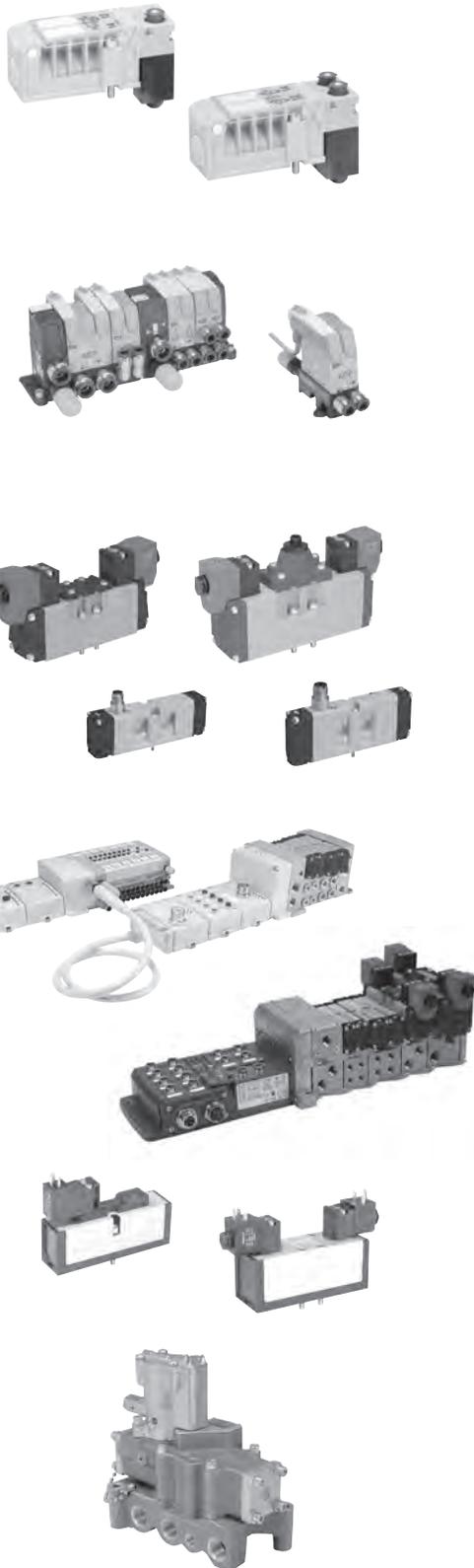




SCAN ME



## Pneumatic Valve Products

### Subbase and Manifold Valve Series

#### H Series Micro

|                              |         |
|------------------------------|---------|
| Features                     | D2-D3   |
| Common Part Numbers          | D4-D5   |
| Ordering Information         | D6-D9   |
| Technical / Dimensional Data | D10-D27 |
| Accessories                  | D12     |

#### Moduflex Series

|  |         |
|--|---------|
| Features                                   | D28-D32 |
| Common Part Numbers / Ordering Information | D33-D45 |
| P2M Network Nodes                          | D46-D55 |
| Technical Data / Accessories               | D56-D66 |
| Dimensional Data                           | D67-D72 |

#### H Series ISO

|  |           |
|--|-----------|
| Features                                   | D73-D76   |
| Plug-In                                    |           |
| 15407-2 - Size 02, 01 / 5599-2, Size 1, 2  | D77-D91   |
| 5599-2 - Size 3                            | D94-D101  |
| Non Plug-In                                |           |
| 15407-1 - Size 02, 01 / 5599-1 - Size 1, 2 | D102-D116 |
| 5599-1 Size 3                              | D117-D123 |
| Technical Data / Accessories               | D124-D138 |
| Dimensional Data                           | D139-D150 |

#### Network Connectivity

|                              |           |
|------------------------------|-----------|
| Features                     | D151-D160 |
| P2M Network Nodes            | D161-D170 |
| P2H Network Nodes            | D171-D190 |
| PCH Network Portal           | D191-D207 |
| Turck Network Portal         | D208-D227 |
| Accessories / Cables         | D228-D230 |
| Technical / Dimensional Data | D231      |

#### DX Series

|  |           |
|--|-----------|
| Features                                   | D232      |
| Common Part Numbers / Ordering Information | D233-D239 |
| Non Plug-In                                |           |
| 15407-1, Size 02 & 01                      | D240-D248 |
| 5599-1, Size 1, 2, 3                       | D249-D250 |
| Technical Data / Accessories               | D251-D263 |
| Dimensional Data                           | D264-D270 |

#### Valvair II Series

|  |           |
|--|-----------|
| Features                                   | D271      |
| Common Part Numbers / Ordering Information | D272-D277 |
| Technical Data / Accessories               | D278-D288 |
| Dimensional Data                           | D289-D296 |

**D**  
Subbase & Manual Valves



Features

**H Series Micro**

The H Series Micro Valve System incorporates a space saving back to back valve mounting design, and achieves flow rates of 0.35 Cv per valve with 4 valves having a combined width of 42mm. This plug-in valve solution simplifies wiring with the use of 25 pin connectors or fieldbus systems.

**Ports**

- M7 on manifolds
- 3/8 Inch on end plates

**Mounting**

- Manifold

**Solenoids**

- 24 VDC, 1.0 watt

**Certification / approval**

- IP65 rated
- EMC / CE Mark: According to EN 61 000-6-2

**Material specifications**

|                 |                                 |
|-----------------|---------------------------------|
| Body            | Polyamide reinforced fiberglass |
| End plates      | Aluminum                        |
| Fasteners       | Zinc plated steel               |
| Manifolds       | Aluminum                        |
| Spool           | Brass and nitrile rubber        |
| Spool enclosure | Brass                           |



**Operating information**

Operating pressure: Vacuum to 120 PSIG (Vacuum to 8.2 bar)

Temperature range: 5°F to 120°F (-15°C to 49°C)

**2-Position & Dual 3/2**

0.35 Cv  
C = 1.2 NI/s x bar, b = 0.13  
Qn = 282 NI/min  
Qmax = 510 NI/min

**3-Position**

0.30 Cv  
C = 1 NI/s x bar, b = 0.13  
Qn = 228 NI/min  
Qmax = 402 NI/min

Pilot pressure requirements:

| Valve number | Minimum pilot pressure | Maximum pilot pressure |
|--------------|------------------------|------------------------|
| HMEVX2049A   | 40 PSI                 | 120 PSI                |
| HM2VX2049A   | 25 PSI                 | 120 PSI                |
| HM5VX2049A   | 45 PSI                 | 120 PSI                |
| HMNVX2049A   | 40 PSI                 | 120 PSI                |
| HMPVX2049A   | 40 PSI                 | 120 PSI                |
| HMQVX2049A   | 40 PSI                 | 120 PSI                |

D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Wear Compensation System**

**Maximum Performance**

- Low Friction
- Lower Operating Pressures
- Fast Response
- Less Wear

**Long Cycle Life** - Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore.

**Non-Lube Service** - No lubrication required for continuous valve shifting.

**Bi-Directional Spool Seals** - Common spool used for any pressure, including vacuum.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

## Features

**Innovative Product Design**

- Back to back valve mounting design centralizes wiring in the manifold
- 4 valves on a 42mm wide manifold provides a 10.5mm wide valve solution with a reduced cost
- High flow of 0.35 Cv allows for broad application use
- Plug-in valve electronics reduce and eliminate wiring system costs
- Multiple pressure zones for many applications on the same manifold

**Standard Features**

- Integrated LED's identify when solenoids are active
- Side and bottom porting options on manifolds and end plates for versatile mounting
- All valve functions available for complete product offering
- Valves can be arranged in any combination for maximum flexibility
- Internal and external pilot options available for vacuum to 145 PSI applications
- IP65 protection enables direct machine mounting
- Product identification, valve function, and port description tags are standard on every manifold and are clearly visible thru a protective cover
- User configurable overrides for non-locking, locking, or no override options

**Manifold Platforms**

- 25 pin D-sub manifolds for control systems with discrete Outputs
- IO-Link Type A & Type B communication modules
- Cost effective moduflex fieldbus manifolds for control systems with DeviceNet™, Profibus®, Interbus and CANopen fieldbus and no inputs or outputs near valves
- Cost effective moduflex fieldbus manifolds with AS-i communication offer both Inputs and solenoid control
- Fully functional H Series fieldbus manifolds for control systems with inputs and outputs attached to the valve manifold
- Enhanced H Series bus expansion allows 4 H Series fieldbus valve manifolds to be connected to a single communication module significantly reducing costs on large machines
- Rockwell Automation RS Logix 5000™ users can take Advantage of Preferred Connectivity, by using the preloaded device profiles

**Complete Assemblies**

- All products offered as component level parts for individual assembly
- Simple manifolds offer sub-assembly level products with valves and fittings attached to manifold bases in a single part number
- Add-a-fold systems offer complete assemblies; including valves, manifolds, end plates, fittings, and mufflers in as few as 2 part numbers

D

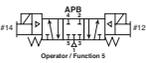
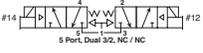
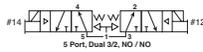
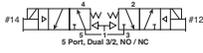
Subbase & Manual  
ValvesH Series  
MicroModuflex  
SeriesH Series  
ISONetwork  
ConnectivityDX ISOMAX  
SeriesValvair II  
Series

For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D3

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**H Series Micro Valves**

|   | Symbol  | Type                                 | Cv   | Operator        | Part Number       |
|---|---|--------------------------------------|------|-----------------|-------------------|
|  |  | 4-way, 2-position                    | 0.35 | Single solenoid | <b>HMEVX2049A</b> |
|   |  | 4-way, 2-position                    | 0.35 | Double solenoid | <b>HM2VX2049A</b> |
|   |  | 4-way, 3-position, all ports blocked | 0.3  | Double solenoid | <b>HM5VX2049A</b> |
|  |  | 3-way, 2-position, dual valve, NC/NC | 0.35 | Double solenoid | <b>HMNVX2049A</b> |
|   |  | 3-way, 2-position, dual valve, NO/NO | 0.35 | Double solenoid | <b>HMPVX2049A</b> |
|   |  | 3-way, 2-position, dual valve, NO/NC | 0.35 | Double solenoid | <b>HMQVX2049A</b> |
|  |   | Blanking plate                       | N/A  | N/A             | <b>HMBVX00XXA</b> |
|  |   | Intermediate air supply              | N/A  | N/A             | <b>HMCVX00XXA</b> |

- All valves, except double solenoid 2-position, ship with multi functional overrides. Standard valve configuration is non-locking manual override. Each solenoid can be configured for locking override or no override with the included manual override caps.
- All valve options include an LED, which is built into the manifold.
- All valve options pull pilot pressure from the manifold. The manifold assembly can be configured for internal or external pilot on the end plate.

**Manifold Bases**

|                                   | Part Numbers  |           |             |                 |                 |
|-----------------------------------|---|-----------|-------------|-----------------|-----------------|
| <b>Plug-In Valve Manifolds</b>    |   |           |             |                 |                 |
| Single solenoid outputs only      | <table border="1"> <tr> <th>Side Port</th> <th>Bottom Port</th> </tr> <tr> <td><b>PSM21JAP</b></td> <td><b>PSM22JAP</b></td> </tr> </table> | Side Port | Bottom Port | <b>PSM21JAP</b> | <b>PSM22JAP</b> |
| Side Port                         | Bottom Port   |           |             |                 |                 |
| <b>PSM21JAP</b>                   | <b>PSM22JAP</b>   |           |             |                 |                 |
| Double or single solenoid outputs | <table border="1"> <tr> <th>Side Port</th> <th>Bottom Port</th> </tr> <tr> <td><b>PSM21MAP</b></td> <td><b>PSM22MAP</b></td> </tr> </table> | Side Port | Bottom Port | <b>PSM21MAP</b> | <b>PSM22MAP</b> |
| Side Port                         | Bottom Port   |           |             |                 |                 |
| <b>PSM21MAP</b>                   | <b>PSM22MAP</b>   |           |             |                 |                 |

Each manifold holds 4 H Series Micro Valves. Double address circuit boards contain outputs for 8 solenoids, and can be used with any valve. When a single solenoid valve is used, one address is not used but is still present on the manifold. Single address circuit boards contain outputs for 4 solenoids. Only single solenoid valves can be used.

 Most popular.

**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Common Part Numbers

Internal Pilot End Plate Kits

|   | Electrical Option   | Porting | Side Port       | Bottom Port     |
|---|---|---------|-----------------|-----------------|
|    | 25-pin, D-sub   | NPT     | <b>PSML25AP</b> | <b>PSML26AP</b> |
|   |   | BSPP    | <b>PSML21AP</b> | <b>PSML22AP</b> |
|    | Turck fieldbus with valve driver module - 16 outputs                                    | NPT     | <b>PSMT15AP</b> | <b>PSMT16AP</b> |
|   |   | BSPP    | <b>PSMT11AP</b> | <b>PSMT12AP</b> |
|    | Turck fieldbus with valve driver module - 32 outputs                                    | NPT     | <b>PSMT25AP</b> | <b>PSMT26AP</b> |
|   |   | BSPP    | <b>PSMT21AP</b> | <b>PSMT22AP</b> |
|    | Moduflex up to 24 outputs   | NPT     | <b>PSMM45AP</b> | <b>PSMM46AP</b> |
|   |   | BSPP    | <b>PSMM41AP</b> | <b>PSMM42AP</b> |
|    | H Series Fieldbus with valve driver module  | NPT     | <b>PSML65AP</b> | <b>PSML66AP</b> |
|   |   | BSPP    | <b>PSML61AP</b> | <b>PSML62AP</b> |
|   | H Series Fieldbus with valve driver module and bus extension connector                  | NPT     | <b>PSMM55AP</b> | <b>PSMM56AP</b> |
|   |   | BSPP    | <b>PSMM51AP</b> | <b>PSMM52AP</b> |
|  | H Series Fieldbus with valve driver module and 24VDC connector                          | NPT     | <b>PSMM65AP</b> | <b>PSMM66AP</b> |
|   |   | BSPP    | <b>PSMM61AP</b> | <b>PSMM62AP</b> |
|  | H Series Fieldbus with valve driver module, bus extension connector and 24VDC connector | NPT     | <b>PSMM75AP</b> | <b>PSMM76AP</b> |
|   |   | BSPP    | <b>PSMM71AP</b> | <b>PSMM72AP</b> |

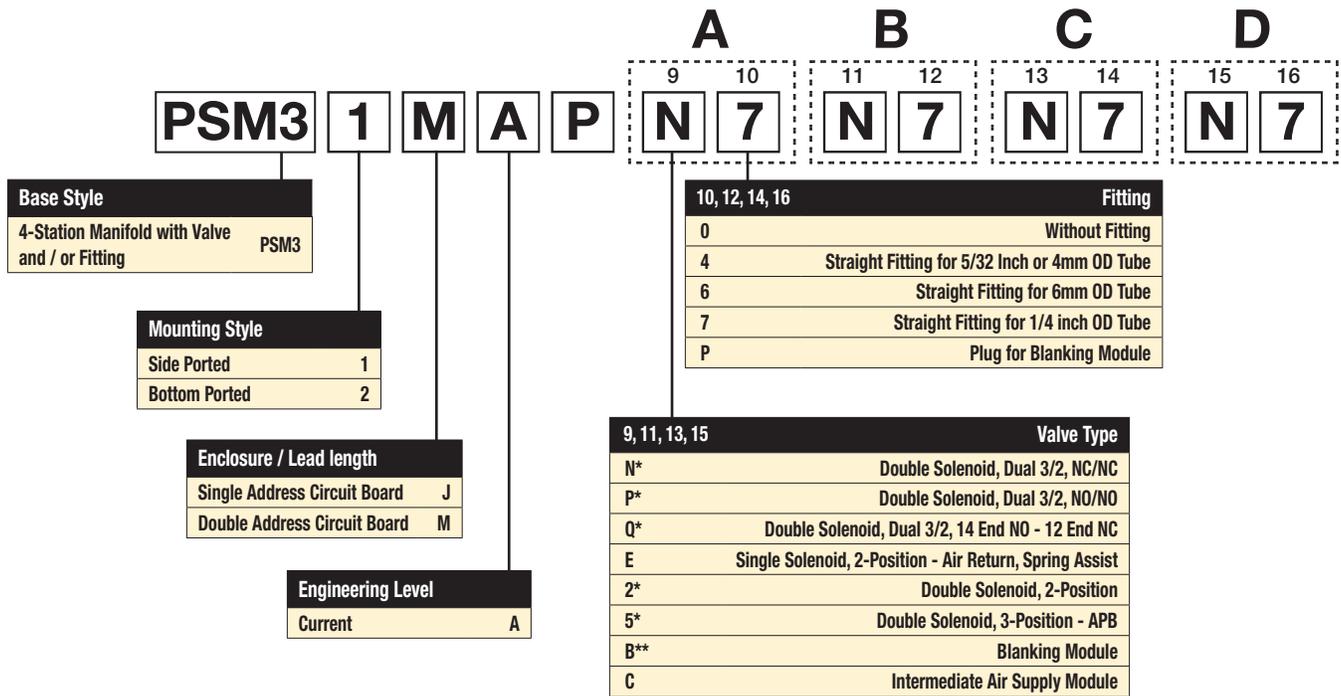
 Most popular.



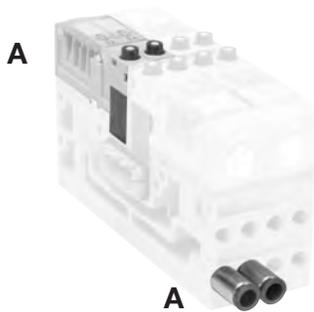
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**Simple Manifold Assemblies**

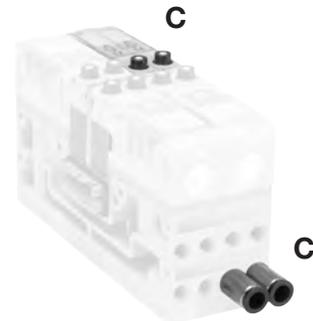
Includes a valve manifold with 4 valves and fittings installed.  
 End Plates must be ordered separately.



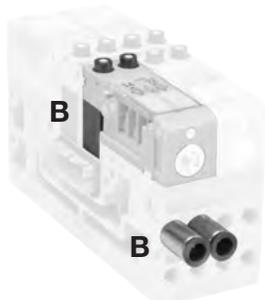
\* Requires double address circuit board, enclosure "M".  
 \*\* Requires fitting "P".



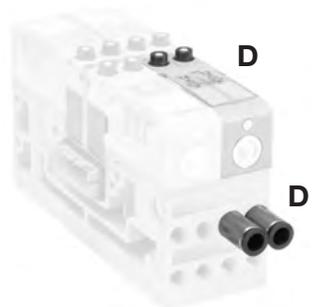
**Valve Position A - Character 9**  
**Fitting Position A - Character 10**



**Valve Position C - Character 13**  
**Fitting Position C - Character 14**



**Valve Position B - Character 11**  
**Fitting Position B - Character 12**



**Valve Position D - Character 15**  
**Fitting Position D - Character 16**

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)



**Ordering Information**

**How To Order Plug-in Add-A-Fold Assemblies**

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List Simple Manifold Assemblies. List left to right, LOOKING AT THE CYLINDER PORTS on the manifold.

**Maximum Number of Solenoids  
(Maximum Energized Simultaneously)**

| 24VDC | 25-pin<br>D-sub | Moduflex | H Series<br>Fieldbus* | Turck         |               |
|-------|-----------------|----------|-----------------------|---------------|---------------|
|       |                 |          |                       | 16<br>Outputs | 32<br>Outputs |
|       | 24 (24)         | 24 (24)  | 32 (32)               | 16 (16)       | 32 (32)       |

\* Maximum of 32 solenoids per manifold. With Bus Extension functionality, 4 manifolds with up to 32 solenoids each can be connected on the same network.

**Add-A-Fold Assembly Model Number**

**AAHM D 3 24 0 0 0 0**

| Valve Series              |      |
|---------------------------|------|
| H Series Micro Add-A-Fold | AAHM |

| End Plate Option   |   |
|--|---|
| Turck Fieldbus with Valve Driver Module - 16 Outputs   | A |
| Turck Fieldbus with Valve Driver Module - 32 Outputs   | B |
| 25-Pin, D-Sub - 24 Outputs   | D |
| H Series Fieldbus with Valve Drive Module - 32 Outputs                                       | Y |
| H Series Fieldbus with Valve Drive Module and Bus Extension Connector - 32 Outputs           | W |
| H Series Fieldbus with Valve Drive Module and 24VDC Connector - 32 Outputs                   | X |
| H Series Fieldbus with Valve Drive Module and Bus Extension and 24VDC Connector - 32 Outputs | Z |
| Moduflex - Up to 24 Outputs  | T |

H Series Fieldbus and Moduflex communication modules must be ordered separately.

| End Plate Type          |                                  |   |
|-------------------------|----------------------------------|---|
| <b>BSPP<br/>Threads</b> | Bspp Side Port, Internal Pilot   | 1 |
|                         | Bspp Bottom Port, Internal Pilot | 2 |
|                         | Bspp Side Port, External Pilot   | 3 |
|                         | Bspp Bottom Port, External Pilot | 4 |
| <b>NPT<br/>Threads</b>  | Npt Side Port, Internal Pilot    | 5 |
|                         | Npt Bottom Port, Internal Pilot  | 6 |
|                         | Npt Side Port, External Pilot    | 7 |
|                         | Npt Bottom Port, External Pilot  | 8 |

| Number of Stations* |    |
|---------------------|----|
| 4 Valve Manifold    | 04 |
| 8 Valve Manifold    | 08 |
| 12 Valve Manifold   | 12 |
| 16 Valve Manifold   | 16 |
| 20 Valve Manifold   | 20 |
| 24 Valve Manifold   | 24 |
| 28 Valve Manifold   | 28 |
| 32 Valve Manifold   | 32 |

\* For an Add-A-Fold part number to be valid, all segments must have a corresponding electrical connection at the end plate. See Maximum Number of Solenoids chart.

**Note:**  
BSPP fittings can only be used with BSPP Manifolds.  
NPT fittings can only be used with NPT Manifolds.

 Most popular.

| Pilot Exhaust on End Plate |  |                         |
|----------------------------|--|-------------------------|
| 0                          | Without Fitting                        |                         |
| M                          | Muffler                                |                         |
| 4                          | Straight Fitting for 4mm OD Tube       | <b>BSPP<br/>Threads</b> |
| 6                          | Straight Fitting for 6mm OD Tube       |                         |
| 4                          | Straight Fitting for 5/32 inch OD Tube | <b>NPT<br/>Threads</b>  |
| 7                          | Straight Fitting for 1/4 inch OD Tube  |                         |

| M7 Pilot Port on End Plate      |  |                         |
|---------------------------------|--|-------------------------|
| <i>Internal Pilot End Plate</i> |  |                         |
| 0                               | With Standard Plug                     |                         |
| <i>External Pilot End Plate</i> |  |                         |
| 0                               | Without Fitting                        |                         |
| 4                               | Straight Fitting for 4mm OD Tube       | <b>BSPP<br/>Threads</b> |
| 6                               | Straight Fitting for 6mm OD Tube       |                         |
| 4                               | Straight Fitting for 5/32 inch OD Tube | <b>NPT<br/>Threads</b>  |
| 7                               | Straight Fitting for 1/4 inch OD Tube  |                         |

| 3/8" Exhaust on End Plate |                                       |                         |
|---------------------------|---------------------------------------|-------------------------|
| 0                         | Without Fitting                       |                         |
| M                         | Muffler                               |                         |
| 8                         | Straight Fitting for 8mm OD Tube      | <b>BSPP<br/>Threads</b> |
| A                         | Straight Fitting for 10mm OD Tube     |                         |
| 7                         | Straight Fitting for 1/4 inch OD Tube | <b>NPT<br/>Threads</b>  |
| 9                         | Straight Fitting for 3/8 inch OD Tube |                         |

| 3/8" Inlet Port on End Plate |                                       |                         |
|------------------------------|---------------------------------------|-------------------------|
| 0                            | Without Fitting                       |                         |
| 8                            | Straight Fitting for 8mm OD Tube      | <b>BSPP<br/>Threads</b> |
| A                            | Straight Fitting for 10mm OD Tube     |                         |
| 7                            | Straight Fitting for 1/4 inch OD Tube | <b>NPT<br/>Threads</b>  |
| 9                            | Straight Fitting for 3/8 inch OD Tube |                         |

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

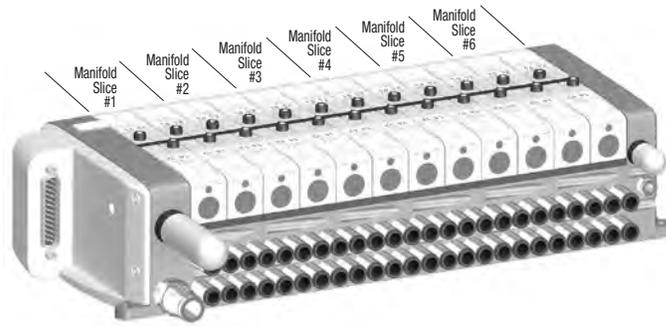
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**25-pin, D-Sub Manifolds**

**24 Single Solenoid Valves**



**Add-A-Fold**

Manifold is factory assembled and tested for pneumatic leaks and electrical continuity.

| Item | Qty | Description                         | Part Number             |
|------|-----|-------------------------------------|-------------------------|
| 01   | 1   | 24 valve Add-A-Fold with end plates | <b>AAHMD5249M0M</b>     |
| 02   | 6   | 4 valve simple manifold slices #1-6 | <b>PSM31JAPE7E7E7E7</b> |

**Component Level**

| Item | Qty | Description                           | Part Number       |
|------|-----|---------------------------------------|-------------------|
| 01   | 1   | 25-pin, D-sub, end plate              | <b>PSML25AP</b>   |
| 02   | 24  | Single solenoid valve                 | <b>HMEVX2049A</b> |
| 03   | 6   | Manifold, side ported, single address | <b>PSM21JAP</b>   |
| 04   | 50  | 1/4" Tube fittings (in box quantity)  | <b>PS567925</b>   |
| 05   | 10  | 3/8" Tube fittings (in box quantity)  | <b>PS568338</b>   |
| 06   | 1   | 3/8" Exhaust muffler                  | <b>P6M-PAB3</b>   |
| 07   | 1   | 1/8" Exhaust muffler                  | <b>P6M-PAB1</b>   |

**Sandwich Regulator**

| Description  | Kit Number       |
|--|------------------|
|  Common port regulator, 5 to 125 PSI with gauge | <b>PSMRAX6AP</b> |

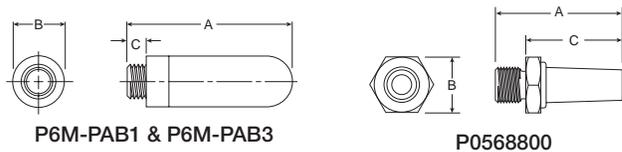
Notes: Cv values are reduced when using a sandwich regulator to 0.20 for 2-position and Dual 3/2 valves, and 0.17 for 3-position APB valves. The sandwich regulator passes full pilot pressure from the manifold, allowing the regulated pressure to adjusted down to 5 PSI without affecting valve functionality.

**Flow Controls**

| Description  | Kit Number        |
|--|-------------------|
|  4mm to 4mm or 5/32" to 5/32" OD tube | <b>FC832-5/32</b> |
| 1/4" to 1/4" O.D. tube   | <b>FC832-4</b>    |

 Most popular.

**Mufflers**



|   | Port Thread                        | A         | Ø B       | C         | Weight (grams) | Part Number     |
|---|------------------------------------|-----------|-----------|-----------|----------------|-----------------|
|    | 1/8 pilot exhaust – BSPP or NPT    | 1.14 (29) | 0.55 (14) | 0.24 (6)  | 0.02           | <b>P6M-PAB1</b> |
|   | 3/8 main exhaust – BSPP or NPT     | 2.36 (60) | 0.98 (25) | 0.35 (9)  | 0.06           | <b>P6M-PAB3</b> |
|  | M7 x 1 bottom port pilot exhaust * | 0.98 (25) | 0.43 (11) | 0.75 (19) | 5              | <b>P0568800</b> |

Note: Recommended tube durometer of 95 or higher. A tube support may be required if tube durometer is less than 95.

\* Must be order in multiples of 10.

**Fittings – Must be ordered in multiples of 10**

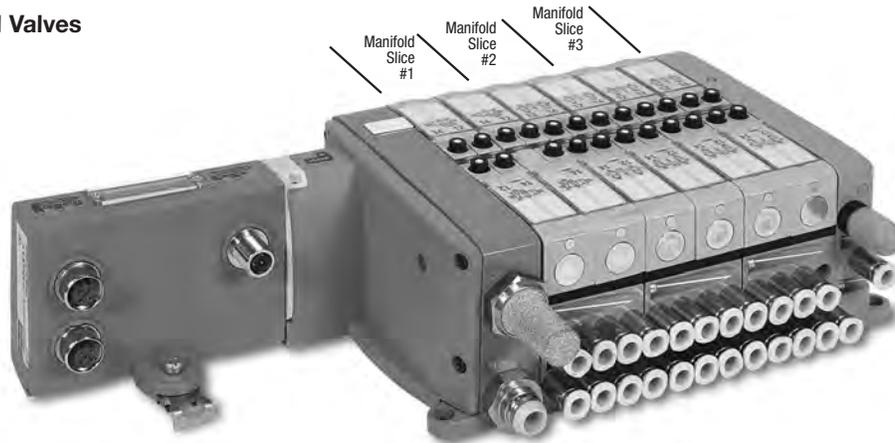
|   | Thread    | Tube O.D.    | Part Number     |
|---|-----------|--------------|-----------------|
| <b>Manifold or pilot supply ports – straight</b>                                    |           |              |                 |
|  | M7        | 4mm or 5/32" | <b>PS567904</b> |
|   | M7        | 6mm          | <b>PS567906</b> |
|   | M7        | 1/4"         | <b>PS567925</b> |
| <b>Main inlet or exhaust ports</b>  |           |              |                 |
|  | 3/8" NPT  | 1/4"         | <b>PS568325</b> |
|   | 3/8" NPT  | 3/8"         | <b>PS568338</b> |
|   | 3/8" BSPP | 8mm          | <b>PS568308</b> |
|   | 3/8" BSPP | 10mm         | <b>PS568310</b> |
| <b>Pilot exhaust ports</b>  |           |              |                 |
|  | 1/8" NPT  | 5/32"        | <b>PS568215</b> |
|   | 1/8" NPT  | 1/4"         | <b>PS568225</b> |
|   | 1/8" BSPP | 4mm          | <b>PS568204</b> |
|   | 1/8" BSPP | 6mm          | <b>PS568206</b> |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Moduflex Fieldbus Manifold**

**4 Double Solenoid Valves,  
 8 Single Solenoid Valves**



**Add-A-Fold**

Manifold is factory assembled and tested for pneumatic leaks and electrical continuity. P2M IO-Link Module ordered separately.

| Item | Qty | Description                         | Part Number             |
|------|-----|-------------------------------------|-------------------------|
| 01   | 1   | 12 valve add-a-fold with end plates | <b>AAHMT5129M0M</b>     |
| 02   | 1   | 4 valve simple manifold slice #1    | <b>PSM31MAPN7N7N7</b>   |
| 03   | 2   | 4 valve simple manifold slice #2-3  | <b>PSM31JAPE7E7E7E7</b> |

**Component Level**

| Item | Qty | Description                           | Part Number        |
|------|-----|---------------------------------------|--------------------|
| 01   | 1   | Moduflex fieldbus, end plate          | <b>PSMM45AP</b>    |
| 02   | 4   | Double solenoid, dual 3/2, NC/NC      | <b>HMN VX2049A</b> |
| 03   | 1   | Manifold, side ported, double address | <b>PSM21MAP</b>    |
| 04   | 8   | Single solenoid valve                 | <b>HMEVX2049A</b>  |
| 05   | 2   | Manifold, side ported, single address | <b>PSM21JAP</b>    |
| 06   | 30  | 1/4" tube fittings (in box quantity)  | <b>PS567925</b>    |
| 05   | 10  | 3/8" tube fittings (in box quantity)  | <b>PS568338</b>    |
| 06   | 1   | 3/8" exhaust muffler                  | <b>P6M-PAB3</b>    |
| 07   | 1   | 1/8" exhaust muffler                  | <b>P6M-PAB1</b>    |

**Additional Components**

**Moduflex Communication Modules  
 Industrial Ethernet – IP65**

| Industrial Ethernet Protocol              | Maximum Addresses † | Part Number          |
|---|---------------------|----------------------|
| EtherNet/IP ( <i>Safe Power Capable</i> ) | 24 †                | <b>P2M2HBVE12400</b> |
| PROFINET ( <i>Safe Power Capable</i> )    | 24 †                | <b>P2M2HBVN12400</b> |
| EtherCAT ( <i>Safe Power Capable</i> )    | 24 †                | <b>P2M2HBVT12400</b> |
| Modbus/TCP ( <i>Safe Power Capable</i> )  | 24 †                | <b>P2M2HBVM12400</b> |
| PowerLink ( <i>Safe Power Capable</i> )   | 24 †                | <b>P2M2HBVW12400</b> |

**Industrial Ethernet – IP20**

| Industrial Ethernet Protocol | Maximum Addresses † | Part Number            |
|------------------------------|---------------------|------------------------|
| Profinet IO                  | 24 †                | <b>P2M2HBVE12400RJ</b> |
| EtherNet/IP                  | 24 †                | <b>P2M2HBVN12400RJ</b> |
| EtherCAT                     | 24 †                | <b>P2M2HBVT12400RJ</b> |

† 24 addresses capable when used with H Micro and H ISO only

Most popular.

**IO-Link**

| IO-Link - 24 outputs           | Part Number             |
|--------------------------------|-------------------------|
| Class A 3-Pin, Aux power 1 & 3 | <b>P2M2HBVL12400A13</b> |
| 3-Pin, Aux power 4 & 3         | <b>P2M2HBVL12400A43</b> |
| 3-Pin, Aux power 4 & 2         | <b>P2M2HBVL12400A42</b> |
| Class B 5-Pin, Aux power 2 & 5 | <b>P2M2HBVL12400B25</b> |

Note: For Safe Power Capable version, add "-SPC" to end of part number

**IO-Link**

| Bus Protocol                | Connector Type                          | Part Number                     |
|-----------------------------|---|---------------------------------|
| Power & Communication Cable | IO-Link 5-pin male to female cable, TPE | <b>RKC 4.5T*-RSC 4.5T/S1587</b> |

Where \* = 1, 2, 3, 4, 5, 10, 20 meter standard lengths

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

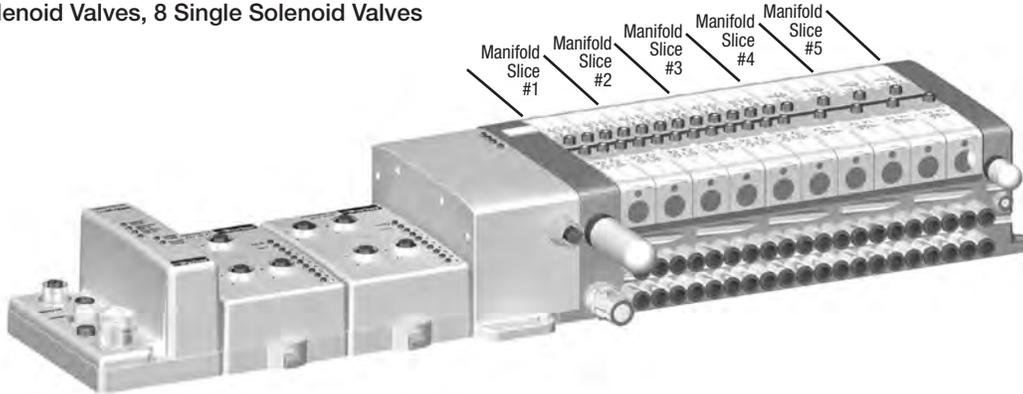
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**H Series Fieldbus Manifold**

12 Double Solenoid Valves, 8 Single Solenoid Valves



**Add-A-Fold**

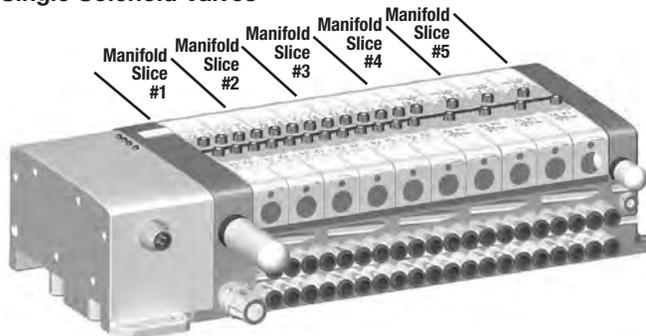
Manifold is factory assembled and tested for pneumatic leaks and electrical continuity.

| Item | Qty | Description                         | Part Number             |
|------|-----|-------------------------------------|-------------------------|
| 01   | 1   | 20 valve add-a-fold with end plates | <b>AAHMW5209M0M</b>     |
| 02   | 3   | 4 valve simple manifold slices #1-3 | <b>PSM31MAPN7N7N7N7</b> |
| 03   | 2   | 4 valve simple manifold slices #4-5 | <b>PSM31JAPE7E7E7E7</b> |

**Component Level**

| Item | Qty | Description   | Part Number       |
|------|-----|---|-------------------|
| 01   | 1   | H Series Fieldbus, with valve driver module and bus extension connector | <b>PSMM55AP</b>   |
| 02   | 12  | Double solenoid, dual 3/2, NC/NC  | <b>HMNVX2049A</b> |
| 03   | 3   | Manifold, side ported, double address                                   | <b>PSM21MAP</b>   |
| 04   | 8   | Single solenoid, 2-position, air return, spring assist                  | <b>HMEVX2049A</b> |
| 05   | 2   | Manifold, side ported, single address                                   | <b>PSM21JAP</b>   |
| 06   | 40  | 1/4" tube fittings (in box quantity)                                    | <b>PS567925</b>   |
| 07   | 10  | 3/8" tube fittings (in box quantity)                                    | <b>PS568338</b>   |
| 08   | 1   | 3/8" exhaust muffler  | <b>P6M-PAB3</b>   |
| 09   | 1   | 1/8" exhaust muffler  | <b>P6M-PAB1</b>   |

12 Double Solenoid Valves, 8 Single Solenoid Valves



**Add-A-Fold**

Manifold is factory assembled and tested for pneumatic leaks and electrical continuity.

| Item | Qty | Description                         | Part Number             |
|------|-----|-------------------------------------|-------------------------|
| 01   | 1   | 20 valve add-a-fold with end plates | <b>AAHMX5209M0M</b>     |
| 02   | 3   | 4 valve simple manifold slices #1-3 | <b>PSM31MAPN7N7N7N7</b> |
| 03   | 2   | 4 valve simple manifold slices #4-5 | <b>PSM31JAPE7E7E7E7</b> |

**Component Level**

| Item | Qty | Description   | Part Number       |
|------|-----|---|-------------------|
| 01   | 1   | H series fieldbus, with valve driver Module and 24VDC connector | <b>PSMM65AP</b>   |
| 02   | 12  | Double solenoid, dual 3/2, NC/NC                                | <b>HMNVX2049A</b> |
| 03   | 3   | Manifold, side ported, double address                           | <b>PSM21MAP</b>   |
| 04   | 8   | Single solenoid, 2-position, air return, spring assist          | <b>HMEVX2049A</b> |
| 05   | 2   | Manifold, side ported, single address                           | <b>PSM21JAP</b>   |
| 06   | 40  | 1/4" tube fittings (in box quantity)                            | <b>PS567925</b>   |
| 07   | 10  | 3/8" tube fittings (in box quantity)                            | <b>PS568338</b>   |
| 08   | 1   | 3/8" exhaust muffler  | <b>P6M-PAB3</b>   |
| 09   | 1   | 1/8" exhaust muffler  | <b>P6M-PAB1</b>   |

**Additional Components**

| Description                               | Part Number      |
|---|------------------|
| H Series Fieldbus Devicenet Communication | <b>PSSCDM12A</b> |
| 8 Digital Input, 24VDC, M12 Connectors    | <b>PSSN8M12A</b> |
| H Series Micro Bus Extender Cable         | <b>PSSVEXT1</b>  |

See H Series Fieldbus section of catalog for more information.

  Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Accessories**

**Manifold to Manifold Gaskets\***

|   | Description  | Part Number    |
|---|--|----------------|
|  | All galleys passing  | <b>PSM0001</b> |
|  | Main pressure to rear or front valves blocked, exhaust passing | <b>PSM0002</b> |
|  | Main pressure to rear or front valves blocked, exhaust blocked | <b>PSM0003</b> |
|  | All galleys blocked  | <b>PSM0004</b> |

\* Includes 1 Gasket

**Solenoid Kit**

| Description  | Part Number    |
|--|----------------|
|  24VDC solenoid kit with screws | <b>PSM0010</b> |

**Blanking Plate Kits**

| Description   | Part Number       |
|---|-------------------|
|  Blanking plugs, gasket, and mounting screws. | <b>HMBVX00XXA</b> |

Blanking plugs must be inserted into the 2 and 4 ports of the manifold corresponding to the blanking plate.

**Intermediate Air Supply Base**

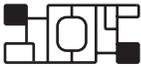
| Description   | Part Number       |
|---|-------------------|
|  Gasket and mounting screws. | <b>HMCVX00XXA</b> |

Fittings (not included) must be inserted into the 2 and 4 ports of the manifold corresponding to the intermediate air supply. Auxiliary pressure should be supplied through these fittings, which will directly feed the #1 pressure galley.

**Override Caps**

| Description  | Part Number    |
|--|----------------|
|  Set of 10 manual override caps | <b>PSM0011</b> |

**Gaskets and Valve Screws**

| Description  | Part Number    |
|--|----------------|
|  Set of 5 valve to manifold gaskets and 10 screws | <b>PSM0012</b> |

**Regulator Gauge**

| Description  | Part Number     |
|--|-----------------|
|  5 to 125 PSI gauge | <b>P0566202</b> |

**Subbase & Manifold Valve Products  
H Series Micro**

**Plugs**

| Description  | Part Number    |
|--|----------------|
|  Set of 10 M7 plugs (Part No. PS567900) for auxiliary and pilot pressure ports | <b>PSM0013</b> |

**Screws**

| Description   | Part Number    |
|---|----------------|
|  Set of 10 manifold to manifold M3 screws | <b>PSM0014</b> |

**Valve Labels\***

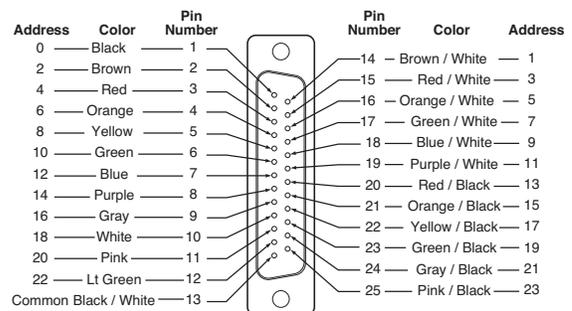
| Description  | Part Number    |
|--|----------------|
| Single solenoid diagram                                  | <b>PSM002E</b> |
| Double solenoid diagram                                  | <b>PSM0022</b> |
| Double solenoid diagram – APB                            | <b>PSM0025</b> |
| Double solenoid diagram – Dual 3/2 NC/NC                 | <b>PSM002N</b> |
| Double solenoid diagram – Dual 3/2 NO/NO                 | <b>PSM002P</b> |
| Double solenoid diagram – Dual 3/2, 14 end NO, 12 end NC | <b>PSM002Q</b> |

\*Includes 10 Labels.

**Protective Cover**

| Description  | Part Number   |
|--|---------------|
|  Protective polyester cover<br>Set of 10 | <b>PS5706</b> |

**25-Pin, D-Sub Cable (Female)**



| Description   | Length   | Part Number       |
|---|----------|-------------------|
|  25-pin, D-sub cable, IP20 | 3 meters | <b>P8LMH25M3A</b> |
| 25-pin, D-sub cable, IP20   | 9 meters | <b>SCD259D</b>    |
| 25-pin, D-sub cable, IP65   | 3 meters | <b>SCD253W</b>    |
| 25-pin, D-sub cable, IP65   | 9 meters | <b>SCD259WE</b>   |

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

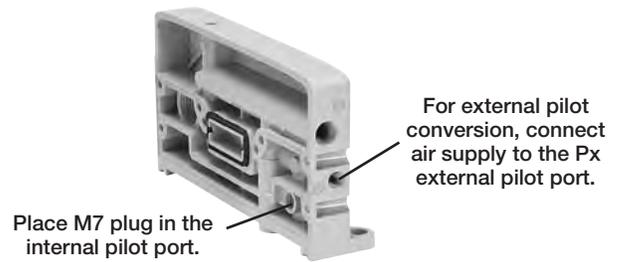


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**Pilot Configuration**

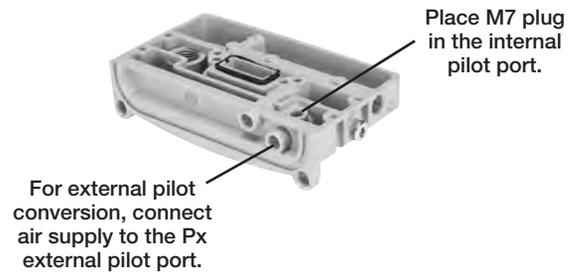
**Side Ported**

Manifolds can be configured for either internal or external pilot in the field. Side ported manifolds are configured for internal pilot when the M7 plug is located in the Px port on the front of the right hand end plate. Moving this plug to the internal pilot port of the right hand end plate and replacing it with a fitting allows an external pilot to be used.



**Bottom Ported**

Bottom ported manifolds are configured for internal pilot when the M7 plug is located in the Px port on the bottom of the right hand end plate. Moving this plug to the internal pilot port of the right hand end plate and replacing it with a fitting allows an external pilot to be used.

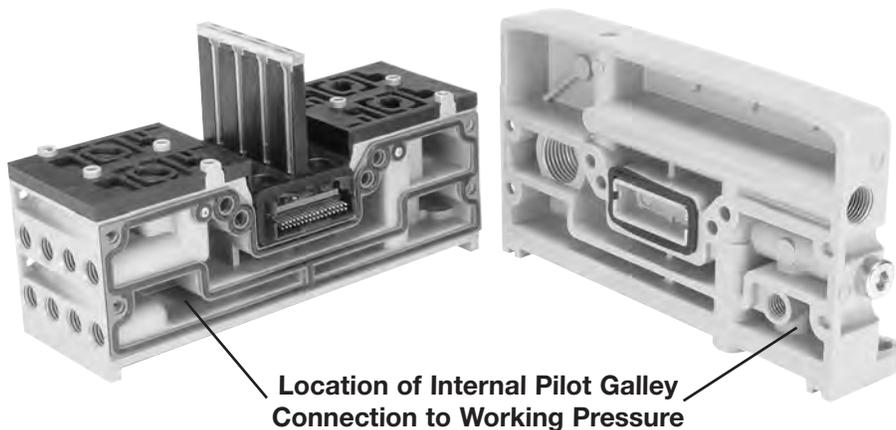


**Pilot Pressure Requirements**

Internal pilot pressure is supplied to the entire manifold from the right hand end plate, where the main pressure for the front row of valves is connected to the pilot pressure galley.

Maximum pilot pressure is 120 PSI. For applications requiring working pressures from 120 to 145 PSI, an external pilot supply less than 120 PSI is required.

| Valve Number      | Minimum Pilot Pressure | Maximum Pilot Pressure |
|-------------------|------------------------|------------------------|
| <b>HMEVX2049A</b> | 40 PSI                 | 120 PSI                |
| <b>HM2VX2049A</b> | 25 PSI                 | 120 PSI                |
| <b>HM5VX2049A</b> | 45 PSI                 | 120 PSI                |
| <b>HMNVX2049A</b> | 40 PSI                 | 120 PSI                |
| <b>HMPVX2049A</b> | 40 PSI                 | 120 PSI                |
| <b>HMQVX2049A</b> | 40 PSI                 | 120 PSI                |



**Single Solenoid - Single Address Manifolds**



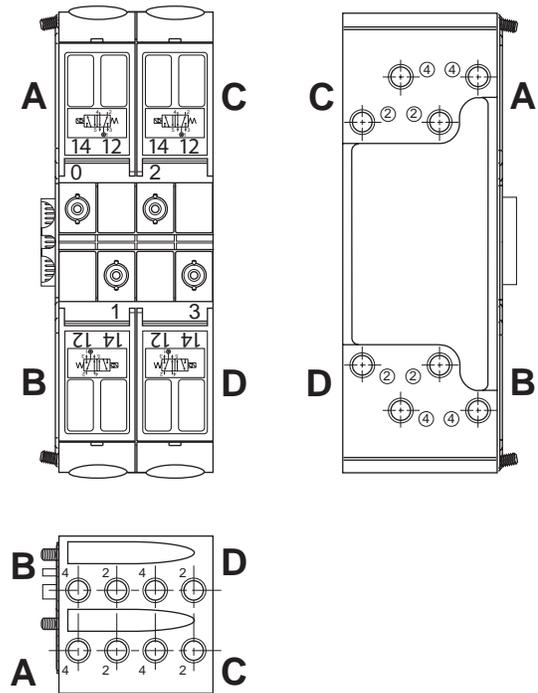
**Single Pressure At Inlet Port 1:**

*De-energized position* – Solenoid operator #14 de-energized. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

*Energized position* – Solenoid operator #14 energized. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

**HMEVX2049A - Single Address Manifolds**

| Valve Position A        |     | Valve Position C |     |
|-------------------------|-----|------------------|-----|
| <b>Output 0</b>         |     |                  |     |
| On                      | Off | On               | Off |
| 1→4                     | 1→2 | 1→4              | 1→2 |
| 3←2                     | 5←4 | 3←2              | 5←4 |
| <b>Valve Position B</b> |     |                  |     |
| <b>Output 1</b>         |     |                  |     |
| On                      | Off | On               | Off |
| 1→4                     | 1→2 | 1→4              | 1→2 |
| 3←2                     | 5←4 | 3←2              | 5←4 |
| <b>Valve Position D</b> |     |                  |     |
| <b>Output 3</b>         |     |                  |     |
| On                      | Off | On               | Off |
| 1→4                     | 1→2 | 1→4              | 1→2 |
| 3←2                     | 5←4 | 3←2              | 5←4 |



**Single Solenoid - Double Address Manifolds**



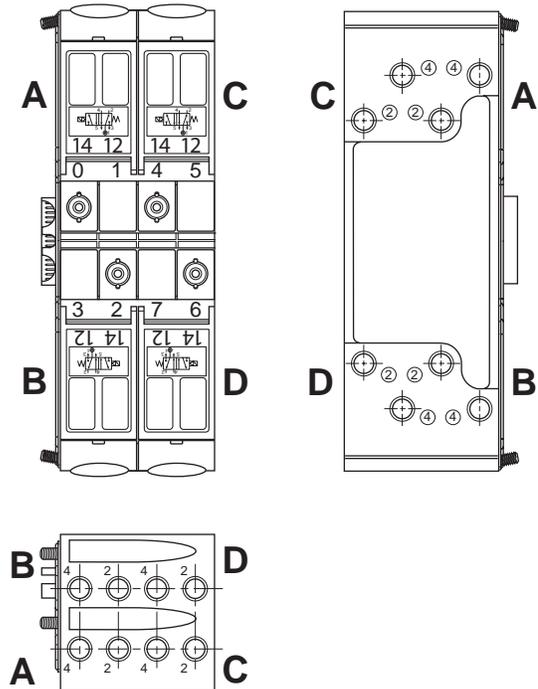
**Single Pressure At Inlet Port 1:**

*De-energized position* – Solenoid operator #14 de-energized. Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

*Energized position* – Solenoid operator #14 energized. Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

**HMEVX2049A - Double Address Manifolds**

| Valve Position A        |     |                 |     | Valve Position C        |     |                 |     |
|-------------------------|-----|-----------------|-----|-------------------------|-----|-----------------|-----|
| <b>Output 0</b>         |     | <b>Output 1</b> |     | <b>Output 4</b>         |     | <b>Output 5</b> |     |
| On                      | Off | On              | Off | On                      | Off | On              | Off |
| 1→4                     | 1→2 | 1→2             | 1→2 | 1→4                     | 1→2 | 1→2             | 1→2 |
| 3←2                     | 5←4 | 5←4             | 5←4 | 3←2                     | 5←4 | 5←4             | 5←4 |
| <b>Output Lost</b>      |     |                 |     | <b>Output Lost</b>      |     |                 |     |
|                         |     | 1→2             | 1→2 |                         |     | 1→2             | 1→2 |
|                         |     | 3←2             | 5←4 |                         |     | 3←2             | 5←4 |
| <b>Valve Position B</b> |     |                 |     | <b>Valve Position D</b> |     |                 |     |
| <b>Output 3</b>         |     | <b>Output 2</b> |     | <b>Output 7</b>         |     | <b>Output 6</b> |     |
| On                      | Off | On              | Off | On                      | Off | On              | Off |
| 1→2                     | 1→2 | 1→4             | 1→2 | 1→2                     | 1→2 | 1→4             | 1→2 |
| 5←4                     | 5←4 | 3←2             | 5←4 | 5←4                     | 5←4 | 3←2             | 5←4 |
| <b>Output Lost</b>      |     |                 |     | <b>Output Lost</b>      |     |                 |     |
|                         |     | 1→4             | 1→2 |                         |     | 1→4             | 1→2 |
|                         |     | 3←2             | 5←4 |                         |     | 3←2             | 5←4 |

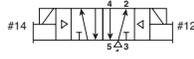


**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Double Solenoid - Double Address Manifolds, Last state #12 Energized or #14 Energized**



**Single Pressure At Inlet Port 1:**

**Solenoid operator #14 energized last.** Pressure at inlet port 1 connected to outlet port 4. Outlet port 2 connected to exhaust port 3.

**Solenoid operator #12 energized last.** Pressure at inlet port 1 connected to outlet port 2. Outlet port 4 connected to exhaust port 5.

A 2-Position, Double Solenoid Valve is a detented valve. When the output is removed, the spool remains in its position.

**HM2VX2049A - Double Address Manifolds - Last state #12 Energized**

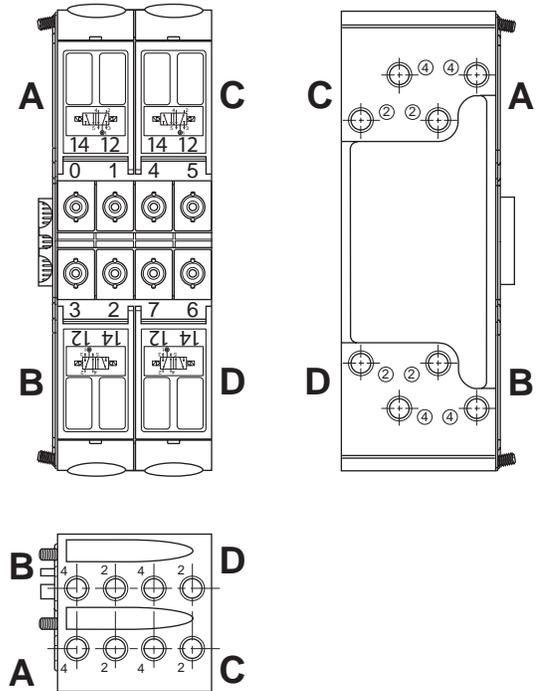
| Valve Position A |     |          |     | Valve Position C |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 0         |     | Output 1 |     | Output 4         |     | Output 5 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→4              | 1→2 | 1→2      | 1→2 | 1→4              | 1→2 | 1→2      | 1→2 |
| 3←2              | 5←4 | 5←4      | 5←4 | 3←2              | 5←4 | 5←4      | 5←4 |

| Valve Position B |     |          |     | Valve Position D |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 3         |     | Output 2 |     | Output 7         |     | Output 6 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→2              | 1→2 | 1→4      | 1→2 | 1→2              | 1→2 | 1→4      | 1→2 |
| 5←4              | 5←4 | 3←2      | 5←4 | 5←4              | 5←4 | 3←2      | 5←4 |

**HM2VX2049A - Double Address Manifolds - Last state #14 Energized**

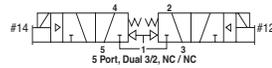
| Valve Position A |     |          |     | Valve Position C |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 0         |     | Output 1 |     | Output 4         |     | Output 5 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→4              | 1→4 | 1→2      | 1→4 | 1→4              | 1→4 | 1→2      | 1→4 |
| 3←2              | 3←2 | 5←4      | 3←2 | 3←2              | 3←2 | 5←4      | 3←2 |

| Valve Position B |     |          |     | Valve Position D |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 3         |     | Output 2 |     | Output 7         |     | Output 6 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→2              | 1→4 | 1→4      | 1→4 | 1→2              | 1→4 | 1→4      | 1→4 |
| 5←4              | 3←2 | 3←2      | 3←2 | 5←4              | 3←2 | 3←2      | 3←2 |



**Double Solenoid - Double Address Manifolds**

**Dual 3-Way, 2-Position NC / NC (NNP)**



**With #14 & #12 operators both de-energized** – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.

**With #14 operator energized** – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.

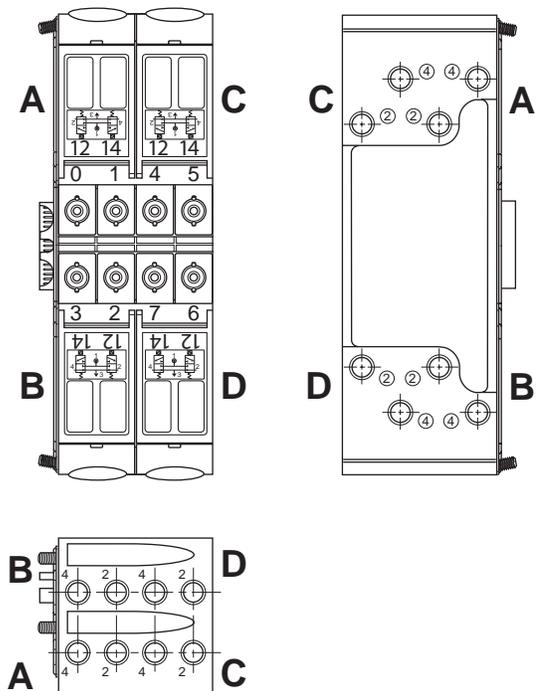
**With #12 operator energized** – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.

**With #14 & #12 operators both energized** – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

**HMNVX2049A - Double Address Manifolds**

| Valve Position A |     |          |     | Valve Position C |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 0         |     | Output 1 |     | Output 4         |     | Output 5 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→2              | 1←1 | 1→4      | 1←1 | 1→2              | 1←1 | 1→4      | 1←1 |
| 3←1              | 3←2 | 5←1      | 5←4 | 3←1              | 3←2 | 5←1      | 5←4 |

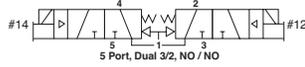
| Valve Position B |     |          |     | Valve Position D |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 3         |     | Output 2 |     | Output 7         |     | Output 6 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→4              | 1←1 | 1→2      | 1←1 | 1→4              | 1←1 | 1→2      | 1←1 |
| 5←1              | 5←4 | 3←1      | 3←2 | 5←1              | 5←4 | 3←1      | 3←2 |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Double Solenoid - Double Address Manifolds**

**Dual 3-Way, 2-Position  
 NO / NO (NP)**



*With #14 & #12 operators both de-energized* – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

*With #14 operator energized* – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.

*With #12 operator energized* – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.

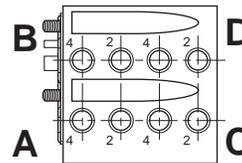
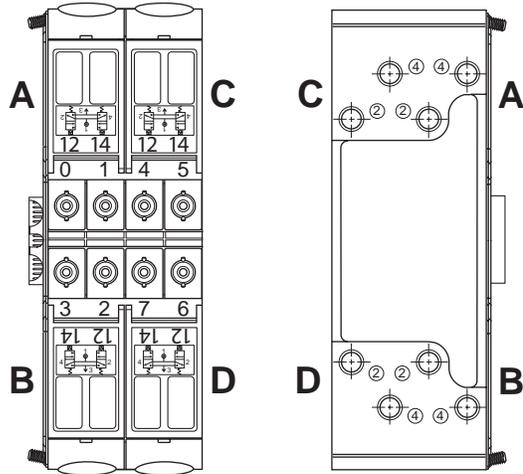
*With #14 & #12 operators both energized* – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.

**HMPVX2049A - Double Address Manifolds**

| Valve Position A |     |          |     | Valve Position C |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 0         |     | Output 1 |     | Output 4         |     | Output 5 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→               | 1→2 | 1→       | 1→4 | 1→               | 1→2 | 1→       | 1→4 |
| 3←2              | 3→  | 5←4      | 5→  | 3←2              | 3→  | 5←4      | 5→  |

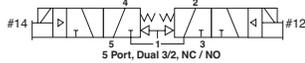
  

| Valve Position B |     |          |     | Valve Position D |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 3         |     | Output 2 |     | Output 7         |     | Output 6 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→               | 1→4 | 1→       | 1→2 | 1→               | 1→4 | 1→       | 1→2 |
| 5←4              | 5→  | 3←2      | 3→  | 5←4              | 5→  | 3←2      | 3→  |



**Double Solenoid - Double Address Manifolds**

**Dual 3-Way, 2-Position  
 14 End NO / 12 End NC  
 (NP / NNP)**



*With #14 & #12 operators both de-energized* – pressure at inlet port 1 connected to outlet port 4, exhaust port 5 blocked, outlet port 2 connected to exhaust port 3.

*With #14 operator energized* – pressure at inlet port 1 blocked, outlet port 4 connected to exhaust port 5, outlet port 2 connected to exhaust port 3.

*With #12 operator energized* – pressure at inlet port 1 connected to outlet ports 4 & 2, exhaust ports 3 & 5 blocked.

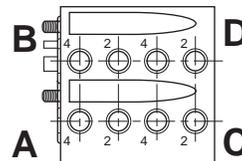
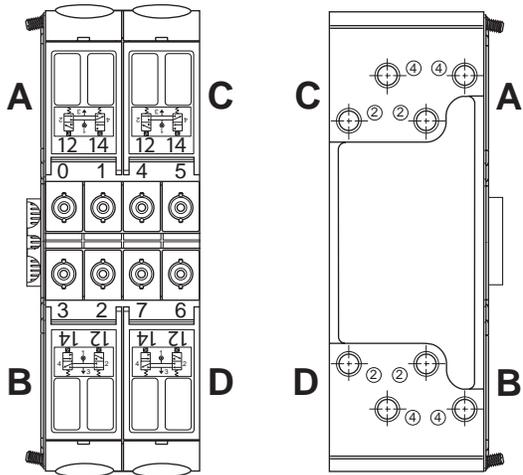
*With #14 & #12 operators both energized* – pressure at inlet port 1 connected to outlet port 2, exhaust port 3 blocked, outlet port 4 connected to exhaust port 5.

**HMQVX2049A - Double Address Manifolds**

| Valve Position A |     |          |     | Valve Position C |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 0         |     | Output 1 |     | Output 4         |     | Output 5 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→2              | 1→  | 1→       | 1→4 | 1→2              | 1→  | 1→       | 1→4 |
| 3→               | 3←2 | 5←4      | 5→  | 3→               | 3←2 | 5←4      | 5→  |

| Valve Position B |     |          |     | Valve Position D |     |          |     |
|------------------|-----|----------|-----|------------------|-----|----------|-----|
| Output 3         |     | Output 2 |     | Output 7         |     | Output 6 |     |
| On               | Off | On       | Off | On               | Off | On       | Off |
| 1→               | 1→4 | 1→2      | 1→  | 1→               | 1→4 | 1→2      | 1→  |
| 5←4              | 5→  | 3→       | 3←2 | 5←4              | 5→  | 3→       | 3←2 |



**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

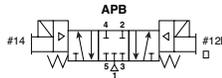


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Double Solenoid - Double Address Manifolds**

**3-Position**

**Function 5: All Ports Blocked**



**With #12 operator energized** – inlet port 1 connected to cylinder port 2, cylinder port 4 connected to exhaust port 5.

**With #14 operator energized** – inlet port 1 connected to cylinder port 4, cylinder port 2 connected to exhaust port 3.

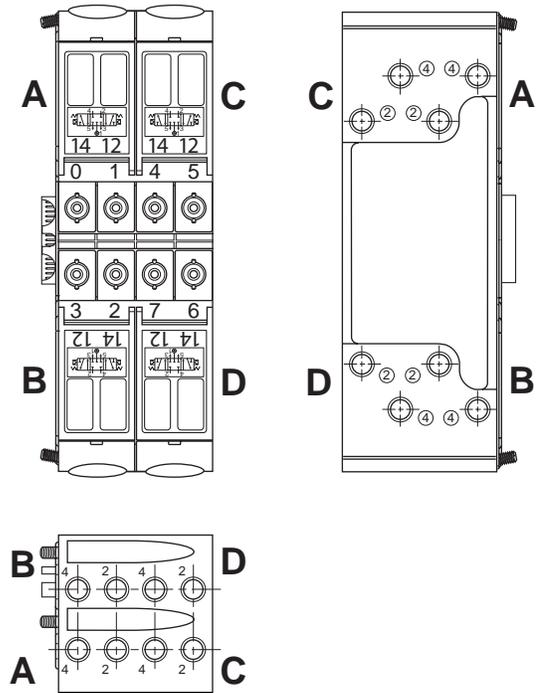
All ports blocked in the center position.

**HM5VX2049A - Double Address Manifolds**

| Valve Position A |              |              | Valve Position C |              |              |
|------------------|--------------|--------------|------------------|--------------|--------------|
| Output 0 On      | Output 0 Off | Output 0 Off | Output 4 On      | Output 4 Off | Output 4 Off |
| Output 1 Off     | Output 1 On  | Output 1 Off | Output 5 Off     | Output 5 On  | Output 5 Off |
| 5→1              | 5←4          | 3→1 1→4      | 5→1              | 5←4          | 3→1 1→4      |
| 1→4              | 1→2          | 1→1 1→2      | 1→4              | 1→2          | 1→1 1→2      |
| 3→2              | 3→1          | 5→1          | 3→2              | 3→1          | 5→1          |

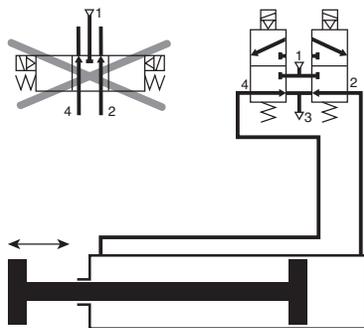
| Valve Position B |              |              | Valve Position D |              |              |
|------------------|--------------|--------------|------------------|--------------|--------------|
| Output 2 On      | Output 2 Off | Output 2 Off | Output 6 On      | Output 6 Off | Output 6 Off |
| Output 3 Off     | Output 3 On  | Output 3 Off | Output 7 Off     | Output 7 On  | Output 7 Off |
| 5→1              | 5←4          | 3→1 1→4      | 5→1              | 5←4          | 3→1 1→4      |
| 1→4              | 1→2          | 1→1 1→2      | 1→4              | 1→2          | 1→1 1→2      |
| 3→2              | 3→1          | 5→1          | 3→2              | 3→1          | 5→1          |



**Dual 3/2 valves replace 3-position valves for better performance**

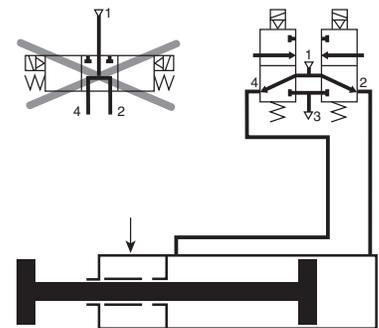
**3-position center exhaust**

A traditional 5/3 center exhaust valve is now replaced by a double 3/2 NC+NC valve module. Both cylinder chambers are exhausted and rod and piston are free to move.



**3-position pressure center**

A traditional 5/3 pressure center valve is now replaced by a double 3/2 NO+NO valve module. The function is identical.

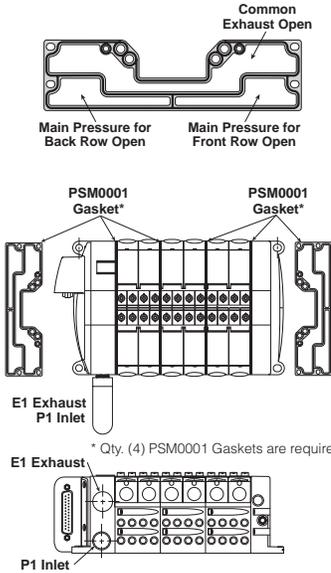


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Multiple Pressure Zones**

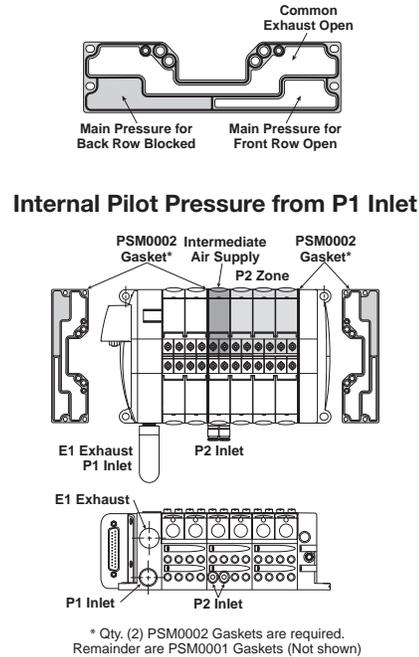
**PSM0001 –**

All ports open. Common pressure for front and rear manifold.  
 Common exhausts.  
 Standard gasket included with each manifold and end plate.



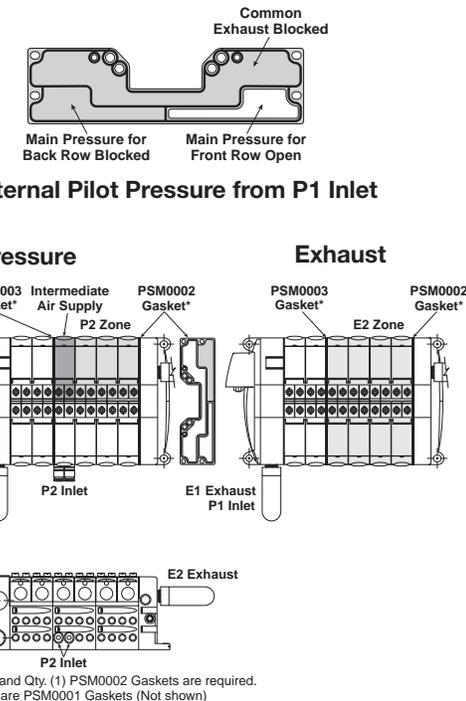
**PSM0002 –**

Rear manifold blocked for separate pressure supply.  
 Common exhausts.  
 Flip gasket to block front of manifold.



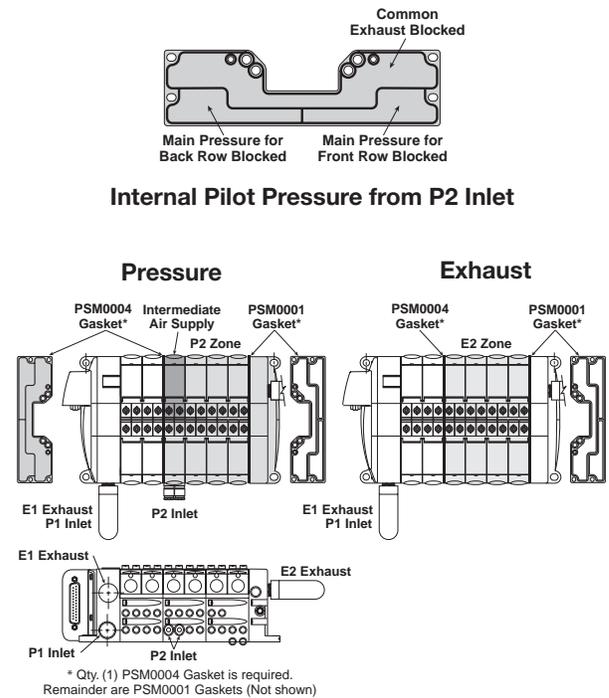
**PSM0003 –**

Rear manifold blocked for separate pressure supply.  
 Exhaust blocked also.  
 Flip gasket to block front of manifold.  
 If used with bottom ported end plates, second exhaust must be piped from the side of the right end plate.



**PSM0004 –**

All galleys blocked.  
 Two pressure zones and two exhaust zones.  
 If used with bottom ported end plates, second exhaust must be piped from the side of the right end plate.



**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



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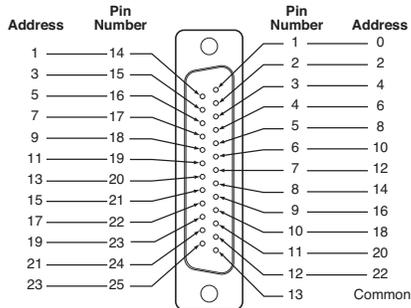
**Maximum Number of Solenoids**

(Maximum Energized Simultaneously)

|       | 25-Pin D-Sub | Moduflex | H Series<br>Fieldbus* |
|-------|--------------|----------|-----------------------|
| 24VDC | 24 (24)      | 24 (24)  | 32 (32)               |

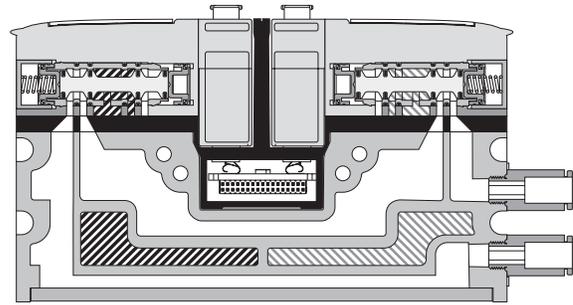
\* Maximum of 32 solenoids per manifold. With Bus Extension functionality, 4 manifolds with up to 32 solenoids each can be connected on the same network.

**25-Pin, D-Sub Connector (Male)**

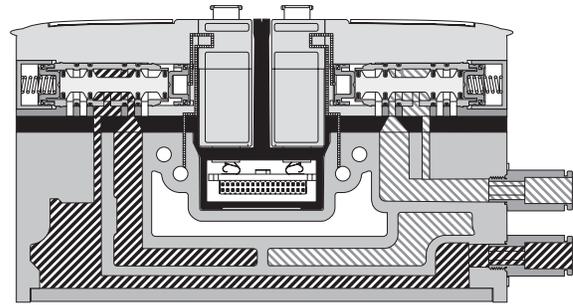


View into End Plate Connector - Male D-Sub, 25-Pin

**Single Solenoid Valves Shown**  
**Solenoid is De-energized**



**Side Exhaust**  
 4 Ports Connected to Exhaust Port  
 (5 & 3 Common)



**Side Pressure**  
 2 Ports Connected to Inlet Port 1



**D**

Subbase & Manual  
Valves

H Series  
Micro

Moduflex  
Series

H Series  
ISO

Network  
Connectivity

DX ISOMAX  
Series

Valvair II  
Series

**Cv Values - H Series Micro**

The charts below represent the minimum required Cv values for pneumatic systems operating at 80 PSI with a 5 PSI pressure drop.

To use the chart, locate the diameter of the cylinder across the horizontal axis, then the average required rod speed of the cycle. The intersection point is Cv value needed.

Grayed out values are not attainable with H Series Micro. Please select a larger Parker valve.

| Average Rod Speed (mm/s) | Cylinder Diameter (mm) |       |       |       |       |       |       |       |       |       |       |       |       |
|--------------------------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                          | 6                      | 8     | 10    | 12    | 16    | 20    | 25    | 32    | 40    | 50    | 63    | 80    | 100   |
| 25                       | 0.000                  | 0.001 | 0.001 | 0.002 | 0.003 | 0.005 | 0.008 | 0.013 | 0.021 | 0.032 | 0.051 | 0.083 | 0.129 |
| 50                       | 0.001                  | 0.002 | 0.003 | 0.004 | 0.007 | 0.010 | 0.016 | 0.026 | 0.041 | 0.065 | 0.103 | 0.166 | 0.259 |
| 75                       | 0.001                  | 0.002 | 0.004 | 0.006 | 0.010 | 0.016 | 0.024 | 0.040 | 0.062 | 0.097 | 0.154 | 0.248 | 0.388 |
| 100                      | 0.002                  | 0.003 | 0.005 | 0.007 | 0.013 | 0.021 | 0.032 | 0.053 | 0.083 | 0.129 | 0.205 | 0.331 | 0.517 |
| 125                      | 0.002                  | 0.004 | 0.006 | 0.009 | 0.017 | 0.026 | 0.040 | 0.066 | 0.103 | 0.162 | 0.257 | 0.414 | 0.647 |
| 150                      | 0.003                  | 0.005 | 0.008 | 0.011 | 0.020 | 0.031 | 0.049 | 0.079 | 0.124 | 0.194 | 0.308 | 0.497 | 0.776 |
| 175                      | 0.003                  | 0.006 | 0.009 | 0.013 | 0.023 | 0.036 | 0.057 | 0.093 | 0.145 | 0.226 | 0.359 | 0.580 | 0.906 |
| 200                      | 0.004                  | 0.007 | 0.010 | 0.015 | 0.026 | 0.041 | 0.065 | 0.106 | 0.166 | 0.259 | 0.411 | 0.662 | 1.035 |
| 225                      | 0.004                  | 0.007 | 0.012 | 0.017 | 0.030 | 0.047 | 0.073 | 0.119 | 0.186 | 0.291 | 0.462 | 0.745 | 1.164 |
| 250                      | 0.005                  | 0.008 | 0.013 | 0.019 | 0.033 | 0.052 | 0.081 | 0.132 | 0.207 | 0.323 | 0.513 | 0.828 | 1.294 |
| 275                      | 0.005                  | 0.009 | 0.014 | 0.020 | 0.036 | 0.057 | 0.089 | 0.146 | 0.228 | 0.356 | 0.565 | 0.911 | 1.423 |
| 300                      | 0.006                  | 0.010 | 0.016 | 0.022 | 0.040 | 0.062 | 0.097 | 0.159 | 0.248 | 0.388 | 0.616 | 0.994 | 1.552 |
| 350                      | 0.007                  | 0.012 | 0.018 | 0.026 | 0.046 | 0.072 | 0.113 | 0.185 | 0.290 | 0.453 | 0.719 | 1.159 | 1.811 |
| 400                      | 0.007                  | 0.013 | 0.021 | 0.030 | 0.053 | 0.083 | 0.129 | 0.212 | 0.331 | 0.517 | 0.822 | 1.325 | 2.070 |
| 450                      | 0.008                  | 0.015 | 0.023 | 0.034 | 0.060 | 0.093 | 0.146 | 0.238 | 0.373 | 0.582 | 0.924 | 1.490 | 2.329 |
| 500                      | 0.009                  | 0.017 | 0.026 | 0.037 | 0.066 | 0.103 | 0.162 | 0.265 | 0.414 | 0.647 | 1.027 | 1.656 | 2.587 |

| Average Rod Speed (in/s) | Cylinder Diameter (in) |       |       |       |       |       |         |        |        |        |        |       |        |       |        |        |       |
|--------------------------|------------------------|-------|-------|-------|-------|-------|---------|--------|--------|--------|--------|-------|--------|-------|--------|--------|-------|
|                          | 5/16"                  | 7/16" | 9/16" | 3/4"  | 7/8"  | 1"    | 1-1/16" | 1-1/8" | 1-1/4" | 1-1/2" | 1-3/4" | 2"    | 2-1/2" | 3"    | 3-1/4" | 3-5/8" | 4"    |
| 1                        | 0.001                  | 0.002 | 0.003 | 0.005 | 0.006 | 0.008 | 0.010   | 0.011  | 0.013  | 0.019  | 0.026  | 0.034 | 0.053  | 0.076 | 0.090  | 0.111  | 0.136 |
| 2                        | 0.002                  | 0.003 | 0.005 | 0.010 | 0.013 | 0.017 | 0.019   | 0.021  | 0.026  | 0.038  | 0.052  | 0.068 | 0.106  | 0.153 | 0.179  | 0.223  | 0.271 |
| 3                        | 0.002                  | 0.005 | 0.008 | 0.014 | 0.019 | 0.025 | 0.029   | 0.032  | 0.040  | 0.057  | 0.078  | 0.102 | 0.159  | 0.229 | 0.269  | 0.334  | 0.407 |
| 4                        | 0.003                  | 0.006 | 0.011 | 0.019 | 0.026 | 0.034 | 0.038   | 0.043  | 0.053  | 0.076  | 0.104  | 0.136 | 0.212  | 0.305 | 0.358  | 0.446  | 0.543 |
| 5                        | 0.004                  | 0.008 | 0.013 | 0.024 | 0.032 | 0.042 | 0.048   | 0.054  | 0.066  | 0.095  | 0.130  | 0.170 | 0.265  | 0.382 | 0.448  | 0.557  | 0.678 |
| 6                        | 0.005                  | 0.010 | 0.016 | 0.029 | 0.039 | 0.051 | 0.057   | 0.064  | 0.079  | 0.114  | 0.156  | 0.204 | 0.318  | 0.458 | 0.537  | 0.669  | 0.814 |
| 7                        | 0.006                  | 0.011 | 0.019 | 0.033 | 0.045 | 0.059 | 0.067   | 0.075  | 0.093  | 0.134  | 0.182  | 0.237 | 0.371  | 0.534 | 0.627  | 0.780  | 0.950 |
| 8                        | 0.007                  | 0.013 | 0.021 | 0.038 | 0.052 | 0.068 | 0.077   | 0.086  | 0.106  | 0.153  | 0.208  | 0.271 | 0.424  | 0.611 | 0.717  | 0.891  | 1.085 |
| 9                        | 0.007                  | 0.015 | 0.024 | 0.043 | 0.058 | 0.076 | 0.086   | 0.097  | 0.119  | 0.172  | 0.234  | 0.305 | 0.477  | 0.687 | 0.806  | 1.003  | 1.221 |
| 10                       | 0.008                  | 0.016 | 0.027 | 0.048 | 0.065 | 0.085 | 0.096   | 0.107  | 0.132  | 0.191  | 0.260  | 0.339 | 0.530  | 0.763 | 0.896  | 1.114  | 1.357 |
| 11                       | 0.009                  | 0.018 | 0.030 | 0.052 | 0.071 | 0.093 | 0.105   | 0.118  | 0.146  | 0.210  | 0.286  | 0.373 | 0.583  | 0.839 | 0.985  | 1.226  | 1.492 |
| 12                       | 0.010                  | 0.019 | 0.032 | 0.057 | 0.078 | 0.102 | 0.115   | 0.129  | 0.159  | 0.229  | 0.312  | 0.407 | 0.636  | 0.916 | 1.075  | 1.337  | 1.628 |
| 14                       | 0.012                  | 0.023 | 0.038 | 0.067 | 0.091 | 0.119 | 0.134   | 0.150  | 0.185  | 0.267  | 0.364  | 0.475 | 0.742  | 1.068 | 1.254  | 1.560  | 1.899 |
| 16                       | 0.013                  | 0.026 | 0.043 | 0.076 | 0.104 | 0.136 | 0.153   | 0.172  | 0.212  | 0.305  | 0.415  | 0.543 | 0.848  | 1.221 | 1.433  | 1.783  | 2.171 |
| 18                       | 0.015                  | 0.029 | 0.048 | 0.086 | 0.117 | 0.153 | 0.172   | 0.193  | 0.238  | 0.343  | 0.467  | 0.611 | 0.954  | 1.374 | 1.612  | 2.006  | 2.442 |
| 20                       | 0.017                  | 0.032 | 0.054 | 0.095 | 0.130 | 0.170 | 0.191   | 0.215  | 0.265  | 0.382  | 0.519  | 0.678 | 1.060  | 1.526 | 1.791  | 2.229  | 2.713 |

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



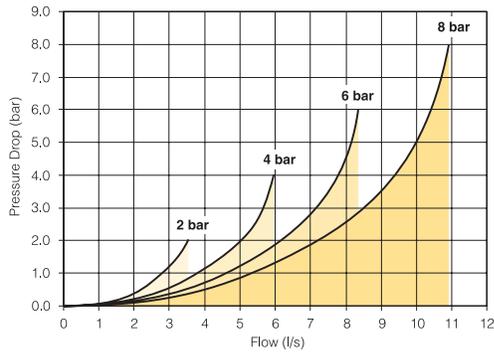
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D20

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

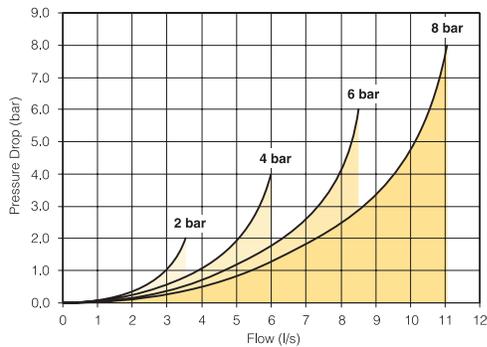
**Flow Characteristics**

**Dual 3/2**



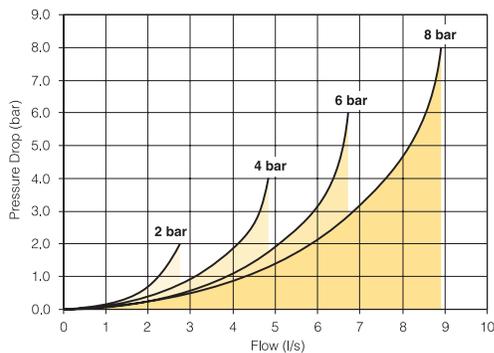
Operating pressure: 39 to 120.3 PSI (2.7 to 8.3 bar)  
 Change-over time (side 14): Actuation 15 ms  
 Return 20 ms P = 6b  
 Change-over time (side 12): 15 ms / 25 ms P = 6b  
 Flow (acc. to ISO 6358): c = 1.2 NI/s x bar  
 b = 0.13  
 Qn = 4.6 NI/s  
 Qmax = 8.4 NI/s

**5/2 single and double solenoid**



Operating pressure: Single solenoid 39 to 120.3 PSI (2.7 to 8.3 bar)  
 Double solenoid 24.6 to 120.3 PSI (1.7 to 8.3 bar)  
 Change-over time: Single solenoid Actuation 15 ms  
 Return 20 ms P = 6b  
 Double solenoid 13 ms / 13 ms P = 6b  
 Flow (acc. to ISO 6358): c = 1.2 NI/s x bar  
 b = 0.13  
 Qn = 4.7 NI/s  
 Qmax = 8.5 NI/s

**5/3 all ports blocked**



Operating pressure: 39 to 120.3 PSI (2.7 to 8.3 bar)  
 Change-over time: Actuation 20 ms  
 Return 20 ms P = 6b  
 Flow (acc. to ISO 6358): c = 1 NI/s x bar  
 b = 0.14  
 Qn = 3.8 NI/s  
 Qmax = 6.7 NI/s

**Characteristics**

Fluid: Air or inert gas  
 Filtered 40 μ  
 Class 5 (according to ISO 8573-1)  
 Dry class 4 (according to ISO 8573-1)  
 Non-lubricated or lubricated  
 Storage temperature: 104°F to 158°F (-40°C to 70°C)  
 Working temperature: 5°F to 122°F (-15°C to 50°C)  
 Vibration: according to IEC 68-2-6  
 2G to 150 Hz  
 Shock: according to IEC 68-2-27  
 15G 11 ms

Operating pressure: -13 to 120.3 PSI (-0.9 to 8.3 bar)  
 with external pressure 87 PSI (6 bar)  
 Piloting pressure: 37 to 120.3 PSI (2.7 to 8.3 bar)  
 Exhaust collection: Independent exhaust collection  
 Rated coil voltage: 24 VDC -15 % / +10 %  
 Electrical connection: Not polarized  
 Coil insulation: Class B  
 Power consumption: 1 W (42 mA) with LED  
 Duty factor: 100 % at 68°F (20°C)



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D21

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

**Subbase & Manual Valves**

**H Series Micro**

**Moduflex Series**

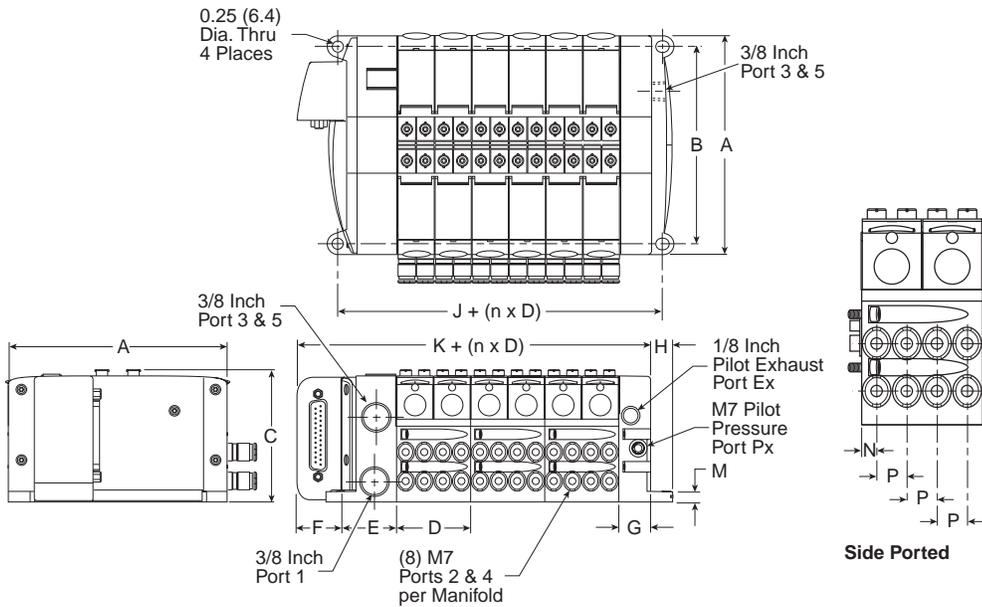
**H Series ISO**

**Network Connectivity**

**DX ISOMAX Series**

**Valvair II Series**

**25-pin, D-Sub with H Series Micro Valves, Side Ported**



**Dimensions**

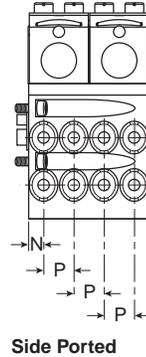
|                 |                 |                |                |
|-----------------|-----------------|----------------|----------------|
| <b>A</b>        | <b>B</b>        | <b>C</b>       | <b>D</b>       |
| 4.88<br>(124.0) | 4.41<br>(112.0) | 2.95<br>(75.0) | 1.65<br>(42.0) |

|                |                |                |                |
|----------------|----------------|----------------|----------------|
| <b>E</b>       | <b>F</b>       | <b>G</b>       | <b>H</b>       |
| 1.22<br>(31.0) | 1.02<br>(26.0) | 0.71<br>(18.0) | 0.49<br>(12.5) |

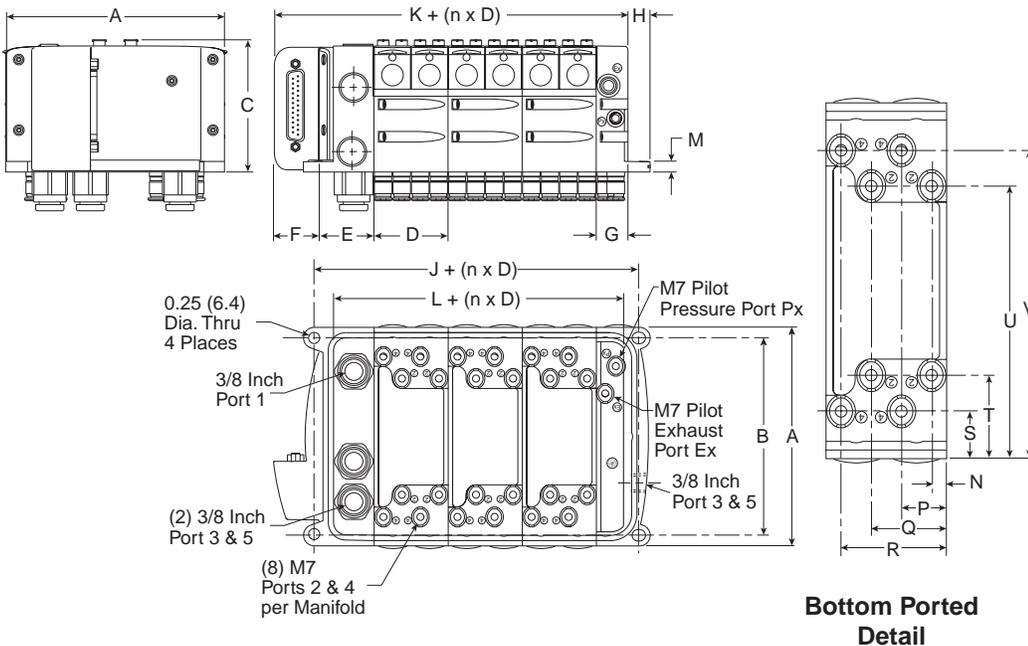
|                |                |               |               |
|----------------|----------------|---------------|---------------|
| <b>J</b>       | <b>K</b>       | <b>M</b>      | <b>N</b>      |
| 2.28<br>(58.0) | 3.44<br>(87.5) | 0.24<br>(6.1) | 0.21<br>(5.2) |

|                |
|----------------|
| <b>P</b>       |
| 0.41<br>(10.5) |

Inches (mm)  
 n = Number of manifolds



**25-pin, D-Sub with H Series Micro Valves, Bottom Ported**



**Dimensions**

|                 |                 |                |                |
|-----------------|-----------------|----------------|----------------|
| <b>A</b>        | <b>B</b>        | <b>C</b>       | <b>D</b>       |
| 4.88<br>(124.0) | 4.41<br>(112.0) | 2.95<br>(75.0) | 1.65<br>(42.0) |

|                |                |                |                |
|----------------|----------------|----------------|----------------|
| <b>E</b>       | <b>F</b>       | <b>G</b>       | <b>H</b>       |
| 1.22<br>(31.0) | 1.02<br>(26.0) | 0.71<br>(18.0) | 0.49<br>(12.5) |

|                |                |                |               |
|----------------|----------------|----------------|---------------|
| <b>J</b>       | <b>K</b>       | <b>L</b>       | <b>M</b>      |
| 2.28<br>(58.0) | 3.44<br>(87.5) | 1.69<br>(43.0) | 0.24<br>(6.1) |

|               |                |                |                |
|---------------|----------------|----------------|----------------|
| <b>N</b>      | <b>P</b>       | <b>Q</b>       | <b>R</b>       |
| 0.21<br>(5.3) | 0.62<br>(15.8) | 1.03<br>(26.3) | 1.45<br>(36.8) |

|                 |                |                |                 |
|-----------------|----------------|----------------|-----------------|
| <b>S</b>        | <b>T</b>       | <b>U</b>       | <b>V</b>        |
| 0.64<br>(16.40) | 1.14<br>(29.0) | 3.73<br>(94.9) | 4.23<br>(107.4) |

Inches (mm)  
 n = Number of manifolds

**Bottom Ported Detail**

**Note:**  
 See Fieldbus Section for the dimensions of manifolds utilizing the H Series Fieldbus, Turck, or Modflex end plate type.



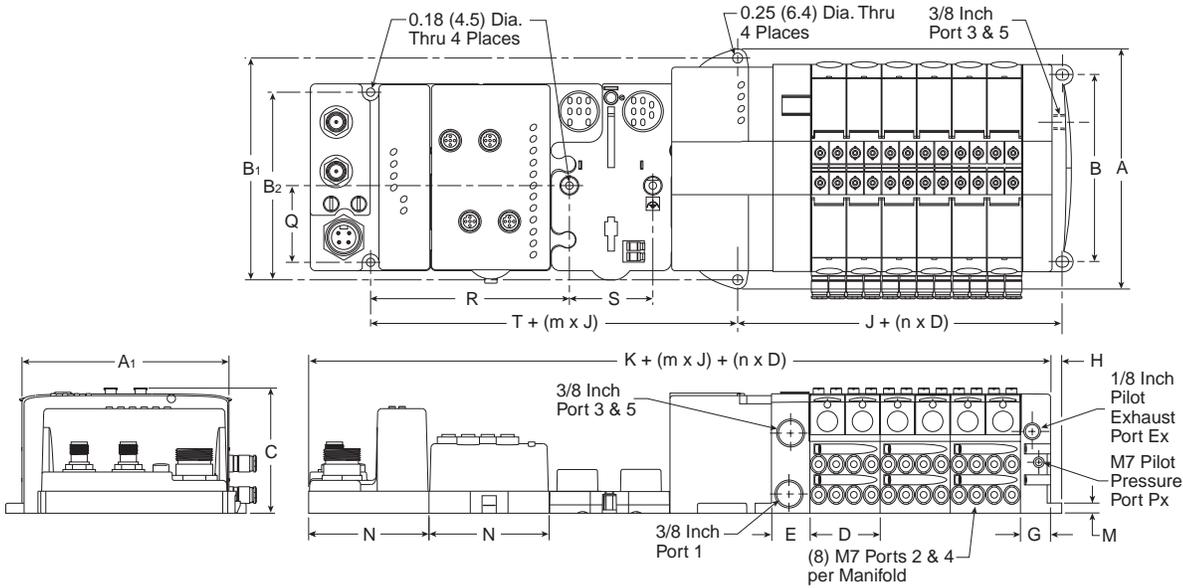
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D22

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**H Series Fieldbus with H Series Micro Valves, Side Ported**

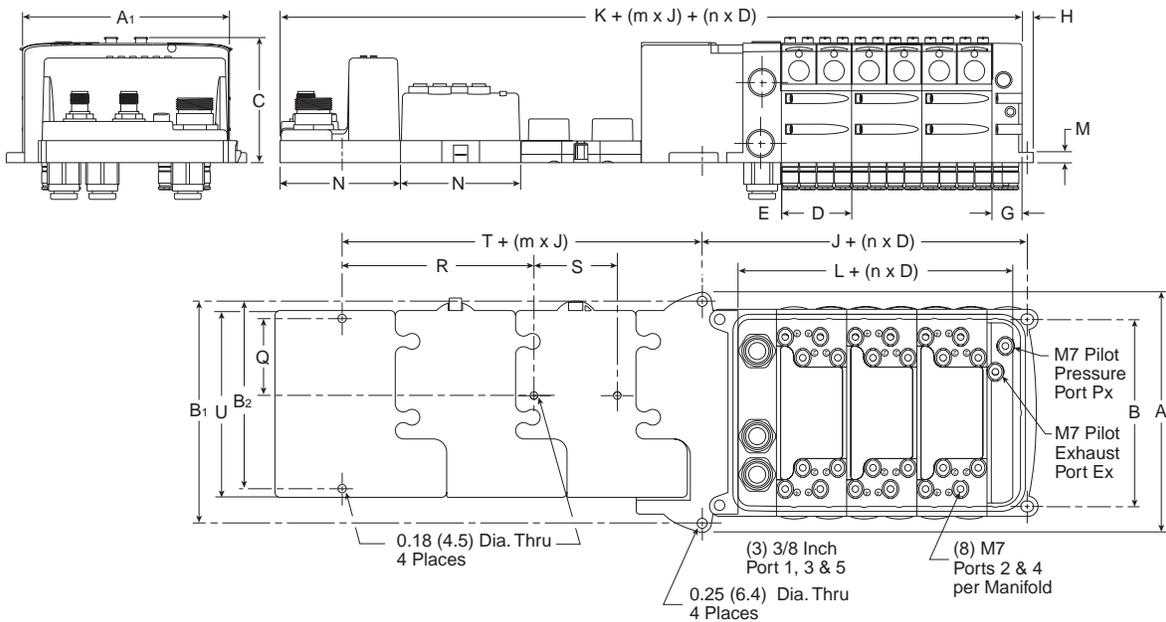


**Dimensions**

|                 |                      |                 |                      |                      |                |                 |                |                |
|-----------------|----------------------|-----------------|----------------------|----------------------|----------------|-----------------|----------------|----------------|
| <b>A</b>        | <b>A<sub>1</sub></b> | <b>B</b>        | <b>B<sub>1</sub></b> | <b>B<sub>2</sub></b> | <b>C</b>       | <b>D</b>        | <b>E</b>       | <b>G</b>       |
| 5.67<br>(144.0) | 4.88<br>(124.0)      | 4.41<br>(112.0) | 5.24<br>(133.0)      | 4.02<br>(102.0)      | 2.95<br>(75.0) | 1.65<br>(42.0)  | 0.91<br>(23.0) | 0.71<br>(18.0) |
| <b>H</b>        | <b>J</b>             | <b>K</b>        | <b>M</b>             | <b>N</b>             | <b>Q</b>       | <b>R</b>        | <b>S</b>       | <b>T</b>       |
| 0.49<br>(12.5)  | 2.72<br>(69.0)       | 7.32<br>(186.0) | 0.24<br>(6.1)        | 2.83<br>(72.0)       | 1.81<br>(46.0) | 4.72<br>(120.0) | 2.01<br>(51.0) | 2.01<br>(51.0) |

Inches (mm)  
 n = Number of Manifolds  
 m = Number of Modules

**H Series Fieldbus with H Series Micro Valves, Bottom Ported**



**Dimensions**

|                 |                      |                 |                      |                      |                |                 |                |                |                |
|-----------------|----------------------|-----------------|----------------------|----------------------|----------------|-----------------|----------------|----------------|----------------|
| <b>A</b>        | <b>A<sub>1</sub></b> | <b>B</b>        | <b>B<sub>1</sub></b> | <b>B<sub>2</sub></b> | <b>C</b>       | <b>D</b>        | <b>E</b>       | <b>G</b>       | <b>H</b>       |
| 5.67<br>(144.0) | 4.88<br>(124.0)      | 4.41<br>(112.0) | 5.24<br>(133.0)      | 4.02<br>(102.0)      | 2.95<br>(75.0) | 1.65<br>(42.0)  | 0.91<br>(23.0) | 0.71<br>(18.0) | 0.49<br>(12.5) |
| <b>J</b>        | <b>K</b>             | <b>L</b>        | <b>M</b>             | <b>N</b>             | <b>Q</b>       | <b>R</b>        | <b>S</b>       | <b>T</b>       | <b>U</b>       |
| 2.72<br>(69.0)  | 7.32<br>(186.0)      | 1.69<br>(43.0)  | 0.24<br>(6.1)        | 2.83<br>(72.0)       | 1.81<br>(46.0) | 4.72<br>(120.0) | 2.01<br>(51.0) | 2.01<br>(51.0) | 4.41<br>(112)  |

Inches (mm)  
 n = Number of Manifolds  
 m = Number of Modules



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D23

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 Richland, Michigan  
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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

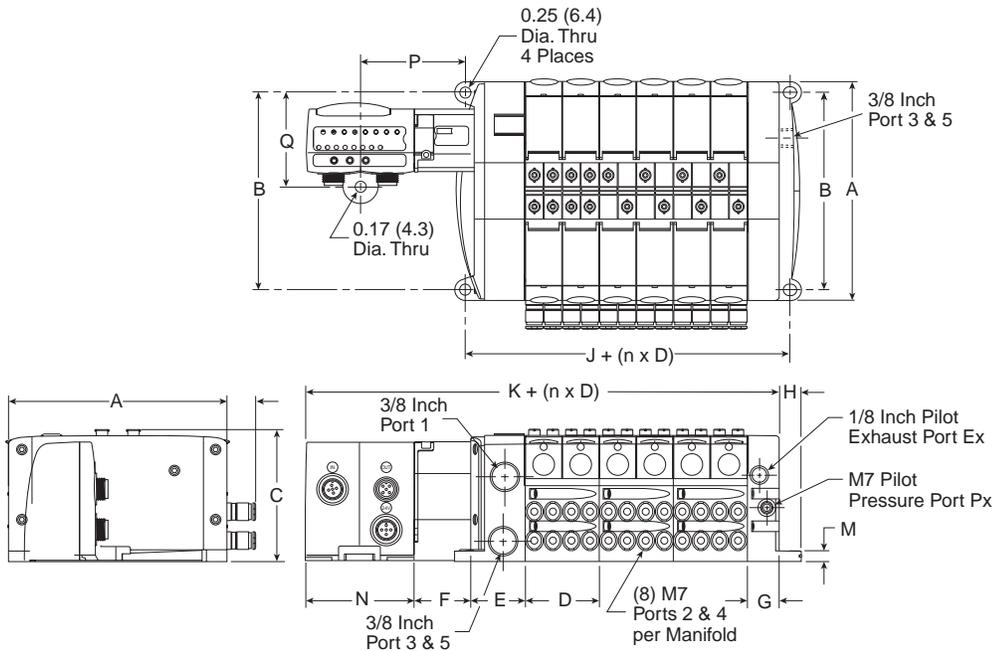
H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Moduflex with H Series Micro Valves, Side Ported**

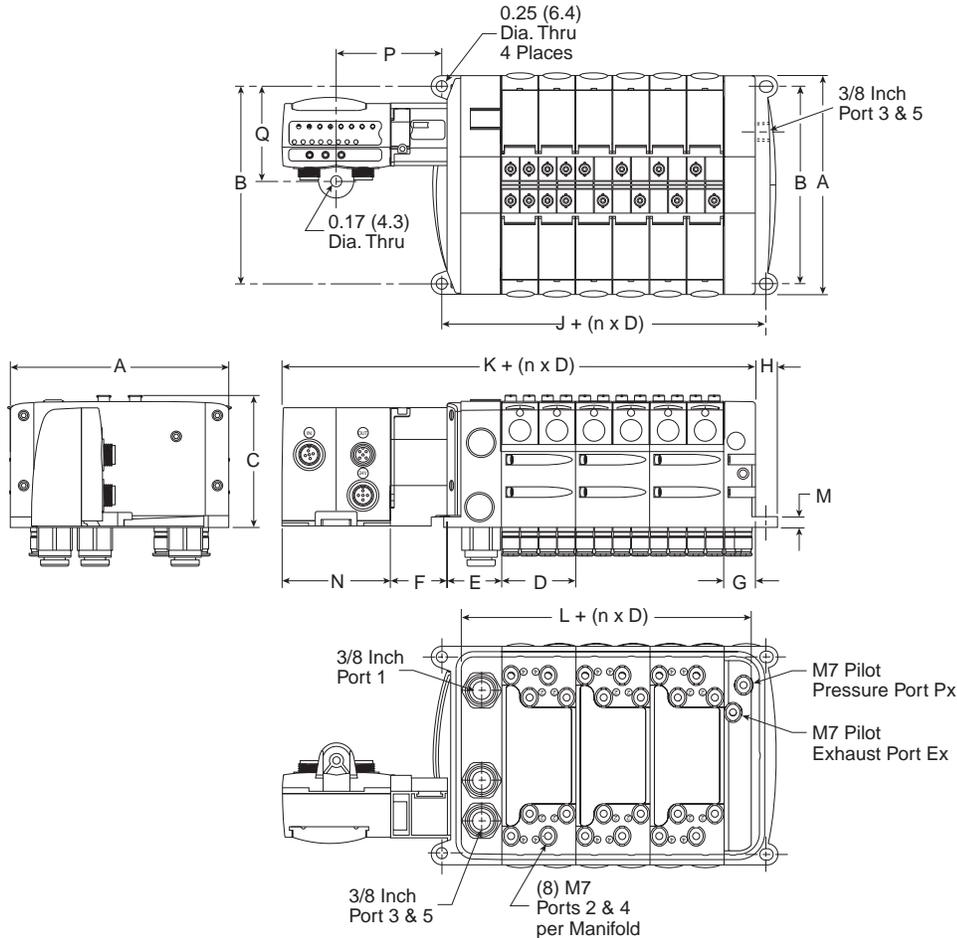


**Dimensions**

| A               | B               | C              | D              |
|-----------------|-----------------|----------------|----------------|
| 4.88<br>(124.0) | 4.41<br>(112.0) | 2.95<br>(75.0) | 1.65<br>(42.0) |
| E               | F               | G              | H              |
| 1.22<br>(31.0)  | 1.28<br>(32.5)  | 0.71<br>(18.0) | 0.49<br>(12.5) |
| J               | K               | M              | N              |
| 2.28<br>(58.0)  | 6.10<br>(155.0) | 0.24<br>(6.1)  | 2.40<br>(61.0) |
| P               | Q               |                |                |
| 2.36<br>(60.0)  | 2.07<br>(52.55) |                |                |

Inches (mm)  
 n = Number of manifolds

**Moduflex with H Series Micro Valves, Bottom Ported**



**Dimensions**

| A               | B               | C               | D              |
|-----------------|-----------------|-----------------|----------------|
| 4.88<br>(124.0) | 4.41<br>(112.0) | 2.95<br>(75.0)  | 1.65<br>(42.0) |
| E               | F               | G               | H              |
| 1.22<br>(31.0)  | 1.02<br>(26.0)  | 0.71<br>(18.0)  | 0.49<br>(12.5) |
| J               | K               | L               | M              |
| 2.28<br>(58.0)  | 6.10<br>(155.0) | 1.69<br>(43.0)  | 0.24<br>(6.1)  |
| N               | P               | Q               |                |
| 2.40<br>(61.0)  | 2.36<br>(60.0)  | 2.07<br>(52.55) |                |

Inches (mm)  
 n = Number of manifolds

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

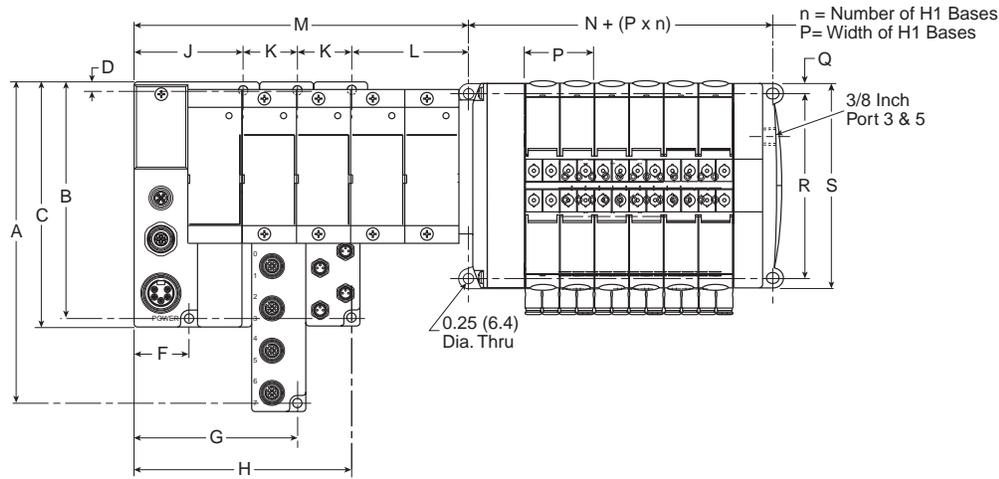


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D24

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 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Turck with H Series Micro Valves, Side Ported**

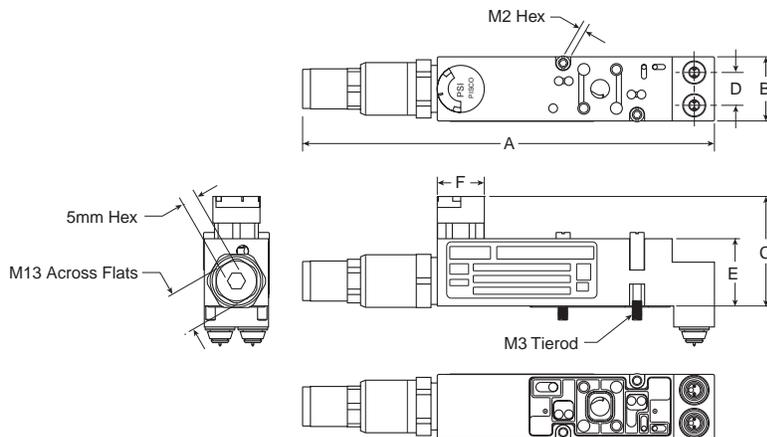


**Dimensions**

| A              | B              | C               | D              |
|----------------|----------------|-----------------|----------------|
| 7.48<br>(190)  | 5.51<br>(140)  | 5.71<br>(145)   | 0.20<br>(5)    |
| F              | G              | H               | J              |
| 1.28<br>(32.5) | 3.79<br>(96.5) | 5.06<br>(128.5) | 2.53<br>(64.5) |
| K              | L              | M               | N              |
| 1.26<br>(32)   | 2.54<br>(64)   | See<br>note 1   | 2.28<br>(58)   |
| P              | Q              | R               | S              |
| 1.65<br>(42)   | .19<br>(4.9)   | 4.41<br>(112)   | 4.88<br>(124)  |

Note 1:  $M = J + L + n_2 \times K$ , where  $n_2$  = Number of Turck input / output modules  
 Inches (mm)

**Sandwich Regulator**



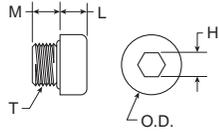
**Dimensions**

| A              | B              | C            | D              |
|----------------|----------------|--------------|----------------|
| 5.20<br>(132)  | 0.81<br>(20.5) | 1.38<br>(35) | 0.41<br>(10.5) |
| E              | F              |              |                |
| 0.85<br>(21.5) | 0.59Ø<br>(15Ø) |              |                |

Inches (mm)

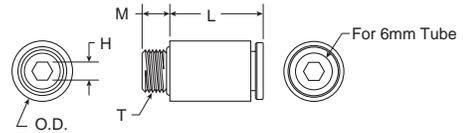
**M7 Fittings**

**PS567900 – Kit PSM0013**



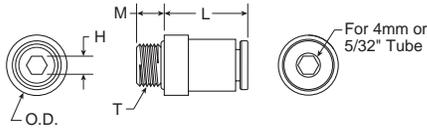
| Part no. | L             | M           | H hex       | T thread | O.D.         |
|----------|---------------|-------------|-------------|----------|--------------|
| PS567900 | 0.18<br>(4.5) | 0.20<br>(5) | 0.16<br>(4) | M7 x 1   | 0.39<br>(10) |

**PS567906**



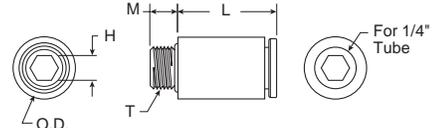
| Part no. | Tube size | L            | M           | H Hex       | T thread | O.D.         |
|----------|-----------|--------------|-------------|-------------|----------|--------------|
| PS567906 | 6mm       | 0.63<br>(16) | 0.20<br>(5) | 0.12<br>(3) | M7 x 1   | 0.39<br>(10) |

**PS567904**



| Part no. | Tube size       | L            | M           | H Hex       | T thread | O.D.         |
|----------|-----------------|--------------|-------------|-------------|----------|--------------|
| PS567904 | 4mm or<br>5/32" | 0.55<br>(14) | 0.20<br>(5) | 0.12<br>(3) | M7 x 1   | 0.39<br>(10) |

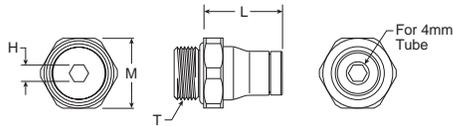
**PS567925**



| Part no. | Tube size | L              | M             | H Hex       | T thread | O.D.           |
|----------|-----------|----------------|---------------|-------------|----------|----------------|
| PS567925 | 1/4"      | 0.65<br>(16.5) | 0.18<br>(4.6) | 0.16<br>(4) | M7 x 1   | 0.41<br>(10.3) |

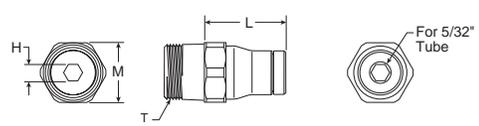
**1/8 Inch Fittings**

**PS568204**



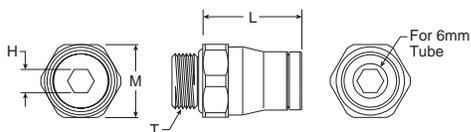
| Part No. | Tube Size | L              | M Hex        | H Hex       | T Thread |
|----------|-----------|----------------|--------------|-------------|----------|
| PS568204 | 4mm       | 0.57<br>(14.5) | 0.51<br>(13) | 0.12<br>(3) | G1 /8    |

**PS568215**



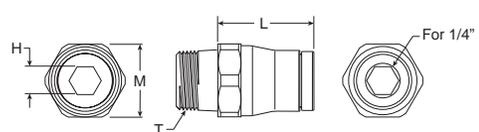
| Part No. | Tube Size | L            | M Hex        | H Hex       | T Thread |
|----------|-----------|--------------|--------------|-------------|----------|
| PS568215 | 5/32"     | 0.59<br>(15) | 0.43<br>(11) | 0.12<br>(3) | 1/8 NPT  |

**PS568206**



| Part no. | Tube size | L              | M Hex        | H Hex       | T thread |
|----------|-----------|----------------|--------------|-------------|----------|
| PS568206 | 6mm       | 0.69<br>(17.5) | 0.51<br>(13) | 0.16<br>(4) | G1/8     |

**PS568225**



| Part no. | Tube size | L            | M Hex        | H Hex       | T thread |
|----------|-----------|--------------|--------------|-------------|----------|
| PS568225 | 1/4"      | 0.67<br>(17) | 0.51<br>(13) | 0.20<br>(5) | 1/8 NPT  |

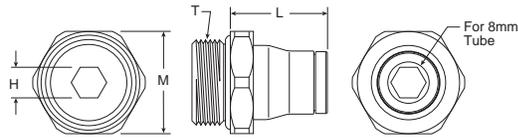
**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

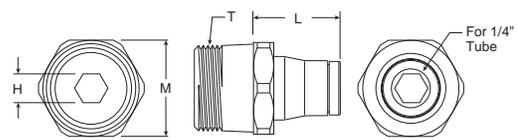
**3/8 Inch Fittings**

**PS568308**



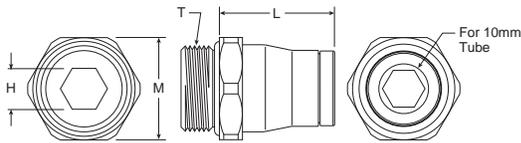
| Part no.        | Tube size | L            | M Hex        | H Hex       | T thread |
|-----------------|-----------|--------------|--------------|-------------|----------|
| <b>PS568308</b> | 8mm       | 0.75<br>(19) | 0.79<br>(20) | 0.24<br>(6) | G3/8     |

**PS568325**



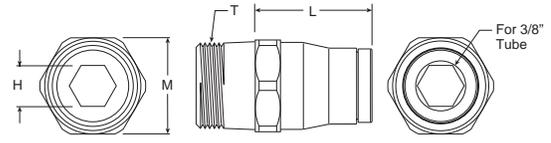
| Part no.        | Tube size | L            | M Hex        | H Hex       | T thread |
|-----------------|-----------|--------------|--------------|-------------|----------|
| <b>PS568325</b> | 1/4"      | 0.67<br>(17) | 0.71<br>(18) | 0.20<br>(5) | 3/8 NPT  |

**PS568310**



| Part no.        | Tube size | L              | M Hex        | H Hex       | T thread |
|-----------------|-----------|----------------|--------------|-------------|----------|
| <b>PS568310</b> | 10mm      | 0.89<br>(22.5) | 0.79<br>(20) | 0.31<br>(8) | G3/8     |

**PS568338**



| Part no.        | Tube size | L            | M Hex        | H Hex       | T thread |
|-----------------|-----------|--------------|--------------|-------------|----------|
| <b>PS568338</b> | 3/8"      | 0.91<br>(23) | 0.71<br>(18) | 0.31<br>(8) | 3/8 NPT  |

**D**

Subbase & Manual  
Valves

H Series  
Micro

Moduflex  
Series

H Series  
ISO

Network  
Connectivity

DX ISOMAX  
Series

Valvair II  
Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Features**

**Moduflex Series**

The Moduflex Valve System redefines flexibility for pneumatic users. Whether configured from basic components or ordered as a pre-assembled and tested valve manifold, Moduflex flexibility is unmatched in the market place.

**Ports**

- Size 1: Push-in connectors for 5/32, 1/4 inch, 4, 6mm OD tube
- Size 2: Push-in connectors for 1/4, 3/8, 1/2 inch, 6, 8, 10 OD tube

**Mounting**

- S Series – Individual subbase
- T Series – Manifold mount with individual connectors
- V Series – Manifold mount with collective wiring or fieldbus

**Network Connectivity Options**

- Industrial Ethernet – EtherNet/IP, PROFINET, Modbus TCP, PowerLink, EtherCAT
- IO-Link – Class A & Class B

**Solenoids**

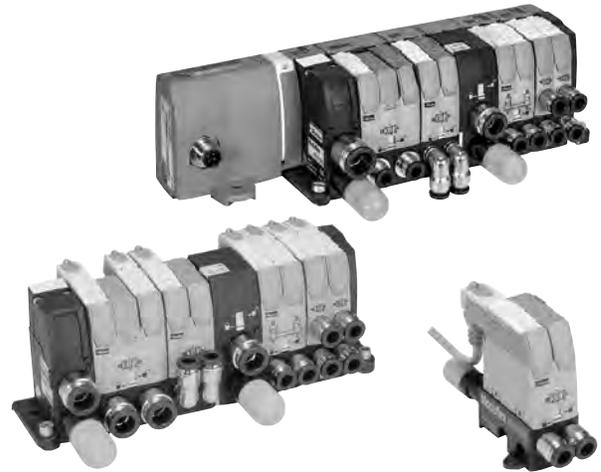
- 1.0 Watt
- 24 VDC
- Compatible with PNP or NPN outputs

**Certification / approval**

- IP65 rated
- CE, as marked

**Material specifications**

|                             |  |
|-----------------------------|--|
| End plates (T and V series) | Plastic                                      |
| Fasteners                   | Nickel plated steel                          |
| Spool                       | Aluminum and nitrile rubber or ceramic plate |
| Subbase or manifold         | Plastic                                      |
| Valve body                  | Plastic                                      |



**Operating information**

|                                 |  |
|---------------------------------|--|
| Operating pressure:             | Vacuum to 123 PSIG (Vacuum to 8.3 bar) |
| Operating temperature:          | 5°F to 140°F (-15°C to 60°C)           |
| Fieldbus operating temperature: | 32°F to 130°F (0°C to 55°C)            |

|                  |                         |
|------------------|-------------------------|
| D                | Subbase & Manual Valves |
|                  | H Series Micro          |
| Moduflex Series  | H Series ISO            |
|                  | Network Connectivity    |
| DX ISOMAX Series | Valvair II Series       |

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

## Features

### Module Series Selection and Assembly Procedures

Moduflex system provides a complete choice of either stand-alone valves, short-build valve islands, or large valve island configurations. Electrical control connections may be individual or island integrated. Peripheral modules add complementary functions — flow control, pressure regulation, P.O. check valves and vacuum generators can be added directly to the valve or used as a stand alone product.

Moduflex gives machine builders maximum flexibility to assemble each automation system step by step using basic modules.

Valve islands can be easily assembled using the following procedure.

1. Assemble the required valve island with the basic modules.
2. Mount the valve island on the machine together with any stand-alone valves and peripheral modules.
3. Select and install the required clip-on pneumatic and electrical connectors.

### “S” Series Stand Alone Valves

For isolated cylinders on a machine, it is preferable to locate the valve close by. Therefore a stand-alone module is ideal. Response time and air consumption are then reduced to a minimum. Peripheral modules can be installed directly into the valve.



“S” Series Size 1 Single Solenoid



“S” Series Size 1 Single Air Pilot



Straight or Elbow Pneumatic Connectors



Union Pneumatic Connectors

Dual P.O. Check Valve



## Subbase & Manifold Valve Products “S” & “T” Series

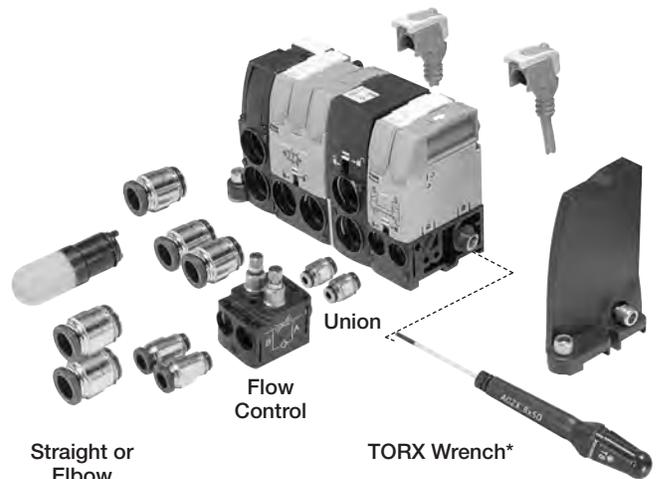
### “T” Series Valve Island Modules with Individual Connectors

For small groups of cylinders requiring short localized valve islands, it is convenient to use individual electrical connector islands.



“T” Series Island Modules

“T” Series modules are easily assembled to form a complete manifold. All electrical connectors are individual and pneumatic connectors are of the push-in tube type. Modules with different functions and flow passages may be combined in the same island manifold, giving total flexibility to adapt to all machine requirements.



Straight or Elbow Pneumatic Connectors

TORX Wrench\*

\* Maximum torque rating 10.6 in. lbs. (1.2 Nm).



M8 2-pin, male connector



Clip Connector with LED & surge protection

**Features**

**“V” Series Valve Island Modules with Integrated Connections**

When the number of valves is larger, modular islands are easily assembled using the integrated electrical connection series. These islands are then connected to the control PLC, with a multi-connector cable or with a fieldbus connection.

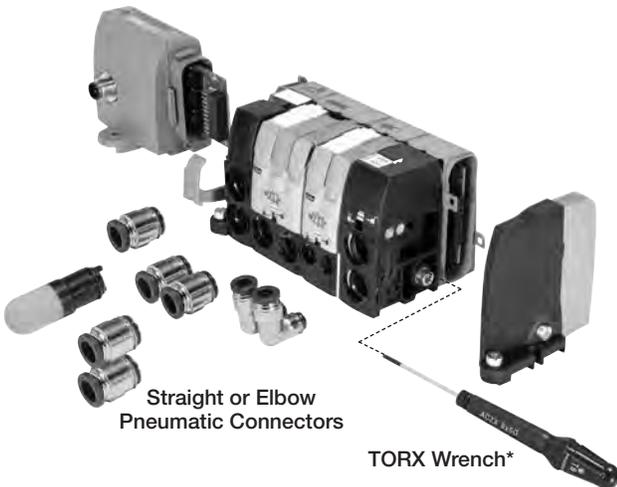


**“V” Series with 20-Pin Connector**



**“V” Series with Field Bus Connection**

“V” Series modules are easily assembled to form a complete manifold. All pneumatic connectors are of the push-in tube type. When the valve island has been installed, it is a simple operation to separate the field bus module from the valve island using the quick release lever. Modules with different functions and flow passages may be combined in the same island manifold, giving total flexibility to adapt to all machine requirements.



**Straight or Elbow Pneumatic Connectors**

**TORX Wrench\***

\* Maximum torque rating 10.6 in. lbs. (1.2 Nm).

**“P” Series Peripheral Modules**

Peripheral Modules are available and can be mounted directly to valves or used as a stand alone product. These modules answer the complementary needs of the cylinders, flow controls, pressure regulation or positioning.



**Flow Control**



**Pressure Regulator**



**Dual P.O. Check Valve**



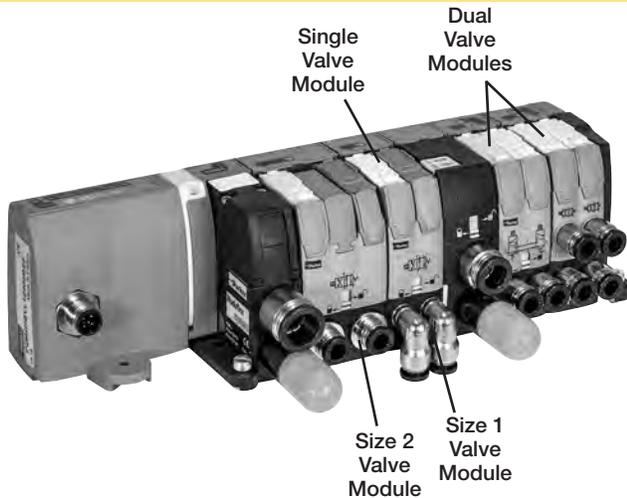
**Vacuum Generator**

|                             |                                    |
|-----------------------------|------------------------------------|
| <b>D</b>                    | <b>Subbase &amp; Manual Valves</b> |
|                             | <b>H Series Micro</b>              |
| <b>Modulflex Series</b>     | <b>H Series ISO</b>                |
| <b>Network Connectivity</b> | <b>DX ISOMAX Series</b>            |
| <b>Valvair-II Series</b>    |                                    |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Valve Function**



Modulflex Valve Islands offer the greatest flexibility for your design requirements.

Valve Modules are available as 4-Way or 3-Way valves and can be ordered as single or dual valves. A Single Valve Module has one valve in one valve body. A Dual Valve Module will have 2 valves in one valve body. Each Valve in the Dual Valve Body is controlled by a solenoid or air pilot and can be operated independently from the other valve in the same body. There are no dimensional difference between a single and a dual valve. Flow Rates are reduced on the dual valves.

Single valve modules offer Ceramic Slide Valve Technology while dual valve modules offer WCS – Wear Compensation System Technology. Both offer low friction shift forces, fast response and less spool wear.

Valve Modules are available in two different valve body sizes. Size 1 and Size 2 Valve Modules can be combined in both “T” and “V” Series Valve Islands without transition kits.

**4/2, 4-Way, 2-Position Valves**

| Single Valves | ANSI Symbol | Description  | Size 1 Body | Size 2 Body |
|---------------|-------------|--|-------------|-------------|
|               |             | Single Solenoid, Spring Return Valve   | Cv = .32    | Cv = .80    |
|               |             | Single Air Pilot, Spring Return Valve  |             |             |
|               |             | Double Solenoid Valve  | Cv = .32    | Cv = .80    |
|               |             | Double Air Pilot Valve   |             |             |
| Dual Valves   | ANSI Symbol | Description  | Size 1 Body | Size 2 Body |
|               |             | (2) Single Solenoid, Spring Return Valve with Exhaust Check.<br>Double Solenoid Valve Body   | Cv = .18    | N/A         |
|               |             | (2) Single Air Pilot, Spring Return Valve with Exhaust Check.<br>Double Air Pilot Valve Body |             |             |

D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

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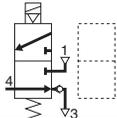
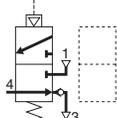
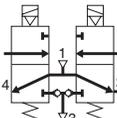
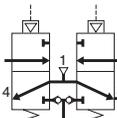
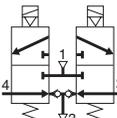
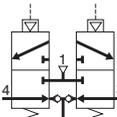


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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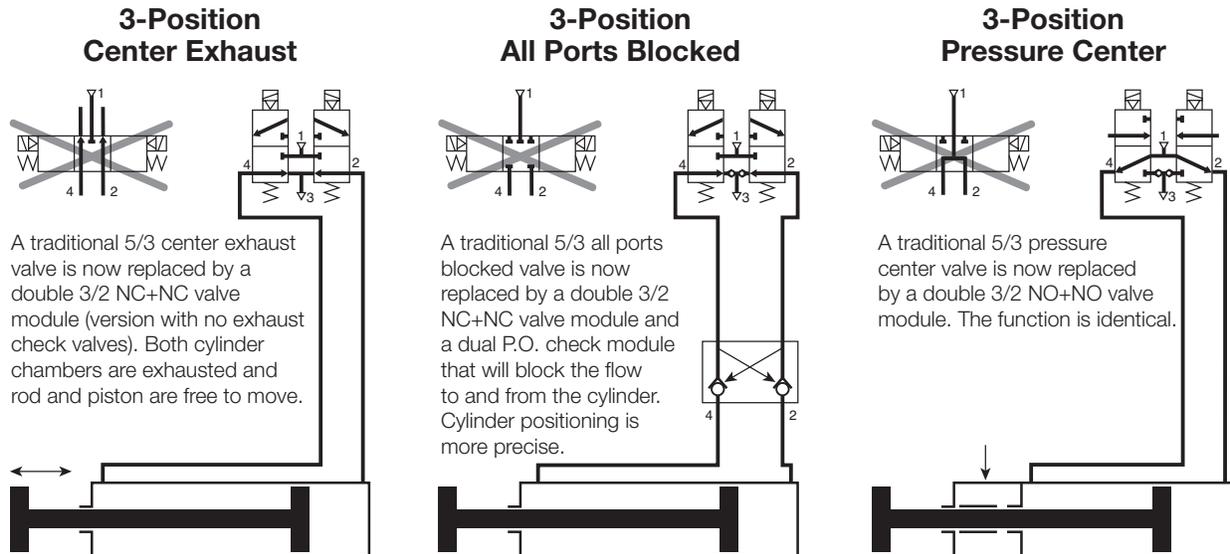
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3/2, 3-Way, 2-Position Valves

| Single Valves  | ANSI Symbol   | Description  | Size 1 Body | Size 2 Body |
|--|---|--|-------------|-------------|
|   |    | Single Solenoid, NC, Spring Return Valve with Exhaust Check.                                     | Cv = .22    | Cv = .44    |
|   |    | Single Air Pilot, NC, Spring Return Valve with Exhaust Check.                                    |             |             |
| Dual Valves  | ANSI Symbol   | Description  | Size 1 Body | Size 2 Body |
|   |    | (2) Single Solenoid, NO, Spring Return Valve with Exhaust Check.<br>Double Solenoid Valve Body   | Cv = .22    | Cv = .44    |
|   |    | (2) Single Air Pilot, NO, Spring Return Valve with Exhaust Check.<br>Double Air Pilot Valve Body |             |             |
|  |   | (2) Single Solenoid, NC, Spring Return Valve with Exhaust Check.<br>Double Solenoid Valve Body   | Cv = .22    | Cv = .44    |
|  |  | (2) Single Air Pilot, NC, Spring Return Valve with Exhaust Check.<br>Double Air Pilot Valve Body |             |             |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series

Dual 3/2 Valves Replace All 3-Position Valves for a Better Performance



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**"S" Series Individual Subbase Valves (Valve & Base without Pneumatic Connectors)**

|   | Symbol  | Type   | Operator  | Pilot connector                        | Cv                                     | Part number       |                    |                    |
|---|---|--|---|--|--|-------------------|--------------------|--------------------|
|   |   |  |   |  |  | Size 1            | Size 2             |                    |
|  |  | 4-way, 2-position  | Single solenoid                                       | M8 Lockable                            | 0.32                                   | <b>P2M1S4ES2C</b> | <b>P2M2S4ES2C</b>  |                    |
|   |   |  |   | Clip                                   |  | P2M1S4ES2CW       | P2M2S4ES2CW        |                    |
|   |   |  | Single air pilot                                      |  | P2M1S4PS                               | P2M2S4PS          |                    |                    |
|   | Double solenoid   | 4-way, 2-position  | 4-way, 2-position                                     | Double solenoid                        | M8 Lockable                            | 0.32              | <b>P2M1S4EE2C</b>  | <b>P2M2S4EE2C</b>  |
|   |   |  |   |  | Clip                                   |                   | P2M1S4EE2CW        | P2M2S4EE2CW        |
|   |   |  |   | Double air pilot                       |  | P2M1S4PP          | P2M2S4PP           |                    |
|  |  | 3-way, 2-position, dual valve, NC/NC w/ exhaust check                              | Double solenoid                                       | M8 Lockable                            | 0.22                                   | <b>P2M1SDEE2C</b> | <b>P2M2SDEE2C</b>  |                    |
|   |   |  |   | Clip                                   |  | P2M1SDEE2CW       | P2M2SDEE2CW        |                    |
|   |   |  | Double air pilot                                      |  | P2M1SDPP                               | P2M2SDPP          |                    |                    |
|   | Double Solenoid   | 3-way, 2-position, dual valve, NO/NO w/ exhaust check                              | 3-way, 2-position, dual valve, NO/NO w/ exhaust check | Double solenoid                        | M8 Lockable                            | 0.22              | <b>P2M1SC EE2C</b> | <b>P2M2SC EE2C</b> |
|   |   |  |   |  | Clip                                   |                   | P2M1SC EE2CW       | P2M2SC EE2CW       |
|   |   |  |   | Double air pilot                       |  | P2M1SC PP         | P2M2SC PP          |                    |
|  |  | 3-way, 2-position, dual valve, NC/NO w/ exhaust check                              | Double solenoid                                       | M8 Lockable                            | 0.22                                   | <b>P2M1SEEE2C</b> | <b>P2M2SEEE2C</b>  |                    |
|   |   |  |   | Clip                                   |  | P2M1SEEE2CW       | P2M2SEEE2CW        |                    |
|   |   |  | Single Air Pilot                                      | 3-way, 2-position, NC w/ exhaust check | 3-way, 2-position, NC w/ exhaust check | Single solenoid   | M8 Lockable        | 0.22               |
|   | Clip  | P2M1S3ES2CW  |   |  |  | P2M2S3ES2CW       |                    |                    |
|   | Single air pilot  |  |   |  |  | P2M1S3PS          | P2M2S3PS           |                    |
|   | Double Solenoid   |  | 3-way, 2-position, dual valve, NC/NC                  | Double solenoid                        | M8 Lockable                            | 0.22              | <b>P2M1SGEE2C</b>  | <b>P2M2SGEE2C</b>  |
| Clip  |   |  |   |  | P2M1SGEE2CW                            |                   | P2M2SGEE2CW        |                    |

Note: Includes 5/32" (4mm) Air Pilot Connectors.



M8 2-pin, male connector



Clip Connector with LED & surge protection

 Most popular.



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Subbase & Manual Valves

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H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**"S" Series Accessories**

| Description  | Tube Size (OD)  | Option                               | Part Number        | Part Number        |                   |
|--|---|--------------------------------------|--------------------|--------------------|-------------------|
|  |   |                                      | Size 1             | Size 2             |                   |
| <br>Push to connect fitting   | 5/32"   | Elbow                                | <b>CMD04-1</b>     | —                  |                   |
|  |   | Straight                             | <b>FMD04-1</b>     | —                  |                   |
|  | 1/4"  | Elbow                                | <b>CMD07-1B</b>    | <b>CMD07-2B</b>    |                   |
|  |   | Straight                             | <b>FMD07-1B</b>    | <b>FMD07-2B</b>    |                   |
|  | 3/8"  | Elbow                                | —                  | <b>CMD09-2B</b>    |                   |
|  |   | Straight                             | —                  | <b>FMD09-2B</b>    |                   |
|  | 1/2"  | Straight                             | —                  | <b>FMD13-2B</b>    |                   |
|  | 6mm   | Elbow                                | <b>CMD06-1</b>     | <b>CMD06-2</b>     |                   |
|  |   | Straight                             | <b>FMD06-1</b>     | <b>FMD06-2</b>     |                   |
|  | 8mm   | Elbow                                | —                  | <b>CMD08-2</b>     |                   |
|  |   | Straight                             | —                  | <b>FMD08-2</b>     |                   |
|  | 10mm  | Elbow                                | —                  | <b>CMD10-2</b>     |                   |
|  |   | Straight                             | —                  | <b>FMD10-2</b>     |                   |
|  | <br>Muffler for exhaust port |                                      |                    | <b>MMDVA1</b>      | <b>MMDVA2</b>     |
| <br>Plug  |   |                                      | —                  | <b>PMDYY2</b>      |                   |
| <br>Double male union   |   | Connecting peripheral modules        | <b>HMDXX1</b>      | <b>HMDXX2</b>      |                   |
|  |   | 2m Cable                             | <b>P8LS08L226C</b> | <b>P8LS08L226C</b> |                   |
|  |   | 5m Cable                             | <b>P8LS08L526C</b> | <b>P8LS08L526C</b> |                   |
| <br>M8 female connector to flying lead - IP67 LED and surge protection |   | 9m Cable                             | <b>P8LS08L926C</b> | <b>P8LS08L926C</b> |                   |
|  | <br>Clip connector – IP40  | 1 x Clip connector                   | 1 meter            | <b>P8LW021C</b>    | <b>P8LW021C</b>   |
|  |   | Individual: including 2 flying leads | 2 x Clip connector | 1 meter            | <b>P8LW021C02</b> |
| Multiple: 1 common (0 VDC) and 1 flying lead per connector   |   | 4 x Clip connector                   | 1 meter            | <b>P8LW021C04</b>  | <b>P8LW021C04</b> |
|  |   | 8 x Clip connector                   | 1 meter            | <b>P8LW021C08</b>  | <b>P8LW021C08</b> |
| <br>Field wireable connector  |   | M8 Connector                         | <b>P8CS0803J</b>   | <b>P8CS0803J</b>   |                   |
|  |   | M12 Connector                        | <b>P8CS1204J</b>   | <b>P8CS1204J</b>   |                   |

Note: 85 Durometer minimum for pneumatic connectors.

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**"S" Series Individual Subbase Valve**  
*(Complete with Pneumatic and Electrical Connectors)*

|  |            |          |          |            |           |           |          |           |
|--|------------|----------|----------|------------|-----------|-----------|----------|-----------|
|  | <b>P2M</b> | <b>1</b> | <b>S</b> | <b>4ES</b> | <b>2C</b> | <b>00</b> | <b>A</b> | <b>F4</b> |
|--|------------|----------|----------|------------|-----------|-----------|----------|-----------|

| Basic Series |     |
|--------------|-----|
| Moduflex     | P2M |

| Size   |   |
|--------|---|
| Size 1 | 1 |
| Size 2 | 2 |

| Valve Series       |   |
|--------------------|---|
| Individual Subbase | S |

| Valve Type / Function                           |            |
|---|------------|
| <b>3-Way / 2-Position</b>                       |            |
| Single Solenoid, Nc Spring Return               | 3ES        |
| Single Air Pilot, Nc Spring Return              | 3PS        |
| <b>4-Way / 2-Position</b>                       |            |
| Single Solenoid, Spring Return                  | 4ES        |
| Single Air Pilot, Spring Return                 | 4PS        |
| Double Solenoid                                 | 4EE        |
| Double Air Pilot                                | 4PP        |
| <b>Dual 3-Way, 2-Position, Spring Return</b>    |            |
| Solenoid, NC / NC + PO Check (4/3 APB)          | BEE*       |
| Air Pilot, NC / NC + PO Check (4/3 APB)         | BPP*       |
| Solenoid, NO / NO (4/3 Pressure Ctr.)           | CEE        |
| Air pilot NO / NO (4/3 Pressure Ctr.)           | CPP        |
| <b>Solenoid, NC / NC with Exhaust Check</b>     | <b>DEE</b> |
| Air Pilot, NC / NC with Exhaust Check           | DPP        |
| Solenoid, NO / NC with Exhaust Check            | EEE        |
| Solenoid, NC / NC without Check (4/3 Exh. Ctr.) | GEE        |

| Operator Voltage                |    |
|---------------------------------|----|
| 24VDC                           | 2C |
| Remote Pilot - 5/32" (4mm) Tube | 00 |

| Ports (all ports) |                                     |
|-------------------|-------------------------------------|
| C0*               | 10mm Elbow Fitting                  |
| <b>C4</b>         | <b>5/32" (4mm) Elbow Fitting</b>    |
| C6                | 6mm Elbow Fitting                   |
| <b>C7</b>         | <b>1/4" Elbow Fitting</b>           |
| C8*               | 8mm Elbow Fitting                   |
| <b>C9*</b>        | <b>3/8" Elbow Fitting</b>           |
| F0*               | 10mm Straight Fitting               |
| <b>F3*</b>        | <b>1/2" Straight Fitting</b>        |
| <b>F4</b>         | <b>5/32" (4mm) Straight Fitting</b> |
| F6                | 6mm Straight Fitting                |
| <b>F7</b>         | <b>1/4" Straight Fitting</b>        |
| F8*               | 8mm Straight Fitting                |
| <b>F9*</b>        | <b>3/8" Straight Fitting</b>        |

\* Only available with size 2 valves.

| Fitting Configuration |                                       |
|-----------------------|---------------------------------------|
| <b>A*</b>             | <b>Straight Fittings</b>              |
| <b>B*</b>             | <b>Elbow Fittings</b>                 |
| <b>C*†</b>            | <b>Straight Fitting &amp; Muffler</b> |
| <b>D*†</b>            | <b>Elbow Fitting &amp; Muffler</b>    |

\* Ports 1 & 3 fittings sizes are same as ports 2 & 4 (see example at left.)  
 † Fitting in port 1, muffler in port 3.

| LED / Cable |   |
|-------------|---|
| <b>00</b>   | <b>No Cable, No LED, No Surge Suppression</b>       |
| <b>V2</b>   | <b>2 Meter Cable with LED and Surge Suppression</b> |
| V5          | 5 Meter Cable with LED and Surge Suppression        |
| V9          | 9 Meter Cable with LED and Surge Suppression        |
| W0          | No Cable / Clip Ready                               |
| W1          | 1 Meter Cable, Clip Connector                       |

**Example for fitting configuration:**

**Size 1**

CF7 Ports 1 & 3  
1/4" straight fitting & muffler  
Ports 2 & 4  
1/4" straight fittings

**Size 2**

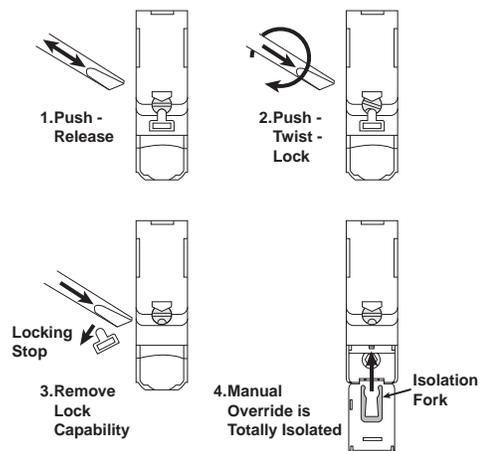
AC0 Ports 1 & 3  
10mm elbow fittings  
Ports 2 & 4  
10mm elbow fittings

**Valve includes peripheral P. O. Check Valve and union fittings.**

**With only one universal solenoid pilot for all configurations**

24VDC is now a global standard for all machines. The Moduflex 24VDC unique solenoid pilot is supplied with the multi-function manual override that can be adapted to all requirements, as explained by the drawings.

**Multi-function adaptable manual override**



  Most popular.



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**D**

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**Example:**

Size 1, 4-Way Single Solenoid valve with 1/4" Straight Connectors in Ports 1, 2 and 4. Exhaust Muffler in Port 3. Valve to include 2m cable with LED and surge suppression.

**“S” Series Single Solenoid**

**How to Order Complete Valve Assembly**

| Line Item | Quantity | Part Number            | Description  |
|-----------|----------|------------------------|--|
| 1         | 1        | <b>P2M1S4ES2CV2CF7</b> | Size 1, Individual Subbase Valve, 4 Way, Single Solenoid, 2m Cable with LED / Surge Suppression, Exhaust Muffler with 1/4" OD Straight Port Fittings |

**Notes:**

1. Cables supplied loose with valve.
2. For LED and Surge Suppressor, cable must be supplied with valve.

**How to Order Components**

| Line Item | Quantity | Part Number        | Description  |
|-----------|----------|--------------------|--|
| 1         | 1        | <b>P2M1S4ES2C</b>  | Size 1, Individual Subbase Valve, Single Solenoid, 4 Way |
| 2         | 1        | <b>P8LS08L226C</b> | 2m Cable with LED / Surge Suppression                    |
| 3         | 3        | <b>FMD07-1B</b>    | Size 1, 1/4" OD Tube Push In Connector                   |
| 4         | 1        | <b>MMDVA1</b>      | Size 1, Muffler for Exhaust Port                         |

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"T" Series Manifold Valves with Individual Connectors

|   | Symbol  | Type  | Operator         | Pilot Connector | Cv   | Part number        |                   |
|---|---|---|------------------|-----------------|------|--------------------|-------------------|
|   |   |   |                  |                 |      | Size 1             | Size 2            |
|    |    | 4-way, 2-position                                     | Single solenoid  | M8 Lockable     | 0.32 | <b>P2M1T4ES2C</b>  | <b>P2M2T4ES2C</b> |
|   |   |   | Clip             |                 |      | P2M1T4ES2CW        | P2M2T4ES2CW       |
|   |   |   | Single air pilot |                 |      | P2M1T4PS           | P2M2T4PS          |
|   |    | 4-way, 2-position                                     | Double solenoid  | M8 Lockable     | 0.32 | <b>P2M1T4EE2C</b>  | <b>P2M2T4EE2C</b> |
|   |   |   | Clip             |                 |      | P2M1T4EE2CW        | P2M2T4EE2CW       |
|   |   |   | Double air pilot |                 |      | P2M1T4PP           | P2M2T4PP          |
|    |    | 4-way, 2-position, dual valve w/ exhaust check        | Double solenoid  | M8 Lockable     | 0.18 | <b>P2M1TJEE2C</b>  | —                 |
|   |   |   | Clip             |                 |      | P2M1TJEE2CW        | —                 |
|   |   |   | Double air pilot |                 |      | P2M1TJPP           | —                 |
|   |    | 3-way, 2-position, dual valve, NC/NC w/ exhaust check | Double solenoid  | M8 Lockable     | 0.22 | <b>P2M1TDEE2C</b>  | <b>P2M2TDEE2C</b> |
|   |   |   | Clip             |                 |      | P2M1TDEE2CW        | P2M2TDEE2CW       |
|   |   |   | Double air pilot |                 |      | P2M1TDPP           | P2M2TDPP          |
|    |    | 3-way, 2-position, dual valve, NO/NO w/ exhaust check | Double solenoid  | M8 Lockable     | 0.22 | <b>P2M1TC EE2C</b> | <b>P2M2TCEE2C</b> |
|   |   |   | Clip             |                 |      | P2M1TC EE2CW       | P2M2TCEE2CW       |
|   |   |   | Double air pilot |                 |      | P2M1TCPP           | P2M2TCPP          |
|   |    | 3-way, 2-position, dual valve, NC/NO w/ exhaust check | Double solenoid  | M8 Lockable     | 0.22 | <b>P2M1TEEE2C</b>  | <b>P2M2TEEE2C</b> |
|   |   |   | Clip             |                 |      | P2M1TEEE2CW        | P2M2TEEE2CW       |
|   |   |   | Double air pilot |                 |      | P2M1TEPP           | P2M2TEPP          |
|  |   | 3-way, 2-position, NC w/ exhaust check                | Single solenoid  | M8 Lockable     | 0.22 | <b>P2M1T3ES2C</b>  | <b>P2M2T3ES2C</b> |
|   |   |   | Clip             |                 |      | P2M1T3ES2CW        | P2M2T3ES2CW       |
|   |   |   | Single air pilot |                 |      | P2M1T3PS           | P2M2T3PS          |
|   |  | 3-way, 2-position, dual valve, NC/NC                  | Double solenoid  | M8 Lockable     | 0.22 | <b>P2M1TGEE2C</b>  | <b>P2M2TGEE2C</b> |
|   |   |   | Clip             |                 |      | P2M1TGEE2CW        | P2M2TGEE2CW       |

Note: Includes 5/32" (4mm) Air Pilot Connectors.

Manifold Options

| Module   | Part Number       |
|--|-------------------|
| Pneumatic end plate kit                                      | <b>P2M2HXT01*</b> |
| Pneumatic end plate kit with torx screwdriver                | <b>P2M2HXT0T*</b> |
| Intermediate supply module (Includes 4 configuration plates) | <b>P2M2BXT0A*</b> |

\* Use Fittings for Size 2 Modules Only



P2M2HXT01



P2M2BXT0A



M8 2-pin, male connector



Clip Connector with LED & surge protection

 Most popular.



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Part Numbers

"T" Series Size Accessories

| Description   | Tube size OD   | Option                        | Part Number        | Part Number        |                   |
|---|--|-------------------------------|--------------------|--------------------|-------------------|
|   |  |                               | Size 1             | Size 2             |                   |
|  <p>Push to connect fitting</p>  | 5/32" or 4mm   | Elbow                         | <b>CMD04-1</b>     | —                  |                   |
|   |  | Straight                      | <b>FMD04-1</b>     | —                  |                   |
|   | 1/4"   | Elbow                         | <b>CMD07-1B</b>    | <b>CMD07-2B</b>    |                   |
|   |  | Straight                      | <b>FMD07-1B</b>    | <b>FMD07-2B</b>    |                   |
|   | 3/8"   | Elbow                         | —                  | <b>CMD09-2B</b>    |                   |
|   |  | Straight                      | —                  | <b>FMD09-2B</b>    |                   |
|   | 1/2"   | Straight                      | —                  | <b>FMD13-2B</b>    |                   |
|   | 6mm  | Elbow                         | <b>CMD06-1</b>     | <b>CMD06-2</b>     |                   |
|   |  | Straight                      | <b>FMD06-1</b>     | <b>FMD06-2</b>     |                   |
|   | 8mm  | Elbow                         | —                  | <b>CMD08-2</b>     |                   |
|   |  | Straight                      | —                  | <b>FMD08-2</b>     |                   |
|   | 10mm   | Elbow                         | —                  | <b>CMD10-2</b>     |                   |
|   |  | Straight                      | —                  | <b>FMD10-2</b>     |                   |
|   | 12mm   | Elbow                         | —                  | <b>CMD12-2 **</b>  |                   |
| Straight  |  | —                             | <b>FMD12-2 **</b>  |                    |                   |
|  <p>Muffler for exhaust port</p>   |  |                               | <b>MMDVA1</b>      | <b>MMDVA2</b>      |                   |
|  <p>Plug</p>   |  |                               | <b>PMDYY1</b>      | <b>PMDYY2</b>      |                   |
|  <p>Double male union</p>  |  | Connecting peripheral modules | <b>HMDXX1</b>      | <b>HMDXX2</b>      |                   |
|  <p>M8 female connector to flying lead - IP67 LED and surge protection</p> |  | 2M cable                      | <b>P8LS08L226C</b> | <b>P8LS08L226C</b> |                   |
|   |  | 5M cable                      | <b>P8LS08L526C</b> | <b>P8LS08L526C</b> |                   |
|   |  | 9M cable                      | <b>P8LS08L926C</b> | <b>P8LS08L926C</b> |                   |
|  <p>Clip connector – IP40</p>  | 1 x Clip connector   | 1 meter                       | <b>P8LW021C</b>    | <b>P8LW021C</b>    |                   |
|   | Individual: including 2 flying leads                       | 2 x Clip connector            | 1 meter            | <b>P8LW021C02</b>  | <b>P8LW021C02</b> |
|   | Multiple: 1 common (0 VDC) and 1 flying lead per connector | 4 x Clip connector            | 1 meter            | <b>P8LW021C04</b>  | <b>P8LW021C04</b> |
|   |  | 8 x Clip connector            | 1 meter            | <b>P8LW021C08</b>  | <b>P8LW021C08</b> |
|  <p>Field wireable connector</p>   |  | M8 connector                  | <b>P8CS0803J</b>   | <b>P8CS0803J</b>   |                   |
|   |  | M12 connector                 | <b>P8CS1204J</b>   | <b>P8CS1204J</b>   |                   |
|  <p>Torx screwdriver</p>   |  |                               | <b>P2M1K0TASD</b>  | <b>P2M1K0TASD</b>  |                   |

Note: 85 Durometer minimum for pneumatic connectors.

\*\* 12mm OD fittings can not be used with valves. 12mm OD fittings can only be used in pneumatic end plate kit and intermediate air supply module.

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair-II Series

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Ordering Information

"T" Series Valve Manifold with Individual Connectors  
(Complete with Pneumatic and Electrical Connectors)

**P2M 1 T 4ES 2C 00 0 F4**

|   |                     |     |
|---|---------------------|-----|
| <b>Basic Series</b>                             | Valvetronic Modules | P2M |
| <b>Size</b>                                     | Size 1              | 1   |
| <b>Size</b>                                     | Size 2              | 2   |
| <b>Valve Series</b>                             | Individual Wire     | T   |
| <b>Valve Type / Function</b>                    |                     |     |
| <i>3-Way / 2-Position</i>                       |                     |     |
| Single Solenoid, NC Spring Return               | 3ES                 |     |
| Single Air Pilot, NC Spring Return              | 3PS                 |     |
| <i>4-Way / 2-Position</i>                       |                     |     |
| Single Solenoid, Spring Return                  | 4es                 |     |
| Single Air Pilot, Spring Return                 | 4ps                 |     |
| Double Solenoid                                 | 4ee                 |     |
| Double Air Pilot                                | 4pp                 |     |
| <i>Dual 3-Way, 2-Position, Spring Return</i>    |                     |     |
| Solenoid, NC / NC + PO Check (4/3 APB)          | BEE*                |     |
| Air Pilot, NC / NC + PO Check (4/3 APB)         | BPP*                |     |
| Solenoid, NO / NO (4/3 Pressure Ctr.)           | CEE                 |     |
| Air Pilot NO / NO (4/3 Pressure Ctr.)           | CPP                 |     |
| Solenoid, NC / NC with Exhaust Check            | DEE                 |     |
| Air Pilot, NC / NC with Exhaust Check           | DPP                 |     |
| Solenoid, NO / NC with Exhaust Check            | EEE                 |     |
| Solenoid, NC / NC without Check (4/3 Exh. Ctr.) | GEE                 |     |
| <i>Dual 4-Way, 2-Position, Spring Return</i>    |                     |     |
| Solenoid  | JEE**               |     |
| Air Pilot                                       | JPP**               |     |

\* Valve includes peripheral P. O. check valve and union fittings.  
\*\* Size 1 only.

|                        |                              |
|------------------------|------------------------------|
| <b>Ports 2 &amp; 4</b> |                              |
| C0*                    | 10mm Elbow Fitting           |
| C4                     | 5/32" (4mm) Elbow Fitting    |
| C6                     | 6mm Elbow Fitting            |
| C7                     | 1/4" Elbow Fitting           |
| C8*                    | 8mm Elbow Fitting            |
| C9*                    | 3/8" Elbow Fitting           |
| F0*                    | 10mm Straight Fitting        |
| F3*                    | 1/2" Straight Fitting        |
| F4                     | 5/32" (4mm) Straight Fitting |
| F6                     | 6mm Straight Fitting         |
| F7                     | 1/4" Straight Fitting        |
| F8*                    | 8mm Straight Fitting         |
| F9*                    | 3/8" Straight Fitting        |

\* Only available with size 2 valves.

|                        |      |
|------------------------|------|
| <b>Ports 1 &amp; 3</b> |      |
| 0                      | None |

|                    |  |
|--------------------|--|
| <b>LED / Cable</b> |  |
| 00                 | No Cable, no LED, no Surge Suppression       |
| V2                 | 2 Meter Cable with LED and Surge Suppression |
| V5                 | 5 Meter Cable with LED and Surge Suppression |
| V9                 | 9 Meter Cable with LED and Surge Suppression |
| W0                 | No Cable / Clip Ready                        |
| W1                 | 1 Meter Cable, Clip Connector                |

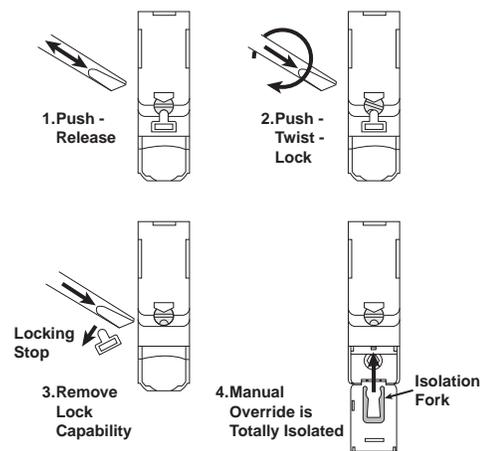
|                         |                                 |
|-------------------------|---------------------------------|
| <b>Operator Voltage</b> |                                 |
| 2C                      | 24VDC                           |
| 00                      | Remote Pilot - 5/32" (4mm) Tube |

**With only one universal solenoid pilot for all configurations**

24VDC is now a global standard for all machines.

The Moduflex 24VDC unique solenoid pilot is supplied with the multi-function manual override that can be adapted to all requirements, as explained by the drawings.

**Multi-function adaptable manual override**



  Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D39

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
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D

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



**Example:**

Size 1, 4-Way Single Solenoid valve with 1/4" Straight Connectors in Ports 2 and 4. Valve to include 2m cable with LED and surge suppression.

**"T" Series Single Solenoid**

**How to Order Complete Valve Assembly**

| Line Item | Quantity | Part Number            | Description   |
|-----------|----------|------------------------|---|
| 1         | 1        | <b>P2M1T4ES2CV20F7</b> | Size 1, T Series Manifold Valves, 4 Way, Single Solenoid, 2m Cable with LED / Surge Suppression, 1/4" OD Straight Port Fittings |

**Notes:**

1. Cables supplied loose with valve.
2. For LED and Surge Suppressor, cable must be supplied with valve.
3. To assemble into a manifold, Pneumatic Head and Tail Set must be ordered separately.

**How to Order Components**

| Line Item | Quantity | Part Number        | Description  |
|-----------|----------|--------------------|--|
| 1         | 1        | <b>P2M1T4ES2C</b>  | Size 1, T Series Manifold Valves, Single Solenoid, 4 Way |
| 2         | 1        | <b>P8LS08L226C</b> | 2m Cable with LED / Surge Suppression                    |
| 3         | 2        | <b>FMD07-1B</b>    | Size 1, 1/4" OD Tube Push In Connector                   |

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**"V" Series Manifold Valves with Collective Wiring**

|   | Symbol  | Type  | Operator        | Cv   | Part Number        |                         |
|---|---|---|-----------------|------|--------------------|-------------------------|
|   |   |   |                 |      | Size 1             | Size 2                  |
|  <p><b>Single Solenoid</b></p> |  | 4-way, 2-position                                     | Single solenoid | 0.32 | <b>P2M1V4ES2CV</b> | 0.8 <b>P2M2V4ES2CV</b>  |
|   |  | 4-way, 2-position                                     | Double solenoid | 0.32 | <b>P2M1V4EE2CV</b> | 0.8 <b>P2M2V4EE2CV</b>  |
|   |  | 4-way, 2-position, dual valve, w/ exhaust check       | Double solenoid | 0.18 | <b>P2M1VJEE2CV</b> |                         |
|   |  | 3-way, 2-position, dual valve, NC/NC w/ exhaust check | Double solenoid | 0.22 | <b>P2M1VDEE2CV</b> | 0.44 <b>P2M2VDEE2CV</b> |
|  <p><b>Double Solenoid</b></p> |  | 3-way, 2-position, dual valve, NO/NO w/ exhaust check | Double solenoid | 0.22 | <b>P2M1VCEE2CV</b> | 0.44 <b>P2M2VCEE2CV</b> |
|   |  | 3-way, 2-position, dual valve, NC/NO w/ exhaust check | Double solenoid | 0.22 | <b>P2M1VEEE2CV</b> | 0.44 <b>P2M2VEEE2CV</b> |
|   |  | 3-way, 2-position, NC w/ exhaust check                | Single solenoid | 0.22 | <b>P2M1V3ES2CV</b> | 0.44 <b>P2M2V3ES2CV</b> |
|   |  | 3-way, 2-position, dual valve, NC/NC                  | Double solenoid | 0.22 | <b>P2M1VGEE2CV</b> | 0.44 <b>P2M2VGEE2CV</b> |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

"V" Series Accessories

| Description  | Tube size OD | Option                          | Part Number                     |                   |
|--|--------------|---------------------------------|---------------------------------|-------------------|
|  |              |                                 | Size 1                          | Size 2            |
|  Push to connect fitting                                    | 5/32"        | Elbow                           | <b>CMD04-1</b>                  | —                 |
|  |              | Straight                        | <b>FMD04-1</b>                  | —                 |
|  | 1/4"         | Elbow                           | <b>CMD07-1B</b>                 | <b>CMD07-2B</b>   |
|  |              | Straight                        | <b>FMD07-1B</b>                 | <b>FMD07-2B</b>   |
|  | 3/8"         | Elbow                           | —                               | <b>CMD09-2B</b>   |
|  |              | Straight                        | —                               | <b>FMD09-2B</b>   |
|  | 1/2"         | Straight                        | —                               | <b>FMD13-2B</b>   |
|  |              | 6mm                             | Elbow                           | <b>CMD06-1</b>    |
|  | Straight     |                                 | <b>FMD06-1</b>                  | <b>FMD06-2</b>    |
|  | 8mm          | Elbow                           | —                               | <b>CMD08-2</b>    |
|  |              | Straight                        | —                               | <b>FMD08-2</b>    |
|  | 10mm         | Elbow                           | —                               | <b>CMD10-2</b>    |
| Straight   |              | —                               | <b>FMD10-2</b>                  |                   |
| 12mm   | Elbow        | —                               | <b>CMD12-2 **</b>               |                   |
|  | Straight     | —                               | <b>FMD12-2 **</b>               |                   |
|  Muffler for exhaust port                                   |              | —                               | <b>MMDVA1</b>                   | <b>MMDVA2</b>     |
|  Plug   |              | —                               | <b>PMDYY1</b>                   | <b>PMDYY2</b>     |
|  Double male union  |              | Connecting peripheral modules   | <b>HMDXX1</b>                   | <b>HMDXX2</b>     |
|  Electrical 20-pin multi-connector cable with flying leads | IP65 rated   | 2M cable                        | <b>P8LMH20M2A</b>               | <b>P8LMH20M2A</b> |
|  |              | 5M cable                        | <b>P8LMH20M5A</b>               | <b>P8LMH20M5A</b> |
|  |              | 9M cable                        | <b>P8LMH20M9A</b>               | <b>P8LMH20M9A</b> |
|  Electrical 25-pin D-sub cable                            | IP20 rated   | 3M cable                        | <b>P8LMH25M3A</b>               | <b>P8LMH25M3A</b> |
|  |              | 9M cable                        | <b>SCD259D</b>                  | <b>SCD259D</b>    |
|  | IP65 rated   | 3M cable                        | <b>SCD253W</b>                  | <b>SCD253W</b>    |
|  |              | 9M cable                        | <b>SCD259WE</b>                 | <b>SCD259WE</b>   |
| Field wireable connector for power supply  | Female       | M12 - A code                    | <b>P8CS1205AA</b>               |                   |
|  Power & Communication Cable                              | IO-Link      | 5-pin male to female cable, TPE | <b>RKC 4.5T*-RSC 4.5T/S1587</b> |                   |
|  Torx screwdriver   |              | —                               | <b>P2M1K0TASD</b>               | <b>P2M1K0TASD</b> |

Where \* = 1, 2, 3, 4, 5, 10, 20 meter standard lengths

Note: 85 Durometer minimum for pneumatic connectors.

\*\* 12mm OD fittings can not be used with valves. 12mm OD fittings can only be used in pneumatic end plate kit and intermediate air supply module.

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Electrical Connections**

| Description                                    | Part Number      |
|--|------------------|
| 20-pin, Multi-connector electrical head module | <b>P2M2HEV0A</b> |
| 25-pin, D-sub, electrical head module          | <b>P2M2HEV0D</b> |



P2M2HEV0A



P2M2HEV0D

**Network Connectivity Connections**

| Description     | Part Number            |                         |
|-----------------|------------------------|-------------------------|
| EtherNet I/P    | <b>P2M2HBVE12400</b>   |                         |
| PROFINET        | <b>P2M2HBVN12400</b>   |                         |
| EtherCAT        | <b>P2M2HBVT12400</b>   |                         |
| Modbus TCP      | <b>P2M2HBVM12400</b>   |                         |
| PowerLink       | <b>P2M2HBVW12400</b>   |                         |
| IO-Link Class A | 3-Pin, Aux power 1 & 3 | <b>P2M2HBVL12400A13</b> |
| IO-Link Class A | 3-Pin, Aux power 4 & 3 | <b>P2M2HBVL12400A43</b> |
| IO-Link Class A | 3-Pin, Aux power 4 & 2 | <b>P2M2HBVL12400A42</b> |
| IO-Link Class B | 5-Pin, Aux power 2 & 5 | <b>P2M2HBVL12400B25</b> |

**Manifold Options**

| Module   | Part Number       |
|--|-------------------|
| Pneumatic end plate kit                                      | <b>P2M2HXT01*</b> |
| Pneumatic end plate kit with torx screwdriver                | <b>P2M2HXT0T*</b> |
| Intermediate supply module (Includes 4 configuration plates) | <b>P2M2BXV0A*</b> |

\* Use Fittings for Size 2 Modules Only



P2M2HXT01



P2M2BXV0A

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Ordering Information

"V" Series Valve Manifold with Collective Wiring  
(Complete with Pneumatic Connectors)

**P2M 1 V 4ES 2C V0 0 F4**

| Basic Series        |     |
|---------------------|-----|
| Valvetronic Modules | P2M |

| Size   |   |
|--------|---|
| Size 1 | 1 |
| Size 2 | 2 |

| Valve Series      |   |
|-------------------|---|
| Collective Wiring | V |

| Valve Type / Function                           |       |
|---|-------|
| <b>3-Way / 2-Position</b>                       |       |
| Single Solenoid, NC Spring Return               | 3ES   |
| <b>4-Way / 2-Position</b>                       |       |
| Single Solenoid, Spring Return                  | 4es   |
| Double Solenoid                                 | 4ee   |
| <b>Dual 3-Way, 2-Position, Spring Return</b>    |       |
| Solenoid, NC / NC + PD Check (4/3 APB)          | BEE*  |
| Solenoid, NO / NO (4/3 Pressure Ctr.)           | CEE   |
| Solenoid, NC / NC with Exhaust Check            | DEE   |
| Solenoid, NO / NC with Exhaust Check            | EEE   |
| Solenoid, NC / NC without Check (4/3 Exh. Ctr.) | GEE   |
| <b>Dual 4-Way, 2-Position, Spring Return</b>    |       |
| Solenoid  | JEE** |

\* Valve includes peripheral P. O. Check valve and union fittings.  
\*\* Size 1 Only.

| Ports 2 & 4 |                              |
|-------------|------------------------------|
| C0*         | 10mm Elbow Fitting           |
| C4          | 5/32" (4mm) Elbow Fitting    |
| C6          | 6mm Elbow Fitting            |
| C7          | 1/4" Elbow Fitting           |
| C8*         | 8mm Elbow Fitting            |
| C9*         | 3/8" Elbow Fitting           |
| F0*         | 10mm Straight Fitting        |
| F3*         | 1/2" Straight Fitting        |
| F4          | 5/32" (4mm) Straight Fitting |
| F6          | 6mm Straight Fitting         |
| F7          | 1/4" Straight Fitting        |
| F8*         | 8mm Straight Fitting         |
| F9*         | 3/8" Straight Fitting        |

\* Only available with size 2 valves.

| Ports 1 & 3 |      |
|-------------|------|
| 0           | None |

| LED / Cable |   |
|-------------|---|
| V0          | No Cable with LED and Surge Suppression |

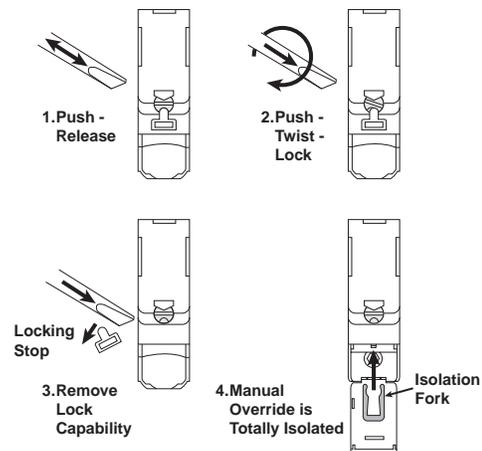
| Operator Voltage |       |
|------------------|-------|
| 2C               | 24VDC |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series

**With only one universal solenoid pilot for all configurations**

24VDC is now a global standard for all machines. The Moduflex 24VDC unique solenoid pilot is supplied with the multi-function manual override that can be adapted to all requirements, as explained by the drawings.

**Multi-function adaptable manual override**



Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**"V" Series Single Solenoid**



**How to Order -**

**Example:** Size 1, 4-Way Single Solenoid valve with 1/4" Straight Connectors in Ports 2 and 4. Valve to include LED and surge suppression.

| Line Item                         | Quantity | Part number            | Description   |
|-----------------------------------|----------|------------------------|---|
| <b>Complete Peripheral Module</b> |          |                        |   |
| 1                                 | 1        | <b>P2M2V4ES2CV00F7</b> | Size 1, V Series Manifold Valves, 4 Way, Single Solenoid, LED / Surge Suppression, 1/4" OD Straight Port Fittings |
| <b>Components</b>                 |          |                        |   |
| 1                                 | 1        | <b>P2M1V4ES2CV</b>     | Size 1, V Series Manifold Valves, Single Solenoid, 4 Way  |
| 2                                 | 2        | <b>FMD07-1B</b>        | Size 1, 1/4" OD Tube Push In Connector  |

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

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Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D45

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**“V” Series 25-Pin, D-Sub Addressing**



**Valve Island Head 25-Pin, Multi-Connector**

On the island head module, the multi-connector integrates the HE10 connector standard in its 25-Pin version.

Its plug-in function is secured in position with a guillotine lock with easy access from the front of the island.

The 25-Pin, D-Sub multi-connector is rated for IP40.

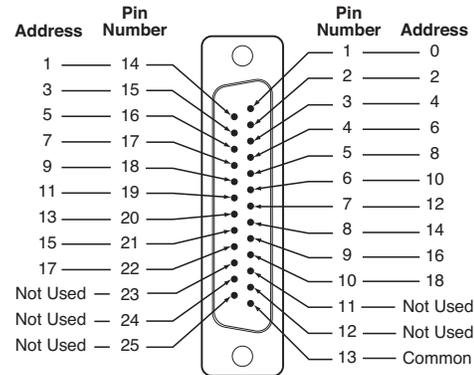
**25-Pin, Multi-Connector Addressing**

When assembling a **V Series** island, modules are automatically connected to the head module through the modular principle of the integrated electrical connections.

Each wire color code corresponds a solenoid pilot position in the island.



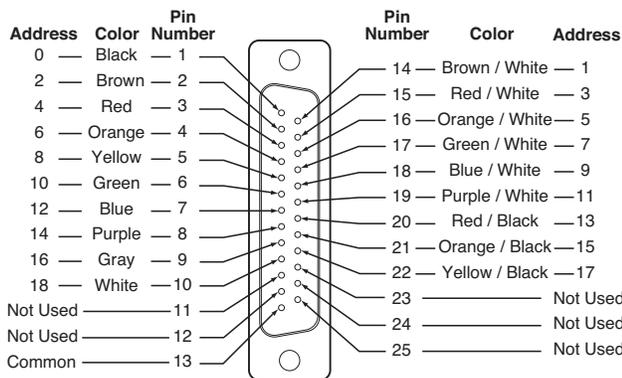
**P8LMH25M3A - Cable**



Face View - Male D-Sub, 25-Pin Head Module Connector

**Electrical 25-Pin D-Sub Cable**

| Length (meters) | Weight (oz) | IP | Part Number       |
|-----------------|-------------|----|-------------------|
| 3               | 14.3        | 20 | <b>P8LMH25M3A</b> |
| 3               | 14.3        | 65 | <b>SCD253W</b>    |
| 9               | 55.8        | 20 | <b>SCD259D</b>    |
| 9               | 55.8        | 65 | <b>SCD259WE</b>   |



Face View - Female D-Sub, 25-Pin Cable Connector

**Electrical Specifications**

|                                  |  |
|----------------------------------|--|
| Rated voltage                    | 24VDC  |
| Maximum addresses                | 19   |
| Maximum energized simultaneously | 19   |
| Electrical connection            | 25-Pin, D-Sub DIN41652, MIL-C-24308, NFC93425 Type HE5 |
| Polarity                         | Insensitive: PNP and NPN compatible                    |
| Dust and water protection        | IP40 / IP65  |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**"V" Series 20-Pin, Multi-Connector and Addressing**



**Valve Island Head 20-Pin, Multi-Connector**

On the island head module, the multi-connector integrates the HE10 connector standard in its 20-Pin version.

Its plug-in function is secured in position with a guillotine lock with easy access from the front of the island.

Just like the whole island, the multi-connector follows the IP65 protection standard.

**Cable Specification:**

8.6 mm dia., UL, 20 wires, 0.22mm<sup>2</sup>, AWG 24

Minimum Static Radius: 6.5 mm (.255")

Available with 6.56 ft. (2 m), 16.4 ft. (5 m) and 29.5 ft. (9 m) lengths.

**20-Pin, Multi-Connector Addressing**

When assembling a **V Series** island, modules are automatically connected to the head module through the modular principle of the integrated electrical connections.

The color code addressing given below conforms to the DIN 47100 standard.

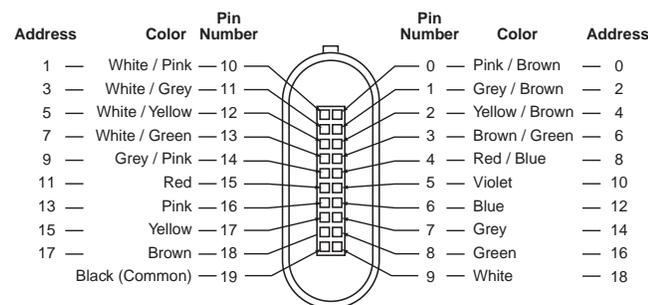
Each wire color code corresponds a solenoid pilot position in the island.



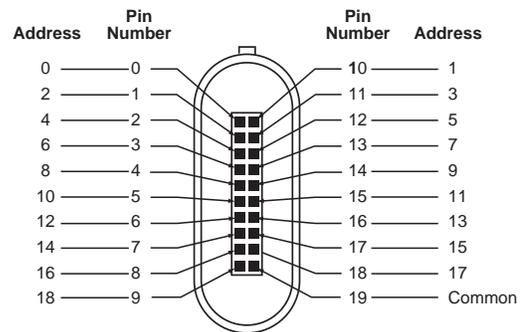
**P8LMH20M2A - Cable**

**Electrical 20-Pin Multi-Connector with Flying Lead Cable**

| Cable Length | Weight (oz) | IP | Part Number       |
|--------------|-------------|----|-------------------|
| 2 m          | 10.97       | 65 | <b>P8LMH20M2A</b> |
| 5 m          | 27.41       | 65 | <b>P8LMH20M5A</b> |
| 9 m          | 49.38       | 65 | <b>P8LMH20M9A</b> |



Face View - Female 20-Pin Cable Connector



Face View - Male 20-Pin Head Module Connector

**Electrical Specifications**

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Rated Voltage                    | 24VDC                               |
| Maximum Addresses                | 19                                  |
| Maximum Energized Simultaneously | 19                                  |
| Electrical Connection            | Type HE10                           |
| Polarity                         | Insensitive: PNP and NPN compatible |
| Dust and Water Protection        | IP65                                |



## P2M Network Nodes

P2M communication modules directly attach to the Moduflex valve series as well as the P2M endplates of the H Series Micro and H Series ISO valve products. It offers a compact and low cost network solution.

### Features

- Small, compact product design
- IO-Link Class A & Class B nodes
- Broad protocol offering
- Channel-level diagnostics (LED and Electronic)
- Horizontal and vertical mounting without derating
- 5g vibration
- Quick-disconnects for I/O and network connectivity
- Built-in panel grounding
- CE certification



D

Subbase & Manual  
Valves

H Series  
Micro

Moduflex  
Series

H Series  
ISO

Network  
Connectivity

DX ISOMAX  
Series

Valvair II  
Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D48

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**P2M Industrial Ethernet Node**

The P2M Industrial Ethernet 24 DO node allows a very simple and cost efficient connection to the most popular Industrial Ethernet networks.

Designed with isolated auxiliary power, it can easily be adapted to all power supply architectures and follow any required machine directives as Safe Power Capable.



| Industrial Ethernet Protocol     | Part Number          |
|----------------------------------|----------------------|
| EtherNet/IP (Safe Power Capable) | <b>P2M2HBVE12400</b> |
| PROFINET (Safe Power Capable)    | <b>P2M2HBVN12400</b> |
| EtherCAT (Safe Power Capable)    | <b>P2M2HBVT12400</b> |
| Modbus/TCP (Safe Power Capable)  | <b>P2M2HBVM12400</b> |
| PowerLink (Safe Power Capable)   | <b>P2M2HBVW12400</b> |

**Simple Product Set-Up**



The P2M Industrial Ethernet node offers IP addressing through 3 rotary switches located on the top side.

The 3 rotary switches also allow for Factory Reset, IP address storage, and DHCP addressing.

If supported by the protocol used, the IP address can be modified through the embedded web page.

For an application requiring a regular disconnection / reconnection of communication & power, PROFINET and EtherNet/IP protocols allow respectively a Fast Start-Up (FSU) and Quick Connect mode. This mode can be enabled or disabled.

**Topology / Integrated Ethernet Switch**



The P2M Industrial Ethernet 24 DO node offers 2 Ethernet ports allowing a line topology without external switch. The Ring topology can also be supported (enable/disable) for PROFINET, EtherNet/IP and Modbus TCP/IP.

The integrated Ethernet switch supports Class C services allowing use in an isochronous real time (IRT) structure.

**Easy Diagnostics – Local LEDs, Process (cyclic) data, Parameter (acyclic) data**



The P2M Industrial Ethernet 24 DO node offers local diagnostics through 7 LED's located on the visible top side, showing:

- Logic status
- Ethernet activity on both ports
- Standard Status due to protocol
- Output error / Auxiliary power

This local information as well as configuration and predictive maintenance diagnostics (Power monitoring, Solenoid cycle counting, etc) are available via both Process Data (cyclic) and Parameter Data (acyclic) via the PLC through the network and also easily viewable from the embedded web page.

When the PLC is NOT in control, the web page allows the user to force ON/OFF the solenoids state. This function has password protection.

**P2M Industrial Ethernet Connections & Configuration**

**Ethernet ports and Auxiliary power connection**

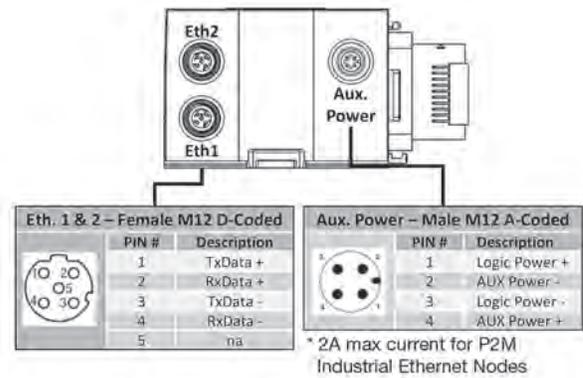
Ethernet ports: 2 x Standard Female M12 D-Coded – 5 pins  
 Auxiliary Power: Standard Male M12 A-Coded – 4 pins

**Configuration file**

The configuration files (.EDS, .GDS, etc) can be download from the product web page.

**Add on Instructions & Function Blocks**

Add on Instructions & Function Blocks to assist in the configuration and programming of the P2M Node are available on the product web page – [www.parker.com/pdn/P2M\\_IE](http://www.parker.com/pdn/P2M_IE)



**Safe Power Capable**

Auxiliary power of P2M Industrial Ethernet 24 DO node can be supplied from a safe output device following machinery directives. This includes:

- Output Signal Switch Device (OSSD) test pulse compatible
- Galvanic isolation between 0 Vdc Logic and Auxiliary power
- PP or PM cabling modes

For more details, refer to the user manuals located at [www.parker.com/pdn/P2M\\_IE](http://www.parker.com/pdn/P2M_IE)

**P2M Industrial Ethernet Valve Control**

All P2M Industrial Ethernet Nodes can easily connect to and control pneumatic valves sizes ranging from 0.18 Cv to 6.0 Cv utilizing the Moduflex, H Micro, or H ISO valve series including the new H ISO Universal manifold which can mix ISO sizes 15407 (sizes 02 & 01) and 5599 (sizes 1 & 2) without transition plates.

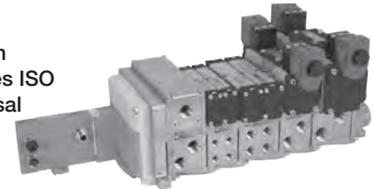
P2M on Moduflex



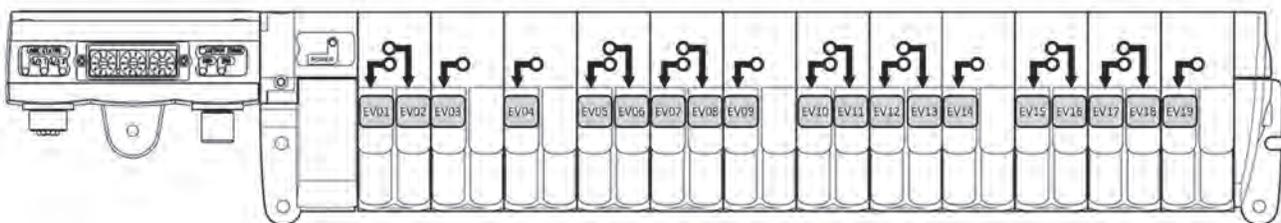
P2M on H Series Micro



P2M on H Series ISO Universal



**P2M Industrial Ethernet Node Output (Solenoid) data mapping - shown on Moduflex valve series**



|         | 7 . . . . . 3       | 2 . . . . . 0       |
|---------|---------------------|---------------------|
| Byte 0  | EV08 . . . . .      | EV01                |
| Byte 1  | EV16 . . . . .      | EV09                |
| Byte 2* | EV24 . . . . . EV20 | EV19 . . . . . EV17 |

\* Byte 2 / Bits 3 to 7 are only available when connected to H Series Micro or H Series ISO valve manifolds. The Moduflex valve series is limited to 19.

**Process (Cyclic) Diagnostic through network via ADI #9 – “Module Error Input”**

Easy to access diagnostic data transmitted to the PLC as Application Device Instance (ADI) #9

- Voltage warning, short circuit condition, module error, etc
- For more details refer to user manual on product web page – [www.parker.com/pdn/P2M\\_IE](http://www.parker.com/pdn/P2M_IE)

| ADI | Instance name      | Data type | Access |
|-----|--------------------|-----------|--------|
| #9  | Module error input | Unit 16   | Read   |

|        |                         |
|--------|-------------------------|
| Byte 0 | Diag 7 . . . . . Diag 0 |
| Byte 1 | Reserved                |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Valve Island V Series with Industrial Ethernet connection**

EtherNet/IP™

EtherCAT®

The P2M Industrial Ethernet Lite node 24DO allows a very simple and cost efficient connection to the most popular Industrial Ethernet networks.

In its compact IP40 version equipped with two RJ45 Ethernet ports, it saves size in cabinet applications and offers an easy connection to the network in a line topology.



| Industrial Ethernet Protocol | Part Number            |
|------------------------------|------------------------|
| Profinet IO                  | <b>P2M2HBVE12400RJ</b> |
| EtherNet/IP                  | <b>P2M2HBVN12400RJ</b> |
| EtherCAT                     | <b>P2M2HBVT12400RJ</b> |

**Product Set-Up**



The P2M Lite Node 24DO is by default in DHCP mode. The module must be assigned to a static IP-Address in order to be controlled via the network.

The Network Configuration settings can be done through the embedded web server of the node as well as "IPconfig", "TIA Portal" or similar methods.

For an application requiring a regular disconnection / reconnection of the node, Profinet and EtherNet/IP protocols allow respectively a Fast Start-Up (FSU) and Quick Connect mode. This mode can be enable or disable .

**Technology / Integrated Ethernet Switch**



The P2M Industrial Ethernet Lite node 24DO offers 2 RJ45 ports allowing a line topology without external switch. The Ring topology can also be supported (enable/disable) for Profinet and EtherNet/IP.

The integrated Ethernet switch support Class C Services allowing used in an isochronous real time (IRT) structure.

**Diagnostic**



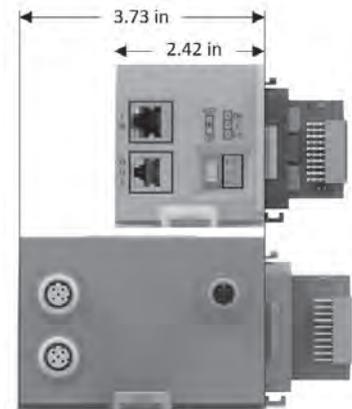
The P2M Industrial Ethernet Lite node 24DO offers a local diagnostic through 5 LED's located on the visible top side and 4 additional on both Ethernet connectors showing:

- Logic status
- Ethernet activity on both ports
- Standard Status due to protocol
- Output error / Power Supply

This local information as well as trouble shooting and predictive maintenance diagnostics (Power monitoring, Life cycle counting, ...) are available in PLC through the network and reported on imbedded web page.

When PLC is in "STOP", the web page allows to force ON/OFF solenoids state. This function has a password protection.

Save 1.31 inches with P2M Lite Node compared to P2M Ethernet Node



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D51

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Industrial Ethernet Lite Node Connections and Diagnostic Functions**

**Ethernet and Power Connections**

**Network Communication Ports:**

2 x Standard RJ45 Female connectors

Usage of standard manufactured cables available from your usual electrical supplier is recommended.

**Power Supply:**

Standard 3-Pin' Male Connector - 3,81 mm pitch

**Working mode selector:**

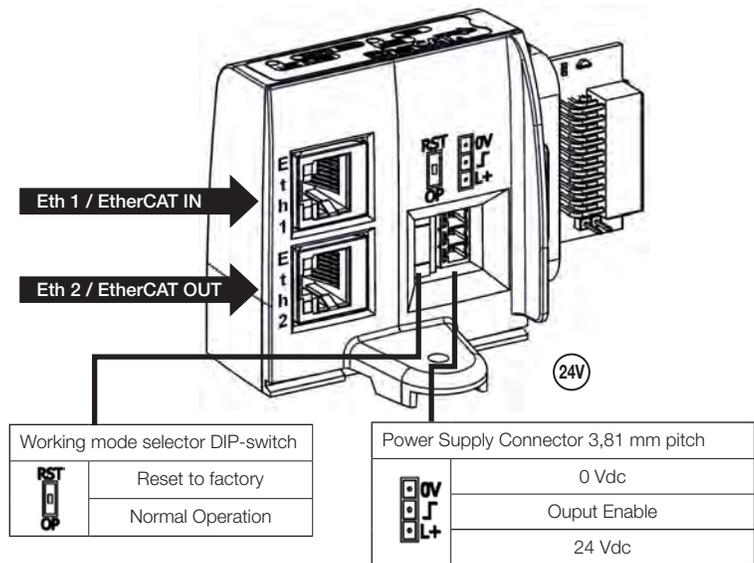
DIP-switch

**Configuration Files**

The configuration files can be download from the product web page: [www.parker.com/pde/P2M\\_IE](http://www.parker.com/pde/P2M_IE)

**IP Address Setting**

For both Profinet IO and EtherNet/IP protocols, the P2M Lite 24DO Node is by default in DHCP mode. The module must be assigned to a static IP-Address in order to be controlled via network. Please, refer to the user manual for IP-Address assignment process.



**Local and Network Diagnostic Functions**

**Local Diagnostic**

The P2M Lite 24DO node offers a local diagnostic via 9 LED's. Please refer to user manual with interpretation table.

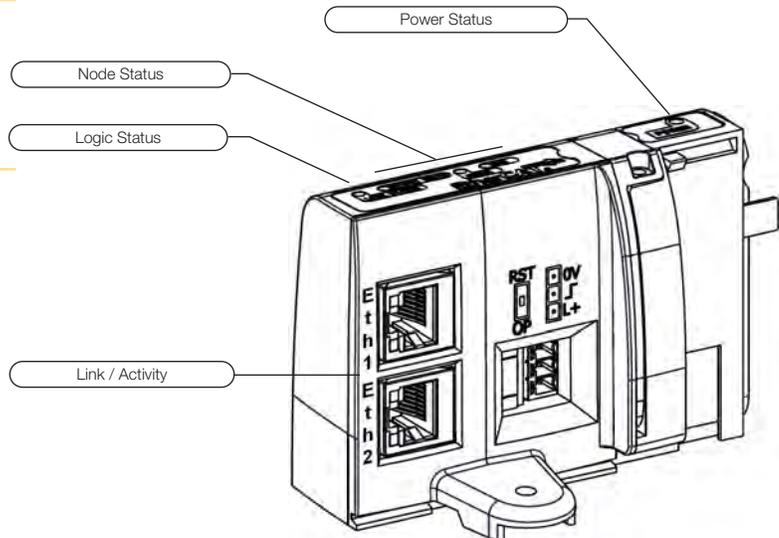
**Network Diagnostic**

The P2M Lite 24DO Node offers additional useful module status information:

- Pilot overload or short circuit
- Power Voltage out of tolerance
- Cycle counter for every pilot
- Module temperature

For detailed technical information on the P2M Lite 24DO Node and a complete interpretation of node's diagnostic functionalities, please refer to the User Manual available from the product web page:

[www.parker.com/pde/P2M\\_IE](http://www.parker.com/pde/P2M_IE)



**EtherNet/IP™**



**EtherCAT®**

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modutefx Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Valve Island V Series with IO-Link connection**

The P2M Moduflex IO-Link 24 DO node allows a very simple and cost efficient connection to any IO-Link master, centralised into the PLC or decentralised through an industrial Ethernet network.

Designed in both Class A and Class B versions with an isolated auxiliary power, it can easily be adapted to all power supply architectures and follow machine directives.



**“V” Series Valve Island - P2M head module for IO-Link**

Electrical Module for 24 outputs  
 (The last 5 outputs of this 24 DO module can not be used with Moduflex Valve)



**M12 A coded Connector connection**

| Description                                 | IO-Link class | IO-Link | Aux. power | Aux. power pinout | Weight (g) | Part number                     |                             |
|---|---------------|---------|------------|-------------------|------------|---------------------------------|-----------------------------|
|   |               |         |            |                   |            | Standard                        | Safe power capable          |
| Class A<br>P2M IO-Link communication module | Class A       | 3 Pin's | 3 Pin's    | 1 & 3             | 160        | <b>P2M2HBVL12400A13</b>         | <b>P2M2HBVL12400A13-SPC</b> |
|   |               | 3 Pin's | 3 Pin's    | 4 & 3             | 160        | <b>P2M2HBVL12400A43</b>         | <b>P2M2HBVL12400A43-SPC</b> |
|   |               | 3 Pin's | 5 Pin's    | 4 & 2             | 160        | <b>P2M2HBVL12400A42</b>         | <b>P2M2HBVL12400A42-SPC</b> |
| Class B                                     | Class B       | 5 Pin's |            | 2 & 5             | 140        | <b>P2M2HBVL12400B25</b>         | <b>P2M2HBVL12400B25-SPC</b> |
| Power & communication cable                 |               |         |            |                   |            | <b>RKC 4.5T*-RSC 4.5T/S1587</b> |                             |

IODD file can be downloaded from IODD Finder or the Moduflex web site:  
<https://ioddfinder.io-link.com> or [www.parker.com/pdn/io-link](http://www.parker.com/pdn/io-link)

Where \* = 1, 2, 3, 4, 5, 10, 20 meter standard lengths

**P2M Class A Module with Independent Auxiliary Power Supply**



The P2M IO-Link Class A module can handle a Moduflex valve manifold having up to 19 solenoid outputs, or H Series Micro / ISO up to 24 solenoid outputs.

Thanks to its 2 x M12 A coded male connectors, the P2M node can be connected to any IO-Link Class A master and separately receive its auxiliary power supply for valves from an independent source.

The P2M IO-Link Class A module exists in 3 versions with the auxiliary power M12 connector pin out adapted to any sourcing through a standard M12 cable:

- P2M2HBVL12400A13 version: 24VDC / 0VDC on pins 1 & 3 – Standard version
- P2M2HBVL12400A43 version: 24VDC / 0VDC on pins 4 & 3 – Compatible with Siemens wiring
- P2M2HBVL12400A42 version: 24VDC / 0VDC on pins 4 & 2 – Compatible with Rockwell wiring and Turck wiring

**P2M Class B Module**



The P2M IO-Link Class B module can handle a Moduflex valve manifold having up to 19 solenoid outputs, or H Series Micro / ISO up to 24 solenoid outputs.

Thanks to its single M12 A coded male connectors, P2M node can be connected to any IO-Link Class B master receiving its auxiliary power supply for valves on pins 2 & 5 from the only cable simplifying the connection.

- P2M2HBVL12400B25 version: 24VDC / 0VDC on pins 2 & 5

**Valve Series**

Check the total maximum solenoid current consumption against the limit of the power supply and P2M module (standard version 4A, SPC version 2A).



**Moduflex Valve**  
 Cv: .18 - 0.80  
 19 Solenoids  
 42mA per Sol.



**H Micro**  
 Cv: 0.35  
 24 Solenoids  
 42mA per Sol.



**H ISO 15407-2 & 5599-2**  
 Cv: 0.55 - 6.0  
 24 Solenoids  
 42mA (15407) / 133mA (5599) per Sol.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**IO-Link Module Connection and Diagnostic Functions**



**IO-Link Module Connection**

Standard male M12 – type A

Usage of standard manufactured cables available from your usual electrical supplier is recommended.

Note: Auxiliary power for solenoids can be wired allowing the user to turn outputs off while the communications remains on.

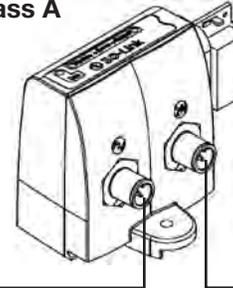
**Configuration**

IODD file can be downloaded from IODD Finder or the P2M web site:  
<https://ioddfinder.io-link.com>  
[www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)

**Class B**



**Class A**



**Legend**

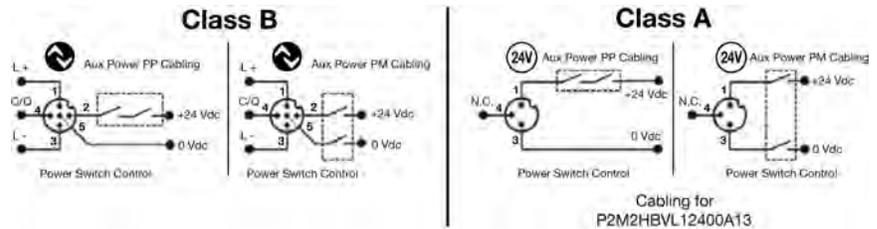
| Symbol | Description                   |
|--------|-------------------------------|
| L+     | IO-Link power supply "+"      |
| L-     | IO-Link power supply "-"      |
| C/Q    | IO-Link communication         |
| Aux +  | Auxiliary power supply 24 VDC |
| Aux -  | Auxiliary power supply 0 VDC  |

| M12 pin's | Class A   |           |           |
|-----------|-----------|-----------|-----------|
|           | 3 pin's   |           | 5 pin's   |
|           | P2M...A13 | P2M...A43 | P2M...A42 |
| 1         | Aux +     | Not used  | Not used  |
| 2         | -         | -         | Aux -     |
| 3         | Aux -     | Aux -     | Not used  |
| 4         | C/Q       | Aux +     | Aux +     |
| 5         | -         | -         | Not used  |

**Auxiliary Power Supply Compatibility**

The P2M IO-Link Node can be powered from a 24VDC auxiliary source in PP or PM mode as grounds are isolated.

The P2M Safe Power Capable (-SPC) versions can be connected from a SAFE OSSD test pulsed power source.



**IO-Link Module Diagnostic Functions**

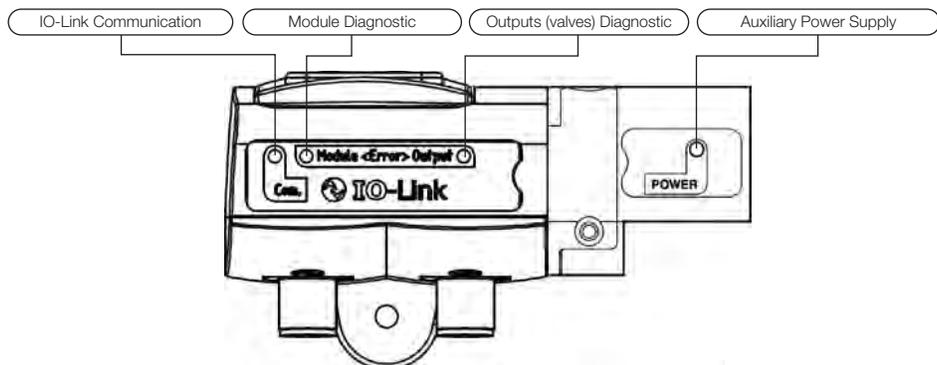
The P2M IO-Link module offers additional useful module status information:

- Solenoid overload or short circuit
- Auxiliary voltage out of tolerance
- Cycle counter for each solenoid
- Module temperature

For more information on product technical information and module diagnostic functionalities, please refer to the user manual available from the product web page:

[www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)

| COM Green LED |                              |                                    | Module - Error Red LED |  |                                     | Error - Output Red LED |   |   | POWER Green LED |  |                              |
|---------------|------------------------------|------------------------------------|------------------------|--|-------------------------------------|------------------------|---|---|-----------------|--|------------------------------|
| LED Status    | Description                  | Solving                            | LED Status             | Description  | Solving                             | LED Status             | Description   | Solving                                   | LED Status      | Description                            | Solving                      |
| OFF           | IO-Link L+ / L- not powered  | Check connection                   | OFF                    | Standard mode                                      | NA                                  | OFF                    | Standard mode                                       | NA  | OFF             | AUX power failure                      | Check Auxiliary Power Supply |
| ON            | IOL L+ / L- powered IO mode  | Set IO-Link mode in IO-Link master | ON                     | 24 VDC AUX power missing or any active malfunction | Check power supply or change module | ON                     | Any driver error (overload, over temperature, etc.) | Fix solenoid issue then acknowledge error | ON              | Standard                               | NA                           |
| Blinking      | IO-Link communication active | NA                                 |                        |  |                                     |                        |   |   | Blinking        | Aux Power is out of range, alarm level | Check Auxiliary Power Supply |



**D**  
**Subbase & Manual Valves**  
**H Series Micro**  
**Modulflex Series**  
**H Series ISO**  
**Network Connectivity**  
**DX ISOMAX Series**  
**Valvair II Series**



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Input Data**

One byte of diagnostic input data is transferred from P2M IO-Link to the IO-Link Master.

**Process input data**

|                         |                             |                  |                     |           |                   |                     |                      |
|-------------------------|-----------------------------|------------------|---------------------|-----------|-------------------|---------------------|----------------------|
| 7                       | 6                           | 5                | 4                   | 3         | 2                 | 1                   | 0                    |
| Output driver SPI error | Output driver channel error | Polyfuse tripped | Temperature warning | SPI error | AUX voltage error | AUX voltage warning | Acknowledge Required |

**Output Data**

Three bytes of process data are received by P2M IO-Link from the IO-Link Master for control of solenoids.

**Process output data (Byte 0)**

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 7   | 6   | 5   | 4   | 3   | 2   | 1   | 0   |
| EV8 | EV7 | EV6 | EV5 | EV4 | EV3 | EV2 | EV1 |

**Process output data (Byte 1)**

|      |      |      |      |      |      |      |     |
|------|------|------|------|------|------|------|-----|
| 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0   |
| EV16 | EV15 | EV14 | EV13 | EV12 | EV11 | EV10 | EV9 |

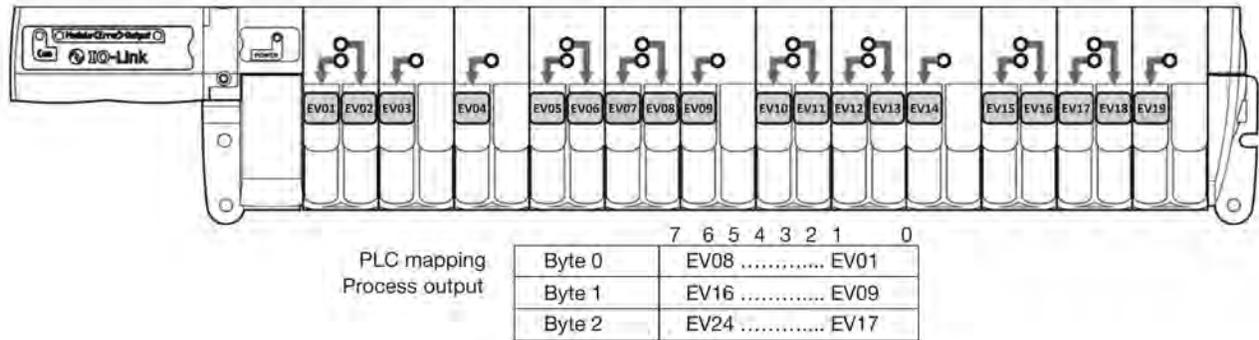
**Process output data (Byte 2)**

|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
| EV24 | EV23 | EV22 | EV21 | EV20 | EV19 | EV18 | EV17 |

**Solenoid Pilots Addressing and Process Mapping**

**P2M IO-Link node addressing used with Moduflex Valve System**

The P2M IO-Link node, when used with Moduflex Valve System can handle up to 19 pilot solenoid valves. Addressing will be done as shown below.

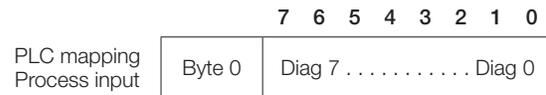


**P2M IO-Link Module Electrical Specifications**

|                            |                                      |
|----------------------------|--------------------------------------|
| IO-Link power supply       | According to IO-Link standard V1.1.2 |
| Speed communication        | Com 2 – 38 kBd                       |
| Auxiliary power supply     | 20.4 VDC to 26.4 VDC                 |
| Current limit per channel  | 150 mA                               |
| Max current limit          | 4 A                                  |
| Polarity inversion         | YES                                  |
| Short circuit protection   | YES                                  |
| Operating temperature      | 0°C to 55°C                          |
| Storage temperature        | -25°C to 70°C                        |
| Shock according to IEC     | 60068-2-27:2008                      |
| Vibration according to IEC | 60068-2-6:2007                       |
| EMC according to IEC       | 61000-4-2 up to -4-6                 |

**Network Diagnostic Through Process Mapping:**

The P2M IO-Link module offers diagnostic data transmitted to the PLC through the master:



| Diag bit    | Error message                        | Detail                      |
|-------------|--------------------------------------|-----------------------------|
| Diag 0..... | Fail-safe status .....               | Acknowledgement required    |
| Diag 1..... | Auxiliary voltage warning.....       | Check auxiliary power       |
| Diag 2..... | Auxiliary voltage failure.....       | Check auxiliary power       |
| Diag 3..... | Module failure .....                 | Module HS. must be replaced |
| Diag 4..... | Module over-temperature              |                             |
| Diag 5..... | Module over-load                     |                             |
| Diag 6..... | Pilot solenoid(s) short circuit..... | Solenoid must be replaced   |
| Diag 7..... | Outputs stage failure                |                             |

For further details, refer to the user manual: can be downloaded from [www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Accessories

Peripheral Modules

| Accessories   | Description                      | Option                        | Part Number     |                 |                 |
|---|----------------------------------|-------------------------------|-----------------|-----------------|-----------------|
|   |                                  |                               | Size 1          | Size 2          |                 |
|    | Pressure regulator without gauge | 0 to 30 PSI                   | <b>P2M1PXST</b> | <b>P2M2PXST</b> |                 |
|   |                                  | 0 to 60 PSI                   | <b>P2M1PXSL</b> | <b>P2M2PXSL</b> |                 |
|   |                                  | 0 to 120 PSI                  | <b>P2M1PXSN</b> | <b>P2M2PXSN</b> |                 |
|    | Pressure regulator with gauge    | 0 to 30 PSI                   | <b>P2M1PXSR</b> | <b>P2M2PXSR</b> |                 |
|   |                                  | 0 to 60 PSI                   | <b>P2M1PXSM</b> | <b>P2M2PXSM</b> |                 |
|   |                                  | 0 to 120 PSI                  | <b>P2M1PXSG</b> | <b>P2M2PXSG</b> |                 |
|    | Gauge                            | 0 to 30 PSI                   | <b>P2M1K0GT</b> | <b>P2M1K0GT</b> |                 |
|   |                                  | 0 to 60 PSI                   | <b>P2M1K0GL</b> | <b>P2M1K0GL</b> |                 |
|   |                                  | 0 to 120 PSI                  | <b>P2M1K0GN</b> | <b>P2M1K0GN</b> |                 |
|    | Push to connect fitting          | 5/32" or 4mm OD tube          | Elbow           | <b>CMD04-1</b>  |                 |
|   |                                  |                               | Straight        | <b>FMD04-1</b>  |                 |
|   |                                  | 1/4" OD tube                  | Elbow           | <b>CMD07-1B</b> | <b>CMD07-2B</b> |
|   |                                  |                               | Straight        | <b>FMD07-1B</b> | <b>FMD07-2B</b> |
|   |                                  | 3/8" OD tube                  | Elbow           |                 | <b>CMD09-2B</b> |
|   |                                  |                               | Straight        |                 | <b>FMD09-2B</b> |
|   |                                  | 1/2" OD tube                  | Straight        |                 | <b>FMD13-2B</b> |
|   |                                  |                               | 6mm OD tube     | Elbow           | <b>CMD06-1</b>  |
|   |                                  | 8mm OD tube                   | Straight        | <b>FMD06-1</b>  | <b>FMD06-2</b>  |
|   |                                  |                               | Elbow           |                 | <b>CMD08-2</b>  |
|   |                                  | 10mm OD tube                  | Straight        |                 | <b>FMD08-2</b>  |
|   |                                  |                               | Elbow           |                 | <b>CMD10-2</b>  |
|   | Double male union                | Connecting peripheral modules |                 | <b>HMDXX1</b>   | <b>HMDXX2</b>   |
|   |                                  |                               |                 | <b>MMDVA1</b>   | <b>MMDVA2</b>   |
|  | Muffler for vacuum exhaust port  |                               | <b>PMDYY1</b>   | <b>PMDYY2</b>   |                 |
|  | Plug                             |                               |                 |                 |                 |

Note: 85 Durometer minimum for pneumatic connectors.

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

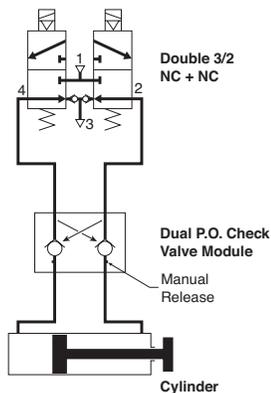
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Dual P.O. Check Valve**

Combined with a double 3/2 NC + NC valve, this module will block both flows and stop cylinder movement as soon as the valve's outputs are both exhausted. Better than a 3-Position valve, it provides more precise positioning when fitted close to the cylinder. Standard with manual release buttons.



P2M1PXCA

**Application**

At the outputs of a double 3/2 NC + NC valve, the dual P.O. check valve module achieves efficient and stable cylinder positioning. As soon as both lines are exhausted by the main control valve, the two internally piloted check valves close tight. The cylinder is then stabilized.

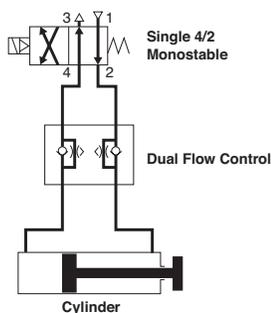
The manual pressure releases may then eventually be used for an adequate machine positioning.

**Dual P.O. Check Valve**

|        | Part Number     |
|--------|-----------------|
| Size 1 | <b>P2M1PXCA</b> |
| Size 2 | <b>P2M2PXCA</b> |

**Dual Flow Control**

By controlling the exhaust flows of a double-acting cylinder, this module can adjust both speeds — extend and retract. It may be plugged into the valve module output ports or mounted close to the cylinder in its in-line version.



P2M1PXFA

**Application**

On a double-acting cylinder, extend and retract speeds are adjusted separately by control of air flow exhaust. The control becomes more precise when the flow adjustment is close to the cylinder. The examples show different solutions which are dependent upon the valve-to-cylinder distance and accessibility to the cylinder

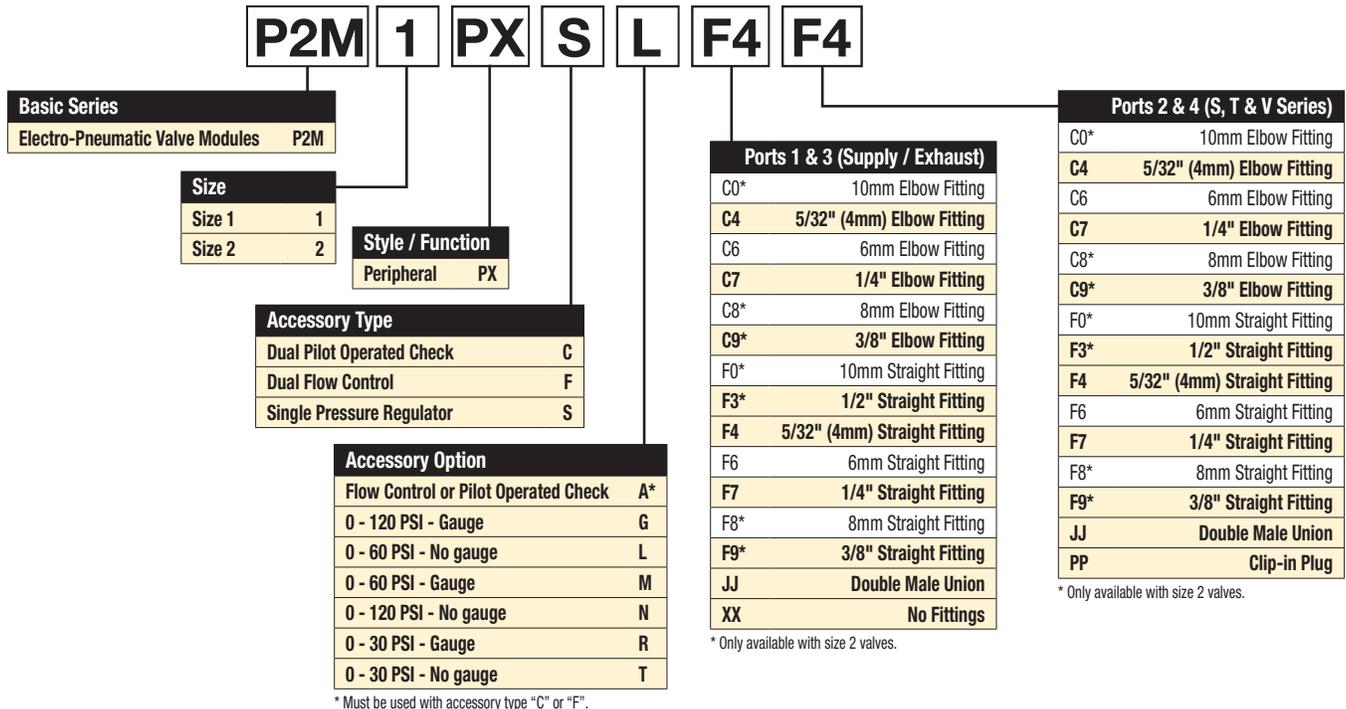
**Dual Flow Control Module**

|        | Weight  | Part Number     |
|--------|---------|-----------------|
| Size 1 | 1.06 oz | <b>P2M1PXFA</b> |
| Size 2 | 1.59 oz | <b>P2M2PXFA</b> |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**“P” Series Peripheral Modules Model Number Index**  
*(Complete with Pneumatic Connectors)*



**D**  
Subbase & Manual Valves  
H Series Micro  
Moduflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

**Regulator with Gauge**



**How to Order - Example:** Size 1, Regulator with gauge, 1/4" OD straight fittings.

| Line item                         | Quantity | Part Number         | Description   |
|-----------------------------------|----------|---------------------|---|
| <b>Complete Peripheral Module</b> |          |                     |   |
| 1                                 | 1        | <b>P2M1PXSGF7F7</b> | Size 1, Regulator with 0-160 PSI Gauge, 1/4" OD Straight Port Fittings in port 1, 2, 3, 4 |
| <b>Components</b>                 |          |                     |   |
| 1                                 | 1        | <b>P2M1PXSG</b>     | Size 1, Regulator with 0-160 PSI Gauge  |
| 2                                 | 4        | <b>FMD07-1B</b>     | Size 1-1/4" OD Tube Push-In Connector   |

**Flow Control with Fittings**



**How to Order - Example:** Size 1, Dual Flow Control, 1/4" OD straight fittings.

| Line item                         | Quantity | Part Number         | Description  |
|-----------------------------------|----------|---------------------|--|
| <b>Complete Peripheral Module</b> |          |                     |  |
| 1                                 | 1        | <b>P2M1PXFAF7F7</b> | Size 1, Dual Flow Control, 1/4" OD Straight Port Fittings in Port 1, 2, 3, 4 |
| <b>Components</b>                 |          |                     |  |
| 1                                 | 1        | <b>P2M1PXFA</b>     | Size 1, Dual Flow Control  |
| 2                                 | 4        | <b>FMD07-1B</b>     | Size 1-1/4" OD Tube Push-In Connector  |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Vacuum Generator Applications**

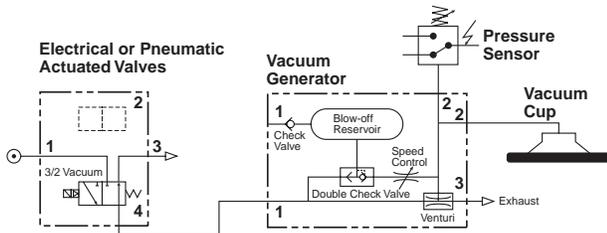
Depending on the application requirements, this vacuum generator may be controlled by single or by a dual 3/2 Moduflex valve. The Vacuum Generator has an integrated blow-off chamber that helps destroy the degree of vacuum. Blow-off can be increased with the addition of a control air input to the blow-off port on the vacuum module. A Ø6 mm port is available for an optional plug-in vacuum sensor for delivering a vacuum feedback signal.



| Description      | Weight | Size            |
|------------------|--------|-----------------|
| Vacuum Generator | .88 oz | <b>P2M1PXVA</b> |

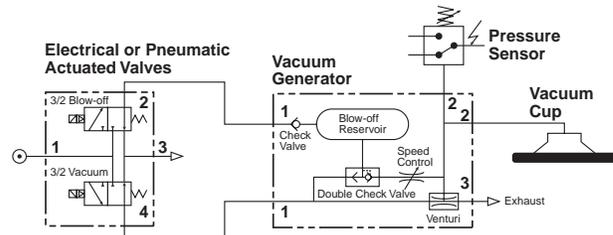
**Single 3/2 NC Air Control Valve**

The 3/2 valve delivers the air supply to generate vacuum through the venturi. It also pressurizes the integrated blow-off chamber. When the 3/2 valve cuts-off the air supply, this chamber is automatically exhausted into the vacuum channel in order to speed-up the part release. In this type of application, it is preferred to have the vacuum generator mounted away from the control valve.



**Dual 3/2 3/2 Valve Control**

One 3/2 valve controls air supply for vacuum. The other 3/2 valve will generate an additional blow-off that may prove necessary to obtain quick part release from large vacuum pads. The effect of the blow-off can be controlled with an adjustable screw. In this type of circuit, the Vacuum Generator can be mounted directly to the valve by using Double Male Unions or as a stand alone item away from the control valve.



**Vacuum Flow (SCFM)**

| Nozzle Diameter | 0    | 3    | 6    | 9    | 12   | 15   | 18   | 21   | 24 | 27 | 30 |
|-----------------|------|------|------|------|------|------|------|------|----|----|----|
| <b>P2M1PXVA</b> | 0.84 | 0.76 | 0.67 | 0.55 | 0.42 | 0.30 | 0.18 | 0.06 | —  | —  | —  |

**Evacuation Time**

| Series / Nozzle Diameter | Air Supply Pressure | Air Consumption | Evacuation Time in Sec / ft <sup>3</sup> * to Reach Different Vacuum Levels (inHg) |      |      |      |      |      |     |     |    |
|--------------------------|---------------------|-----------------|--|------|------|------|------|------|-----|-----|----|
|                          | PSI                 | SCFM            | 3  | 6    | 9    | 12   | 15   | 18   | 21  | 24  | 27 |
| <b>P2M1PXVA</b>          | 70                  | 1.60            | 5.6  | 14.2 | 22.0 | 42.4 | 62.3 | 85.0 | 116 | 198 | —  |

\* 1 ft<sup>3</sup> = 28.31 liters

**Vacuum Generator Model Number Index**

**P2M1PXVA F7 A F7 C MA**

| Basic Configuration | #1 Pressure Port        | #2 Sensor Port  | #2 Vacuum Port          | #3 Exhaust Port         |
|---------------------|-------------------------|-----------------|-------------------------|-------------------------|
| Basic Unit P2M1PXVA | 5/32" (4mm) Elbow C4    | A 6mm Plug      | C4 5/32" (4mm) Elbow    | C4 5/32" (4mm) Elbow    |
|                     | 6mm Elbow C6            | B Plug          | C6 6mm Elbow            | C6 6mm Elbow            |
|                     | 1/4" Elbow C7           | K 1/4" Straight | C7 1/4" Elbow           | C7 1/4" Elbow           |
|                     | Joint Fitting JJ        | L 1/4" Elbow    | F4 5/32" (4mm) Straight | F4 5/32" (4mm) Straight |
|                     | 5/32" (4mm) Straight F4 | M 6mm Elbow     | F6 6mm Straight         | F6 6mm Straight         |
|                     | 6mm Straight F6         |                 | F7 1/4" Straight        | F7 1/4" Straight        |
|                     | 1/4" Straight F7        |                 | MA Muffler              | MA Muffler              |
|                     | No Fittings XX          |                 |                         |                         |

| Port #1 Configuration                               |   |
|---|---|
| Fitting in Pressure Port and Blow-Off Port          | A |
| Fitting in Pressure Port and Blow-Off Port Plugged* | B |

\* Can not be directly mounting to valve.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Intermediate Supply Module Model Number Index**

**P2M2BX V 0 4 F9 MM**

| Intermediate Supply Module |        |
|----------------------------|--------|
| Basic Unit                 | P2M2BX |

| Valve Type         |   |
|--------------------|---|
| Individually Wired | T |
| Collective Wiring  | V |

| Wiring Style |   |
|--------------|---|
| No Cable     | 0 |

| Plate Configuration  |   |
|----------------------|---|
| #1 & #3 Blocked      | 1 |
| #1 Open & #3 Blocked | 2 |
| #1 Blocked & #3 Open | 3 |
| #1 & #3 Open         | 4 |

| Inlet Port Type (#1 pressure)* |                              |
|--------------------------------|------------------------------|
| C0                             | 10mm Elbow Fitting           |
| C2                             | 12mm Elbow Fitting           |
| C6                             | 6mm Elbow Fitting            |
| <b>C7</b>                      | <b>1/4" Elbow Fitting</b>    |
| C8                             | 8mm Elbow Fitting            |
| <b>C9</b>                      | <b>3/8" Elbow Fitting</b>    |
| F0                             | 10mm Straight Fitting        |
| F2                             | 12mm Straight Fitting        |
| <b>F3</b>                      | <b>1/2" Straight Fitting</b> |
| F6                             | 6mm Straight Fitting         |
| <b>F7</b>                      | <b>1/4" Straight Fitting</b> |
| F8                             | 8mm Straight Fitting         |
| <b>F9</b>                      | <b>3/8" Straight Fitting</b> |
| <b>MM</b>                      | <b>Clip-in Muffler</b>       |
| <b>PP</b>                      | <b>Clip-in Plug</b>          |

| Exhaust Port Type (#3 exhaust)* |                              |
|---------------------------------|------------------------------|
| C0                              | 10mm Elbow Fitting           |
| C2                              | 12mm Elbow Fitting           |
| C6                              | 6mm Elbow Fitting            |
| <b>C7</b>                       | <b>1/4" Elbow Fitting</b>    |
| C8                              | 8mm Elbow Fitting            |
| <b>C9</b>                       | <b>3/8" Elbow Fitting</b>    |
| F0                              | 10mm Straight Fitting        |
| F2                              | 12mm Straight Fitting        |
| <b>F3</b>                       | <b>1/2" Straight Fitting</b> |
| F6                              | 6mm Straight Fitting         |
| <b>F7</b>                       | <b>1/4" Straight Fitting</b> |
| F8                              | 8mm Straight Fitting         |
| <b>F9</b>                       | <b>3/8" Straight Fitting</b> |
| <b>MM</b>                       | <b>Clip-in Muffler</b>       |
| <b>PP</b>                       | <b>Clip-in Plug</b>          |

\* Elbow fittings face up.

\* Elbow fittings face up.

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Plate Configuration**



**#1 & #3 Blocked**

#1 Port connected to valves on the right only. Left is blocked.  
 #3 Port connected to valves on the right only. Left is blocked.



**#1 Open, #3 Blocked**

#1 Port connected to valves on the right and the left.  
 #3 Port connected to valves on the right only. Left is blocked.



**#1 Blocked, #3 Open**

#1 Port connected to valves on the right only. Left is blocked.  
 #3 Port connected to valves on the right and the left.



**#1 & #3 Open**

#1 Port connected to valves on the right and the left.  
 #3 Port connected to valves on the right and the left.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D60

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Solenoid Pilot 24VDC**

| Description   | Part Number        |
|---|--------------------|
| Solenoid pilot (without plug-in electrical connector) | <b>P2D8V32C5</b>   |
| Air pilot with 5/32" (4mm) tube fitting               | <b>P2M2K0PA</b>    |
| Solenoid pilot (without clip connector)               | <b>P2D2W3226C5</b> |



P2D2W3226C5



P2D8V32C5



P2M2K0PA

**Size 1 Valve**  
**Without Solenoid Pilot**  
**and Without Subbase**  
**4-way / 2-position / Single Valve**



P2M1X4EE

| Solenoid                     | Part Number     |
|------------------------------|-----------------|
| Single solenoid (Monostable) | <b>P2M1X4ES</b> |
| Double solenoid (Bistable)   | <b>P2M1X4EE</b> |

**4-way / 2-position / Dual Valve**

| Solenoid                           | Part Number     |
|------------------------------------|-----------------|
| Solenoid spring with exhaust check | <b>P2M1XJEE</b> |

**3-way / 2-position / Dual Valve**

| Solenoid                                   | Part Number      |
|--|------------------|
| Double solenoid NC + NC with exhaust check | <b>P2M1XDDEE</b> |
| Double solenoid NO + NO with exhaust check | <b>P2M1XCEE</b>  |
| Double solenoid NC + NO with exhaust check | <b>P2M1XEEE</b>  |
| Single solenoid NC with exhaust check      | <b>P2M1X3ES</b>  |

**Set of Maintenance Parts**

| Description  | Part Number     |
|--|-----------------|
| Clips<br>Set of 14 clips: 6 for size 1 valves, 2 for size 2 valves, 4 for dual 4/2 valves, 2 for end plate and intermediate modules                | <b>P2M2K0CA</b> |
| Seals<br>Set of 10 seals: 3 for manifold to manifold seals, 3 under solenoid pilot seals, 4 under valve seals (two size 1 seals, two size 2 seals) | <b>P2M2K0JA</b> |
| Forks<br>Set of 10 isolation forks for solenoid pilot manual override  | <b>P2M2K0FA</b> |

**Size 2 Valve**  
**Without Solenoid Pilot**  
**and Without Subbase**  
**4-way / 2-position / Dual Valve**

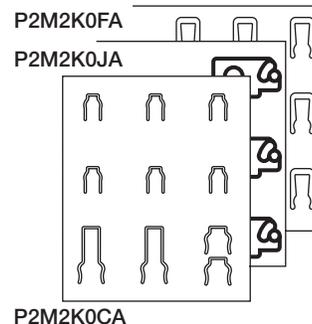


P2M2X4EE

| Solenoid                     | Part Number     |
|------------------------------|-----------------|
| Single solenoid (Monostable) | <b>P2M2X4ES</b> |
| Double solenoid (Bistable)   | <b>P2M2X4EE</b> |

**3-way / 2-position / Dual Valve**

| Solenoid                                   | Part Number      |
|--|------------------|
| Double solenoid NC + NC with exhaust check | <b>P2M2XDDEE</b> |
| Double solenoid NO + NO with exhaust check | <b>P2M2XCEE</b>  |
| Double solenoid NC + NO with exhaust check | <b>P2M2XEEE</b>  |
| Single solenoid NC with exhaust check      | <b>P2M2X3ES</b>  |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D61

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Ordering Information

**Moduflex Add-A-Fold Assembly Model Number Index**  
(Complete with Pneumatic and Electrical Connectors)

**How To Order Plug-in Add-A-Fold Assemblies**

1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List valves and manifolds. List left to right, LOOKING AT THE CYLINDER PORTS on the manifold.

**P2MA V 0 1 C9 C9 ##**

| Moduflex Island Assembly |       |
|--------------------------|-------|
| Add-A-Fold               | P2MA* |

\*Includes pneumatic H & T end plate kit.

| Style              |    |
|--------------------|----|
| Individually Wired | T  |
| Collective Wiring  | V* |

\* Includes 20-pin multi-connector or 25-pin, D-sub electrical head module.

| Wiring / Bus Protocol                         |     |
|---|-----|
| No Cable (20-pin or multi-connector T series) | 0 † |
| 2 Meter Cable (20-pin)                        | 2   |
| 5 Meter Cable (20-pin)                        | 5   |
| 9 Meter Cable (20-pin)                        | 9   |
| Bus   | B*  |
| No Cable (25-pin, D-sub)                      | D   |
| 3 Meter Cable (25-pin, D-sub)                 | F   |

\* Order bus module as a separate line item.  
† Default to option "0" for T series.

| Pilot Source                       |   |
|------------------------------------|---|
| Internal Supply / Internal Exhaust | 1 |
| Internal Supply / External Exhaust | 2 |
| External Supply / Internal Exhaust | 3 |
| External Supply / External Exhaust | 4 |

| Number of Stations <sup>f</sup> |        |
|---------------------------------|--------|
| 01 - 19*                        | V-Type |
| 01 - 30                         | T-Type |

\* Max. number of addresses for V type is 19. Single solenoid valves equal one address. Double solenoid valves equal two addresses. Maximum address may depend upon choice of bus protocol.

† Intermediate modules are considered stations, but do not count against maximum number of addresses for manifold.

| Exhaust Port Type (#3 Exhaust)* |                              |
|---------------------------------|------------------------------|
| C0                              | 10mm Elbow Fitting           |
| C2                              | 12mm Elbow Fitting           |
| C6                              | 6mm Elbow Fitting            |
| <b>C7</b>                       | <b>1/4" Elbow Fitting</b>    |
| C8                              | 8mm Elbow Fitting            |
| <b>C9</b>                       | <b>3/8" Elbow Fitting</b>    |
| F0                              | 10mm Straight Fitting        |
| F2                              | 12mm Straight Fitting        |
| <b>F3</b>                       | <b>1/2" Straight Fitting</b> |
| F6                              | 6mm Straight Fitting         |
| <b>F7</b>                       | <b>1/4" Straight Fitting</b> |
| F8                              | 8mm Straight Fitting         |
| <b>F9</b>                       | <b>3/8" Straight Fitting</b> |
| MM                              | Clip-in Muffler              |
| PP                              | Clip-in Plug                 |

\* Elbow fittings face up.

| Inlet Port Type (#1 pressure)* |                              |
|--------------------------------|------------------------------|
| C0                             | 10mm Elbow Fitting           |
| C2                             | 12mm Elbow Fitting           |
| C6                             | 6mm Elbow Fitting            |
| <b>C7</b>                      | <b>1/4" Elbow Fitting</b>    |
| C8                             | 8mm Elbow Fitting            |
| <b>C9</b>                      | <b>3/8" Elbow Fitting</b>    |
| F0                             | 10mm Straight Fitting        |
| F2                             | 12mm Straight Fitting        |
| <b>F3</b>                      | <b>1/2" Straight Fitting</b> |
| F6                             | 6mm Straight Fitting         |
| <b>F7</b>                      | <b>1/4" Straight Fitting</b> |
| F8                             | 8mm Straight Fitting         |
| <b>F9</b>                      | <b>3/8" Straight Fitting</b> |
| MM                             | Clip-in Muffler              |
| PP                             | Clip-in Plug                 |

\* Elbow fittings face up.



"V" Series with 20-pin Connector



"V" Series with IO-Link

**D**  
Subbase & Manual Valves  
H Series Micro  
Moduflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair-II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Ordering Information**

**How to Order -**

**Example:** Application requires V Series valves with 20-Pin, D-Sub and 2 Meter cable. Manifold to include (1) Size 2, 4/2 Double Solenoid Valve - 3/8" OD fitting, (1) Size 1, 4/2 Single Solenoid Valve - 1/4" OD Elbow Fitting, Intermediate Module - 3/8" OD Fitting with Exhaust Muffler, Port 1 and 3 Blocked, (1) Size 1, Dual 3/2 NC Valve and (1) Size 1, 4-Way Double Solenoid Valve both with 1/4" OD Straight Fittings. Includes 3/8 OD Inlet Fitting and Exhaust Muffler.

| Line Item                         | Quantity | Part Number            | Description  |
|-----------------------------------|----------|------------------------|--|
| <b>Complete Manifold Assembly</b> |          |                        |  |
| 1                                 | 1        | <b>P2MAV21F9MM05</b>   | Moduflex Island Assembly, Pneumatic Head and Tail Module Set, Internal Pilot Supply, Internal Pilot Exhaust, 3/8" Straight Fitting Port 1, Port 3 Muffler. |
| 2                                 | 1        | <b>P2M2V4EE2CV00F9</b> | Size 2, Double Solenoid, 4/2, 3/8" Straight Pneumatic Connectors.  |
| 3                                 | 1        | <b>P2M1V4ES2CV00C7</b> | Size 1, Single Solenoid, 1/4" Elbow Pneumatic Connectors.  |
| 4                                 | 1        | <b>P2M2BXV0A1F9MM</b>  | Intermediate Module 3/8" Straight Fitting with Exhaust Muffler   |
| 5                                 | 1        | <b>P2M1VDEE2CV00C7</b> | Size 1, Dual 3/2 NC + NC, 1/4" Elbow Pneumatic Connectors.   |
| 6                                 | 2        | <b>P2M1VJEE2CV00F7</b> | Size 1, Dual 4/2, 1/4" Straight Pneumatic Connectors.  |

**Components**

|    |   |                    |  |
|----|---|--------------------|--|
| 1  | 1 | <b>P2M2HXT01</b>   | Pneumatic Head and Tail Module Set                           |
| 2  | 1 | <b>P2M2HEV0A</b>   | 20-Pin, Multi-Connector Electrical Head Module               |
| 3  | 1 | <b>P8LMH20M2A</b>  | 2 Meter, 20-Pin Cable  |
| 4  | 1 | <b>P2M2V4EE2CV</b> | Size 2, V Series Island Valve Module, Double Solenoid, 4-Way |
| 5  | 1 | <b>P2M1V4ES2CV</b> | Size 1, V Series Island Valve Module, Single Solenoid, 4-Way |
| 6  | 1 | <b>P2M2BXV0A</b>   | Intermediate Module  |
| 7  | 1 | <b>P2M1VGEE2CV</b> | Size 1, V Series Island Valve Module, Dual 3/2 NC + NC       |
| 8  | 2 | <b>P2M1VJEE2CV</b> | Size 1, V Series Island Valve Module, Dual 4/2               |
| 9  | 2 | <b>CMD07-1B</b>    | Size 1, 1/4" OD Tube Elbow Push-in Connector                 |
| 10 | 6 | <b>FMD07-1B</b>    | Size 1, 1/4" OD Tube Straight Push-in Connector              |
| 11 | 4 | <b>FMD09-2B</b>    | Size 2, 3/8" OD Tube Straight Push-in Connector              |
| 12 | 2 | <b>MMDVA2</b>      | Clip-on Muffler  |

**How to Order -**

**Example:** Application requires V Series valves with IO-Link Class A Module. Manifold to include (1) Size 2, 4/2 Double Solenoid Valve - 3/8" OD fitting, (1) Size 1, 4/2 Single Solenoid Valve - 1/4" OD Elbow Fitting, Intermediate Module - 3/8" OD fitting with Exhaust Muffler, Port 1 and 3 Blocked, (1) Size 1, Dual 3/2 NC Valve and (1) Size 1, 4-Way Double Solenoid Valve both with 1/4" OD Straight Fittings. Include 3/8 OD Inlet Fitting and Exhaust Muffler.

| Line Item                         | Quantity | Part Number            | Description  |
|-----------------------------------|----------|------------------------|--|
| <b>Complete Manifold Assembly</b> |          |                        |  |
| 1                                 | 1        | <b>P2MAVB1F9MM05</b>   | Moduflex Island Assembly, Pneumatic Head and Tail Module Set, Internal Pilot Supply, Internal Pilot Exhaust, 3/8" Straight Fitting Port 1, Port 3 Muffler. |
| 2                                 | 1        | <b>P2M2HBVL12400AB</b> | IO-Link Class A Module   |
| 3                                 | 1        | <b>P2M2V4EE2CV00F9</b> | Size 2, Double Solenoid, 4/2, 3/8" Straight Pneumatic Connectors.  |
| 4                                 | 1        | <b>P2M1V4ES2CV00C7</b> | Size 1, Single Solenoid, 1/4" Elbow Pneumatic Connectors.  |
| 5                                 | 1        | <b>P2M2BXV0A1F9MM</b>  | Intermediate Module 3/8" Straight Fitting with Exhaust Muffler   |
| 6                                 | 2        | <b>P2M1VDEE2CV00C7</b> | Size 1, Dual 3/2 NC + NC, 1/4" Elbow Pneumatic Connectors.   |
| 7                                 | 1        | <b>P2M1VJEE2CV00F7</b> | Size 1, Dual 4/2, 1/4" Straight Pneumatic Connectors.  |

**Components**

|    |   |                        |  |
|----|---|------------------------|--|
| 1  | 1 | <b>P2M2HXT01</b>       | Pneumatic Head and Tail Module Set                           |
| 2  | 1 | <b>P2M2HBVL12400AB</b> | IO-Link Class A Module                                       |
| 3  | 1 | <b>P2M2V4EE2CV</b>     | Size 2, V Series Island Valve Module, Double Solenoid, 4-Way |
| 4  | 1 | <b>P2M1V4ES2CV</b>     | Size 1, V Series Island Valve Module, Single Solenoid, 4-Way |
| 5  | 1 | <b>P2M2BXV0A</b>       | Intermediate Module  |
| 6  | 1 | <b>P2M1VGEE2CV</b>     | Size 1, V Series Island Valve Module, Dual 3/2 NC + NC       |
| 7  | 2 | <b>P2M1VJEE2CV</b>     | Size 1, V Series Island Valve Module, Dual 4/2               |
| 8  | 2 | <b>CMD07-1B</b>        | Size 1, 1/4" OD Tube Elbow Push-in Connector                 |
| 9  | 6 | <b>FMD07-1B</b>        | Size 1, 1/4" OD Tube Straight Push-in Connector              |
| 10 | 4 | <b>FMD09-2B</b>        | Size 2, 3/8" OD Tube Straight Push-in Connector              |
| 11 | 2 | <b>MMDVA2</b>          | Clip-on Muffler  |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

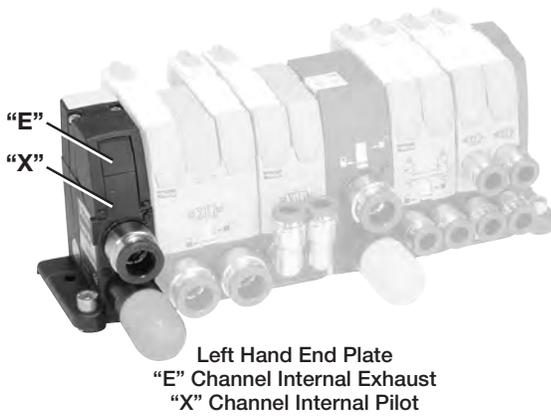
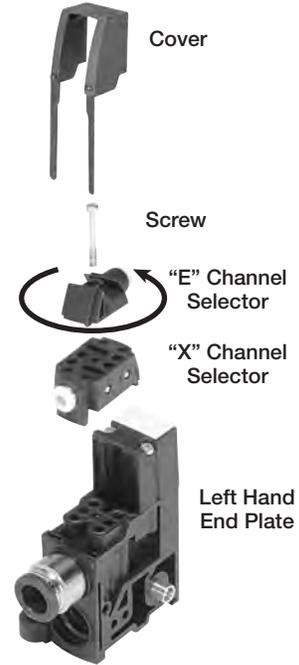
**Internal and external pilot supply options**

All T and V Series Valve bases incorporate an auxiliary channel "X" to supply pressure to the solenoid pilots. The "X" galley is pressurized from the left hand end plate. Depending on the configuration of the left hand end plate, this pressure is either supplied from the #1 port in the left hand end plate or supplied externally through a 4mm OD tube fitting in the left hand end plate. This fitting is supplied in all left hand end plates and can be converted in the field.

**Internal and external solenoid pilot exhaust options**

All T and V Series Valve bases incorporate an auxiliary channel "E" which is used to exhaust the solenoid pilot pressure from each solenoid valve. The "E" galley is connected to the left hand end plate. Depending on the configuration of the left hand end plate, this exhaust is either connected to the #3 exhaust port or is connected to a 4mm OD Tube fitting in the left hand end plate. This fitting is supplied in all left hand end plates and can be converted in the field.

To configure the left hand end plate, with pressure off, remove head cover to expose the selector section. Loosen selector section and rotate "X" or "E" channel selector to desired position. Tighten selector section and assemble cover.



|                      |                         |
|----------------------|-------------------------|
| D                    | Subbase & Manual Valves |
|                      | H Series Micro          |
| Moduflex Series      |                         |
| H Series ISO         |                         |
| Network Connectivity |                         |
| DX ISOMAX Series     |                         |
| Valvair II Series    |                         |



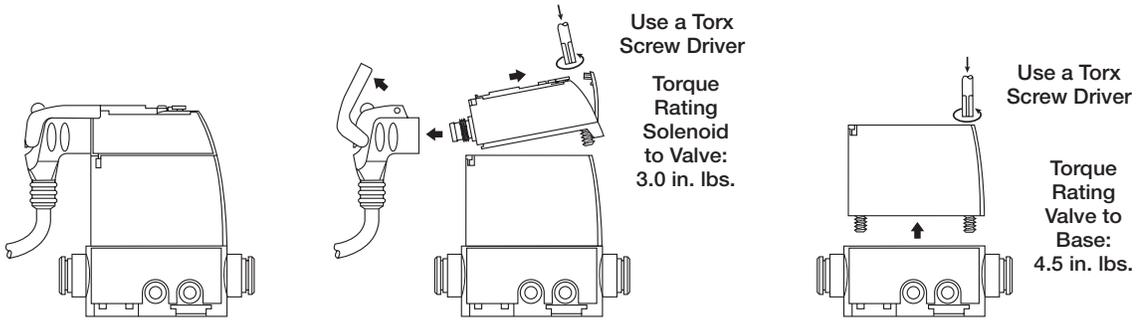
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**“V”, “T” and “S” Series Maintenance**

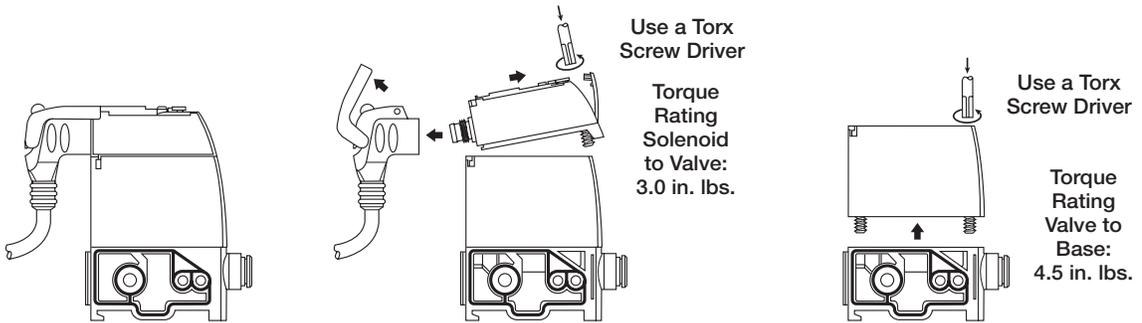
The latest generations of compact pneumatic valves have a life expectancy which generally exceeds the equipment they control. Therefore, maintenance is seldom required. When it

is necessary to change the solenoid pilot, valve or connector, they can be easily replaced without removing the island base, as shown below.

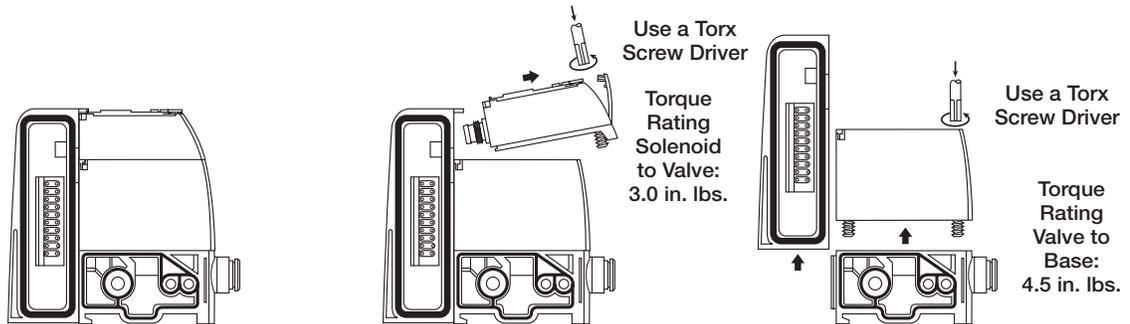
**“S” Series**



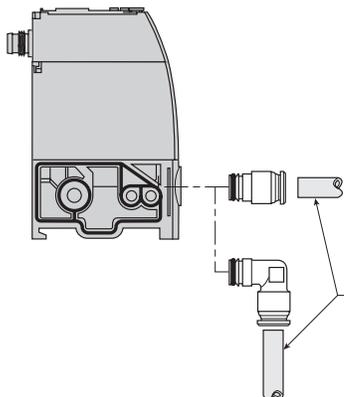
**“T” Series**



**“V” Series**



**Fitting and Tubing Installation**



**Fitting Assembly:** Pneumatic Connectors are retained by a clip in each module. Assembly is achieved by pushing the fitting into the module and sliding the clip down over the groove in the fitting. Pull fitting to check that it is secure.

**Tubing Assembly:** Cut tubing squarely & cleanly. Inspect the tubing to insure there are no sharp edges that may nick or cut the o-ring seal. Insert tubing into fitting until it bottoms out. A slight pull on the tube afterwards can help verify it is properly retained / inserted.

**Tubing Disassembly:** When it is required to remove the tubing from the fitting push the release button in towards the fitting & remove the tubing.

**Tubing Reassembly:** Inspect the tubing before re-inserting it for any scoring or other damage that would affect the o-ring sealing. It is recommended that for every insertion, the tubing end be trimmed, especially if it has any scoring or damage.

**Pneumatic Valve Specifications**

|                        |   |     |             |
|------------------------|---|-----|-------------|
| Fluid                  | Air, inert gas, filtered 40µ <sup>1</sup> , dry <sup>2</sup> or lubricated <sup>3</sup>                           |     |             |
| Operating Pressures    | Vacuum to 120 PSI   |     |             |
| Piloting Pressure      | 43 to 120 PSI for operating pressures below, use external pilot supply available on all head modules <sup>5</sup> |     |             |
| Pilot Supply           | Internal with "S" Series, mixed internal / external with "T" and "V" Series                                       |     |             |
| Exhaust Collection     | All exhausts are collectable, including solenoid pilot exhaust  |     |             |
| Life Cycle             | 100 million operations <sup>4</sup> (with dry air, 3 Hz, 20°C, 6 bar)   |     |             |
| Operating Temperatures | 5°F to 140°F (32°F to 130°F for field bus systems)  |     |             |
| Stocking Temperatures  | -40°F to 155°F  |     |             |
| Vibration Resistance   | According to IEC 68 - 2 - 6   | 2G  | 2 to 150 Hz |
| Impact Resistance      | According to IEC 68 - 2 - 27  | 15G | 11 ms       |

1. Class 5 according to ISO 8573-1
2. Class 4 according to ISO 8573-1
3. 3. With main air supply lubricated, monitor lubrication rate so that valve bank is not flooded with lubricant.
4. 4/2 valve
5. Double 3/2 minimum 50 PSI

**Electrical Specifications**

|                                     |   |                        |           |
|-------------------------------------|---|------------------------|-----------|
| Rated Coil Voltage                  | 24VDC   |                        |           |
| Allowable Voltage Fluctuation       | -15% to +10 % of nominal voltage  |                        |           |
| Electrical Connection               | Polarity insensitive: PNP and NPN compatible  |                        |           |
| Coil insulation Type                | Class B   |                        |           |
| Power Consumption                   | 1W (42 mA)  |                        |           |
| Manual Override                     | Locking or non-locking, isolated if required  |                        |           |
| Response Time of the Complete Valve | 9.6 ms ± 1.2 on 4/2 Double Solenoid Valve Size 1<br>12.0 ms ± 1.2 on 4/2 Single Solenoid Valve Size 1<br>14.8 ms ± 2 on 4/2 Double Solenoid Valve Size 2<br>17.0 ms ± 2 on 4/2 Single Solenoid Valve Size 2 | According to ISO 12238 |           |
| Type of Use                         | Continuous-duty Solenoid  |                        |           |
| Dust and Water Protection           | According to EN 60 529  | "S" and "T" Series:    | M8 IP67   |
|                                     |   |                        | Clip IP40 |
|                                     |   | "V" Series:            | IP65      |

**Specifications**

**1/4", 3/8" and 1/2" Fittings**

**Construction**

Nickel Plated Brass Body; O-ring: Nitrile (Buna N) lubricated with Silicone lubricant; Grab Ring: 301 Stainless Steel; One Piece Button Collet: Acetal – black

**Recommended Parker Tubing Series:**

E (Linear Low Density Polyethylene), PP (Polypropylene), N (Plasticized Polyamide, Nylon), NR (Unplasticized Polyamide, Rigid Nylon), U (Polyurethane 90 Durometer Shore A), HU (Polyurethane 95 Durometer Shore A)

**Other materials:** Polyurethane 85 Durometer Shore A – Applications and service conditions vary and therefore the use of a tube support may be required for any 85A PU tubing. The following commercially available O.D. – I.D. 85A tubing sizes require the use of a tube support regardless of application. ( 5/32" – 3/32", 3/16" – 1/8", 1/4" - .170", 1/4" – 3/16", 5/16" – 1/4", 3/8" – 5/16", 1/2" – 3/8")

Prestolok fittings should not be used for live swivel applications. Vacuum applications dependent upon temperature and type of tubing used.

**6mm, 8mm, 10mm, 12mm Fittings**

**Construction**

Polyamide HR Body; O-ring: Nitrile (Buna N) lubricated with Silicone lubricant; Sleeve: Polyamide HR Body; Grab Ring: 301 Stainless Steel; One Piece Button Collet: Polyacetal – yellow

**Recommended Parker Tubing Series for 6mm, 8mm, 10mm, 12mm Fittings:**

E (Linear Low Density Polyethylene), N (Plasticized Polyamide, Nylon), U (Polyurethane 90 Durometer Shore A), HU (Polyurethane 95 Durometer Shore A)

Prestolok fittings should not be used for live swivel applications. Vacuum applications dependent upon temperature and type of tubing used.

**D**

**Subbase & Manual Valves**

**H Series Micro**

**Moduflex Series**

**H Series ISO**

**Network Connectivity**

**DX ISOMAX Series**

**Valvair II Series**



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**"S" Series Individual Subbase Valve Dimensions and Mounting**

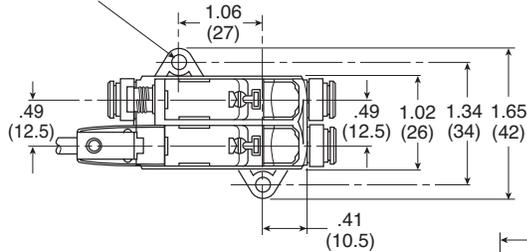
**Subbase Valve Size 1**



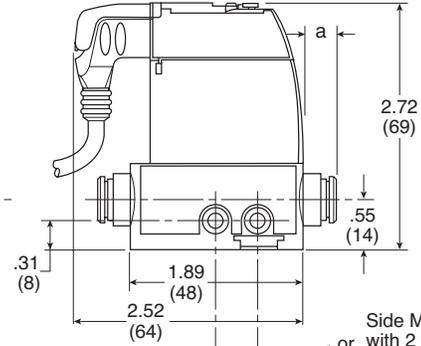
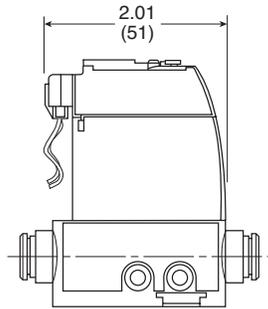
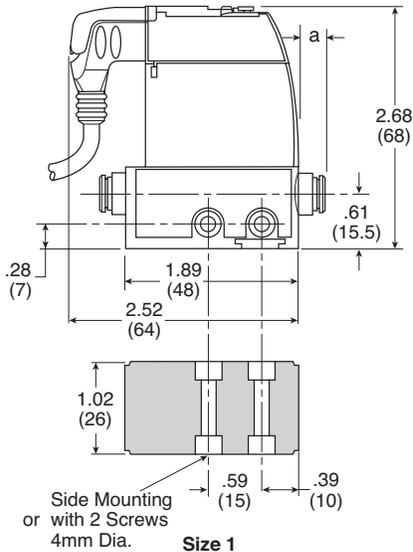
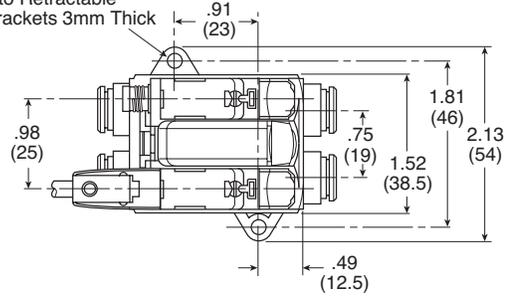
**Subbase Valve Size 2**



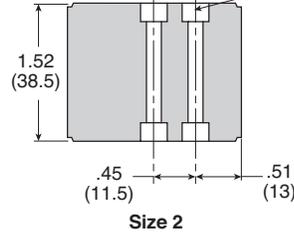
Surface Mounting with Screws 4 mm Dia. into Retractable Brackets 3mm Thick



Surface Mounting with Screws 4 mm Dia. into Retractable Brackets 3mm Thick



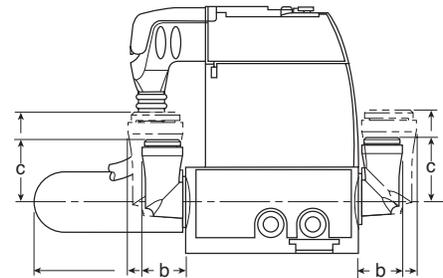
Side Mounting with 2 Screws 4mm Dia.



**Air Pilot**

| OD Tube Ext.         | a  | b  | c  |
|----------------------|----|----|----|
| 5/32" (4 mm)         | 8  | 10 | 12 |
| <b>Size 1 Valves</b> |    |    |    |
| 6 mm                 | 8  | 13 | 16 |
| 1/4"                 | 15 | 18 | 22 |
| Muffler              |    | 31 |    |
| 1/4"                 | 12 | 18 | 22 |
| <b>Size 2 Valves</b> |    |    |    |
| 8 mm                 | 9  | 16 | 19 |
| 3/8"                 | 16 | 23 | 26 |
| 10 mm                | 13 | 18 | 22 |
| Muffler              |    | 40 |    |

**Special Case:** 4/3 all ports blocked. Add the dual P.O. check valve that has been plugged in the basic valve.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

**Subbase & Manual Valves**

**H Series Micro**

**Moduflex Series**

**H Series ISO**

**Network Connectivity**

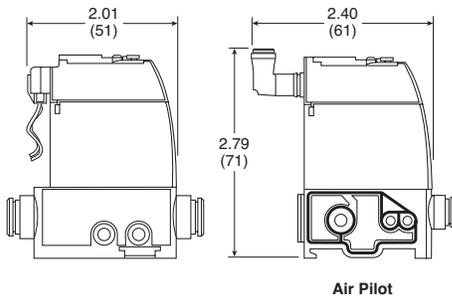
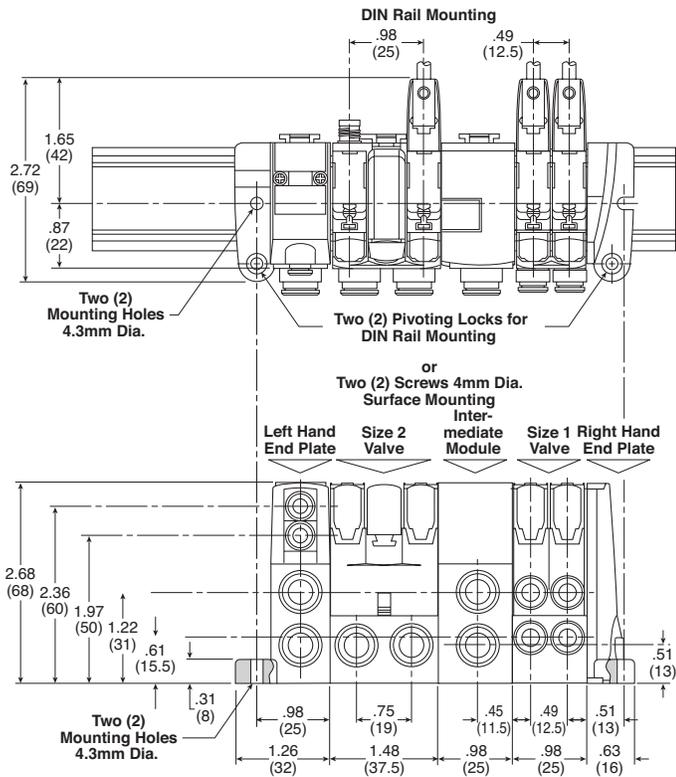
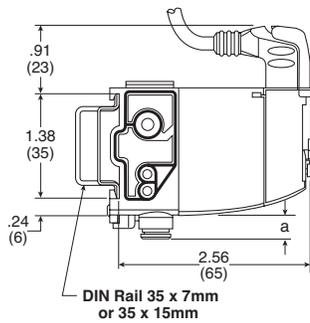
**DX ISOMAX Series**

**Valvair II Series**

**"T" Series Manifold Dimensions and Mounting**



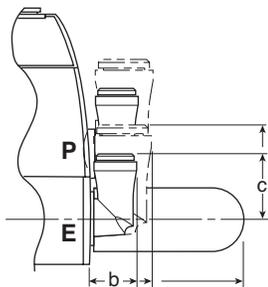
Total Width Depends on Valve Composition



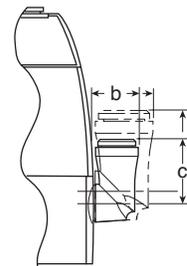
**Special Case:** 4/3 all ports blocked function within island version, add the dimensions of the dual P.O. check valve plugged into the island.

**End Plate and Intermediate Modules**

|               | a  | b  | c  |
|---------------|----|----|----|
| 6 mm Tube OD  | 8  | 13 | 16 |
| 1/4" Tube OD  | 12 | 18 | 22 |
| 8 mm Tube OD  | 9  | 16 | 19 |
| 3/8" Tube OD  | 16 | 23 | 26 |
| 10 mm Tube OD | 13 | 18 | 25 |
| 12 mm Tube OD | 13 | 19 | 25 |
| 1/2" Tube OD  | 13 |    |    |
| Muffler       | 40 |    |    |



| OD Tube       | Ext.         | a  | b  | c  |
|---------------|--------------|----|----|----|
| Size 1 Valves | 5/32" (4 mm) | 8  | 10 | 12 |
|               | 6 mm         | 8  | 13 | 16 |
|               | 1/4"         | 15 | 18 | 22 |
| Size 2 Valves | 1/4"         | 12 | 18 | 22 |
|               | 8 mm         | 9  | 16 | 19 |
|               | 3/8"         | 16 | 23 | 26 |
| 10 mm         | 13           | 18 | 22 |    |



**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

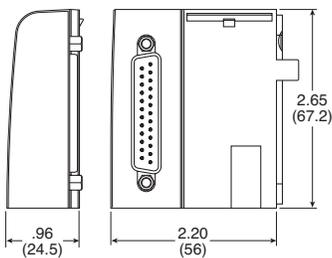
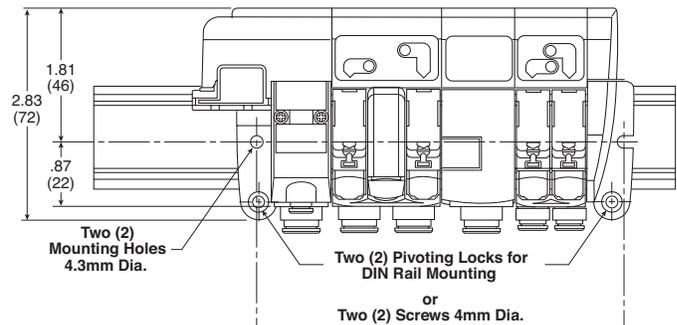
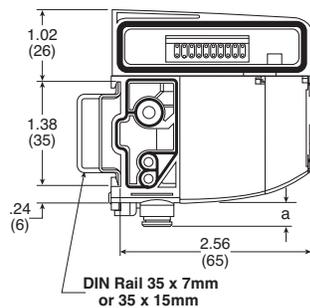


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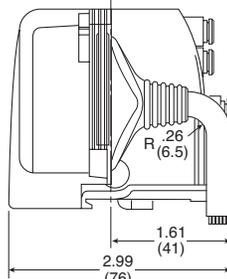
**"V" Series Manifold Dimensions and Mounting**  
 20-pin, Multi-Connector Valve Manifold



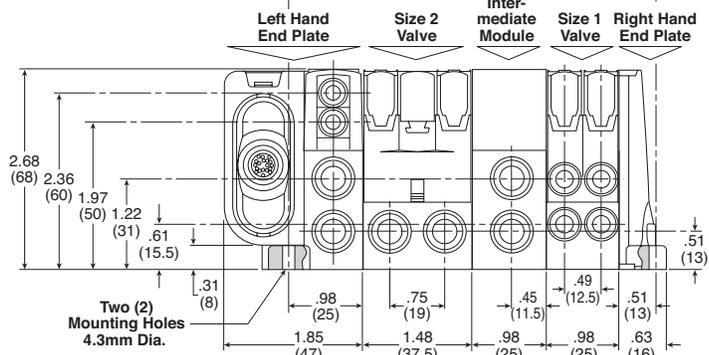
Total Width Depends  
 on Valve Composition



25-pin,  
 D-Sub

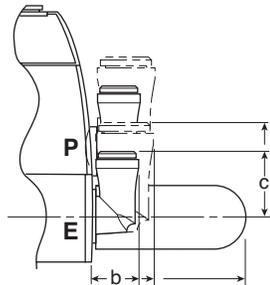


20-pin,  
 Multi-Connector

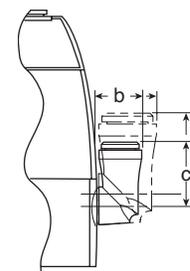


**End Plate and Intermediate Modules**

|               | a  | b  | c  |
|---------------|----|----|----|
| 6 mm Tube OD  | 8  | 13 | 16 |
| 1/4" Tube OD  | 12 | 18 | 22 |
| 8 mm Tube OD  | 9  | 16 | 19 |
| 3/8" Tube OD  | 16 | 23 | 26 |
| 10 mm Tube OD | 13 | 18 | 25 |
| 12 mm Tube OD | 13 | 19 | 25 |
| 1/2" Tube OD  | 13 |    |    |
| Muffler       | 40 |    |    |



| OD Tube        | Ext.         | a  | b  | c  |
|----------------|--------------|----|----|----|
|                | 5/32" (4 mm) | 8  | 10 | 12 |
| Size 1 Modules | 6 mm         | 8  | 13 | 16 |
|                | 1/4"         | 15 | 18 | 22 |
| Size 2 Modules | 1/4"         | 12 | 18 | 22 |
|                | 8 mm         | 9  | 16 | 19 |
|                | 3/8"         | 16 | 23 | 26 |
|                | 10 mm        | 13 | 18 | 22 |



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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

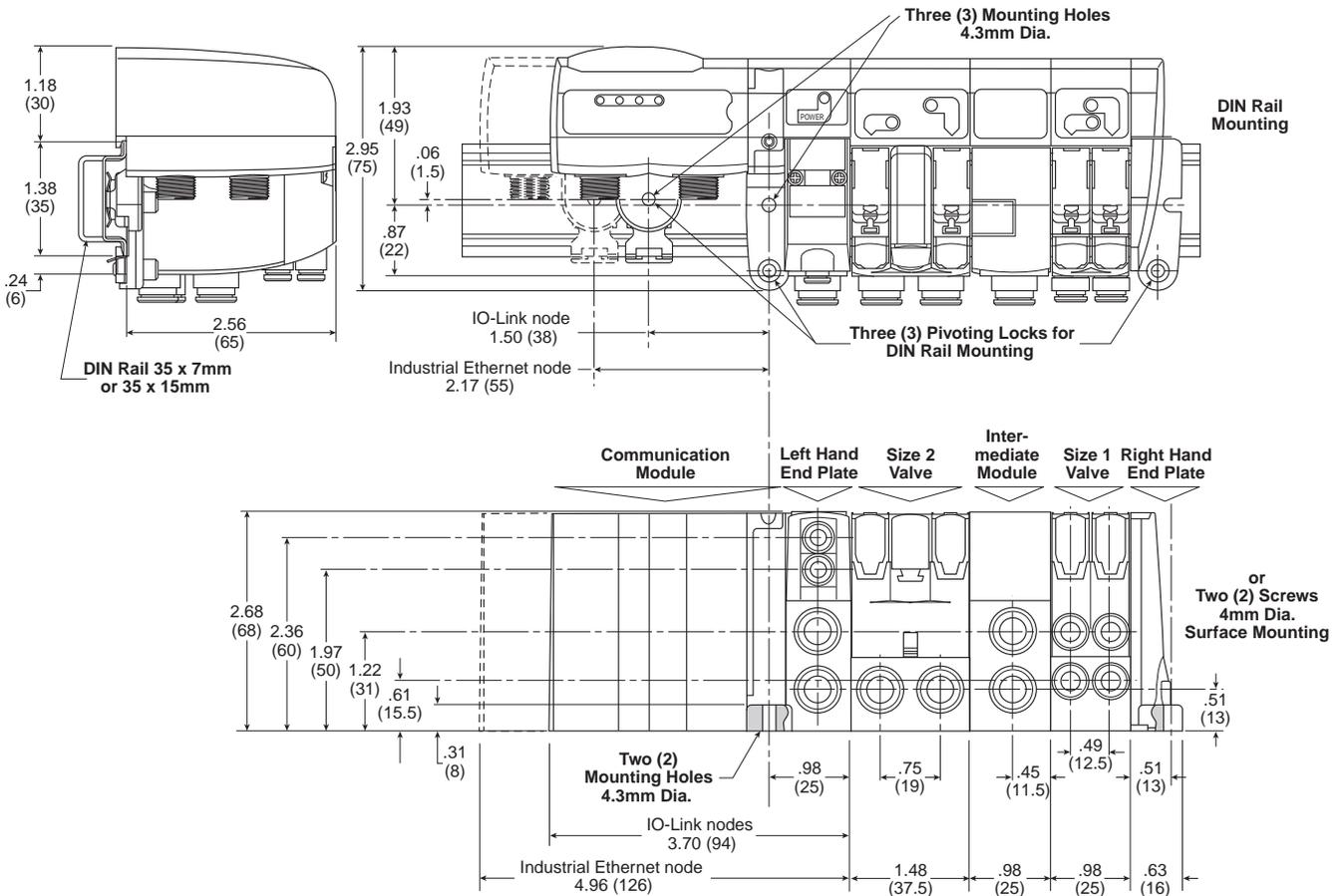
Valvair II Series

**“V” Series Manifold Dimensions and Mounting**  
**P2M Connected Valve Manifolds**

Total Width Depends  
 on Valve Composition



**Industrial Ethernet and IO-Link P2M Network Nodes with Valve Manifold**



**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



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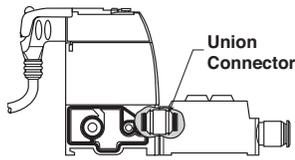
D70

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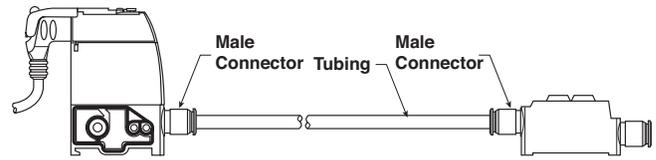
**"P" Series Peripheral Modules Dimensions and Mounting**

**Reminder:** Peripheral modules may either be plugged in the valve output ports or mounted in-line separate from the valve.

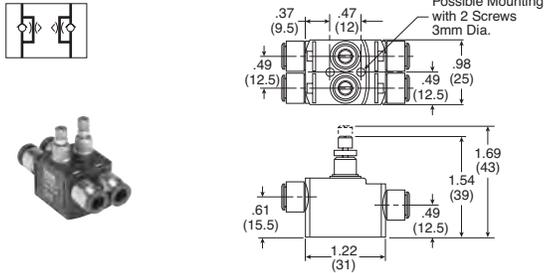
**Peripheral Module Plugged in a Valve**



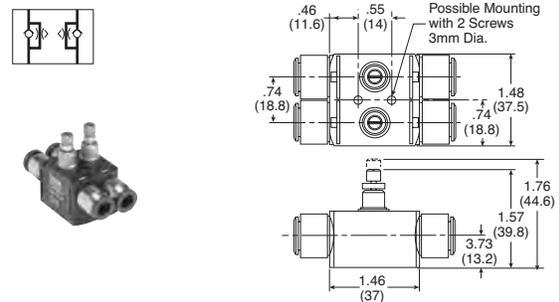
**In-Line Peripheral Modules: Mounting is Required**



**Dual Flow Control Size 1**

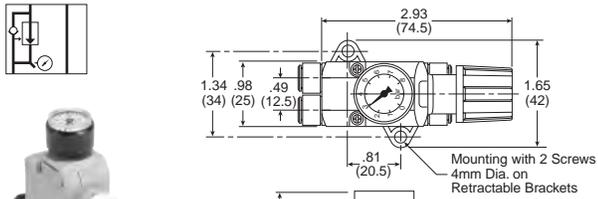


**Dual Flow Control Size 2**



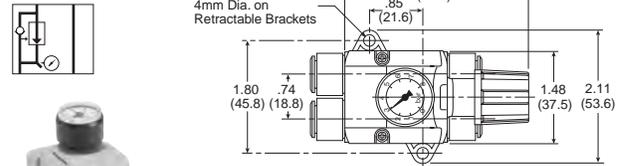
**Pressure Regulator Size 1**

**With Gauge**

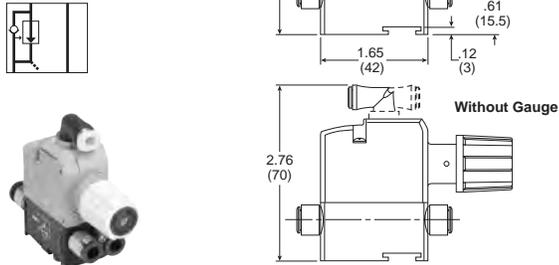


**Pressure Regulator Size 2**

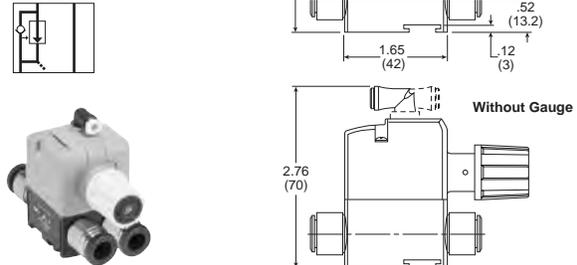
**With Gauge**



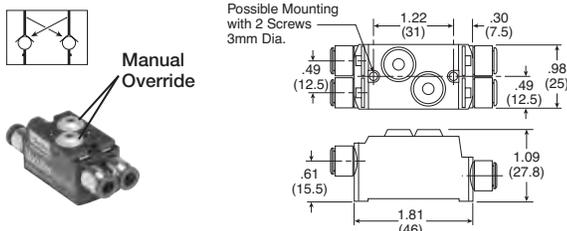
**Without Gauge**



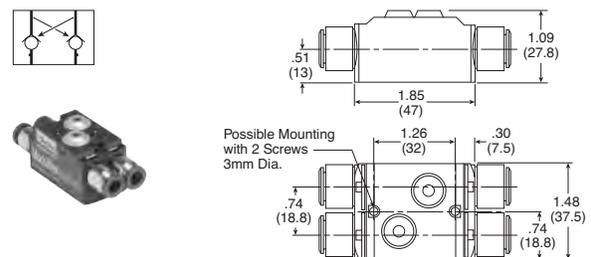
**Without Gauge**



**Dual P.O. Check Valve Size 1**



**Dual P.O. Check Valve Size 2**



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

|                         |
|-------------------------|
| <b>D</b>                |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DXISOMAX Series         |
| Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

Features

H Series ISO

The H Series ISO valve conforms to international standards 15407 and 5599, providing maximum flexibility for end users. As Parker’s premier manifold mount product offering, H Series ISO offers machine builders a complete offering with a wide variety of accessories and options in a valve family with flow ranges from 0.55 Cv up to 6.0 Cv. HB/HA/H1/H2/H3 can be mounted on the same manifold. Individual wiring is available with DIN or central connectors, and collective solutions offer installation time savings with either multi-pin connectors or network solutions.

Ports, Flow

- H Universal Manifold
  - HB: 1/8 inch, 0.55 Cv
  - HA: 1/4 inch, 1.1 Cv
  - H1: 3/8 inch, 1.5 Cv
  - H2: 1/2 inch, 3.0 Cv
- H Classic Manifold (not compatible with H Universal without H3 Transition Kit)
  - H3: 3/4 inch, 6.0 Cv
- NPT and BSPP “G” standard

Solenoids

- HB & HA: 24 VDC, 1.0 Watt, and 120 VAC, 1.0 VA
- H1, H2, & H3: 24 VDC, 3.2 Watt, 120 VAC, 4.5 VA, 24 VDC, 1.3 Watt

Certification / approval

- IP65 rated
- cCSAus approved voltages:
  - 15407-2 & 5599-2 24VDC manifolds only
  - 15407-2 & 5599-2 single subbase, all voltages
  - 15407-1 & 5599-1 manifold and single subbase, all voltages
- BSPP manifold and subbase ports meet ISO 1179 specifications

Operating Pressure

Maximum: 145 PSIG (1000 kPa)

Minimum: see below chart

| Operator / Function | Internal Pilot                                 | PSIG (Min. kPa) HB | PSIG (Min. kPa) HA | PSIG (Min. kPa) H1 | PSIG (Min. kPa) H2 | PSIG (Min. kPa) H3 |
|---------------------|--|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1                   | Single solenoid - 2-position                   | 30                 | 25                 | 25                 | 25                 | 35                 |
| 2                   | Double solenoid- 2-position                    | (207)              | (173)              | (173)              | (173)              | (241)              |
| 3                   | Single remote pilot - 2-position**             | Vacuum             | Vacuum             | Vacuum             | Vacuum             | Vacuum             |
| 4                   | Double remote pilot - 2-position**             | Vacuum             | Vacuum             | Vacuum             | Vacuum             | Vacuum             |
| 5, 6, 7             | Double solenoid - 3-position APB, CE, PC       | 35 (241)           | 35 (241)           | 35 (241)           | 50 (345)           | 50 (345)           |
| 8, 9, 0             | Double remote pilot - 3-position** APB, CE, PC | Vacuum             | Vacuum             | Vacuum             | Vacuum             | Vacuum             |
| E                   | Single solenoid pilot - 2-position             |                    |                    |                    |                    |                    |
|                     | Air return / spring assist                     | 30 (207)           | 30 (207)           | 35 (241)           | 45 (310)           | 45 (310)           |
| F                   | Single remote pilot - 2-position**             |                    |                    |                    |                    |                    |
|                     | Air return / spring assist                     |                    |                    |                    |                    |                    |
| N, P, Q             | Double solenoid - dual 3/2                     | 30 (207)           | N/A                | N/A                | N/A                | N/A                |
|                     | External pilot*                                | *                  | *                  | *                  | *                  | *                  |
| All                 | H Series                                       | Vacuum             | Vacuum             | Vacuum             | Vacuum             | Vacuum             |

\* External Pilot Pressure / Remote Pilot Supply - Must meet or exceed minimum pilot pressure for internal pilot option. Not available on Operator / Function N, P, or Q.

\*\* Must be equal to or greater than operating pressure.



Operating information

|                     |                                       |
|---------------------|---------------------------------------|
| Operating pressure: | Vacuum to 145 PSIG (Vacuum to 10 bar) |
| Pilot pressure:     | See chart                             |
| Temperature range:  | 5°F to 120°F (-15°C to 49°C)          |

Material specifications

|            |                   |
|------------|-------------------|
| Body       | Aluminum          |
| End caps   | PBT               |
| End plates | Aluminum          |
| Fasteners  | Zinc plated steel |
| Manifolds  | Aluminum          |
| Seals      | Nitrile           |
| Spool      | Aluminum          |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

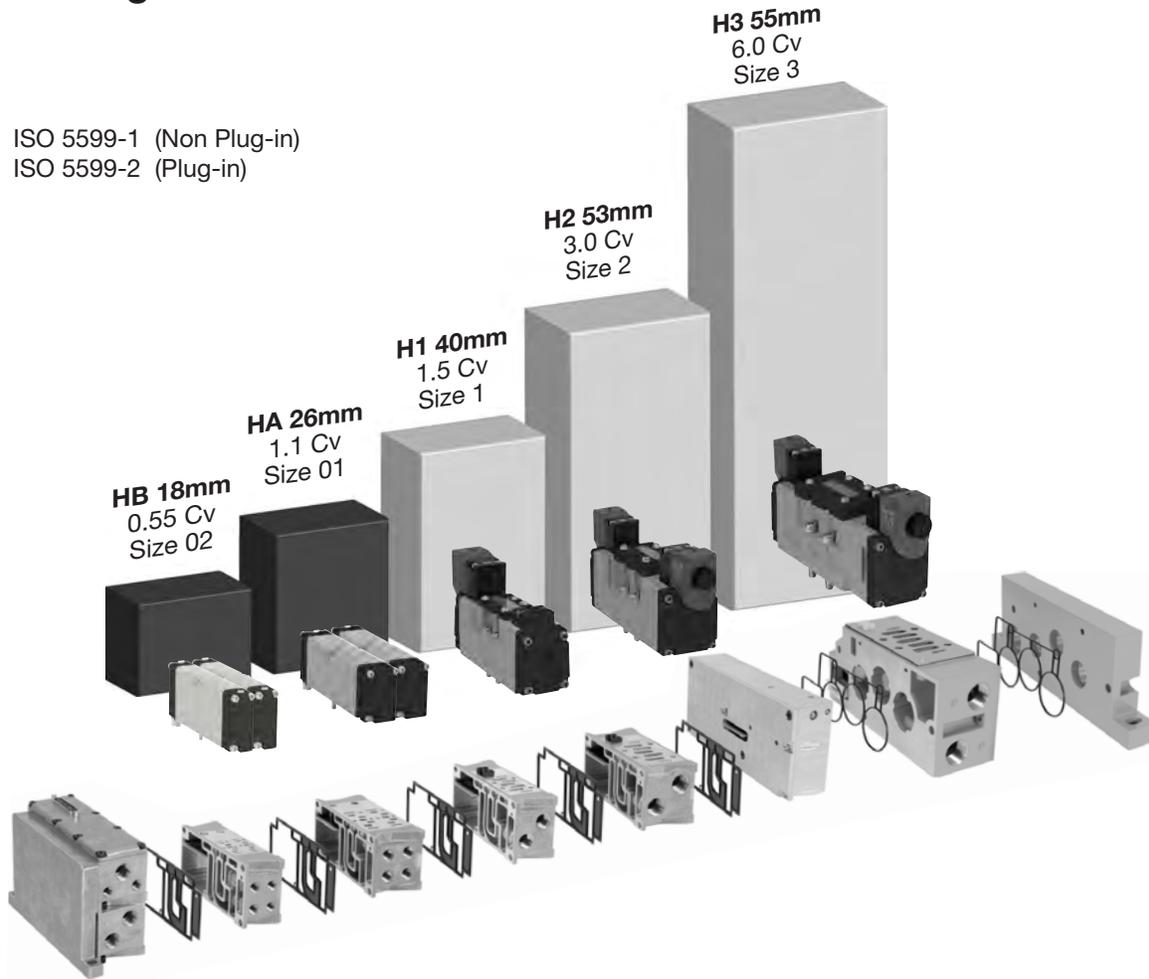
Features

H Series ISO

Right Sizing



ISO 5599-1 (Non Plug-in)  
ISO 5599-2 (Plug-in)



**D**  
Subbase & Manual  
Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

Cylinder Bore Size - inches (mm)

| Cylinder Speed - in/s (mm/s) | Cylinder Bore Size - inches (mm) |                |               |                |                |                |                |                |
|------------------------------|----------------------------------|----------------|---------------|----------------|----------------|----------------|----------------|----------------|
|                              | 1-1/4" (32 mm)                   | 1-1/2" (40 mm) | 2.00" (50 mm) | 2-1/2" (63 mm) | 3-1/4" (80 mm) | 4.00" (100 mm) | 5.00" (125 mm) | 6.00" (150 mm) |
| 1.96 (50)                    | 0.03                             | 0.04           | 0.06          | 0.10           | 0.17           | 0.26           | 0.41           | 0.59           |
| 3.93 (100)                   | 0.05                             | 0.08           | 0.13          | 0.21           | 0.35           | 0.53           | 0.82           | 1.19           |
| 5.90 (150)                   | 0.08                             | 0.12           | 0.20          | 0.31           | 0.52           | 0.79           | 1.24           | 1.78           |
| 7.87 (200)                   | 0.10                             | 0.16           | 0.26          | 0.41           | 0.69           | 1.05           | 1.64           | 2.37           |
| 9.84 (250)                   | 0.13                             | 0.20           | 0.33          | 0.52           | 0.87           | 1.32           | 2.06           | 2.97           |
| 11.81 (300)                  | 0.16                             | 0.25           | 0.40          | 0.62           | 1.05           | 1.58           | 2.47           | 3.56           |
| 13.77 (350)                  | 0.18                             | 0.29           | 0.46          | 0.72           | 1.22           | 1.85           | 2.88           | 4.15           |
| 15.74 (400)                  | 0.21                             | 0.33           | 0.53          | 0.82           | 1.39           | 2.11           | 3.30           | 4.75           |
| 17.71 (450)                  | 0.24                             | 0.37           | 0.59          | 0.93           | 1.57           | 2.37           | 3.71           | 5.34           |
| 19.68 (500)                  | 0.26                             | 0.41           | 0.66          | 1.03           | 1.74           | 2.64           | 4.12           | 5.94           |
|                              | HB                               |                | HA            |                | H1             | H2             | H3             |                |



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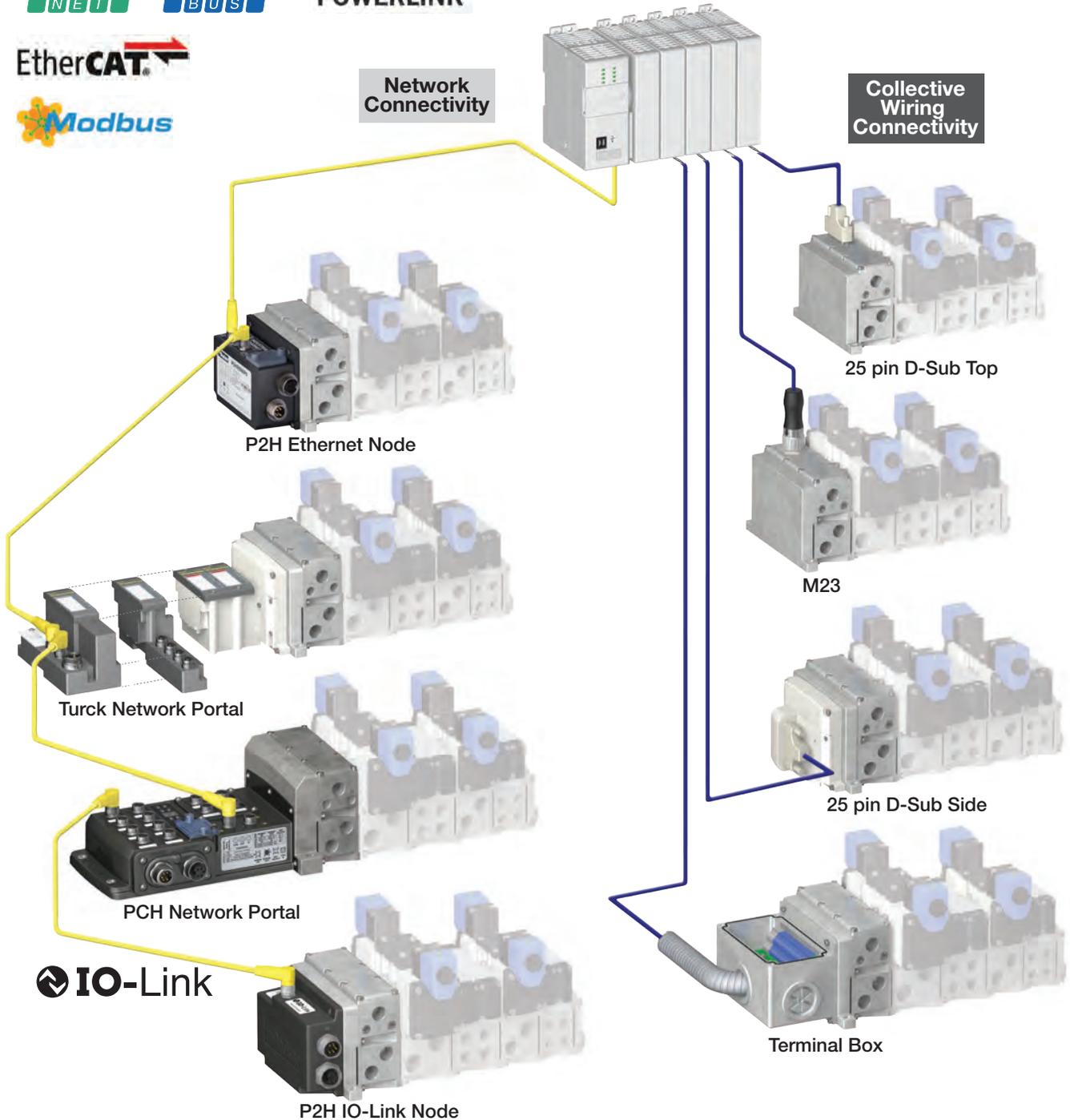


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Parker Hannifin Corporation**  
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Richland, Michigan  
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**Connectivity**

EtherNet/IP DeviceNet



|                         |
|-------------------------|
| D                       |
| Subbase & Manual Valves |
| H Series Micro          |
| Moduflex Series         |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |

Industrial Ethernet protocol offerings differ by product line



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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Features

Two easy ways to order H Universal

1 Online Configuration

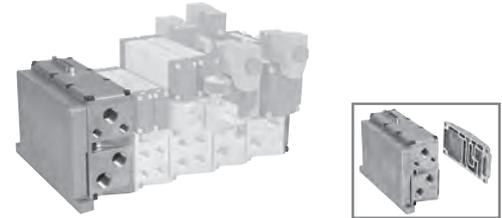
Navigate to the landing page  
www.parker.com/pdn/HSeriesISO  
Customize your manifold assembly  
Create and save a unique assembled part number  
Generate a CAD model



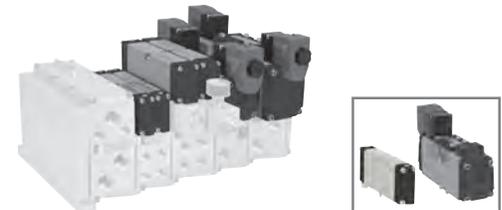
OR

2 Order Components

**A Select Endplate Kit**  
Includes Left and Right Hand Endplate



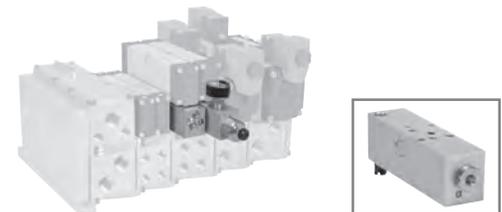
**B Select Valve Stations**  
Valves (size HB, HA, H1 or H2)  
Blanking Plate



**C Select Valve Manifold Segments**  
Manifold (size HB, HA, H1 or H2)  
Air Supply Module



**D Select Sandwich Accessories**  
Sandwich Regulators  
Sandwich Flow Control  
Pilot Exhaust



|   |                         |
|---|-------------------------|
| D | Subbase & Manual Valves |
|   | H Series Micro          |
|   | Modulflex Series        |
|   | H Series ISO            |
|   | Network Connectivity    |
|   | DX ISOMAX Series        |
|   | Valvair II Series       |



For inventory, lead times, and kit lookup, visit www.pdnplu.com

**Common Part Numbers**

**End Plate Kits - Universal for use with HB, HA, H1 H2**

|  | Electrical option   | NPT port                   | BSPP port                  |
|--|---|----------------------------|----------------------------|
|   | 25-pin, D-Sub<br>Side, 24 address   | <b>PSHU20L100P</b>         | <b>PSHU20L101P</b>         |
|   | 25-pin, D-Sub<br>Top, 24 address  | <b>PSHU20L200P</b>         | <b>PSHU20L201P</b>         |
|   | 19-pin, round, Brad Harrison,<br>16 address                               | <b>PSHU20L300P</b>         | <b>PSHU20L301P</b>         |
|   | 12-pin, M23, 8 address  | <b>PSHU20L400P</b>         | <b>PSHU20L401P</b>         |
|  | 19-pin, M23, 16 address   | <b>PSHU20M200P</b>         | <b>PSHU20M201P</b>         |
|   | Terminal box, 32 address  | <b>PSHU20L500P</b>         | <b>PSHU20L501P</b>         |
| <div style="display: flex; flex-direction: column; align-items: flex-start;"> <div style="margin-bottom: 10px;"></div> <div style="margin-bottom: 10px;"></div> <div style="margin-bottom: 10px;"></div> <div></div> </div> <p>Class A</p> <p>Class B</p> | P2H IO Link Class B, standard version,<br>24 address                      | <b>PSHU20N200P</b>         | <b>PSHU20N201P</b>         |
|  | P2H IO Link Class B, safe version,<br>24 address                          | <b>PSHU20S200P</b>         | <b>PSHU20S201P</b>         |
|  | P2H IO Link Class A, 4-pin safe version,<br>24 address                    | <b>PSHU20S400P</b>         | <b>PSHU20S401P</b>         |
|  | P2H IO Link Class A, 5-pin safe version,<br>24 address                    | <b>PSHU20S500P</b>         | <b>PSHU20S501P</b>         |
|   | P2H Ethernet Node, 32 addresses, EtherNet/<br>IP™                         | <b>PSHU20P200PE000A-P4</b> | <b>PSHU20P210PE000A-P4</b> |
|  | P2H Ethernet Node, 32 addresses, EtherCAT                                 | <b>PSHU20P200PT000A-P4</b> | <b>PSHU20P210PT000A-P4</b> |
|  | P2H Ethernet Node, 32 addresses, Profinet                                 | <b>PSHU20P200PN000A-P4</b> | <b>PSHU20P210PN000A-P4</b> |
|   | PCH Network Portal, 32 addresses with 2<br>Modules Variants, EtherNet/IP™ | <b>PSHU20P300PEAAN0-P4</b> | <b>PSHU20P301PEAAN0-P4</b> |
|  | PCH Network Portal, 32 addresses, with<br>Modules Variants, EtherNet/IP™  | <b>PSHU20P300PEAAB0-P5</b> | <b>PSHU20P301PEAAB0-P5</b> |
|   | Turck Network with valve driver module,<br>16 address                     | <b>PSHU20T100P</b>         | <b>PSHU20T101P</b>         |
|  | Turck Network with valve driver module,<br>32 address                     | <b>PSHU20T200P</b>         | <b>PSHU20T201P</b>         |

 Most popular.



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

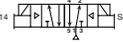
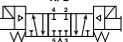
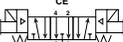
Network Connectivity

DX ISOMAX Series

Valvair II Series

**Common Part Numbers**

**Valve - 15407-2, Plug-in, Size 18mm (HB)**

| Symbol  | Type  | Cv                                | Operator           | Voltage         | Pilot   | Non-Locking   | Locking                              |                 |                 |          |                    |                    |             |
|---|---|-----------------------------------|--------------------|-----------------|---|---|--------------------------------------|-----------------|-----------------|----------|--------------------|--------------------|-------------|
|  | 4-way, 2-position, spring return  | 0.55                              | Single solenoid    | 24 VDC          | Internal  | <b>HBEVXBG0G9A</b>  | HBEVXBH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                    |                 | External  | <b>HBEVXLG0G9A</b>  | HBEVXLH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                    |                 |  | 4-way, 2-position, air return   | 0.55                                 | Single solenoid | 24 VDC          | Internal | <b>HB1VXBG0G9A</b> | HB1VXBH0G9A        |             |
|   |   |                                   |                    |                 |   |   |                                      |                 |                 | External | <b>HB1VXLG0G9A</b> | HB1VXLH0G9A        |             |
|   |   |                                   |                    |                 |   |   |                                      |                 |                 | 120 VAC  | Internal           | <b>HB1VXBG023A</b> | HB1VXBH023A |
|   |   |                                   |                    |                 |   |   |                                      |                 |                 |          | External           | <b>HB1VXLG023A</b> | HB1VXLH023A |
|  | 4-way, 2-position   | 0.55                              | Double solenoid    | 24 VDC          | Internal  | <b>HB2VXBG0G9A</b>  | HB2VXBH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                    |                 | External  | <b>HB2VXLG0G9A</b>  | HB2VXLH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                    |                 | 120 VAC   | Internal  | <b>HB2VXBG023A</b>                   | HB2VXBH023A     |                 |          |                    |                    |             |
|   |   |                                   |                    |                 |   | External  | <b>HB2VXLG023A</b>                   | HB2VXLH023A     |                 |          |                    |                    |             |
|   |   |                                   |                    |                 |   |  | 4-way, 3-position, all ports blocked | 0.5             | Double solenoid | 24 VDC   | Internal           | <b>HB5VXBG0G9A</b> | HB5VXBH0G9A |
|   |   |                                   |                    |                 |   |   |                                      |                 |                 |          | External           | <b>HB5VXLG0G9A</b> | HB5VXLH0G9A |
| 120 VAC   | Internal  | <b>HB5VXBG023A</b>                | HB5VXBH023A        |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   | External  | <b>HB5VXLG023A</b>                | HB5VXLH023A        |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   |  | 4-way, 3-position, center exhaust | 0.5                | Double solenoid | 24 VDC  |   |                                      |                 |                 |          | Internal           | <b>HB6VXBG0G9A</b> | HB6VXBH0G9A |
|   |   |                                   |                    |                 |   |   |                                      |                 |                 |          | External           | <b>HB6VXLG0G9A</b> | HB6VXLH0G9A |
| 120 VAC   |   |                                   |                    |                 |   | Internal  | <b>HB6VXBG023A</b>                   | HB6VXBH023A     |                 |          |                    |                    |             |
|   |   |                                   |                    |                 |   | External  | <b>HB6VXLG023A</b>                   | HB6VXLH023A     |                 |          |                    |                    |             |
|   |   |                                   |                    |                 |   |  | 4-way, 3-position, pressure center   | 0.5             | Double solenoid | 24 VDC   | Internal           | <b>HB7VXBG0G9A</b> | HB7VXBH0G9A |
|   |   |                                   |                    |                 |   |   |                                      |                 |                 |          | External           | <b>HB7VXLG0G9A</b> | HB7VXLH0G9A |
| 120 VAC   | Internal  | <b>HB7VXBG023A</b>                | HB7VXBH023A        |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   | External  | <b>HB7VXLG023A</b>                | HB7VXLH023A        |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   | 24 VDC  | Internal                          | <b>HBNVXBG0G9A</b> | HBNVXBH0G9A     |   |   |                                      |                 |                 |          |                    |                    |             |
|   |   | Internal                          | <b>HBNVXBG023A</b> | HBNVXBH023A     |   |   |                                      |                 |                 |          |                    |                    |             |
| 24 VDC  | Internal  | <b>HBPVXBG0G9A</b>                | HBPVXBH0G9A        |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   | Internal  | <b>HBPVXBG023A</b>                | HBPVXBH023A        |                 |   |   |                                      |                 |                 |          |                    |                    |             |

**Manifold Base - 2-Station, 15407-2, Plug-in, Size 18mm (HB)**

| End Ported Bases  | Enclosure / Lead Length | Solenoid Addresses            | 1/8" NPT           | 1/8" BSPP   |
|---|-------------------------|-------------------------------|--------------------|-------------|
|  | Circuit board           | Single solenoid - 2 address   | <b>PSHU1151J1P</b> | PSHU1152J1P |
|   | Circuit board           | Double solenoid - 4 addresses | <b>PSHU1151M1P</b> | PSHU1152M1P |

**Accessories - 15407-2, Plug-in, Size 18mm (HB)**

| Accessories   | Description   | Part Number                               |
|---|---|---|
|  | Gauge adapter kit<br>Includes 1/8" coupling, long nipple, and gauge                                 | <b>PS5651160P</b>                         |
|  | Blanking plate kit  | <b>PS5634P</b>                            |
|  | Sandwich flow control for individual valve<br>Note: Do not use with Independent sandwich regulators | <b>PS5635P</b>                            |
|   |   |   |
|  | Sandwich supply module  | 1/8" NPT<br><b>PS561600P</b>              |
|   |   | 1/8" BSPP<br><b>PS561601P</b>             |
|  | Sandwich regulator  | Common pressure<br><b>PS5638155P</b>      |
|   |   | Independent pressure<br><b>PS5638255P</b> |
|   |   | 5-125 PSIG w/ gauge<br><b>PS5638166P</b>  |
|   |   | <b>PS5638266P</b>                         |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

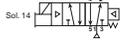
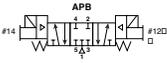
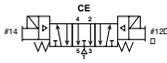
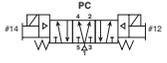
D78

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Common Part Numbers**

**Valve - 15407-2, Plug-in, Size 26mm (HA)**

| Symbol  | Type  | Cv                                | Operator        | Voltage         | Pilot   | Non-Locking   | Locking                              |                 |                 |          |                    |                    |             |
|---|---|-----------------------------------|-----------------|-----------------|---|---|--------------------------------------|-----------------|-----------------|----------|--------------------|--------------------|-------------|
|  | 4-way, 2-position, spring return  | 1.1                               | Single solenoid | 24 VDC          | Internal  | <b>HAEVXBG0G9A</b>  | HAEVXBH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 | External  | HAEVXLG0G9A   | HAEVXLH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |  | 4-way, 2-position, air return   | 1.1                                  | Single solenoid | 24 VDC          | Internal | <b>HA1VXBG0G9A</b> | HA1VXBH0G9A        |             |
|   |   |                                   |                 |                 |   |   |                                      |                 |                 | External | HA1VXLG0G9A        | HA1VXLH0G9A        |             |
|   |   |                                   |                 |                 |   |   |                                      |                 |                 | 120 VAC  | Internal           | <b>HA1VXBG023A</b> | HA1VXBH023A |
|   |   |                                   |                 |                 |   |   |                                      |                 |                 |          | External           | HA1VXLG023A        | HA1VXLH023A |
|  | 4-way, 2-position   | 1.1                               | Double solenoid | 24 VDC          | Internal  | <b>HA2VXBG0G9A</b>  | HA2VXBH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 | External  | HA2VXLG0G9A   | HA2VXLH0G9A                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 | 120 VAC   | Internal  | <b>HA2VXBG023A</b>                   | HA2VXBH023A     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   | External  | HA2VXLG023A                          | HA2VXLH023A     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   |  | 4-way, 3-position, all ports blocked | 1.0             | Double solenoid | 24 VDC   | Internal           | <b>HA5VXBG0G9A</b> | HA5VXBH0G9A |
|   |   |                                   |                 |                 |   |   |                                      |                 |                 |          | External           | HA5VXLG0G9A        | HA5VXLH0G9A |
| 120 VAC   | Internal  | <b>HA5VXBG023A</b>                | HA5VXBH023A     |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   | External  | HA5VXLG023A                       | HA5VXLH023A     |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   |  | 4-way, 3-position, center exhaust | 1.0             | Double solenoid | 24 VDC  |   |                                      |                 |                 |          | Internal           | <b>HA6VXBG0G9A</b> | HA6VXBH0G9A |
|   |   |                                   |                 |                 |   |   |                                      |                 |                 |          | External           | HA6VXLG0G9A        | HA6VXLH0G9A |
| 120 VAC   |   |                                   |                 |                 |   | Internal  | <b>HA6VXBG023A</b>                   | HA6VXBH023A     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   | External  | HA6VXLG023A                          | HA6VXLH023A     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   |  | 4-way, 3-position, pressure center   | 1.0             | Double solenoid | 24 VDC   | Internal           | <b>HA7VXBG0G9A</b> | HA7VXBH0G9A |
|   |   |                                   |                 |                 |   |   |                                      |                 |                 |          | External           | HA7VXLG0G9A        | HA7VXLH0G9A |
| 120 VAC   | Internal  | <b>HA7VXBG023A</b>                | HA7VXBH023A     |                 |   |   |                                      |                 |                 |          |                    |                    |             |
|   | External  | HA7VXLG023A                       | HA7VXLH023A     |                 |   |   |                                      |                 |                 |          |                    |                    |             |

**Single Subbase - 15407-2, Plug-in, Size 26mm (HA)**

| Enclosure / Lead Length  | Solenoid Addresses            | 1/4" NPT          | 1/4" BSPP         |
|--|-------------------------------|-------------------|-------------------|
|  Terminal strip in the base | Double solenoid - 2 addresses | <b>PS551113CP</b> | <b>PS551114CP</b> |

**Manifold Base - 2-Station, 15407-2, Plug-in, Size 26mm (HA)**

| End Ported Bases  | Enclosure / Lead Length | Solenoid Addresses            | 1/4" NPT           | 1/4" BSPP          |
|---|-------------------------|-------------------------------|--------------------|--------------------|
|  | Circuit board           | Single solenoid - 2 address   | <b>PSHU1153J1P</b> | <b>PSHU1154J1P</b> |
|   | Circuit board           | Double solenoid - 4 addresses | <b>PSHU1153M1P</b> | <b>PSHU1154M1P</b> |

**Accessories - 15407-2, Plug-in, Size 26mm (HA)**

| Accessories   | Description                                       | Part Number   |                      |
|---|---|---|----------------------|
|  | Blanking plate kit                                | <b>PS5534P</b>  |                      |
|  | Sandwich flow control for individual valve        | Note : Do not use with Independent Port Sandwich Regulators<br><b>PS5535P</b> |                      |
|  | Pilot pressure control, without sensor, 1/8" BSPP | <b>PS55XXA0P</b>  |                      |
|  | Sandwich supply module                            | 1/4" NPT  | <b>PS552600P</b>     |
|   |   | 1/4" BSPP   | <b>PS552601P</b>     |
|  | Sandwich regulator                                | 2-60 PSIG w/ gauge  | <b>PS5538155P</b>    |
|   |   | 5-125 PSIG w/ gauge   | <b>PS5538166P</b>    |
|   |   | Common Pressure   | Independent Pressure |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

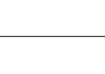
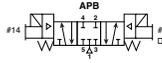
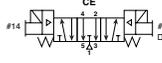
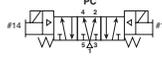
Network Connectivity

DX ISOMAX Series

Valvair II Series

**Common Part Numbers**

**Valve - 5599-2, Plug-in, Size 1 (H1)**

| Symbol  | Type                               | Cv                 | Operator        | Voltage | Pilot  | Non-Locking                          | Locking            |                 |        |          |                    |                    |
|---|------------------------------------|--------------------|-----------------|---------|--|--------------------------------------|--------------------|-----------------|--------|----------|--------------------|--------------------|
| <br>  | 4-way, 2-position, spring return   | 1.5                | Single solenoid | 24 VDC  | Internal   | <b>H1EVXBG0B9D</b>                   | <b>H1EVXBH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H1EVXXG0B9D</b>                   | <b>H1EVXXH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | Internal   | <b>H1EVXBG023D</b>                   | <b>H1EVXBH023D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H1EVXXG023D</b>                   | <b>H1EVXXH023D</b> |                 |        |          |                    |                    |
| <br>  | 4-way, 2-position, air return      | 1.5                | Single solenoid | 24 VDC  | Internal   | <b>H11VXBG0B9D</b>                   | <b>H11VXBH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H11VXXG0B9D</b>                   | <b>H11VXXH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | Internal   | <b>H11VXBG023D</b>                   | <b>H11VXBH023D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H11VXXG023D</b>                   | <b>H11VXXH023D</b> |                 |        |          |                    |                    |
| <br>  | 4-way, 2-position                  | 1.5                | Double solenoid | 24 VDC  | Internal   | <b>H12VXBG0B9D</b>                   | <b>H12VXBH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H12VXXG0B9D</b>                   | <b>H12VXXH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | Internal   | <b>H12VXBG023D</b>                   | <b>H12VXBH023D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H12VXXG023D</b>                   | <b>H12VXXH023D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | <br> | 4-way, 3-position, all ports blocked | 1.2                | Double solenoid | 24 VDC | Internal | <b>H15VXBG0B9D</b> | <b>H15VXBH0B9D</b> |
|   |                                    |                    |                 |         |  |                                      |                    |                 |        | External | <b>H15VXXG0B9D</b> | <b>H15VXXH0B9D</b> |
| Internal  | <b>H15VXBG023D</b>                 | <b>H15VXBH023D</b> |                 |         |  |                                      |                    |                 |        |          |                    |                    |
| External  | <b>H15VXXG023D</b>                 | <b>H15VXXH023D</b> |                 |         |  |                                      |                    |                 |        |          |                    |                    |
| <br>  | 4-way, 3-position, center exhaust  | 1.2                | Double solenoid | 24 VDC  | Internal   | <b>H16VXBG0B9D</b>                   | <b>H16VXBH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H16VXXG0B9D</b>                   | <b>H16VXXH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | Internal   | <b>H16VXBG023D</b>                   | <b>H16VXBH023D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H16VXXG023D</b>                   | <b>H16VXXH023D</b> |                 |        |          |                    |                    |
| <br> | 4-way, 3-position, pressure center | 1.2                | Double solenoid | 24 VDC  | Internal   | <b>H17VXBG0B9D</b>                   | <b>H17VXBH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H17VXXG0B9D</b>                   | <b>H17VXXH0B9D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | Internal   | <b>H17VXBG023D</b>                   | <b>H17VXBH023D</b> |                 |        |          |                    |                    |
|   |                                    |                    |                 |         | External   | <b>H17VXXG023D</b>                   | <b>H17VXXH023D</b> |                 |        |          |                    |                    |

**Single Subbase - 5599-2, Plug-in, Size 1 (H1)**

| Side Ported   | Enclosure / Lead Length                               | Solenoid Addresses            | 3/8" NPT            | 3/8" BSPP           |
|---|---|-------------------------------|---------------------|---------------------|
|  | Terminal strip in base                                | Double solenoid - 2 addresses | <b>PS401115CDP</b>  | <b>PS401116CDP</b>  |
|   | 6" flying leads                                       | Double solenoid - 2 addresses | <b>PS401115ADP</b>  | <b>PS401116ADP</b>  |
|   | 4-pin, M12 micro connector in base, SAE / Ford wiring | Double solenoid - 2 addresses | <b>PS4011158FDP</b> | <b>PS4011168FDP</b> |

**Manifold Base - 5599-2, Plug-in, Size 1 (H1)**

| End Ported  | Enclosure / Lead Length | Solenoid Addresses            | 3/8" NPT           | 3/8" BSPP          |
|---|-------------------------|-------------------------------|--------------------|--------------------|
|  | Circuit board           | Single solenoid - 1 address   | <b>PSHU1155J1P</b> | <b>PSHU1156J1P</b> |
|   | Circuit board           | Double solenoid - 2 addresses | <b>PSHU1155M1P</b> | <b>PSHU1156M1P</b> |

**Accessories - 5599-2, Size 1 (H1)**

| Accessory   | Description           | Part Number        |
|---|-----------------------|--------------------|
|  | Common pressure       | <b>PS4038166CP</b> |
|   | Independent pressure  | <b>PS4038266CP</b> |
|  | Blanking plate kit    | <b>PS4034CP</b>    |
|  | Sandwich flow control | <b>PS4035CP</b>    |

A Sandwich Flow Control and Common Port Sandwich Regulator may be used together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators.

 Most popular.



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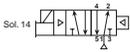
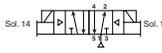
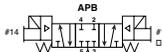
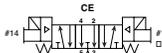
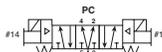
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**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

Common Part Numbers

Valve - 5599-2, Plug-in, Size 2 (H2)

| Symbol  | Type                              | Cv                 | Operator           | Voltage | Pilot  | Non-Locking                          | Locking            |                    |        |          |                    |                    |
|---|-----------------------------------|--------------------|--------------------|---------|--|--------------------------------------|--------------------|--------------------|--------|----------|--------------------|--------------------|
|  | 4-way, 2-position, spring return  | 3.0                | Single solenoid    | 24 VDC  | Internal   | <b>H2EVXBG0B9D</b>                   | <b>H2EVXBH0B9D</b> |                    |        |          |                    |                    |
|   |                                   |                    |                    |         | External   | <b>H2EVXXG0B9D</b>                   | <b>H2EVXXH0B9D</b> |                    |        |          |                    |                    |
|   |                                   |                    |                    |         | 120 VAC  | Internal                             | <b>H2EVXBG023D</b> | <b>H2EVXBH023D</b> |        |          |                    |                    |
|   |                                   |                    |                    |         |  | External                             | <b>H2EVXXG023D</b> | <b>H2EVXXH023D</b> |        |          |                    |                    |
|   |                                   |                    |                    |         |   | 4-way, 2-position, air return        | 3.0                | Single solenoid    | 24 VDC | Internal | <b>H21VXBG0B9D</b> | <b>H21VXBH0B9D</b> |
|   |                                   |                    |                    |         |  |                                      |                    |                    |        | External | <b>H21VXXG0B9D</b> | <b>H21VXXH0B9D</b> |
| 120 VAC   | Internal                          | <b>H21VXBG023D</b> | <b>H21VXBH023D</b> |         |  |                                      |                    |                    |        |          |                    |                    |
|   | External                          | <b>H21VXXG023D</b> | <b>H21VXXH023D</b> |         |  |                                      |                    |                    |        |          |                    |                    |
|  | 4-way, 2-position                 | 3.0                | Double solenoid    | 24 VDC  |  |                                      |                    |                    |        | Internal | <b>H22VXBG0B9D</b> | <b>H22VXBH0B9D</b> |
|   |                                   |                    |                    |         |  |                                      |                    |                    |        | External | <b>H22VXXG0B9D</b> | <b>H22VXXH0B9D</b> |
|   |                                   |                    |                    |         | 120 VAC  | Internal                             | <b>H22VXBG023D</b> | <b>H22VXBH023D</b> |        |          |                    |                    |
|   |                                   |                    |                    |         |  | External                             | <b>H22VXXG023D</b> | <b>H22VXXH023D</b> |        |          |                    |                    |
|   |                                   |                    |                    |         |   | 4-way, 3-position, all ports blocked | 2.8                | Double solenoid    | 24 VDC | Internal | <b>H25VXBG0B9D</b> | <b>H25VXBH0B9D</b> |
|   |                                   |                    |                    |         |  |                                      |                    |                    |        | External | <b>H25VXXG0B9D</b> | <b>H25VXXH0B9D</b> |
| 120 VAC   | Internal                          | <b>H25VXBG023D</b> | <b>H25VXBH023D</b> |         |  |                                      |                    |                    |        |          |                    |                    |
|   | External                          | <b>H25VXXG023D</b> | <b>H25VXXH023D</b> |         |  |                                      |                    |                    |        |          |                    |                    |
|  | 4-way, 3-position, center exhaust | 2.8                | Double solenoid    | 24 VDC  |  |                                      |                    |                    |        | Internal | <b>H26VXBG0B9D</b> | <b>H26VXBH0B9D</b> |
|   |                                   |                    |                    |         |  |                                      |                    |                    |        | External | <b>H26VXXG0B9D</b> | <b>H26VXXH0B9D</b> |
|   |                                   |                    |                    |         | 120 VAC  | Internal                             | <b>H26VXBG023D</b> | <b>H26VXBH023D</b> |        |          |                    |                    |
|   |                                   |                    |                    |         |  | External                             | <b>H26VXXG023D</b> | <b>H26VXXH023D</b> |        |          |                    |                    |
|   |                                   |                    |                    |         |  | 4-way, 3-position, pressure center   | 2.8                | Double solenoid    | 24 VDC | Internal | <b>H27VXBG0B9D</b> | <b>H27VXBH0B9D</b> |
|   |                                   |                    |                    |         |  |                                      |                    |                    |        | External | <b>H27VXXG0B9D</b> | <b>H27VXXH0B9D</b> |
| 120 VAC   | Internal                          | <b>H27VXBG023D</b> | <b>H27VXBH023D</b> |         |  |                                      |                    |                    |        |          |                    |                    |
|   | External                          | <b>H27VXXG023D</b> | <b>H27VXXH023D</b> |         |  |                                      |                    |                    |        |          |                    |                    |

Single Subbase - 5599-2, Plug-in, Size 2 (H2)

| Side Ported Base  | Enclosure / Lead Length | Solenoid Addresses            | 1/2" NPT           | 1/2" BSPP          |
|---|-------------------------|-------------------------------|--------------------|--------------------|
|  | Terminal strip in base  | Double solenoid - 2 address   | <b>PS411117CCP</b> | <b>PS411118CCP</b> |
|   | 6" flying leads         | Double solenoid - 2 addresses | <b>PS411117ACP</b> | <b>PS411118ACP</b> |

Manifold Base - 5599-2, Plug-in, Size 2 (H2)

| End Ported  | Enclosure / Lead Length | Solenoid Addresses            | 1/2" NPT           | 1/2" BSPP          |
|---|-------------------------|-------------------------------|--------------------|--------------------|
|  | Circuit board           | Single solenoid - 1 address   | <b>PSHU1157J1P</b> | <b>PSHU1158J1P</b> |
|   | Circuit board           | Double solenoid - 2 addresses | <b>PSHU1157M1P</b> | <b>PSHU1158M1P</b> |

Accessories - 5599-2, Size 2 (H2)

| Accessory   | Description           | Part Number        |
|---|-----------------------|--------------------|
|  | Common pressure       | <b>PS4138166CP</b> |
|   | Independent pressure  | <b>PS4138266CP</b> |
|  | Blanking plate kit    | <b>PS4134CP</b>    |
|  | Sandwich flow control | <b>PS4135CP</b>    |

A Sandwich Flow Control and Common Port Sandwich Regulator may be used together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators.

 Most popular.



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Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Ordering Information

End Plate Kit - Universal Plug-in

**PSHU20 L1 0 0 P**

| Valve Type               |        |
|--------------------------|--------|
| Plug-in (internal pilot) | PSHU20 |
| Plug-in (external pilot) | PSHU2X |

| Thread Type |          |
|-------------|----------|
| 0           | NPT      |
| 1*          | BSPP "G" |

\* BSPP conforms to ISO 1179-1 w 228-1 threads

| Left Hand End Plate Type * †  |           |
|---|-----------|
| 25-Pin, D-Sub (side)  | L1        |
| 25-Pin, D-Sub (top)   | L2        |
| 19-Pin, Round, Brad Harrison  | L3        |
| 12-Pin, M23   | L4        |
| 32-Point Terminal Strip   | L5        |
| 19-Pin, M23   | M2        |
| P2H IO Link Class B, 24 Address, Standard Version                       | N2        |
| P2H IO Link Class B, 24 Address, Safe Version                           | S2        |
| <b>P2H IO Link Class A, 24 Address, 4-Pin, Safe Version</b>             | <b>S4</b> |
| P2H IO Link Class A, 24 Address, 5-Pin, Safe Version                    | S5        |
| Turck Network with valve driver module - 16 outputs ‡                   | T1        |
| Turck Network with valve driver module - 32 outputs ‡                   | T2        |
| -----For P2H Ethernet Node and PCH Network Portal, see next pages ----- |           |

| Right Hand End Plate Type / Port |  |
|----------------------------------|--|
| 0                                | Low Profile (no ports)   |
| 1                                | 1/2 Exhaust and Inlet Port   |
| 2                                | 3/4 Exhaust and Inlet Port   |
| 3*                               | H3 Transition Plate, 1" Exhaust and Inlet, (electrical pass through)   |
| 4*                               | H3 Transition Plate, 1" Exhaust and Inlet, (expansion to 25th address) |

\* 1, 3 & 5 manifold galley blocked at transition plate. 12 & 14 pass through.



25-pin D-Sub (top) with low profile end plate shown 3.97 Cv

\* 120VAC is not CSA certified.

‡ Turck Network communication modules must be ordered separately. See Network Connectivity section for more information.

† PSHU11P gaskets included in each end plate kit.

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

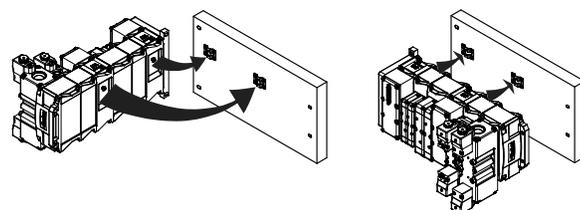
Right Hand End Plate

|   | Description  | NPT Port  | BSPP Port |
|---|--|-----------|-----------|
|  | Right hand end plate only, low profile, 3.97 Cv          |           | PSHU4000P |
|  | Right hand end plate only, high flow 1/2" ports, 6.07 Cv | PSHU4100P | PSHU4101P |
|   | Right hand end plate only, high flow 3/4" ports, 8.35 Cv | PSHU4200P | PSHU4201P |

H3 Transition Kit

|   |  |           |           |
|---|--|-----------|-----------|
|  | H3 transition, H3 right hand end plate, 1" ports, electrical pass through (includes gaskets & bolts)   | PSHU7100P | PSHU7101P |
|   | H3 transition, H3 right hand end plate, 1" ports, expansion to 25th address (includes gaskets & bolts) | PSHU7200P | PSHU7201P |

Installation Bracket



| Bracket                       | Part Number |
|-------------------------------|-------------|
| Bracket and Bolt (Quantity 2) | PSHU60P     |



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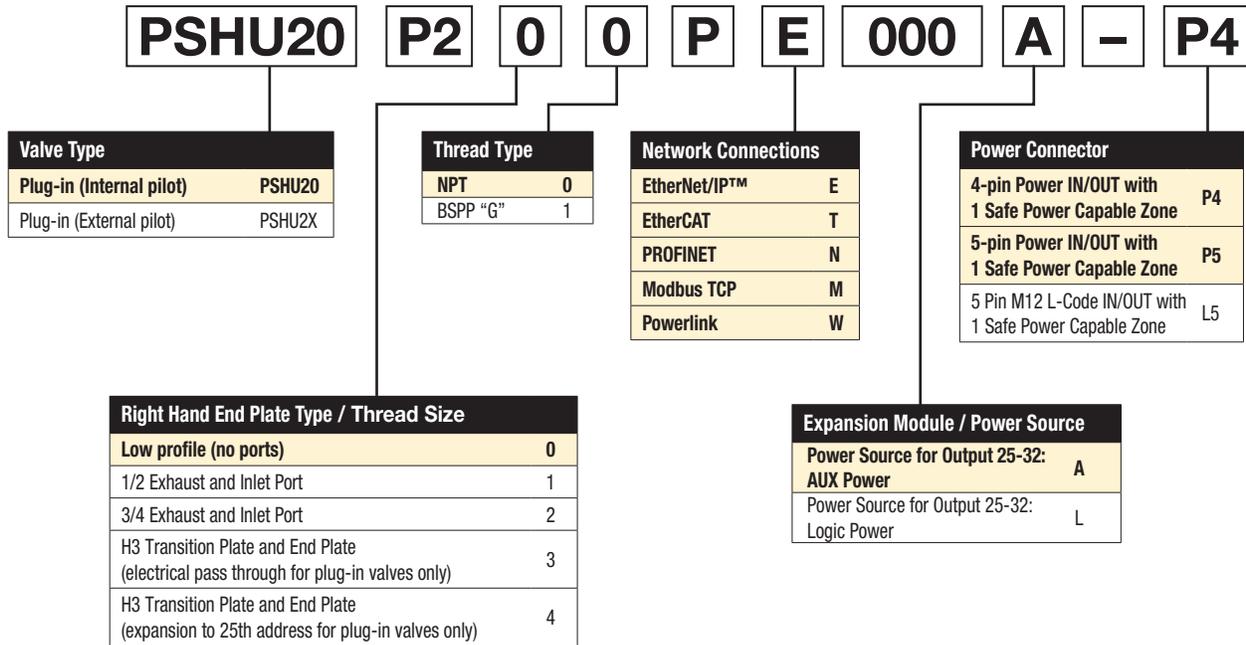
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**Ordering Information**

**End Plate Kit – Universal Plug-in**

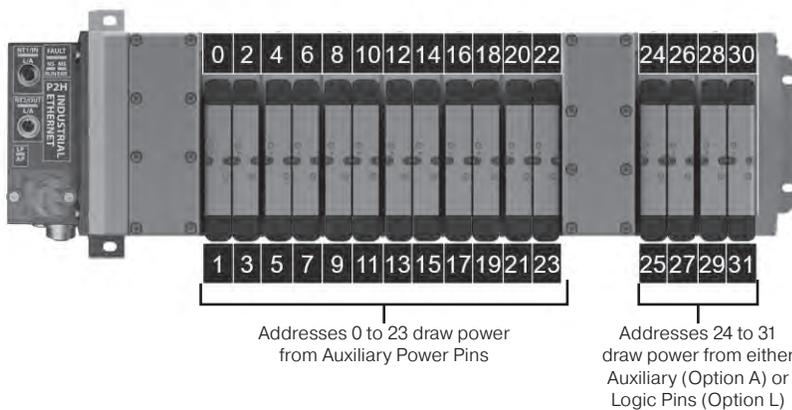
The P2H EtherNet Node is ordered as an endplate kit. This includes the P2H EtherNet Node, left hand air supply module, and right hand end plate. 32 pilot solenoid addresses with two choices of power source configurations.

For fully assembled manifold Add-A-Fold part number, reference page D91



**Power Source Selection**

The P2H Node 32DO has two available power sources for addresses 24 to 31. Addresses 24 to 31 can draw their power from Auxiliary Power Pins (Power Source Option A) or Logic Power Pins (Power Source Option L). Must use Auxiliary Inlet Module with electrical expansion to access addresses 24 to 31. Address 0 to 23 is always auxiliary power source.



  Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**End Plate Kit – Universal Plug-in**

The PCH Network Portal is ordered as an endplate kit. This includes the PCH Network Portal, left hand air supply module, and right hand end plate. 32 pilot solenoid addresses with configurable I/O.

For fully assembled manifold Add-A-Fold part number, reference page D92



**PSHU20 P3 0 0 P E AAA 0 - P4**

| Valve Type               |        |
|--------------------------|--------|
| Plug-in (Internal pilot) | PSHU20 |
| Plug-in (External pilot) | PSHU2X |

| Thread Type |   |
|-------------|---|
| NPT         | 0 |
| BSPP "G"    | 1 |

| Network Connections |   |
|---------------------|---|
| EtherNet/IP™        | E |
| EtherCAT            | T |
| PROFINET            | N |
| Modbus TCP          | M |

| Power Connector                                   |    |
|---|----|
| 4-pin Power IN/OUT with 1 Safe Power Capable Zone | P4 |
| 5-pin Power IN/OUT with 1 Safe Power Capable Zone | P5 |
| 4-pin Power IN/IN with 2 Safe Power Zones         | S4 |
| 5-pin Power IN/IN with 2 Safe Power Zones         | S5 |

| Right Hand End Plate Type / Thread Size   |   |
|---|---|
| Low profile (no ports)  | 0 |
| 1/2 Exhaust and Inlet Port  | 1 |
| 3/4 Exhaust and Inlet Port  | 2 |
| H3 Transition Plate and End Plate (electrical pass through for plug-in valves only)   | 3 |
| H3 Transition Plate and End Plate (expansion to 25th address for plug-in valves only) | 4 |

| Module Combinations |                   |                   |
|---------------------|-------------------|-------------------|
| Module Position 1   | Module Position 2 | Module Position 3 |
| A                   | A                 | A                 |
| A                   | A                 | B                 |
| A                   | A                 | C                 |
| A                   | A                 | N                 |
| A                   | B                 | B                 |
| A                   | B                 | C                 |
| A                   | B                 | N                 |
| A                   | C                 | C                 |
| A                   | C                 | N                 |
| B                   | B                 | B                 |
| B                   | B                 | C                 |
| B                   | B                 | N                 |
| B                   | C                 | C                 |
| B                   | C                 | N                 |
| C                   | C                 | C                 |
| C                   | C                 | N                 |

For any module configurations not listed, consult factory.

|          |                         |
|----------|-------------------------|
| <b>D</b> | Subbase & Manual Valves |
|          | H Series Micro          |
|          | Modulflex Series        |
|          | H Series ISO            |
|          | Network Connectivity    |
|          | DX ISOMAX Series        |
|          | Valvair II Series       |

Most popular.



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Ordering Information

Valve - 15407-2 Plug-in, Size 18mm (HB) & 26mm (HA)

**HB 1 VX B G 0 G9 A**

| Basic Series 15407-2 |    |
|----------------------|----|
| ISO 15407-2 18mm     | HB |
| ISO 15407-2 26mm     | HA |

| 15407-2 Operator / Function                             |    |
|---|----|
| Single Solenoid, 2-Position - Air Return                | 1  |
| Double Solenoid, 2-Position                             | 2  |
| Double Solenoid, 3-Position - APB                       | 5  |
| Double Solenoid, 3-Position - CE                        | 6  |
| Double Solenoid, 3-Position - PC                        | 7  |
| Single Solenoid, 2-Position - Air Return, Spring Assist | E  |
| Double Solenoid, Dual 3/2, NC/NC                        | N* |
| Double Solenoid, Dual 3/2, NO/NO                        | P* |
| Double Solenoid, Dual 3/2, 14 End NC - 12 end NO        | Q* |

\* Available on HB Only, must use Internal Pilot Source Option "B".

| 15407-2 Engineering Level |         |
|---------------------------|---------|
| A                         | Current |

| 15407-2 Voltage & Frequency |      |      |    |                           |
|-----------------------------|------|------|----|---------------------------|
|                             | AC   |      | DC | Light & Surge Suppression |
|                             | 60Hz | 50Hz |    |                           |
| G9                          |      |      | 24 | LED & Suppression         |
| 23                          | 120  | 115  |    | LED & Suppression         |

| 15407-2 Enclosure / Lead Length |                 |
|---------------------------------|-----------------|
| 0                               | Valve Less Base |

| 15407-2 Overrides / Lights |  |
|----------------------------|--|
| G                          | Non-Locking, Flush, Push - W/ Light    |
| H                          | Locking, Flush, Push / Turn - W/ Light |

| 15407-2 Pilot Source / Pilot Exhaust |                                   |
|--------------------------------------|-----------------------------------|
| B                                    | Internal Pilot, Port #1 / Vented  |
| L*                                   | External Pilot, Port #14 / Vented |

\* Must be specified when using Sandwich Regulators.

| Mounting                |    |
|-------------------------|----|
| 15407-2 Valve Less Base | VX |



HB 18mm Valve shown

Valve - 5599-2 Plug-in, Size H1 & H2

**H1 E VX B G 0 B9 D**

| Basic Series 5599-2 |    |
|---------------------|----|
| ISO 5599-2 Size 1   | H1 |
| ISO 5599-2 Size 2   | H2 |

| 5599-2 Operator / Function                              |   |
|---|---|
| Single Solenoid, 2-Position - Air Return                | 1 |
| Double Solenoid, 2-Position                             | 2 |
| Double Solenoid, 3-Position - APB                       | 5 |
| Double Solenoid, 3-Position - CE                        | 6 |
| Double Solenoid, 3-Position - PC                        | 7 |
| Single Solenoid, 2-Position - Air Return, Spring Assist | E |

| 5599-2 Mounting        |    |
|------------------------|----|
| 5599-2 Valve Less Base | VX |

| 5599-2 Pilot Source / Pilot Exhaust      |    |
|--|----|
| Internal Pilot, Port #1 / Vented         | B  |
| External Pilot, Port #12 Or #14 / Vented | X* |

\* Must be specified when using Sandwich Regulators.

| 5599-2 Engineering Level |         |
|--------------------------|---------|
| D                        | Current |

| 5599-2 Voltage & Frequency |      |      |    |                             |
|----------------------------|------|------|----|-----------------------------|
|                            | AC   |      | DC | Light & Surge Suppression   |
|                            | 60Hz | 50Hz |    |                             |
| 42                         | 24   |      |    |                             |
| 45                         |      |      | 12 |                             |
| B9                         |      |      | 24 | LED & Suppression, 3.2 Watt |
| F9                         |      |      | 24 | LED & Suppression, 1.3 Watt |
| 23                         | 120  | 115  |    | LED & Suppression           |
| 57*                        | 240  |      |    |                             |

\* Single subbase only. Not available for 5599-2 manifold mount.

| 5599-2 Enclosure / Lead length |                       |
|--------------------------------|-----------------------|
| 0                              | None, valve less base |

| 5599-2 Overrides / Lights |              |   |
|---------------------------|--------------|---|
|                           | Voltage code |   |
| B                         | 42, 45, 57   | Non-Locking, Flush, Push - w/o Light    |
| C                         | 42, 45, 57   | Locking, Flush, Push / Turn - w/o Light |
| G                         | B9, F9, 23   | Non-Locking, Flush, Push - w/ Light     |
| H                         | B9, 23       | Locking, Flush, Push / Turn - w/ Light  |

Most popular.



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D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Manifold Kit - Universal Plug-in**

**PSHU1153 J 1 P**

| Mounting Style / Port Size          |           |
|-------------------------------------|-----------|
| HB Manifold with 1/8 NPT End Ports  | PSHU1151  |
| HB Manifold with 1/8 BSPP End Ports | PSHU1152* |
| HA Manifold with 1/4 NPT End Ports  | PSHU1153  |
| HA Manifold with 1/4 BSPP End Ports | PSHU1154* |
| H1 Manifold with 3/8 NPT End Ports  | PSHU1155  |
| H1 Manifold with 3/8 BSPP End Ports | PSHU1156* |
| H2 Manifold with 1/2 NPT End Ports  | PSHU1157  |
| H2 Manifold with 1/2 BSPP End Ports | PSHU1158* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Gasket Options |   |
|----------------|---|
| 1              | 1,3,5 Ports Open And Pilots Open                |
| 2              | 1,3,5 Ports Closed And Pilots Open              |
| 3              | 1 Closed, 3,5 Ports Open And Pilots Open        |
| 4              | 1 Port Open, 3,5 Ports Closed And Pilots Open   |
| 5              | 1,3,5 Ports Open And Pilots Closed              |
| 6              | 1,3,5 Ports Closed And Pilots Closed            |
| 7              | 1 Closed, 3,5 Ports Open And Pilots Closed      |
| 8              | 1 Port Open, 3,5 Ports Closed And Pilots Closed |

| Circuit Board Address Configuration |                              |
|-------------------------------------|------------------------------|
| J                                   | Interconnect, Single Address |
| M                                   | Interconnect, Double Address |



HA manifold shown

**Intermediate Air Supply - Universal Plug-in**

**PSHU115A T 1 P**

| Mounting Style / Port Size                     |           |
|--|-----------|
| Intermediate Air Supply, NPT / Internal Pilot  | PSHU115A  |
| Intermediate Air Supply, BSPP / Internal Pilot | PSHU115B* |
| Intermediate Air Supply, NPT / External Pilot  | PSHU115C  |
| Intermediate Air Supply, BSPP / External Pilot | PSHU115D* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Gasket Options |   |
|----------------|---|
| 1              | 1,3,5 Ports Open And Pilots Open                |
| 2              | 1,3,5 Ports Closed And Pilots Open              |
| 3              | 1 Closed, 3,5 Ports Open And Pilots Open        |
| 4              | 1 Port Open, 3,5 Ports Closed And Pilots Open   |
| 5              | 1,3,5 Ports Open And Pilots Closed              |
| 6              | 1,3,5 Ports Closed And Pilots Closed            |
| 7              | 1 Closed, 3,5 Ports Open And Pilots Closed      |
| 8              | 1 Port Open, 3,5 Ports Closed And Pilots Closed |

| Circuit Board Address Configuration |   |
|-------------------------------------|---|
| T                                   | With Electrical Pass Through              |
| E                                   | With Electrical Expansion To 25th Address |



Intermediate air supply module shown

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series



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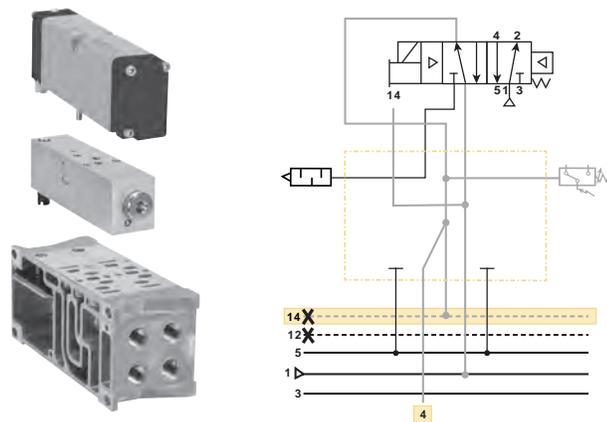
**Pneumatic Zoning**

Multiple pressure zones can be created by selecting alternative gaskets between individual manifold segments or an intermediate air supply module. These zones can be designed to meet different application and safety requirements on the machine. Inserting the PXM Pilot Exhaust Module into a one of these zones allows control of pilot pressure for the entire zone.

**Gasket Kit - Universal Manifold to Manifold**

|  |  | Description    | Part number  |
|--|--|----------------|--|
|  |  | Pilots opened  | 1 – Supply & Exhaust & Pilots Open<br><b>PSHU11P</b>       |
|  |  |                | 2 – Supply Closed, Exhaust & Pilots Open<br><b>PSHU12P</b> |
|  |  |                | 3 – Supply & Exhaust Closed, Pilots Open<br><b>PSHU13P</b> |
|  |  |                | 4 – Supply & Pilots Open, Exhaust Closed<br><b>PSHU14P</b> |
|  |  | Pilots blocked | 5 – Supply & Exhaust Open, Pilots Closed<br><b>PSHU15P</b> |
|  |  |                | 6 – Supply & Pilots Closed, Exhaust Open<br><b>PSHU16P</b> |
|  |  |                | 7 – Supply & Exhaust & Pilots Closed<br><b>PSHU17P</b>     |
|  |  |                | 8 – Supply Open, Exhaust & Pilots Closed<br><b>PSHU18P</b> |

**Pilot Exhaust Module**

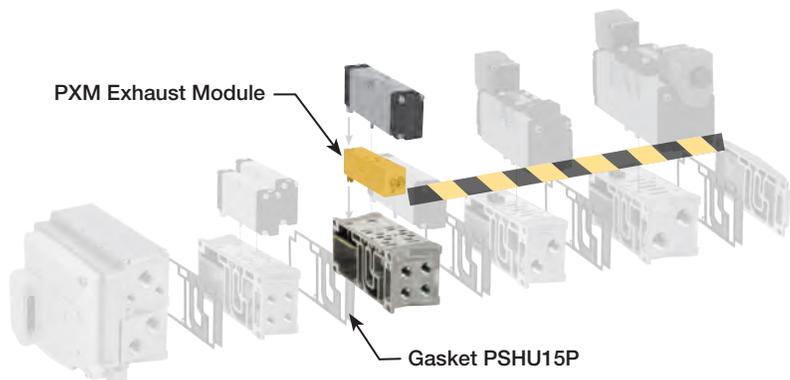


PXM Pilot Exhaust Module enables an H Series HA Single Solenoid valve to control the pilot pressure to other externally piloted H Series ISO valves in the same manifold zone. The HA valve in conjunction with the PXM will remove pilot pressure to all externally piloted valves in the manifold zone when solenoid 14 is de-energized (off). Control of all externally piloted valves in the zone is disabled for both solenoid actuation and manual override until solenoid 14 of the HA valve on the PXM is energized again (on).

**Gaskets blocking pilot pressure are required at the start of the zone the PXM is controlling.** Special zoning gaskets (shown below) are available to meet any application requirement. In the example below, main pressure and exhaust pass through to the second zone, but pilot pressure is blocked. This results in the PXM providing pilot pressure for the zone after this gasket.

| Part Number | Sensor Type                 |
|-------------|-----------------------------|
| PS55XXA0P   | No sensing                  |
| PS55XXM0P   | Mechanical pressure switch  |
| PS55XXE0P   | Solid state pressure switch |

| Part Number | Cable Type                |
|-------------|---------------------------|
| RKC 4.4T-2  | M12,4 Pin Female, PVC, 2m |



**Sandwich Regulator - 15407-2, Plug-in,**

**PS5638 1 6 6 P**

| Basic Series              |        |
|---------------------------|--------|
| HB 15407-2, 18mm, Plug-in | PS5638 |
| HA 15407-2, 26mm, Plug-in | PS5538 |

| Regulator Function             |   |
|--------------------------------|---|
| Common Pressure Regulator      | 1 |
| Independent Pressure Regulator | 2 |

| #2 Port Regulator / Gauge* |                    |
|----------------------------|--------------------|
| 5                          | 2-60 PSIG w/Gauge  |
| 6                          | 5-125 PSIG w/Gauge |

\* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

| #4 Port Regulator / Gauge* |                    |
|----------------------------|--------------------|
| 5                          | 2-60 PSIG w/Gauge  |
| 6                          | 5-125 PSIG w/Gauge |

\* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

**Ordering Components**

- Sandwich Regulator Kit configured for Internal Pilot as standard.
- Order valve as External Pilot.



**HB - 18mm**  
(Independent Dual Port Regulator shown)



**HA - 26mm**  
(Common Port Regulator shown)

**How to Configure Sandwich Regulator / Valve Combinations**

**Internal Pilot Configuration of Sandwich Regulator HA, HB**

Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

| Accessories   | Description                                    | Part number       |
|---|--|-------------------|
|  Gauge adapter kit | Includes 1/8" coupling, long nipple, and gauge | <b>PS5651160P</b> |

**Sandwich Regulator Cv Flow Chart\***

|           | Common Pressure Code 166 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>HB</b> | 0.20                     | 0.20 | 0.41 | 0.34 | 0.23                   | 0.19 | 0.28 | 0.27 |
| <b>HA</b> | 0.41                     | 0.43 | 0.87 | 0.89 | 0.42                   | 0.45 | 0.68 | 0.66 |

\* Regulator Port exhaust through Base Port 3.

**Note:** All Cv's calculated with regulator adjusted full open.

 Most popular.



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**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Sandwich Regulator - 5599-2, Plug-in,**

**PS4038 1 6 6 C P**

| Basic Series       |        |
|--------------------|--------|
| H1 5599-2, Plug-in | PS4038 |
| H2 5599-2, Plug-in | PS4138 |

| Regulator Function             |   |
|--------------------------------|---|
| Common Pressure Regulator      | 1 |
| Independent Pressure Regulator | 2 |

| #2 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

| #4 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

**Ordering Components**

- Sandwich Regulator Kit configured for Internal Pilot as standard.
- Order valve as External Pilot.



**H1 - Size 1**  
 (Independent Dual Port Regulator shown)



**H2 - Size 2**  
 (Independent Dual Port Regulator shown)

**How to Configure Sandwich Regulator / Valve Combinations**

**Internal Pilot Configuration of Sandwich Regulator H1, H2**

Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

**External Pilot Configuration of Sandwich Regulator H1, H2**

An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

**Sandwich Regulator Cv Flow Chart\***

|           | Common Pressure Code 166 |      |      |      | Single Pressure 2 Code 206 |      |      |      | Single Pressure 4 Code 260 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|----------------------------|------|------|------|----------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>H1</b> | 0.62                     | 0.61 | 1.28 | 1.18 | 0.73                       | 0.96 | 0.96 | 0.93 | 0.34                       | 0.70 | 0.94 | 0.98 | 0.52                   | 0.48 | 0.86 | 0.88 |
| <b>H2</b> | 1.47                     | 1.60 | 2.41 | 2.33 | 1.71                       | 1.90 | 1.52 | 1.75 | 1.74                       | 1.67 | 1.73 | 1.79 | 1.61                   | 1.62 | 1.50 | 1.67 |

\* Regulator Port exhaust through Base Port 3.

Note: All Cv's calculated with regulator adjusted full open.



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Ordering Information**

**Online Configuration**

Navigate to the landing page

[www.parker.com/pdn/HSeriesISO](http://www.parker.com/pdn/HSeriesISO)

Customize your manifold assembly

Create and save a unique assembled part number

Generate a CAD model



**Add-A-Fold - Universal Plug-in**

**AA HU20 L1 0 0 P 04**

| Valve Type         |        |
|--------------------|--------|
| Plug-in (internal) | AAHU20 |
| Plug-in (external) | AAHU2X |

| Number of Segments |   |
|--------------------|---|
| 01                 | ↓ |
| 32                 |   |

| Left Hand End Plate Type * †  |    |
|---|----|
| 25-Pin, D-Sub (side)  | L1 |
| 25-Pin, D-Sub (top)   | L2 |
| 19-Pin, Round, Brad Harrison  | L3 |
| 12-Pin, M23   | L4 |
| 32-Point Terminal Strip   | L5 |
| 19-Pin, M23   | M2 |
| P2H IO Link Class B, 24 Address, Standard Version                       | N2 |
| P2H IO Link Class B, 24 Address, Safe Version                           | S2 |
| P2H IO Link Class A, 24 Address, 4-Pin, Safe Version                    | S4 |
| P2H IO Link Class A, 24 Address, 5-Pin, Safe Version                    | S5 |
| Turck Network with valve driver module - 16 outputs ‡                   | T1 |
| Turck Network with valve driver module - 32 outputs ‡                   | T2 |
| -----For P2H Ethernet Node and PCH Network Portal, see next pages ----- |    |

| Thread Type |          |
|-------------|----------|
| 0           | NPT      |
| 1*          | BSPP "G" |

\* BSPP Conforms to ISO 1179-1 w 228-1 Threads

| Right Hand End Plate Type / Port |  |
|----------------------------------|--|
| 0                                | Low profile (no ports)   |
| 1                                | 1/2 Exhaust and inlet port   |
| 2                                | 3/4 Exhaust and inlet port   |
| 3*                               | H3 Transition plate, 1" exhaust and inlet, (electrical pass through)   |
| 4*                               | H3 Transition plate, 1" exhaust and inlet, (expansion to 25th address) |

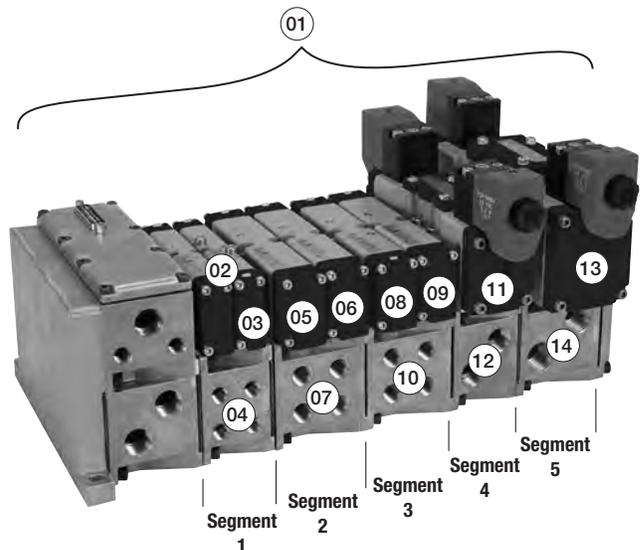
\* 1, 3 & 5 manifold galley blocked at transition plate. 12 & 14 pass through.

- \* 120VAC is not CSA certified. Not available with 240VAC coils.
- ‡ Turck Network communication modules must be ordered separately. See Network Connectivity section for more information.
- † PSHU11P gaskets included in each end plate kit, galley ports 1, 2, 3, 12 & 14 Open.

**Example**

Application requires a 5 segment manifold.

| Item | Part No.    | Location      |                 |
|------|-------------|---------------|-----------------|
| 01   | AAHUL200P05 |               |                 |
| 02   | HB2VXBG0G9A | Segment 1     |                 |
| 03   | HB2VXBG0G9A |               | Valve station 2 |
| 04   | PSHU1151M1P |               | Manifold base   |
| 05   | HA1VXBG0G9A | Segment 2     |                 |
| 06   | HA2VXBG0G9A |               | Valve station 4 |
| 07   | PSHU1153M1P | Manifold base |                 |
| 08   | HA1VXBG0G9A | Segment 3     |                 |
| 09   | HA2VXBG0G9A |               | Valve station 6 |
| 10   | PSHU1153M1P | Manifold base |                 |
| 11   | H12VXBG0B9A | Segment 4     |                 |
| 12   | PSHU1155M1P |               | Manifold base   |
| 13   | H22VXBG0B9A | Segment 5     |                 |
| 14   | PSHU1157M1P |               | Manifold base   |



**Example:**  
5 segment manifold with (2) HB, (4) HA, (1) H1, and (1) H2 valve on manifold bases with 25-pin, D-Sub end plate.

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

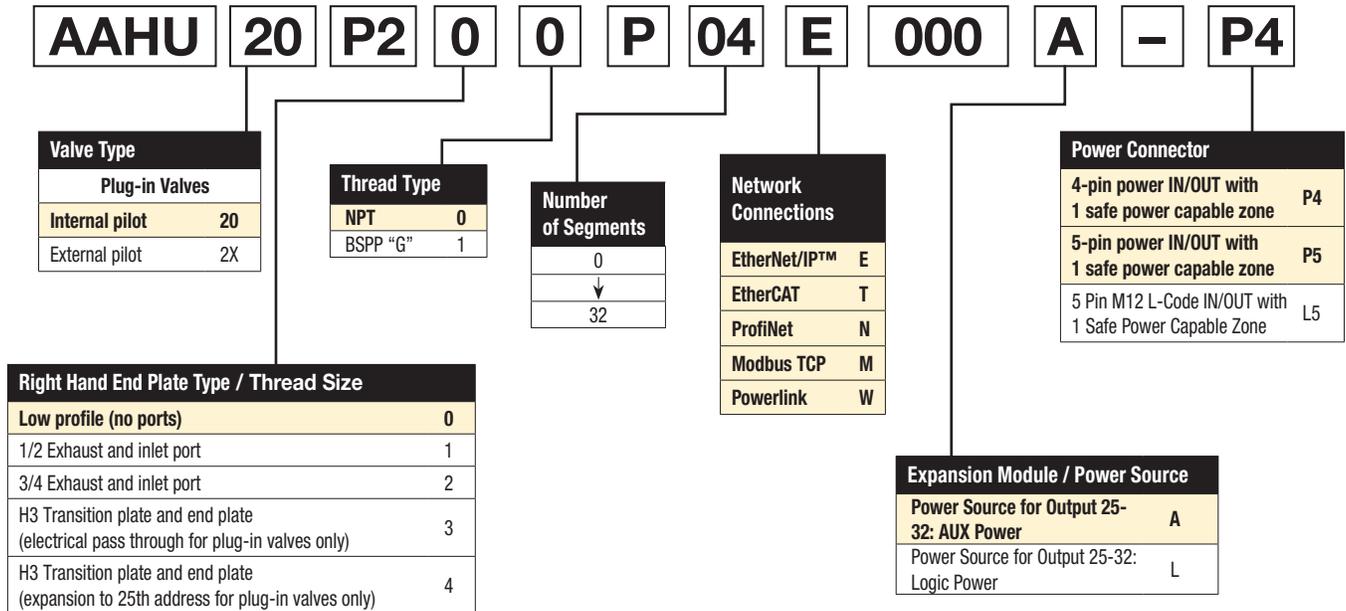
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**Ordering Information**

**Add-A-Fold – Universal Plug-in – P2H Ethernet Node**

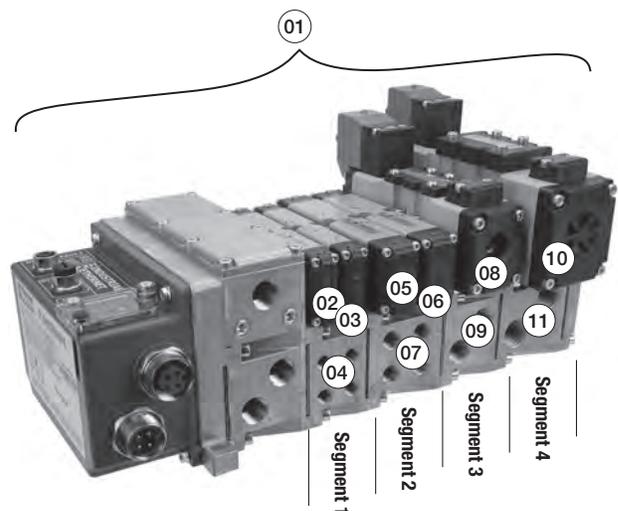
The P2H Industrial EtherNet node is a control unit capable of controlling up to 32 digital outputs (pilot solenoids), through the most popular Industrial Ethernet protocols. The P2H Ethernet is a low-cost network connection with easy integration and simple to use diagnostics all housed in a robust IP65 weld-resistant housing.



**Example**

Application required a 4 segment manifold

| Item | Part No.              | Location                  |
|------|-----------------------|---------------------------|
| 01   | AAHU20P200P04E000A-P4 |                           |
| 02   | HB2VXBG0G9A           | Valve Station 1           |
| 03   | HB2VXBG0G9A           | Segment 1 Valve Station 2 |
| 04   | PSHU1151M1P           | Manifold Base             |
| 05   | HA1VXBG0G9A           | Valve Station 3           |
| 06   | HA2VXBG0G9A           | Segment 2 Valve Station 4 |
| 07   | PSHU1153M1P           | Manifold Base             |
| 08   | H12VXBG0B9A           | Valve Station 5           |
| 09   | PSHU1155M1P           | Segment 3 Manifold Base   |
| 10   | H2222VXBG0B9A         | Valve Station 6           |
| 11   | PSHU1157M1P           | Segment 4 Manifold Base   |



Example:  
5 segment manifold with (2) HB, (2) HA, (1) H1, and (1) H2 valve on manifold bases with P2H Ethernet Node end plate.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Ordering Information**

**Add-A-Fold – Universal Plug-in – PCH Network Portal**

The PCH Network Portal redefines and revolutionizes machine I/O (Inputs and Outputs). The PCH Portal was engineered for the open protocol IO-Link A and IO-Link B devices as well as configurable inputs/ outputs with true PNP/NPN circuitry switching on each port for easy machine design changes. The integrated configurability gives the user flexibility in designing I/O architecture. The PCH Network Portal is designed for general pneumatic control of industrial machinery on an Ethernet network for all types of automated industrial equipment.



**AAHU 20 P3 0 0 P 04 E AAA 0 - P4**

| Valve Type     |    |
|----------------|----|
| Plug-in Valves |    |
| Internal pilot | 20 |
| External pilot | 2X |

| Thread Type |   |
|-------------|---|
| NPT         | 0 |
| BSPG "G"    | 1 |

| Number of Segments |    |
|--------------------|----|
|                    | 0  |
|                    | ↓  |
|                    | 32 |

| Network Connections |   |
|---------------------|---|
| EtherNet/IP™        | E |
| EtherCAT            | T |
| ProfiNet            | N |
| Modbus TCP          | M |

| Module Combinations |                   |                   |
|---------------------|-------------------|-------------------|
| Module Position 1   | Module Position 2 | Module Position 3 |
| A                   | A                 | A                 |
| A                   | A                 | B                 |
| A                   | A                 | C                 |
| A                   | A                 | N                 |
| A                   | B                 | B                 |
| A                   | B                 | C                 |
| A                   | B                 | N                 |
| A                   | C                 | C                 |
| A                   | C                 | N                 |
| B                   | B                 | B                 |
| B                   | B                 | C                 |
| B                   | B                 | N                 |
| B                   | C                 | C                 |
| B                   | C                 | N                 |
| C                   | C                 | C                 |
| C                   | C                 | N                 |

| Power Connector                                   |    |
|---|----|
| 4-pin power IN/OUT with 1 safe power capable zone | P4 |
| 5-pin power IN/OUT with 1 safe power capable zone | P5 |
| 4-pin power IN/IN with 2 safe power zones         | S4 |
| 5-pin power IN/IN with 2 safe power zones         | S5 |

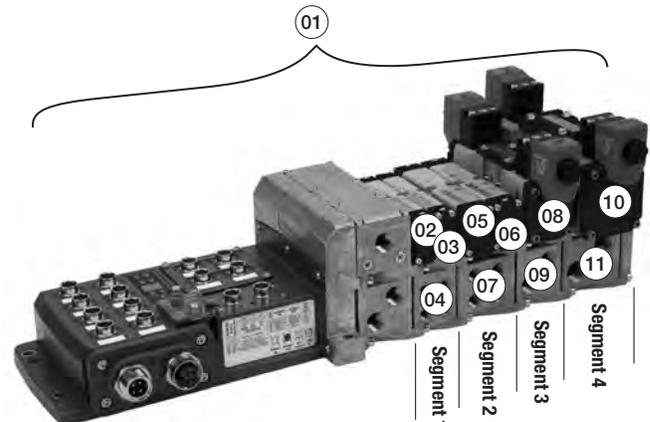
| Right Hand End Plate Type / Thread Size   |   |
|---|---|
| Low profile (no ports)  | 0 |
| 1/2 Exhaust and inlet port  | 1 |
| 3/4 Exhaust and inlet port  | 2 |
| H3 Transition plate and end plate (electrical pass through for plug-in valves only)   | 3 |
| H3 Transition plate and end plate (expansion to 25th address for plug-in valves only) | 4 |

For any module configurations not listed, consult factory.

**Example**

Application required a 4 segment manifold

| Item | Part No.              | Location                  |
|------|-----------------------|---------------------------|
| 01   | AAHU20P300P04EAAA0-P4 |                           |
| 02   | HB2VXBG0G9A           | Valve Station 1           |
| 03   | HB2VXBG0G9A           | Segment 1 Valve Station 2 |
| 04   | PSHU1151M1P           | Manifold Base             |
| 05   | HA1VXBG0G9A           | Valve Station 3           |
| 06   | HA2VXBG0G9A           | Segment 2 Valve Station 4 |
| 07   | PSHU1153M1P           | Manifold Base             |
| 08   | H12VXBG0B9A           | Segment 3 Valve Station 5 |
| 09   | PSHU1155M1P           | Manifold Base             |
| 10   | H2222VXBG0B9A         | Segment 4 Valve Station 6 |
| 11   | PSHU1157M1P           | Manifold Base             |



Example:  
5 segment manifold with (2) HB, (2) HA, (1) H1, and (1) H2 valve on manifold bases with PCH Network Portal end plate.

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Subbase Kit - Plug-in**

**PS55**   **1113**   **C**         **P**

| Series     |      |
|------------|------|
| HA Subbase | PS55 |
| H1 Subbase | PS40 |
| H2 Subbase | PS41 |

| Engineering Level |           |
|-------------------|-----------|
| Blank             | HA Series |
| D                 | H1 Series |
| C                 | H2 Series |

| Mounting Style / Port Size   |       |
|------------------------------|-------|
| <b>HA Series</b>             |       |
| 1/4 NPT side ports           | 1113  |
| 1/4 BSPP side ports          | 1114* |
| 1/4 NPT bottom / side ports  | 1123  |
| 1/4 BSPP bottom / side ports | 1124* |
| <b>H1 Series</b>             |       |
| 3/8 NPT side ports           | 1115  |
| 3/8 BSPP side ports          | 1116* |
| <b>H2 Series</b>             |       |
| 1/2 NPT side ports           | 1117  |
| 1/2 BSPP side ports          | 1118* |

| Wiring Options |                |
|----------------|----------------|
| Blank          | None           |
| C ‡            | Chrysler       |
| F ‡            | SAE / Ford     |
| G ‡            | General Motors |

‡ Not available on HA series.

| Enclosures / Lead Length        |                                   |
|---------------------------------|-----------------------------------|
| <b>Individually Wired Base*</b> |                                   |
| 7 †                             | 3-Pin mini connector in base      |
| 8 †                             | 4-Pin M12 micro connector in base |
| 9 †                             | 5-Pin mini connector in base      |
| <b>A ‡</b>                      | <b>6" Leads</b>                   |
| <b>C</b>                        | <b>Terminal block</b>             |

\* Use plate with no connection.  
 † Must specify valve auto wiring option "C", "F", or "G".  
 ‡ Not available on HA series.

\* BSPP conforms to ISO 1179-1 w 228-1 threads.



HA subbase shown

|                         |
|-------------------------|
| <b>D</b>                |
| Subbase & Manual Valves |
| H Series Micro          |
| Moduflex Series         |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Part Numbers**

**End Plate Kit - Plug-in, 5599-2, Size 3 (H3) \* Not compatible with H Universal**

| Electrical option  | NPT port           | BSPP port   |
|--|--------------------|-------------|
|  <p>No connector - use with individually wired base</p>     | <b>PS4231010DP</b> | PS4231011DP |
|  <p>25-pin, D-sub</p>                                       | <b>PS4220L20DP</b> | PS4220L21DP |
|  <p>19-pin, round, Brad Harrison</p>                        | <b>PS4220L30DP</b> | PS4220L31DP |
|  <p>12-pin, M23</p>   | <b>PS4220L40DP</b> | PS4220L41DP |
|  <p>19-pin, M23</p>   | <b>PS4220M20DP</b> | PS4220M21DP |
|  <p>Turck Network with valve driver module - 16 address</p> | <b>PS4220T10DP</b> | PS4220T11DP |
|  <p>Turck Network with valve driver module - 24 address</p> | <b>PS4220T20DP</b> | PS4220T21DP |
|  <p>P2H IO Link Class B, standard version, 24 address</p>   | <b>PS4220N20DP</b> | PS4220N21DP |
|  <p>P2H IO Link Class B, safe version, 24 address</p>       | <b>PS4220S20DP</b> | PS4220S21DP |
|  <p>P2H IO Link Class A, 4-pin safe version, 24 address</p> | <b>PS4220S40DP</b> | PS4220S41DP |
|  <p>P2H IO Link Class A, 5-pin safe version, 24 address</p> | <b>PS4220S50DP</b> | PS4220S51DP |

Turck Network, H Series Network, and P2M Network Node communication modules must be ordered separately. See Network Connectivity Section for more information.

**Note:**

For cable part numbers and pin out information see Network Connectivity Accessories.

**D**

**Subbase & Manual Valves**

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

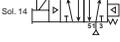
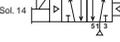
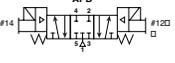
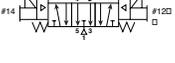
Valvair II Series

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Valve - 5599-2, Plug-in, Size 3 (H3)**

| Symbol  | Type  | Cv                                | Operator        | Voltage         | Pilot   | Non-locking  | Locking                              |                 |                 |          |                    |                    |             |
|---|---|-----------------------------------|-----------------|-----------------|---|--|--------------------------------------|-----------------|-----------------|----------|--------------------|--------------------|-------------|
|  | 4-way, 2-position, spring return  | 6.0                               | Single solenoid | 24 VDC          | Internal  | <b>H3EVXBG0B9D</b>   | H3EVXBH0B9D                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 | External  | H3EVXXG0B9D  | H3EVXXH0B9D                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |  | 4-way, 2-position, air return  | 6.0                                  | Single solenoid | 24 VDC          | Internal | <b>H31VXBG0B9D</b> | H31VXBH0B9D        |             |
|   |   |                                   |                 |                 |   |  |                                      |                 |                 | External | H31VXXG0B9D        | H31VXXH0B9D        |             |
|   |   |                                   |                 |                 |   |  |                                      |                 |                 | 120 VAC  | Internal           | <b>H31VXBG023D</b> | H31VXBH023D |
|   |   |                                   |                 |                 |   |  |                                      |                 |                 |          | External           | H31VXXG023D        | H31VXXH023D |
|  | 4-way, 2-position   | 6.0                               | Double solenoid | 24 VDC          | Internal  | <b>H32VXBG0B9D</b>   | H32VXBH0B9D                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 | External  | H32VXXG0B9D  | H32VXXH0B9D                          |                 |                 |          |                    |                    |             |
|   |   |                                   |                 |                 | 120 VAC   | Internal   | <b>H32VXBG023D</b>                   | H32VXBH023D     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   | External   | H32VXXG023D                          | H32VXXH023D     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   |   | 4-way, 3-position, all ports blocked | 5.0             | Double solenoid | 24 VDC   | Internal           | <b>H35VXBG0B9D</b> | H35VXBH0B9D |
|   |   |                                   |                 |                 |   |  |                                      |                 |                 |          | External           | H35VXXG0B9D        | H35VXXH0B9D |
| 120 VAC   | Internal  | <b>H35VXBG023D</b>                | H35VXBH023D     |                 |   |  |                                      |                 |                 |          |                    |                    |             |
|   | External  | H35VXXG023D                       | H35VXXH023D     |                 |   |  |                                      |                 |                 |          |                    |                    |             |
|   |  | 4-way, 3-position, center exhaust | 5.0             | Double solenoid | 24 VDC  |  |                                      |                 |                 |          | Internal           | <b>H36VXBG0B9D</b> | H36VXBH0B9D |
|   |   |                                   |                 |                 |   |  |                                      |                 |                 |          | External           | H36VXXG0B9D        | H36VXXH0B9D |
| 120 VAC   |   |                                   |                 |                 |   | Internal   | <b>H36VXBG023D</b>                   | H36VXBH023D     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   | External   | H36VXXG023D                          | H36VXXH023D     |                 |          |                    |                    |             |
|   |   |                                   |                 |                 |   |  | 4-way, 3-position, pressure center   | 5.0             | Double solenoid | 24 VDC   | Internal           | <b>H37VXBG0B9D</b> | H37VXBH0B9D |
|   |   |                                   |                 |                 |   |  |                                      |                 |                 |          | External           | H37VXXG0B9D        | H37VXXH0B9D |
| 120 VAC   | Internal  | <b>H37VXBG023D</b>                | H37VXBH023D     |                 |   |  |                                      |                 |                 |          |                    |                    |             |
|   | External  | H37VXXG023D                       | H37VXXH023D     |                 |   |  |                                      |                 |                 |          |                    |                    |             |

**Subbase - Single 5599-2, Plug-in, Size 3 (H3)**

| Side ported base  | Enclosure / Lead length | Solenoid addresses            | 3/4" NPT           | 3/4" BSPP   |
|---|-------------------------|-------------------------------|--------------------|-------------|
|  | Terminal strip in base  | Double solenoid - 2 address   | <b>PS421119CCP</b> | PS421110CCP |
|   | 6" flying leads         | Double solenoid - 2 addresses | <b>PS421119ACP</b> | PS421110ACP |

**Manifold Base - 5599-2, Plug-in, Size 3 (H3)**

| Bottom / End ported bases   | Enclosure / Lead length | Solenoid addresses            | 3/4" NPT           | 3/4" BSPP   |
|---|-------------------------|-------------------------------|--------------------|-------------|
|  | Circuit board           | Double solenoid - 2 addresses | <b>PS421169MCP</b> | PS421160MCP |
|   | Terminal strip in base  | Double solenoid - 2 address   | <b>PS421169CCP</b> | PS421160CCP |
|   | 6" flying leads         | Double solenoid - 2 addresses | <b>PS421169ACP</b> | PS421160ACP |
|  | Circuit board           | Double solenoid - 2 addresses | <b>PS421159MCP</b> | PS421150MCP |
|   | Terminal strip in base  | Double solenoid - 2 address   | <b>PS421159CCP</b> | PS421150CCP |
|   | 6" flying leads         | Double solenoid - 2 addresses | <b>PS421159ACP</b> | PS421150ACP |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D95

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

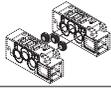
Network Connectivity

DX ISOMAX Series

Valvair II Series

**Part Numbers**

**Accessories - 5599-2, Size 3 (H3)**

| Accessory  | Description                              | Part number        |
|--|--|--------------------|
| <br>Sandwich regulator  | Common pressure 5-125 PSIG w/ gauge      | <b>PS4238166CP</b> |
|  | Independent pressure 5-125 PSIG w/ gauge | <b>PS4238266CP</b> |
| <br>Blanking plate kit  |  | <b>PS4234CP</b>    |
| <br>Sandwich flow control<br>A Sandwich Flow Control and Common Port Sandwich Regulator may be used together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators. |  | <b>PS4235CP</b>    |
| <br>Manifold to manifold gasket kits  |  | <b>PS4213P</b>     |
| <br>Manifold isolation kit  | Main galley (1, 3, 5)                    | <b>PS4232CP</b>    |
|  | Pilot galley                             | <b>PS4033CP</b>    |

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D96

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Ordering Information**

**End Plate Kit - Plug-in, 5599-2, Size 3 (H3) \* Not compatible with H Universal**

**PS42 20L2 0 D P**

| Basic Series     |      |
|------------------|------|
| ISO 5599, Size 3 | PS42 |

| Engineering Level |         |
|-------------------|---------|
| D                 | Current |

| Options †   |              |
|---|--------------|
| <b>25-Pin, D-Sub</b>  | <b>20L2*</b> |
| 19-Pin, Round, Brad Harrison                                | 20L3         |
| 12-Pin, M23   | 20L4         |
| 19-Pin, M23   | 20M2         |
| <b>P2H IO Link Class B, 24 Address, Standard Version</b>    | <b>20N2</b>  |
| P2H IO Link Class B, 24 Address, Safe Version               | 20S2         |
| <b>P2H IO Link Class A, 24 Address, 4-Pin, Safe Version</b> | <b>20S4</b>  |
| P2H IO Link Class A, 24 Address, 5-Pin, Safe Version        | 20S5         |
| Turck Network with Valve Driver Module - 16 Outputs         | 20T1         |
| Turck Network with Valve Driver Module - 24 Outputs         | 20T2         |

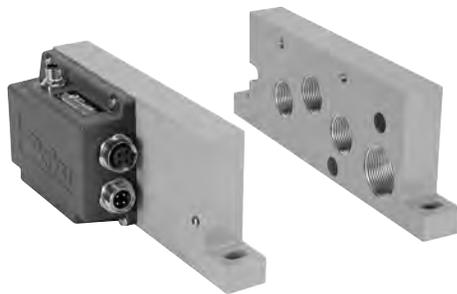
| Thread Type |            |
|-------------|------------|
| <b>0</b>    | <b>NPT</b> |
| 1*          | BSPP "G"   |

\* BSPP Conforms to ISO 1179-1 w 228-1 Threads

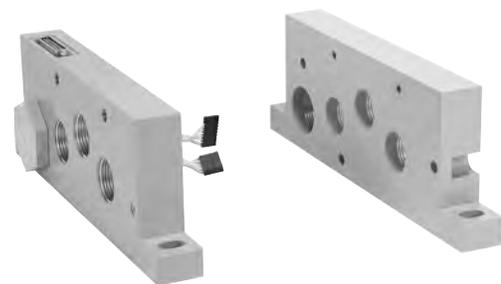
\* 120VAC is Not CSA Rated.

† Manifold bases must have a circuit board.

Turck Network, communication modules must be ordered separately. See Network Connectivity Section for more information.



**H3 P2H Class A end plate shown**



**H3 25-pin D-Sub end plate shown**

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D97

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Valve - Plug-in, 5599-2, Size 3**

**H3 E VX B G O B9 D**

**Basic Series 5599-2**  
 ISO 5599-2 Size 3      **H3**

**5599-2 Engineering Level**  
**D**      **Current**

| 5599-2 Operator / Function                              |   |
|---|---|
| Single solenoid, 2-position - air return                | 1 |
| Double solenoid, 2-position                             | 2 |
| Double solenoid, 3-position - APB                       | 5 |
| Double solenoid, 3-position - CE                        | 6 |
| Double solenoid, 3-position - PC                        | 7 |
| Single solenoid, 2-position - air return, spring assist | E |

| 5599-2 Voltage & Frequency |            |            |           |  |
|----------------------------|------------|------------|-----------|--|
|                            | AC         |            | DC        | Light & surge suppression              |
|                            | 60Hz       | 50Hz       |           |  |
| 42                         | 24         |            |           |  |
| 45                         |            |            | 12        |  |
| <b>B9</b>                  |            |            | <b>24</b> | <b>LED &amp; suppression, 3.2 watt</b> |
| <b>F9</b>                  |            |            | <b>24</b> | <b>LED &amp; suppression, 1.3 watt</b> |
| <b>23</b>                  | <b>120</b> | <b>115</b> |           | <b>LED &amp; suppression</b>           |
| 57                         | 240        |            |           |  |

**5599-2 Mounting**  
 5599-2 Valve less base      **VX**

**5599-2 Pilot source / Pilot exhaust**  
 Internal pilot, port #1 / vented      **B**  
 External pilot, port #12 or #14 / vented      **X\***

\* Must be specified when using Sandwich Regulators.

**5599-2 Enclosure / Lead length**  
**0**      **None, valve less base**

| 5599-2 Overrides / Lights |                   |  |
|---------------------------|-------------------|--|
|                           | Voltage code      |  |
| B                         | 42, 45, 57        | Non-locking, flush, push - w/o light       |
| C                         | 42, 45, 57        | Locking, flush, push / turn - w/o light    |
| <b>G</b>                  | <b>B9, F9, 23</b> | <b>Non-locking, flush, push - w/ light</b> |
| H                         | B9, 23            | Locking, flush, push / turn - w/ light     |



H3 Valve shown

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair-II Series

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Manifold / Subbase Kit - Plug-in, 5599-2, Size 3**

**PS421159** **M** **C** **P**

| Mounting Base Style / Port Size      |           |
|--------------------------------------|-----------|
| Subbase: 3/4 NPT side port           | PS421119  |
| Subbase: 3/4 BSPP side port          | PS421110* |
| Manifold: 3/4 NPT end port           | PS421159  |
| Manifold: 3/4 BSPP end port          | PS421150* |
| Manifold: 3/4 NPT bottom / end port  | PS421169  |
| Manifold: 3/4 BSPP bottom / end port | PS421160* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Engineering Level |    |
|-------------------|----|
| C                 | H3 |

| Wiring Options |                |
|----------------|----------------|
| Blank          | None           |
| C              | Chrysler       |
| F              | SAE / Ford     |
| G              | General Motors |

| Enclosures / Lead Length  |                                      |
|---------------------------|--------------------------------------|
| Individually Wired Base** |                                      |
| 7†                        | 3-pin mini connector in base         |
| 8†                        | 4-pin M12 micro connector in base    |
| 9†                        | 5-pin mini connector in base         |
| <b>A</b>                  | <b>6" Leads</b>                      |
| <b>C</b>                  | <b>Terminal block</b>                |
| Collective Wired Base     |                                      |
| <b>M*</b>                 | <b>Circuit board, double address</b> |

\* Not available with subbase kits.

\*\* Use plate with no connection.

† Must specify valve auto wiring option "C", "F", or "G".

**Note:**

When using the enclosure / lead length "M" option:

- 12VDC - Maximum number of coils energized simultaneously is 13
- 24VDC - Maximum number of coils energized simultaneously is 21, B9 coil  
Maximum number of coils energized simultaneously is 24, F9 coil
- 120VAC - Coils limited by the number of pins available in the connector  
(25-pin D-Sub = 24 coils, 19-pin Brad Harrison = 16, 12-pin M23 = 8)
- 240VAC - Must use "A" or "C" option, lead wires or terminal blocks



**Subbase Kit**

**Automotive Connectors**

Mounted in 1/2" Conduit Port

- 3-Pin - Wired for Single Solenoid
- 4-Pin / 5-Pin - Wired for Double Solenoid



**Manifold Kit**

**Automotive Connectors**

Mounted in Individual Manifold Conduit Cover

- 3-Pin - Wired for Single Solenoid
- 4-Pin / 5-Pin - Wired for Double Solenoid

Most popular.



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D99

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|                         |
|-------------------------|
| <b>D</b>                |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |

**Sandwich Regulator - Plug-in, 5599-2**

**PS4038 1 6 6 C P**

| Basic Series       |        |
|--------------------|--------|
| H3 5599-2, Plug-in | PS4238 |

| Regulator Function             |   |
|--------------------------------|---|
| Common Pressure Regulator      | 1 |
| Independent Pressure Regulator | 2 |

| #2 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

| #4 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For Common Pressure Regulator Option, Regulator Gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line By-Pass Option can only be used with Independent Pressure Regulators.

**Ordering Components**

- Sandwich Regulator Kit configured for Internal Pilot as standard.
- Order valve as External Pilot.

**How to Configure Sandwich Regulator / Valve Combinations**

**Internal Pilot Configuration of Sandwich Regulator H3**

Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

**External Pilot Configuration of Sandwich Regulator H3**

An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

**Sandwich Regulator Cv Flow Chart\***

|           | Common Pressure Code 166 |      |      |      | Single Pressure 2 Code 206 |      |      |      | Single Pressure 4 Code 260 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|----------------------------|------|------|------|----------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>H3</b> | 2.37                     | 2.39 | 4.30 | 4.47 | 2.37                       | 2.81 | 2.75 | 3.01 | 2.65                       | 2.59 | 2.68 | 2.74 | 2.43                   | 2.41 | 3.16 | 3.04 |

\* Regulator Port exhaust through Base Port 3.  
 Note: All Cv's calculated with regulator adjusted full open.

Most popular.



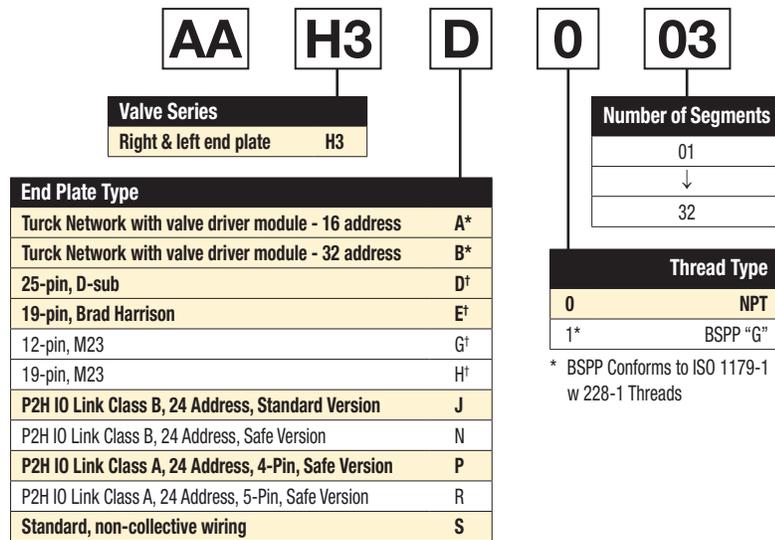
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**Add-A-Fold Assembly - Plug-in, 5599-2, Size 3 \* Not compatible with H Universal**



\* BSPP Conforms to ISO 1179-1 w 228-1 Threads

\* Must order communication modules separately.  
 † Collective wiring module included.

**How To Order Plug-in Add-A-Fold Assemblies**

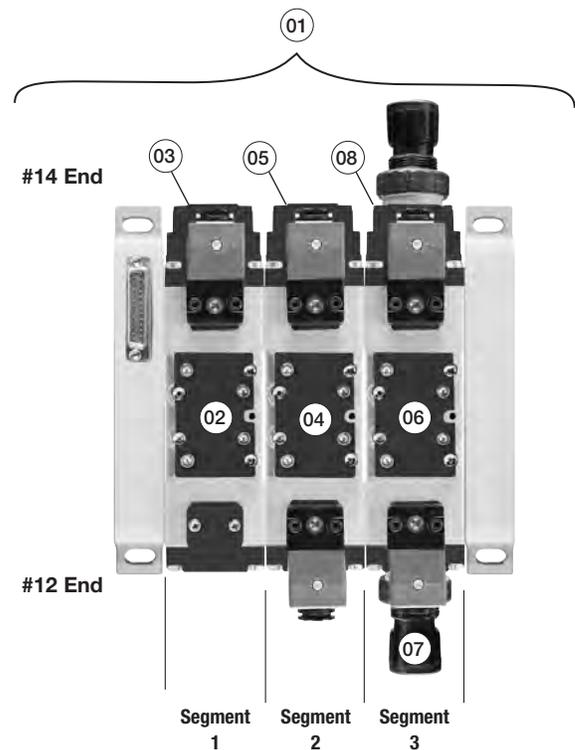
1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete valve, regulator, flow control and manifold base kit. List left to right, LOOKING AT THE CYLINDER PORTS on the #12 end of the manifold. The left most segment is segment 1. (If a blanking plate part number and the individual manifold part numbers for the required segment.)

**Example**

Application requires a 3 segment manifold and regulator on segment 3.

| Item | Part No.    | Location  |                    |
|------|-------------|-----------|--------------------|
| 01   | AAH3D003    |           |                    |
| 02   | H31VXBG0B9D | Segment 1 | Valve station 1    |
| 03   | PS421159MCP |           | Manifold base      |
| 04   | H32VXBG0B9D | Segment 2 | Valve station 2    |
| 05   | PS421159MCP |           | Manifold base      |
| 06   | H32VXXG0B9D | Segment 3 | Valve station 3    |
| 07   | PS4238166CP |           | Sandwich regulator |
| 08   | PS421159MCP |           | Manifold base      |

**NOTE:** Construct manifold assemblies from left to right while looking at the cylinder ports.  
 Valves must be ordered as External Pilot when using Sandwich Regulator.



**Example:**  
 3 segment manifold with (3) H3 valves on manifold bases and regulator at segment 3.

Most popular.



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D101

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Common Part Numbers**

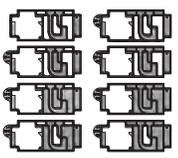
**Valve -15407-1, Non Plug-in, Size 18mm (HB)**

| Symbol  | Type                                 | Cv   | Operator        | Voltage | Pilot    | Non-locking            | Locking         |
|---|--------------------------------------|------|-----------------|---------|----------|------------------------|-----------------|
|  | 4-way, 2-position, spring return     | 0.55 | Single solenoid | 24 VDC  | Internal | <b>HBEXXBG2G9000FA</b> | HBEXXBH2G9000FA |
|   |                                      |      |                 |         | External | HBEXXLG2G9000FA        | HBEXXLH2G9000FA |
|  | 4-way, 2-position, air return        | 0.55 | Single solenoid | 24 VDC  | Internal | <b>HB1WXBG2G9000FA</b> | HB1WXBH2G9000FA |
|   |                                      |      |                 |         | External | HB1WXLG2G9000FA        | HB1WXLH2G9000FA |
|  | 4-way, 2-position                    | 0.55 | Double solenoid | 24 VDC  | Internal | <b>HB2WXBG2G9000FA</b> | HB2WXBH2G9000FA |
|   |                                      |      |                 |         | External | HB2WXLG2G9000FA        | HB2WXLH2G9000FA |
|  | 4-way, 3-position, all ports blocked | 0.5  | Double solenoid | 24 VDC  | Internal | <b>HB5WXBG2G9000FA</b> | HB5WXBH2G9000FA |
|   |                                      |      |                 |         | External | HB5WXLG2G9000FA        | HB5WXLH2G9000FA |
|  | 4-way, 3-position, center exhaust    | 0.5  | Double solenoid | 24 VDC  | Internal | <b>HB6WXBG2G9000FA</b> | HB6WXBH2G9000FA |
|   |                                      |      |                 |         | External | HB6WXLG2G9000FA        | HB6WXLH2G9000FA |
|  | 4-way, 3-position, pressure center   | 0.5  | Double solenoid | 24 VDC  | Internal | <b>HB7WXBG2G9000FA</b> | HB7WXBH2G9000FA |
|   |                                      |      |                 |         | External | HB7WXLG2G9000FA        | HB7WXLH2G9000FA |
|  | 3-way, 2-position, dual valve, NC/NC | 0.45 | Double solenoid | 24 VDC  | Internal | <b>HBNWXBG2G9000FA</b> | HBNWXBH2G9000FA |
|   |                                      |      |                 |         | External | HB7WXLG2G9000FA        | HB7WXLH2G9000FA |
|  | 3-way, 2-position, dual valve, NO/NO | 0.45 | Double solenoid | 24 VDC  | Internal | <b>HBPWXBG2G9000FA</b> | HBPWXBH2G9000FA |
|   |                                      |      |                 |         | External | HB7WXLG2G9000FA        | HB7WXLH2G9000FA |
|  | 3-way, 2-position, dual valve, NC/NO | 0.45 | Double solenoid | 24 VDC  | Internal | <b>HBQWXBG2G9000FA</b> | NA              |
|   |                                      |      |                 |         | External | HB7WXLG2G9000FA        | HB7WXLH2G9000FA |

**Base / End Plate - 15407-1, Non Plug-in, Size 18mm (HB)**

|   | Description                                      | NPT                | BSPP        |
|---|--|--------------------|-------------|
|   | Universal manifold base<br>2 station, end ported | <b>PSHU115101P</b> | PSHU115201P |
|  | Universal end plate<br>Non-collective wiring     | <b>PSHU31L000P</b> | PSHU31L001P |

**Accessories - 15407-1, Non plug-in, Size 18mm (HB)**

| Accessories   | Description  | Part number             |                      |                |
|---|--|-------------------------|----------------------|----------------|
|  | Gauge adapter kit<br>Includes 1/8" coupling and long nipple                    | <b>PS5651160P</b>       |                      |                |
|  | Blanking plate kit   | <b>PS5634P</b>          |                      |                |
|  | Sandwich flow control<br>Do not use with Independent Port Sandwich Regulators. | <b>PS5642P</b>          |                      |                |
|  | 1/8" NPT   | <b>PS562600P</b>        |                      |                |
|   | 1/8" BSPP  | <b>PS562601P</b>        |                      |                |
|  | Sandwich regulator   | Common pressure         | Independent pressure |                |
|   | 2-60 PSIG w/ gauge   | <b>PS5637155P</b>       | <b>PS5637255P</b>    |                |
|   | 5-125 PSIG w/ gauge  | <b>PS5637166P</b>       | <b>PS5637266P</b>    |                |
|  | Manifold to manifold gasket kits   | Pilot open              | Pilot blocked        |                |
|   |  | #1, 3, 5 ports open     | <b>PSHU11P</b>       | <b>PSHU15P</b> |
|   |  | Blocked #1 port         | <b>PSHU12P</b>       | <b>PSHU16P</b> |
|   |  | Blocked #1, 3, 5, ports | <b>PSHU13P</b>       | <b>PSHU17P</b> |
|   | Blocked #3, 5 ports  | <b>PSHU14P</b>          | <b>PSHU18P</b>       |                |

**D**  
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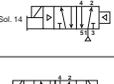
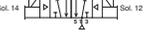
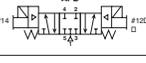
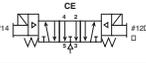
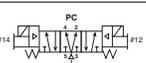
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**Common Part Numbers**

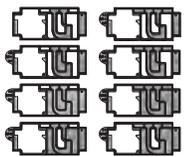
**Valve - 15407-1, Non Plug-in, Size 26mm (HA)**

| Symbol  | Type                                 | Cv  | Operator        | Voltage | Pilot    | Non-locking            | Locking                |
|---|--------------------------------------|-----|-----------------|---------|----------|------------------------|------------------------|
|  | 4-way, 2-position, spring return     | 1.1 | Single solenoid | 24 VDC  | Internal | <b>HAEWXBG2G9000FA</b> | <b>HAEWXBH2G9000FA</b> |
|   |                                      |     |                 |         | External | <b>HAEWXLG2G9000FA</b> | <b>HAEWXLH2G9000FA</b> |
|  | 4-way, 2-position, air return        | 1.1 | Single solenoid | 24 VDC  | Internal | <b>HA1WXBG2G9000FA</b> | <b>HA1WXBH2G9000FA</b> |
|   |                                      |     |                 |         | External | <b>HA1WXLG2G9000FA</b> | <b>HA1WXLH2G9000FA</b> |
|  | 4-way, 2-position                    | 1.1 | Double solenoid | 24 VDC  | Internal | <b>HA2WXBG2G9000FA</b> | <b>HA2WXBH2G9000FA</b> |
|   |                                      |     |                 |         | External | <b>HA2WXLG2G9000FA</b> | <b>HA2WXLH2G9000FA</b> |
|  | 4-way, 3-position, all ports blocked | 1.0 | Double solenoid | 24 VDC  | Internal | <b>HA5WXBG2G9000FA</b> | <b>HA5WXBH2G9000FA</b> |
|   |                                      |     |                 |         | External | <b>HA5WXLG2G9000FA</b> | <b>HA5WXLH2G9000FA</b> |
|  | 4-way, 3-position, center exhaust    | 1.0 | Double solenoid | 24 VDC  | Internal | <b>HA6WXBG2G9000FA</b> | <b>HA6WXBH2G9000FA</b> |
|   |                                      |     |                 |         | External | <b>HA6WXLG2G9000FA</b> | <b>HA6WXLH2G9000FA</b> |
|  | 4-way, 3-position, pressure center   | 1.0 | Double solenoid | 24 VDC  | Internal | <b>HA7WXBG2G9000FA</b> | <b>HA7WXBH2G9000FA</b> |
|   |                                      |     |                 |         | External | <b>HA7WXLG2G9000FA</b> | <b>HA7WXLH2G9000FA</b> |

**Base / End Plate - 15407-1, Non Plug-in, Size 26mm (HA)**

|  | Description             | NPT                         | BSPP               |                    |
|--|-------------------------|-----------------------------|--------------------|--------------------|
|   | Single subbase          | Side ported base, 1/4" port | <b>PS5511130P</b>  | <b>PS5511140P</b>  |
|   | Universal manifold base | 2 station, end ported       | <b>PSHU115301P</b> | <b>PSHU115401P</b> |
|  | Universal end plate     | Non-collective wiring       | <b>PSHU31L000P</b> | <b>PSHU31L001P</b> |

**Accessories - 15407-1, Non Plug-in, Size 26mm (HA)**

| Accessories   | Description  | Part number       |                      |
|---|--|-------------------|----------------------|
|  | Blanking plate kit   | <b>PS5534P</b>    |                      |
|  | Sandwich flow control  | <b>PS5542P</b>    |                      |
|   | Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators. |                   |                      |
|  | Pilot pressure control, without sensor, 1/8" BSPP  | <b>PS55XXA0P</b>  |                      |
|  | 1/4" NPT   | <b>PS552600P</b>  |                      |
|   | 1/4" BSPP  | <b>PS552601P</b>  |                      |
|  | 2-60 PSIG w/ gauge   | Common pressure   | Independent pressure |
|   | 5-125 PSIG w/ gauge  | <b>PS5537155P</b> | <b>PS5537255P</b>    |
|   |  | <b>PS5537166P</b> | <b>PS5537266P</b>    |
|  | #1, 3, 5 ports open  | Pilot open        | Pilot blocked        |
|   | Blocked #1 port  | <b>PSHU11P</b>    | <b>PSHU15P</b>       |
|   | Blocked #1, 3, 5, ports  | <b>PSHU12P</b>    | <b>PSHU16P</b>       |
|   | Blocked #3, 5 ports  | <b>PSHU13P</b>    | <b>PSHU17P</b>       |
|   |  | <b>PSHU14P</b>    | <b>PSHU18P</b>       |



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**D**

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H Series Micro

Modulflex Series

H Series ISO

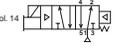
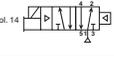
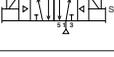
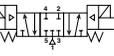
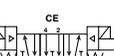
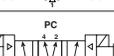
Network Connectivity

DX ISOMAX Series

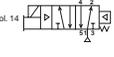
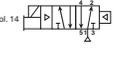
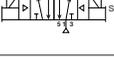
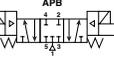
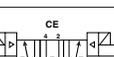
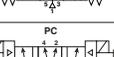
Valvair II Series

**Common Part Numbers**

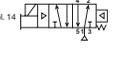
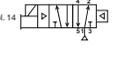
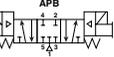
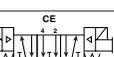
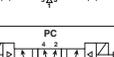
**Valve with Central Connector - 5599-1, Non Plug-in, Size 1 (H1)**

|   | Symbol  | Type                                 | Cv              | Operator        | Voltage  | Pilot                  | Non-locking            | Locking         |
|---|---|--------------------------------------|-----------------|-----------------|----------|------------------------|------------------------|-----------------|
| <b>4-Pin Central M12 Connector, 24 VDC</b>  |   |                                      |                 |                 |          |                        |                        |                 |
|  |  | 4-way, 2-position, spring return     | 1.5             | Single solenoid | 24 VDC   | Internal               | <b>H1EWXBG2B9000FD</b> | H1EWXBH2B9000FD |
|   |   |                                      |                 |                 |          | External               | H1EWXXG2B9000FD        | H1EWXXH2B9000FD |
|  |  | 4-way, 2-position, air return        | 1.5             | Single solenoid | 24 VDC   | Internal               | <b>H11WXBG2B9000FD</b> | H11WXBH2B9000FD |
|   |   |                                      |                 |                 |          | External               | H11WXXG2B9000FD        | H11WXXH2B9000FD |
|  |  | 4-way, 2-position                    | 1.5             | Double solenoid | 24 VDC   | Internal               | <b>H12WXBG2B9000FD</b> | H12WXBH2B9000FD |
|   |   |                                      |                 |                 |          | External               | H12WXXG2B9000FD        | H12WXXH2B9000FD |
|   |  | 4-way, 3-position, all ports blocked | 1.2             | Double solenoid | 24 VDC   | Internal               | <b>H15WXBG2B9000FD</b> | H15WXBH2B9000FD |
|   |   |                                      |                 |                 |          | External               | H15WXXG2B9000FD        | H15WXXH2B9000FD |
|   |  | 4-way, 3-position, center exhaust    | 1.2             | Double solenoid | 24 VDC   | Internal               | <b>H16WXBG2B9000FD</b> | H16WXBH2B9000FD |
|   |   |                                      |                 |                 |          | External               | H16WXXG2B9000FD        | H16WXXH2B9000FD |
|  | 4-way, 3-position, pressure center  | 1.2                                  | Double solenoid | 24 VDC          | Internal | <b>H17WXBG2B9000FD</b> | H17WXBH2B9000FD        |                 |
|   |   |                                      |                 |                 | External | H17WXXG2B9000FD        | H17WXXH2B9000FD        |                 |

**5-Pin Central 7/8" Mini Connector, 120 VAC**

|   |   |                                      |                 |                 |          |                        |                        |                 |
|---|---|--------------------------------------|-----------------|-----------------|----------|------------------------|------------------------|-----------------|
|    |    | 4-way, 2-position, spring return     | 1.5             | Single solenoid | 120 VAC  | Internal               | <b>H1EWXBG323000FD</b> | H1EWXBH323000FD |
|   |   |                                      |                 |                 |          | External               | H1EWXXG323000FD        | H1EWXXH323000FD |
|  |    | 4-way, 2-position, air return        | 1.5             | Single solenoid | 120 VAC  | Internal               | <b>H11WXBG323000FD</b> | H11WXBH323000FD |
|   |   |                                      |                 |                 |          | External               | H11WXXG323000FD        | H11WXXH323000FD |
|  |   | 4-way, 2-position                    | 1.5             | Double solenoid | 120 VAC  | Internal               | <b>H12WXBG323000FD</b> | H12WXBH323000FD |
|   |   |                                      |                 |                 |          | External               | H12WXXG323000FD        | H12WXXH323000FD |
|   |  | 4-way, 3-position, all ports blocked | 1.2             | Double solenoid | 120 VAC  | Internal               | <b>H15WXBG323000FD</b> | H15WXBH323000FD |
|   |   |                                      |                 |                 |          | External               | H15WXXG323000FD        | H15WXXH323000FD |
|   |  | 4-way, 3-position, center exhaust    | 1.2             | Double solenoid | 120 VAC  | Internal               | <b>H16WXBG323000FD</b> | H16WXBH323000FD |
|   |   |                                      |                 |                 |          | External               | H16WXXG323000FD        | H16WXXH323000FD |
|  | 4-way, 3-position, pressure center  | 1.2                                  | Double solenoid | 120 VAC         | Internal | <b>H17WXBG323000FD</b> | H17WXBH323000FD        |                 |
|   |   |                                      |                 |                 | External | H17WXXG323000FD        | H17WXXH323000FD        |                 |

**Valve with 3-Pin DIN Connector - 5599-1, Non Plug-in, Size 1 (H1)**

|   | Symbol  | Type                                 | Cv              | Operator        | Voltage  | Pilot              | Non-locking        | Locking     |
|---|---|--------------------------------------|-----------------|-----------------|----------|--------------------|--------------------|-------------|
| <b>3-Pin DIN Connector, 24 VDC</b>  |   |                                      |                 |                 |          |                    |                    |             |
|  |  | 4-way, 2-position, spring return     | 1.5             | Single solenoid | 24 VDC   | Internal           | <b>H1EWXBBL49D</b> | H1EWXBCL49D |
|   |   |                                      |                 |                 |          | External           | H1EWXXBL49D        | H1EWXXCL49D |
|  |  | 4-way, 2-position, air return        | 1.5             | Single solenoid | 24 VDC   | Internal           | <b>H11WXBBL49D</b> | H11WXBCL49D |
|   |   |                                      |                 |                 |          | External           | H11WXXBL49D        | H11WXXCL49D |
|  |  | 4-way, 2-position                    | 1.5             | Double solenoid | 24 VDC   | Internal           | <b>H12WXBBL49D</b> | H12WXBCL49D |
|   |   |                                      |                 |                 |          | External           | H12WXXBL49D        | H12WXXCL49D |
|   |  | 4-way, 3-position, all ports blocked | 1.2             | Double solenoid | 24 VDC   | Internal           | <b>H15WXBBL49D</b> | H15WXBCL49D |
|   |   |                                      |                 |                 |          | External           | H15WXXBL49D        | H15WXXCL49D |
|   |  | 4-way, 3-position, center exhaust    | 1.2             | Double solenoid | 24 VDC   | Internal           | <b>H16WXBBL49D</b> | H16WXBCL49D |
|   |   |                                      |                 |                 |          | External           | H16WXXBL49D        | H16WXXCL49D |
|  | 4-way, 3-position, pressure center  | 1.2                                  | Double solenoid | 24 VDC          | Internal | <b>H17WXBBL49D</b> | H17WXBCL49D        |             |
|   |   |                                      |                 |                 | External | H17WXXBL49D        | H17WXXCL49D        |             |

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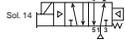
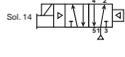
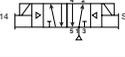
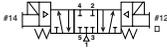
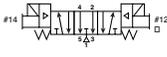
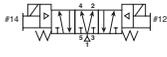
D104

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**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

**Common Part Numbers**

**Valve with 3-Pin DIN Connector - 5599-1, Non Plug-in, Size 1 (H1) (continued)**

| Symbol  | Type                                 | Cv  | Operator        | Voltage | Pilot    | Non-locking        | Locking            |
|---|--------------------------------------|-----|-----------------|---------|----------|--------------------|--------------------|
| <b>3-Pin DIN Connector, 120 VAC</b>   |                                      |     |                 |         |          |                    |                    |
|  | 4-way, 2-position, spring return     | 1.5 | Single solenoid | 120 VAC | Internal | <b>H1EWXBBL53D</b> | <b>H1EWXBCL53D</b> |
|   |                                      |     |                 |         |          | External           | <b>H1EWXXBL53D</b> |
|  | 4-way, 2-position, air return        | 1.5 | Single solenoid | 120 VAC | Internal | <b>H11WXBBL53D</b> | <b>H11WXBCL53D</b> |
|   |                                      |     |                 |         |          | External           | <b>H11WXXBL53D</b> |
|  | 4-way, 2-position                    | 1.5 | Double solenoid | 120 VAC | Internal | <b>H12WXBBL53D</b> | <b>H12WXBCL53D</b> |
|   |                                      |     |                 |         |          | External           | <b>H12WXXBL53D</b> |
|  | 4-way, 3-position, all ports blocked | 1.2 | Double solenoid | 120 VAC | Internal | <b>H15WXBBL53D</b> | <b>H15WXBCL53D</b> |
|   |                                      |     |                 |         |          | External           | <b>H15WXXBL53D</b> |
|  | 4-way, 3-position, center exhaust    | 1.2 | Double solenoid | 120 VAC | Internal | <b>H16WXBBL53D</b> | <b>H16WXBCL53D</b> |
|   |                                      |     |                 |         |          | External           | <b>H16WXXBL53D</b> |
|  | 4-way, 3-position, pressure center   | 1.2 | Double solenoid | 120 VAC | Internal | <b>H17WXBBL53D</b> | <b>H17WXBCL53D</b> |
|   |                                      |     |                 |         |          | External           | <b>H17WXXBL53D</b> |

**Base / End Plate - 5599-1, Non Plug-in, Size 1 (H1)**

|   |                         | Description            | NPT                | BSPP               |
|---|-------------------------|------------------------|--------------------|--------------------|
|    | Single subbase          | Side ported, 3/8" port | <b>PS4011150DP</b> | <b>PS4011160DP</b> |
|   | Universal manifold base | End ported             | <b>PSHU115501P</b> | <b>PSHU115601P</b> |
|  | Universal end plate     | Non-collective wiring  | <b>PSHU31L000P</b> | <b>PSHU31L001P</b> |

**Accessories - 5599-1, Non Plug-in, Size 1 (H1)**

| Accessory   | Description           | Part number                               |
|---|-----------------------|---|
|  | Common pressure       | 5-125 PSIG w/ gauge<br><b>PS4037166CP</b> |
|   | Independent pressure  | 5-125 PSIG w/ gauge<br><b>PS4037266CP</b> |
|  | Blanking plate kit    | <b>PS4034CP</b>                           |
|  | Sandwich flow control | <b>PS4042CP</b>                           |

Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators.

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Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

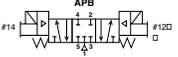
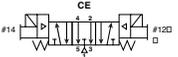
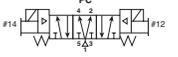
Network Connectivity

DX ISOMAX Series

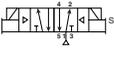
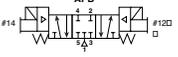
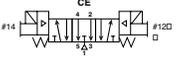
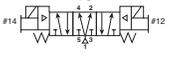
Valvair II Series

**Common Part Numbers**

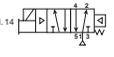
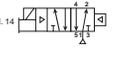
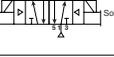
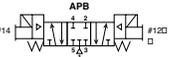
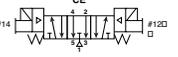
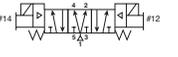
**Valve with Central Connector - 5599-1, Non Plug-in, Size 2 (H2)**

| Symbol  | Type  | Cv                                   | Operator | Voltage         | Pilot  | Non-locking | Locking                |                 |
|---|---|--------------------------------------|----------|-----------------|--------|-------------|------------------------|-----------------|
| <b>4-Pin Central M12 Connector, 24 VDC</b>  |   |                                      |          |                 |        |             |                        |                 |
|    |  | 4-way, 2-position, spring return     | 3.0      | Single solenoid | 24 VDC | Internal    | <b>H2EWXBG2B9000FD</b> | H2EWXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H2EWXXG2B9000FD        | H2EWXXH2B9000FD |
|    |  | 4-way, 2-position, air return        | 3.0      | Single solenoid | 24 VDC | Internal    | <b>H21WXBG2B9000FD</b> | H21WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H21WXXG2B9000FD        | H21WXXH2B9000FD |
|    |  | 4-way, 2-position                    | 3.0      | Double solenoid | 24 VDC | Internal    | <b>H22WXBG2B9000FD</b> | H22WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H22WXXG2B9000FD        | H22WXXH2B9000FD |
|  |  | 4-way, 3-position, all ports blocked | 2.8      | Double solenoid | 24 VDC | Internal    | <b>H25WXBG2B9000FD</b> | H25WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H25WXXG2B9000FD        | H25WXXH2B9000FD |
|  |  | 4-way, 3-position, center exhaust    | 2.8      | Double solenoid | 24 VDC | Internal    | <b>H26WXBG2B9000FD</b> | H26WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H26WXXG2B9000FD        | H26WXXH2B9000FD |
|  |  | 4-way, 3-position, pressure center   | 2.8      | Double solenoid | 24 VDC | Internal    | <b>H27WXBG2B9000FD</b> | H27WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H27WXXG2B9000FD        | H27WXXH2B9000FD |

**5-Pin Central 7/8" Connector, 120 VAC**

|  |   |                                      |     |                 |         |          |                        |                 |
|--|---|--------------------------------------|-----|-----------------|---------|----------|------------------------|-----------------|
|    |    | 4-way, 2-position, spring return     | 3.0 | Single solenoid | 120 VAC | Internal | <b>H2EWXBG323000FD</b> | H2EWXBH323000FD |
|  |   |                                      |     |                 |         | External | H2EWXXG323000FD        | H2EWXXH323000FD |
|  |    | 4-way, 2-position, air return        | 3.0 | Single solenoid | 120 VAC | Internal | <b>H21WXBG323000FD</b> | H21WXBH323000FD |
|  |   |                                      |     |                 |         | External | H21WXXG323000FD        | H21WXXH323000FD |
|  |   | 4-way, 2-position                    | 3.0 | Double solenoid | 120 VAC | Internal | <b>H22WXBG323000FD</b> | H22WXBH323000FD |
|  |   |                                      |     |                 |         | External | H22WXXG323000FD        | H22WXXH323000FD |
|  |  | 4-way, 3-position, all ports blocked | 2.8 | Double solenoid | 120 VAC | Internal | <b>H25WXBG323000FD</b> | H25WXBH323000FD |
|  |   |                                      |     |                 |         | External | H25WXXG323000FD        | H25WXXH323000FD |
|  |  | 4-way, 3-position, center exhaust    | 2.8 | Double solenoid | 120 VAC | Internal | <b>H26WXBG323000FD</b> | H26WXBH323000FD |
|  |   |                                      |     |                 |         | External | H26WXXG323000FD        | H26WXXH323000FD |
|  |  | 4-way, 3-position, pressure center   | 2.8 | Double solenoid | 120 VAC | Internal | <b>H27WXBG323000FD</b> | H27WXBH323000FD |
|  |   |                                      |     |                 |         | External | H27WXXG323000FD        | H27WXXH323000FD |

**Valve with 3-Pin DIN Connector - 5599-1, Non Plug-in, Size 2 (H2)**

| Symbol  | Type  | Cv                                   | Operator | Voltage         | Pilot  | Non-locking | Locking            |             |
|---|---|--------------------------------------|----------|-----------------|--------|-------------|--------------------|-------------|
| <b>3-Pin DIN Connector on Coil, 24 VDC</b>  |   |                                      |          |                 |        |             |                    |             |
|  |  | 4-way, 2-position, spring return     | 3.0      | Single solenoid | 24 VDC | Internal    | <b>H2EWXBBL49D</b> | H2EWXBCL49D |
|   |   |                                      |          |                 |        | External    | H2EWXXBL49D        | H2EWXXCL49D |
|  |  | 4-way, 2-position, air return        | 3.0      | Single solenoid | 24 VDC | Internal    | <b>H21WXBBL49D</b> | H21WXBCL49D |
|   |   |                                      |          |                 |        | External    | H21WXXBL49D        | H21WXXCL49D |
|  |  | 4-way, 2-position                    | 3.0      | Double solenoid | 24 VDC | Internal    | <b>H22WXBBL49D</b> | H22WXBCL49D |
|   |   |                                      |          |                 |        | External    | H22WXXBL49D        | H22WXXCL49D |
|  |  | 4-way, 3-position, all ports blocked | 2.8      | Double solenoid | 24 VDC | Internal    | <b>H25WXBBL49D</b> | H25WXBCL49D |
|   |   |                                      |          |                 |        | External    | H25WXXBL49D        | H25WXXCL49D |
|  |  | 4-way, 3-position, center exhaust    | 2.8      | Double solenoid | 24 VDC | Internal    | <b>H26WXBBL49D</b> | H26WXBCL49D |
|   |   |                                      |          |                 |        | External    | H26WXXBL49D        | H26WXXCL49D |
|  |  | 4-way, 3-position, pressure center   | 2.8      | Double solenoid | 24 VDC | Internal    | <b>H27WXBBL49D</b> | H27WXBCL49D |
|   |   |                                      |          |                 |        | External    | H27WXXBL49D        | H27WXXCL49D |

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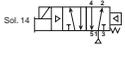
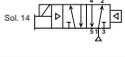
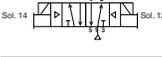
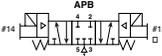
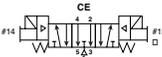
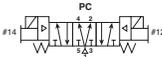
D106

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**D**  
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 DX ISOMAX Series  
 Valvair II Series

**Common Part Numbers**

**Valve with 3-Pin DIN Connector - 5599-1, Non Plug-in, Size 2 (H2) (continued)**

| Symbol  | Type  | Cv                                   | Operator | Voltage         | Pilot   | Non-locking | Locking            |             |
|---|---|--------------------------------------|----------|-----------------|---------|-------------|--------------------|-------------|
| <b>3-Pin DIN connector on coil, 120 VAC</b>                                       |   |                                      |          |                 |         |             |                    |             |
|  |  | 4-way, 2-position, spring return     | 3.0      | Single solenoid | 120 VAC | Internal    | <b>H2EWXBBL53D</b> | H2EWXBCL53D |
|   |   |                                      |          |                 |         | External    | H2EWXXBL53D        | H2EWXXCL53D |
|  |  | 4-way, 2-position, air return        | 3.0      | Single solenoid | 120 VAC | Internal    | <b>H21WXBBL53D</b> | H21WXBCL53D |
|   |   |                                      |          |                 |         | External    | H21WXXBL53D        | H21WXXCL53D |
|  |  | 4-way, 2-position                    | 3.0      | Double solenoid | 120 VAC | Internal    | <b>H22WXBBL53D</b> | H22WXBCL53D |
|   |   |                                      |          |                 |         | External    | H22WXXBL53D        | H22WXXCL53D |
|  |  | 4-way, 3-position, all ports blocked | 2.8      | Double solenoid | 120 VAC | Internal    | <b>H25WXBBL53D</b> | H25WXBCL53D |
|   |   |                                      |          |                 |         | External    | H25WXXBL53D        | H25WXXCL53D |
|  |  | 4-way, 3-position, center exhaust    | 2.8      | Double solenoid | 120 VAC | Internal    | <b>H26WXBBL53D</b> | H26WXBCL53D |
|   |   |                                      |          |                 |         | External    | H26WXXBL53D        | H26WXXCL53D |
|  |  | 4-way, 3-position, pressure center   | 2.8      | Double solenoid | 120 VAC | Internal    | <b>H27WXBBL53D</b> | H27WXBCL53D |
|   |   |                                      |          |                 |         | External    | H27WXXBL53D        | H27WXXCL53D |

**Base / End Plate - 5599-1, Non Plug-in, Size 2 (H2)**

|   |                         | Description            | 1/2" NPT           | 1/2" BSPP   |
|---|-------------------------|------------------------|--------------------|-------------|
|    | Single subbase          | Side ported, 1/2" port | <b>PS4111170CP</b> | PS4111180CP |
|  | Universal manifold base | End ported             | <b>PSHU115701P</b> | PSHU115801P |
|  | Universal end plate     | Non-collective wiring  | <b>PSHU31L000P</b> | PSHU31L001P |

**Accessories - 5599-1, Non Plug-in, Size 2 (H2)**

| Accessory   | Description  | Part number                               |
|---|--|---|
|  | Common pressure  | 5-125 PSIG w/ gauge<br><b>PS4137166CP</b> |
|   | Independent pressure   | 5-125 PSIG w/ gauge<br><b>PS4137266CP</b> |
|  | Blanking plate kit   | <b>PS4134CP</b>                           |
|  | Sandwich flow control  | <b>PS4142CP</b>                           |
|   | Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators. |   |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Ordering Information

End Plate Kit - Universal Non Plug-in



Left hand end plate

**PSHU31** **L0** **0** **0** **P**

| Valve Type                   |        |
|------------------------------|--------|
| Non Plug-in (internal pilot) | PSHU31 |
| Non Plug-in (external pilot) | PSHU3X |

| Left Hand End Plate Type |    |
|--------------------------|----|
| Non Plug-in              | L0 |

| Thread Type |          |
|-------------|----------|
| 0           | NPT      |
| 1*          | BSPP "G" |

\* BSPP Conforms to ISO 1179-1 w 228-1 Threads

| Right Hand End Plate Type / Port |   |
|----------------------------------|---|
| 0                                | Low profile (no ports)                    |
| 1                                | 1/2 Exhaust and inlet port                |
| 2                                | 3/4 Exhaust and inlet port                |
| 5*                               | H3 Transition plate, 1" exhaust and inlet |

\* 1, 3 & 5 manifold galley blocked at transition plate. 12 & 14 pass through.

Right Hand End Plate



Low Profile



High Flow

| Description                                     | NPT port         | BSPP port        |
|---|------------------|------------------|
| Right hand end plate only, low profile          | <b>PSHU4000P</b> |                  |
| Right hand end plate only, high flow 1/2" ports | <b>PSHU4100P</b> | <b>PSHU4101P</b> |
| Right hand end plate only, high flow 3/4" ports | <b>PSHU4200P</b> | <b>PSHU4201P</b> |

H3 Transition Kit



H3 transition, H3 right hand end plate, 1" ports (includes gaskets & bolts)

**PSU7300P**      **PSHU7301P**

Valve - Non Plug-in, 15407-1, Size 18mm (HB) & 26mm (HA)

**HB** **E** **WX** **B** **G** **2** **G9** **000F** **A**

| Basic series 15407-1 |    |
|----------------------|----|
| ISO 15407-1 18mm     | HB |
| ISO 15407-1 26mm     | HA |

| 15407-1 Engineering level |         |
|---------------------------|---------|
| A                         | Current |

| 15407-1 Operator / Function                             |    |
|---|----|
| Single solenoid, 2-position - air return                | 1  |
| Double solenoid, 2-position                             | 2  |
| Double solenoid, 3-position - APB                       | 5  |
| Double solenoid, 3-position - CE                        | 6  |
| Double solenoid, 3-position - PC                        | 7  |
| Single solenoid, 2-position - air return, spring assist | E  |
| Double solenoid, dual 3/2, NC/NC                        | N† |
| Double solenoid, dual 3/2, NO/NO                        | P† |
| Double solenoid, dual 3/2, 14 end NC - 12 end NO        | Q† |

| 15407-1 Central connector wiring options |                       |
|--|-----------------------|
| 000F                                     | SAE / Ford, ISO 20401 |

| 15407-1 Voltage & frequency |                         |
|-----------------------------|-------------------------|
| G9                          | 24VDC LED & suppression |

| 15407-1 Enclosure / Lead length |                                      |
|---------------------------------|--------------------------------------|
| 2                               | 4-pin, M12 micro, straight connector |

| 15407-1 Overrides / Lights |  |
|----------------------------|--|
| G                          | Non-locking, flush, push - w/ light    |
| H                          | Locking, flush, push / turn - w/ light |

| 15407-1 Mounting |    |
|------------------|----|
| Valve less base  | WX |

| 15407-1 Pilot source / Pilot exhaust |                                   |
|--------------------------------------|-----------------------------------|
| B                                    | Internal pilot, port #1 / vented  |
| L*                                   | External pilot, port #14 / vented |

† Available on HB Only, must use Internal Pilot Source Option "B".

\* Must be specified when using Sandwich Regulators.

Most popular.

D  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series



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Valve - Non Plug-in, 5599-1, Central Connector - Size 1 & 2

**H1 E WX B G 2B9 000F D**

| Basic Series 5599-1 |    |
|---------------------|----|
| ISO 5599-1 Size 1   | H1 |
| ISO 5599-1 Size 2   | H2 |

| 5599 -1 Engineering Level |         |
|---------------------------|---------|
| D                         | Current |

| 5599-1 Operator / Function                              |   |
|---|---|
| Single solenoid, 2-position - air return                | 1 |
| Double solenoid, 2-position                             | 2 |
| Double solenoid, 3-position - APB                       | 5 |
| Double solenoid, 3-position - CE                        | 6 |
| Double solenoid, 3-position - PC                        | 7 |
| Single solenoid, 2-position - air return, spring assist | E |

| 5599-1 Central Connector Wiring Options |                              |
|---|------------------------------|
| 000C                                    | Chrysler                     |
| <b>000F*</b>                            | <b>SAE / Ford, ISO 20401</b> |
| 000G                                    | General Motors               |

\* Complies to ISO 20401 with Enclosure Lead Length "2".

| 5599-1 Mounting |    |
|-----------------|----|
| Valve less base | WX |

| 5599-1 Pilot Source / Pilot Exhaust      |    |
|--|----|
| Internal pilot, port #1 / vented         | B  |
| External pilot, port #12 or #14 / vented | X* |

\* Must be specified when using Sandwich Regulators.

| 5599-1 Overrides / Lights      |   |
|--------------------------------|---|
| Non-locking, flush, with light | G |
| Locking, flush, with light     | H |

| Enclosure / Lead Length / Voltage* |      |      |           |   |
|------------------------------------|------|------|-----------|---|
|                                    | AC   |      | DC        |   |
|                                    | 60Hz | 50Hz |           |   |
| 1B9 <sup>†</sup>                   |      |      | 24        | 3-pin, central mini connector, 3.2 watt             |
| 1F9 <sup>†</sup>                   |      |      | 24        | 3-pin, central mini connector, 1.3 watt             |
| 123 <sup>†</sup>                   | 120  | 115  |           | 3-pin, central mini connector                       |
| <b>2B9</b>                         |      |      | <b>24</b> | <b>4-pin, central M12 micro connector, 3.2 watt</b> |
| <b>2F9*</b>                        |      |      | <b>24</b> | <b>4-pin, central M12 micro connector, 1.3 watt</b> |
| 3B9                                |      |      | 24        | 5-pin, central mini connector, 3.2 watt             |
| 3F9*                               |      |      | 24        | 5-pin, central mini connector, 1.3 watt             |
| 323                                | 120  | 115  |           | 5-pin, central mini connector                       |
| 619*                               |      |      | 24        | 2-pin, M12 micro connector on coil                  |

\* All coils include LED & suppression

<sup>†</sup> Operator function "1" or "E"

\* Only available with wiring option "000F"

\* Override "G" only.

Valve - Non Plug-in, 5599-1, CNOMO - Size 1 & 2

**H1 E WX B B L53 D**

| Basic Series 5599-1 |    |
|---------------------|----|
| ISO 5599-1 Size 1   | H1 |
| ISO 5599-1 Size 2   | H2 |

| 5599-1 Engineering Level |         |
|--------------------------|---------|
| D                        | Current |

| 5599-1 Operator / Function                              |   |
|---|---|
| Single solenoid, 2-position - air return                | 1 |
| Double solenoid, 2-position                             | 2 |
| Double solenoid, 3-position - APB                       | 5 |
| Double solenoid, 3-position - CE                        | 6 |
| Double solenoid, 3-position - PC                        | 7 |
| Single solenoid, 2-position - air return, spring assist | E |

| Enclosure / Lead length / Voltage |            |            |           |  |
|-----------------------------------|------------|------------|-----------|--|
|                                   | AC         |            | DC        |  |
|                                   | 60Hz       | 50Hz       |           |  |
| L42                               | 24         |            |           | 3-pin, 30mm DIN 43650A with CNOMO connector        |
| L45                               |            |            | 12        | 3-pin, 30mm DIN 43650A with CNOMO connector        |
| <b>L49</b>                        |            |            | <b>24</b> | <b>3-pin, 30mm DIN 43650A with CNOMO connector</b> |
| <b>L53</b>                        | <b>120</b> | <b>115</b> |           | <b>3-pin, 30mm DIN 43650A with CNOMO connector</b> |
| L57                               | 240        |            |           | 3-pin, 30mm DIN 43650A with CNOMO connector        |
| NXX                               |            |            |           | Valve less coil                                    |

| 5599-1 Mounting |    |
|-----------------|----|
| Valve less base | WX |

| 5599-1 Pilot Source / Pilot Exhaust      |    |
|--|----|
| Internal pilot, port #1 / vented         | B  |
| External pilot, port #12 or #14 / vented | X* |

\* Must be specified when using Sandwich Regulators.

| 5599-1 Overrides / Lights |  |
|---------------------------|--|
| <b>B</b>                  | <b>Non-locking, flush, push - no light</b> |
| C                         | Locking, flush, push / turn - no light     |

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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D  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Remote Pilot - Size 18mm (HB), Size 26mm (HA), Size 1 (H1) & Size 2 (H2)**

**H1** **4** **WX000XX** **D**

| Basic Series      |     |
|-------------------|-----|
| ISO 15407-1 18mm  | HB  |
| ISO 15407-1 26mm  | HA* |
| ISO 5599-1 Size 1 | H1* |
| ISO 5599-1 Size 2 | H2* |

\* Must order remote pilot access plates for manifolds.

| Engineering Level |               |
|-------------------|---------------|
| A                 | 15407 Current |
| D                 | 5599 Current  |

| Remote Pilot Valve |                    |
|--------------------|--------------------|
| WX000XX            | Remote pilot valve |

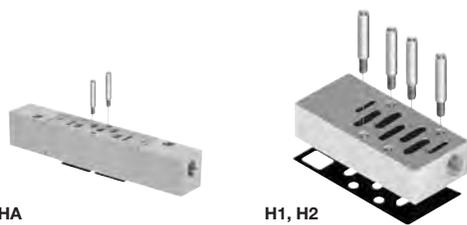
| 15407-1 Operator / Function                                 |   |
|---|---|
| Single remote pilot, 2-position - air return                | 3 |
| Double remote pilot, 2-position                             | 4 |
| Double remote pilot, 3-position - APB                       | 8 |
| Double remote pilot, 3-position - CE                        | 9 |
| Double remote pilot, 3-position - PC                        | 0 |
| Single remote pilot, 2-position - air return, spring assist | F |

Note: For manifolds, end plates, and accessories, see 15407-1 & 5599-1 Non Plug-in valve section.

Note: HB 18mm Valve Remote Pilot Option only available with PL02 Individual Subbase Kits.

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Remote Pilot Access Plate Kit**



| Size | Port size | NPT        | BSPP "G"   |
|------|-----------|------------|------------|
| HA   | 1/4"      | PS551500P  | PS551501P  |
| H1   | 1/8"      | PS401500CP | PS401501CP |
| H2   | 1/8"      | PS411500CP | PS411501CP |

Kit includes: Pilot port access plate, gasket and mounting studs.

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**Manifold Kit - Universal Non Plug-in**

**PSHU1153** **0** **1** **P**

| Mounting Style / Port Size                |                 |
|---|-----------------|
| HB manifold with 1/8 NPT end ports        | PSHU1151        |
| HB manifold with 1/8 BSPP end ports       | PSHU1152*       |
| <b>HA manifold with 1/4 NPT end ports</b> | <b>PSHU1153</b> |
| HA manifold with 1/4 BSPP end ports       | PSHU1154*       |
| <b>H1 manifold with 3/8 NPT end ports</b> | <b>PSHU1155</b> |
| H1 manifold with 3/8 BSPP end ports       | PSHU1156*       |
| <b>H2 manifold with 1/2 NPT end ports</b> | <b>PSHU1157</b> |
| H2 manifold with 1/2 BSPP end ports       | PSHU1158*       |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Gasket Options |   |
|----------------|---|
| <b>1</b>       | <b>1,3,5 ports open and pilots open</b>       |
| 2              | 1,3,5 ports closed and pilots open            |
| 3              | 1 closed, 3,5 ports open and pilots closed    |
| 4              | 1 port open, 3,5 ports closed and pilots open |
| 5              | 1,3,5 ports open and pilots closed            |
| 6              | 1,3,5 ports closed and pilots closed          |
| 7              | 1 closed, 3,5 ports open and pilots closed    |
| 8              | 1 port open, 3,5 ports closed and pilots open |

| Circuit Board Address Configuration |                        |
|-------------------------------------|------------------------|
| <b>0</b>                            | <b>No interconnect</b> |



HA manifold

**Intermediate Air Supply - Universal Non Plug-in**

**PSHU115A** **0** **1** **P**

| Mounting Style / Port Size                           |                 |
|--|-----------------|
| <b>Intermediate air supply, NPT / internal pilot</b> | <b>PSHU115A</b> |
| Intermediate air supply, BSPP / internal pilot       | PSHU115B*       |
| <b>Intermediate air supply, NPT / external pilot</b> | <b>PSHU115C</b> |
| Intermediate air supply, BSPP / external pilot       | PSHU115D*       |

\* BSPP Conforms to ISO 1179-1 w 228-1 Threads.

| Gasket Options |   |
|----------------|---|
| <b>1</b>       | <b>1,3,5 ports open and pilots open</b>       |
| 2              | 1,3,5 ports closed and pilots open            |
| 3              | 1 closed, 3,5 ports open and pilots closed    |
| 4              | 1 port open, 3,5 ports closed and pilots open |
| 5              | 1,3,5 ports open and pilots closed            |
| 6              | 1,3,5 ports closed and pilots closed          |
| 7              | 1 closed, 3,5 ports open and pilots closed    |
| 8              | 1 port open, 3,5 ports closed and pilots open |

| Circuit Board Address Configuration |                      |
|-------------------------------------|----------------------|
| <b>0</b>                            | <b>No electrical</b> |



Intermediate air supply

  Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

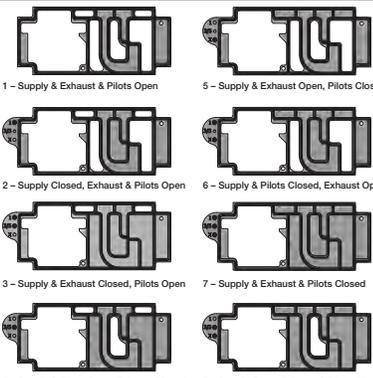
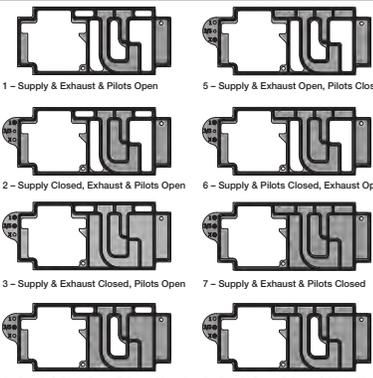
Valvair II Series

Ordering Information

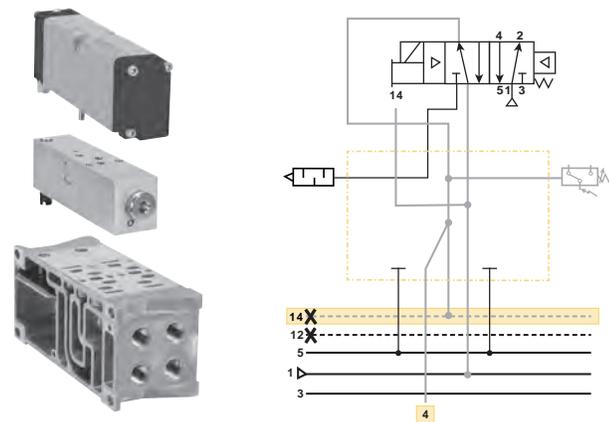
Pneumatic Zoning

Multiple pressure zones can be created by selecting alternative gaskets between individual manifold segments or an intermediate air supply module. These zones can be designed to meet different application and safety requirements on the machine. Inserting the PXM Pilot Exhaust Module into a one of these zones allows control of pilot pressure for the entire zone.

Gasket Kit - Universal Manifold to Manifold

| Description  |  | Part number   |   |
|--|--|---|---|
|  <p>1 – Supply &amp; Exhaust &amp; Pilots Open<br/>2 – Supply Closed, Exhaust &amp; Pilots Open<br/>3 – Supply &amp; Exhaust Closed, Pilots Open<br/>4 – Supply &amp; Pilots Open, Exhaust Closed</p> | Pilots opened  | <p>1 – Supply &amp; Exhaust &amp; Pilots Open <b>PSHU11P</b></p> <p>2 – Supply Closed, Exhaust &amp; Pilots Open <b>PSHU12P</b></p> <p>3 – Supply &amp; Exhaust Closed, Pilots Open <b>PSHU13P</b></p> <p>4 – Supply &amp; Pilots Open, Exhaust Closed <b>PSHU14P</b></p> |   |
|  |  <p>5 – Supply &amp; Exhaust Open, Pilots Closed<br/>6 – Supply &amp; Pilots Closed, Exhaust Open<br/>7 – Supply &amp; Exhaust &amp; Pilots Closed<br/>8 – Supply Open, Exhaust &amp; Pilots Closed</p> | Pilots blocked  | <p>5 – Supply &amp; Exhaust Open, Pilots Closed <b>PSHU15P</b></p> <p>6 – Supply &amp; Pilots Closed, Exhaust Open <b>PSHU16P</b></p> <p>7 – Supply &amp; Exhaust &amp; Pilots Closed <b>PSHU17P</b></p> <p>8 – Supply Open, Exhaust &amp; Pilots Closed <b>PSHU18P</b></p> |

Pilot Exhaust Module



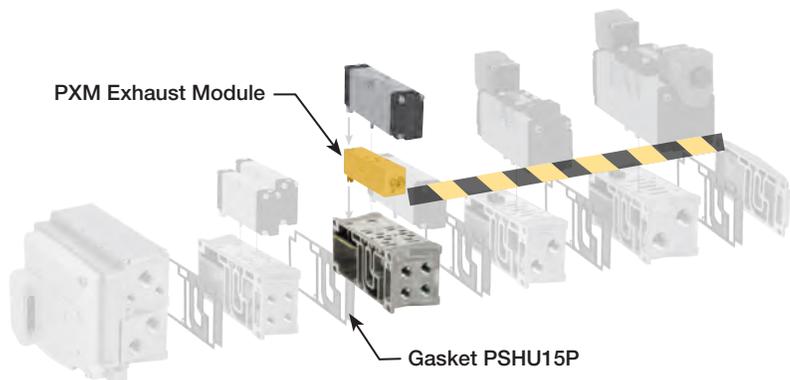
PXM Pilot Exhaust Module enables an H Series HA Single Solenoid valve to control the pilot pressure to other externally piloted H Series ISO valves in the same manifold zone. The HA valve in conjunction with the PXM will remove pilot pressure to all externally piloted valves in the manifold zone when solenoid 14 is de-energized (off). Control of all externally piloted valves in the zone is disabled for both solenoid actuation and manual override until solenoid 14 of the HA valve on the PXM is energized again (on).

Gaskets blocking pilot pressure are required at the start of the zone the PXM is controlling. Special zoning gaskets (shown below) are available to meet any application requirement. In the example below, main pressure and exhaust pass through to the second zone, but pilot pressure is blocked. This results in the PXM providing pilot pressure for the zone after this gasket.

| Part Number | Sensor Type                 |
|-------------|-----------------------------|
| PS55XXA0P   | No sensing                  |
| PS55XXM0P   | Mechanical pressure switch  |
| PS55XXE0P   | Solid state pressure switch |

| Part Number | Cable Type         |
|-------------|--------------------|
| RKC4.4T-2   | M12 cable, PVC, 2m |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

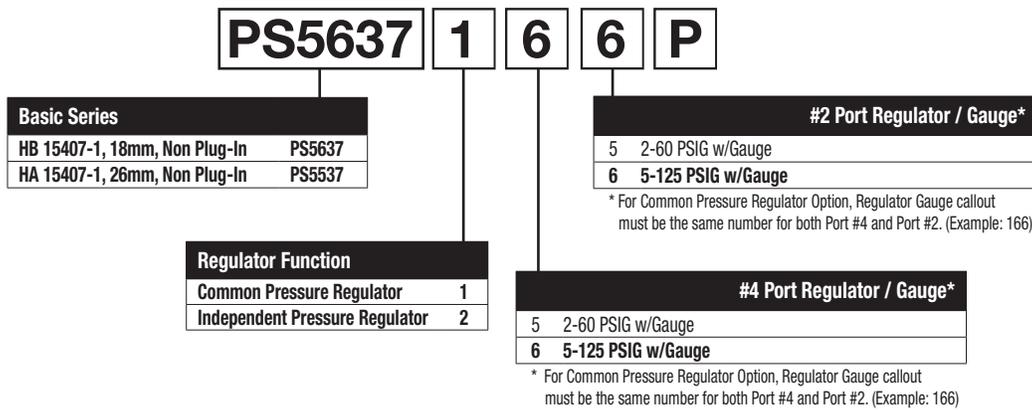
D112

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**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

Ordering Information

Sandwich Regulator - Non Plug-in, 15407-1



**HB - 18mm**  
(Independent Dual Port Regulator shown)



**HA - 26mm**  
(Common Port Regulator shown)

- Ordering Components**
- Manifold or Subbase Kit required.
  - Sandwich Regulator Kit configured for Internal Pilot as standard.
  - Order valve as External Pilot.

How to Configure Sandwich Regulator / Valve Combinations

**Internal Pilot Configuration of Sandwich Regulator HA, HB**  
Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

| Accessories   | Description                                    | Part number       |
|---|--|-------------------|
|  Gauge adapter kit | Includes 1/8" coupling, long nipple, and gauge | <b>PS5651160P</b> |

Sandwich Regulator Cv Flow Chart\*

|           | Common Pressure Code 166 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>HB</b> | 0.20                     | 0.20 | 0.41 | 0.34 | 0.23                   | 0.19 | 0.28 | 0.27 |
| <b>HA</b> | 0.41                     | 0.43 | 0.87 | 0.89 | 0.42                   | 0.45 | 0.68 | 0.66 |

\* Regulator Port exhaust through Base Port 3.  
Note: All Cv's calculated with regulator adjusted full open.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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|            |                         |
|------------|-------------------------|
| <b>D</b>   | Subbase & Manual Valves |
| H Series   | Micro                   |
| Modulflex  | Series                  |
| H Series   | ISO                     |
| Network    | Connectivity            |
| DX ISOMAX  | Series                  |
| Valvair II | Series                  |

Ordering Information

Sandwich Regulator - Non Plug-in, 5599-1

**PS4037** **1** **6** **6** **C** **P**

| Basic Series           |        |
|------------------------|--------|
| H1 5599-1, Non Plug-in | PS4037 |
| H2 5599-1, Non Plug-in | PS4137 |

| Regulator Function             |   |
|--------------------------------|---|
| Common Pressure Regulator      | 1 |
| Independent Pressure Regulator | 2 |

| #2 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For common pressure regulator option, regulator gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line by-pass option can only be used with independent pressure regulators.

| #4 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For common pressure regulator option, regulator gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line by-pass option can only be used with independent pressure regulators.

Ordering Components

- Sandwich regulator kit configured for internal pilot as standard.
- Order valve as external pilot.



**H1 - Size 1**  
(Independent Dual Port Regulator shown)



**H2 - Size 2**  
(Independent Dual Port Regulator shown)

How to Configure Sandwich Regulator / Valve Combinations

**Internal Pilot Configuration of Sandwich Regulator H1 & H2**

Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

**External Pilot Configuration of Sandwich Regulator H1 & H2**

An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

Sandwich Regulator Cv Flow Chart\*

|           | Common Pressure Code 166 |      |      |      | Single Pressure 2 Code 206 |      |      |      | Single Pressure 4 Code 260 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|----------------------------|------|------|------|----------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>H1</b> | 0.62                     | 0.61 | 1.28 | 1.18 | 0.73                       | 0.96 | 0.96 | 0.93 | 0.34                       | 0.70 | 0.94 | 0.98 | 0.52                   | 0.48 | 0.86 | 0.88 |
| <b>H2</b> | 1.47                     | 1.60 | 2.41 | 2.33 | 1.71                       | 1.90 | 1.52 | 1.75 | 1.74                       | 1.67 | 1.73 | 1.79 | 1.61                   | 1.62 | 1.50 | 1.67 |

\* Regulator Port exhaust through Base Port 3.

Note: All Cv's calculated with regulator adjusted full open.

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D114

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Richland, Michigan  
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**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Online Configuration**

Navigate to the landing page

[www.parker.com/pdn/HSeriesISO](http://www.parker.com/pdn/HSeriesISO)

Customize your manifold assembly

Create and save a unique assembled part number

Generate a CAD model



**Add-A-Fold - Universal Non Plug-in**

**AAHU31 L0 0 0 P 06**

| Valve Type             |        |
|------------------------|--------|
| Non plug-in (internal) | AAHU31 |
| Non plug-in (external) | AAHU3X |

| Left Hand End Plate Type  |    |
|---------------------------|----|
| No connector, non plug-in | L0 |

| Right Hand End Plate Type / Port          |    |
|---|----|
| Low profile (no ports)                    | 0  |
| 1/2 Exhaust and inlet port                | 1  |
| 3/4 Exhaust and inlet port                | 2  |
| H3 Transition plate, 1" exhaust and inlet | 5* |

| Number of Segments |   |
|--------------------|---|
| 01                 | ↓ |
| 32                 |   |

| Thread Type |          |
|-------------|----------|
| 0           | NPT      |
| 1*          | BSPP "G" |

\* BSPP conforms to ISO 1179-1 w 228-1 threads

\* 1, 3 & 5 manifold galley blocked at transition plate. 12 & 14 pass through.

**How To Order Plug-in Add-A-Fold Assemblies**

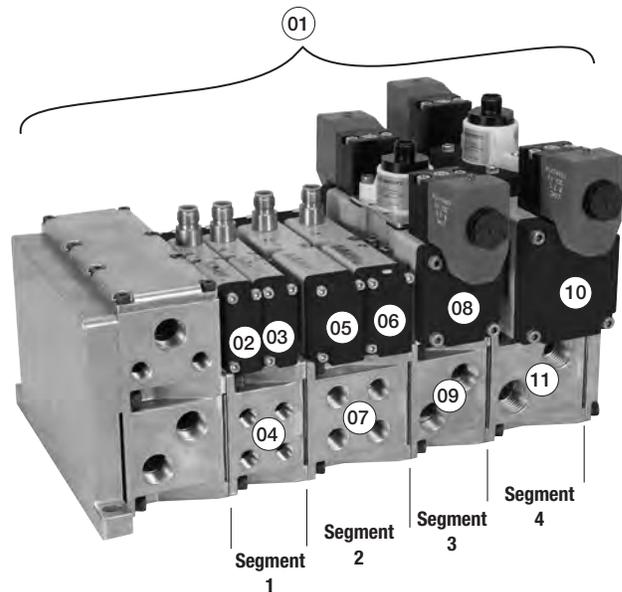
1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete valve, regulator, flow control and manifold base kit. List left to right, LOOKING AT THE CYLINDER PORTS on the #12 end of the manifold. The left most segment is segment 1. (If a blanking plate part number and the individual manifold part numbers for the required segment.)

**Example**

Application requires a 4 segment manifold.

| Item | Part No.        | Location  |                 |
|------|-----------------|-----------|-----------------|
| 01   | AAHU31L000P04   |           |                 |
| 02   | HB2WXBG2G9000FA | Segment 1 | Valve station 1 |
| 03   | HB2WXBG2G9000FA |           | Valve station 2 |
| 04   | PSHU115101P     |           | Manifold base   |
| 05   | HA1WXBG2G9000FA | Segment 2 | Valve station 3 |
| 06   | HA2WXBG2G9000FA |           | Valve station 4 |
| 07   | PSHU115301P     |           | Manifold base   |
| 08   | H12WXBG2B9000FD | Segment 3 | Valve station 5 |
| 09   | PSHU115501P     |           | Manifold base   |
| 10   | H22WXBG2B9000FD | Segment 4 | Valve station 6 |
| 11   | PSHU115701P     |           | Manifold base   |

Most popular.



**Example:**  
 4 segment manifold with (2) HB, (2) HA, (1) H1, and (1) H2 valve on manifold bases with low profile, NPT end plate.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Ordering Information

Subbase Kit - Non Plug-in



HA non plug-in subbase shown

PS55 1113 0 P

| Series     |      |
|------------|------|
| HA Subbase | PS55 |
| H1 Subbase | PS40 |
| H2 Subbase | PS41 |

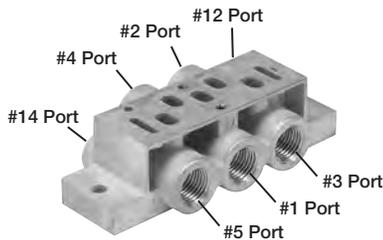
| Engineering Level |           |
|-------------------|-----------|
| Blank             | HA Series |
| D                 | H1 Series |
| C                 | H2 Series |

| Mounting Style / Port Size   |       |
|------------------------------|-------|
| HA Series                    |       |
| 1/4 NPT side ports           | 1113  |
| 1/4 BSPP side ports          | 1114* |
| 1/4 NPT bottom / side ports  | 1123  |
| 1/4 BSPP bottom / side ports | 1124* |
| H1 Series                    |       |
| 3/8 NPT side ports           | 1115  |
| 3/8 BSPP side ports          | 1116* |
| H2 Series                    |       |
| 1/2 NPT side ports           | 1117  |
| 1/2 BSPP side ports          | 1118* |

| Enclosures / Lead Length |                          |
|--------------------------|--------------------------|
| 0                        | None, No Electrical Plug |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

HB Series ISO 15407-1 Size 18mm (HB) Single Subbase



Side ported base  
18mm DX02 / HB

| 1/8" NPT   | 1/8" BSPP  |
|------------|------------|
| PL02-01-80 | PL02-01-70 |

Note: Can be used for external, single, or double remote pilot.

D  
Subbase & Manual Valves  
H Series Micro  
Moduflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series



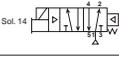
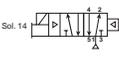
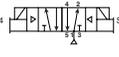
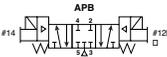
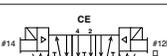
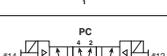
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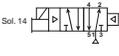
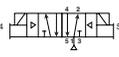
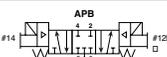
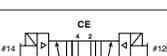
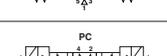
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**Common Part Numbers**

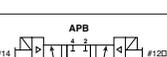
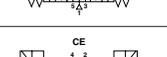
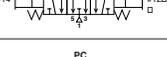
**Valve with Central Connectors - 5599-1, Non Plug-in, Size 3 (H3)**

| Symbol  | Type  | Cv                                   | Operator | Voltage         | Pilot  | Non-locking | Locking                |                 |
|---|---|--------------------------------------|----------|-----------------|--------|-------------|------------------------|-----------------|
|  | Sol. 14  | 4-way, 2-position, spring return     | 6.0      | Single solenoid | 24 VDC | Internal    | <b>H3EWXBG2B9000FD</b> | H3EWXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H3EWXXG2B9000FD        | H3EWXXH2B9000FD |
|   | Sol. 14  | 4-way, 2-position, air return        | 6.0      | Single solenoid | 24 VDC | Internal    | <b>H31WXBG2B9000FD</b> | H31WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H31WXXG2B9000FD        | H31WXXH2B9000FD |
|  | Sol. 14  | 4-way, 2-position                    | 6.0      | Double solenoid | 24 VDC | Internal    | <b>H32WXBG2B9000FD</b> | H32WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H32WXXG2B9000FD        | H32WXXH2B9000FD |
|   | APB      | 4-way, 3-position, all ports blocked | 5.0      | Double solenoid | 24 VDC | Internal    | <b>H35WXBG2B9000FD</b> | H35WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H35WXXG2B9000FD        | H35WXXH2B9000FD |
|   | CE       | 4-way, 3-position, center exhaust    | 5.0      | Double solenoid | 24 VDC | Internal    | <b>H36WXBG2B9000FD</b> | H36WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H36WXXG2B9000FD        | H36WXXH2B9000FD |
|   | PC       | 4-way, 3-position, pressure center   | 5.0      | Double solenoid | 24 VDC | Internal    | <b>H37WXBG2B9000FD</b> | H37WXBH2B9000FD |
|   |   |                                      |          |                 |        | External    | H37WXXG2B9000FD        | H37WXXH2B9000FD |

**5-Pin, Central 7/8" Mini Connector, 120 VAC**

|   |  |                                      |     |                 |         |          |                        |                 |
|---|--|--------------------------------------|-----|-----------------|---------|----------|------------------------|-----------------|
|    | Sol. 14   | 4-way, 2-position, spring return     | 6.0 | Single solenoid | 120 VAC | Internal | <b>H3EWXBG323000FD</b> | H3EWXBH323000FD |
|   |  |                                      |     |                 |         | External | H3EWXXG323000FD        | H3EWXXH323000FD |
|   | Sol. 14   | 4-way, 2-position, air return        | 6.0 | Single solenoid | 120 VAC | Internal | <b>H31WXBG323000FD</b> | H31WXBH323000FD |
|   |  |                                      |     |                 |         | External | H31WXXG323000FD        | H31WXXH323000FD |
|  | Sol. 14  | 4-way, 2-position                    | 6.0 | Double solenoid | 120 VAC | Internal | <b>H32WXBG323000FD</b> | H32WXBH323000FD |
|   |  |                                      |     |                 |         | External | H32WXXG323000FD        | H32WXXH323000FD |
|   | APB     | 4-way, 3-position, all ports blocked | 5.0 | Double solenoid | 120 VAC | Internal | <b>H35WXBG323000FD</b> | H35WXBH323000FD |
|   |  |                                      |     |                 |         | External | H35WXXG323000FD        | H35WXXH323000FD |
|   | CE      | 4-way, 3-position, center exhaust    | 5.0 | Double solenoid | 120 VAC | Internal | <b>H36WXBG323000FD</b> | H36WXBH323000FD |
|   |  |                                      |     |                 |         | External | H36WXXG323000FD        | H36WXXH323000FD |
|   | PC      | 4-way, 3-position, pressure center   | 5.0 | Double solenoid | 120 VAC | Internal | <b>H37WXBG323000FD</b> | H37WXBH323000FD |
|   |  |                                      |     |                 |         | External | H37WXXG323000FD        | H37WXXH323000FD |

**Valve with 3-Pin DIN Connectors - 5599-1, Non Plug-in, Size 3 (H3)**

| Symbol  | Type  | Cv                                   | Operator | Voltage         | Pilot  | Non-locking | Locking            |             |
|---|---|--------------------------------------|----------|-----------------|--------|-------------|--------------------|-------------|
|  | Sol. 14  | 4-way, 2-position, spring return     | 6.0      | Single solenoid | 24 VDC | Internal    | <b>H3EWXBBL49D</b> | H3EWXBCL49D |
|   |   |                                      |          |                 |        | External    | H3EWXXBL49D        | H3EWXXCL49D |
|   | Sol. 14  | 4-way, 2-position, air return        | 6.0      | Single solenoid | 24 VDC | Internal    | <b>H31WXBBL49D</b> | H31WXBCL49D |
|   |   |                                      |          |                 |        | External    | H31WXXBL49D        | H31WXXCL49D |
|  | Sol. 14  | 4-way, 2-position                    | 6.0      | Double solenoid | 24 VDC | Internal    | <b>H32WXBBL49D</b> | H32WXBCL49D |
|   |   |                                      |          |                 |        | External    | H32WXXBL49D        | H32WXXCL49D |
|   | APB      | 4-way, 3-position, all ports blocked | 5.0      | Double solenoid | 24 VDC | Internal    | <b>H35WXBBL49D</b> | H35WXBCL49D |
|   |   |                                      |          |                 |        | External    | H35WXXBL49D        | H35WXXCL49D |
|   | CE       | 4-way, 3-position, center exhaust    | 5.0      | Double solenoid | 24 VDC | Internal    | <b>H36WXBBL49D</b> | H36WXBCL49D |
|   |   |                                      |          |                 |        | External    | H36WXXBL49D        | H36WXXCL49D |
|   | PC       | 4-way, 3-position, pressure center   | 5.0      | Double solenoid | 24 VDC | Internal    | <b>H37WXBBL49D</b> | H37WXBCL49D |
|   |   |                                      |          |                 |        | External    | H37WXXBL49D        | H37WXXCL49D |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

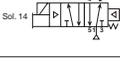
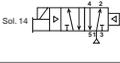
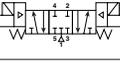
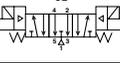
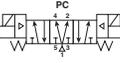
Network Connectivity

DX ISOMAX Series

Valvair II Series

**Common Part Numbers**

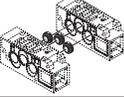
**Valve with 3-Pin DIN Connectors - 5599-1, Non Plug-in, Size 3 (H3)**

| Symbol  | Type  | Cv                                   | Operator | Voltage         | Pilot   | Non-locking | Locking            |                    |
|---|---|--------------------------------------|----------|-----------------|---------|-------------|--------------------|--------------------|
| <b>3-Pin DIN Connector on Coil, 120 VDC</b>   |   |                                      |          |                 |         |             |                    |                    |
|    |  | 4-way, 2-position, spring return     | 6.0      | Single solenoid | 120 VAC | Internal    | <b>H3EWXBBL53D</b> | <b>H3EWXBCL53D</b> |
|   |   |                                      |          |                 |         | External    | <b>H3EWXXBL53D</b> | <b>H3EWXXCL53D</b> |
|    |  | 4-way, 2-position, air return        | 6.0      | Single solenoid | 120 VAC | Internal    | <b>H31WXBBL53D</b> | <b>H31WXBCL53D</b> |
|   |   |                                      |          |                 |         | External    | <b>H31WXXBL53D</b> | <b>H31WXXCL53D</b> |
|    |  | 4-way, 2-position                    | 6.0      | Double solenoid | 120 VAC | Internal    | <b>H32WXBBL53D</b> | <b>H32WXBCL53D</b> |
|   |   |                                      |          |                 |         | External    | <b>H32WXXBL53D</b> | <b>H32WXXCL53D</b> |
|   |  | 4-way, 3-position, all ports blocked | 5.0      | Double solenoid | 120 VAC | Internal    | <b>H35WXBBL53D</b> | <b>H35WXBCL53D</b> |
|   |   |                                      |          |                 |         | External    | <b>H35WXXBL53D</b> | <b>H35WXXCL53D</b> |
|  |  | 4-way, 3-position, center exhaust    | 5.0      | Double solenoid | 120 VAC | Internal    | <b>H36WXBBL53D</b> | <b>H36WXBCL53D</b> |
|   |   |                                      |          |                 |         | External    | <b>H36WXXBL53D</b> | <b>H36WXXCL53D</b> |
|  |  | 4-way, 3-position, pressure center   | 5.0      | Double solenoid | 120 VAC | Internal    | <b>H37WXBBL53D</b> | <b>H37WXBCL53D</b> |
|   |   |                                      |          |                 |         | External    | <b>H37WXXBL53D</b> | <b>H37WXXCL53D</b> |

**Base / End Plate - 5599-1, Non Plug-in, Size 3 (H3) \* Not compatible with H Universal**

| Description   | NPT                | BSP                |
|---|--------------------|--------------------|
|  Single subbase<br>Side ported base, 3/4" port                   | <b>PS4211190CP</b> | <b>PS4211180CP</b> |
|  Manifold base<br>End ported bases<br>Bottom / end ported bases | <b>PS4211590CP</b> | <b>PS4211500CP</b> |
|   | <b>PS4211690CP</b> | <b>PS4211600CP</b> |
| <b>Note:</b> Manifolds include 2 pipe plugs   |                    |                    |
|  End plate<br>End plate - non-collective wiring                | <b>PS4231010DP</b> | <b>PS4231011DP</b> |

**Accessories - 5599-1, Non Plug-in, Size 3 (H3)**

| Accessory  | Description   | Part number        |
|--|---|--------------------|
|  Sandwich regulator               | Common pressure 5-125 PSIG w/ gauge   | <b>PS4237166CP</b> |
|  | Independent pressure 5-125 PSIG w/ gauge  | <b>PS4237266CP</b> |
|  Blanking plate kit               |   | <b>PS4234CP</b>    |
|  Sandwich flow control            | Sandwich flow control   | <b>PS4242CP</b>    |
|  | Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control <b>MUST</b> be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators. |                    |
|  Manifold to manifold gasket kits |   | <b>PS4213P</b>     |
|  Manifold port isolation kit      | Main galley (1, 3, 5)   | <b>PS4232CP</b>    |
|  | Pilot galley (12, 14)   | <b>PS4033CP</b>    |

 Most popular.

**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair-II Series



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**Valve Central Connector - Non Plug-in, 5599-1, Size 3 (H3)**

H3
E
WX
B
G
2B9
000F
D

**Basic Series 5599-1**

ISO 5599-1 Size 3 H3

**5599-1 Operator / Function**

|   |   |
|---|---|
| Single solenoid, 2-position - air return                | 1 |
| Double solenoid, 2-position                             | 2 |
| Double solenoid, 3-position - APB                       | 5 |
| Double solenoid, 3-position - CE                        | 6 |
| Double solenoid, 3-position - PC                        | 7 |
| Single solenoid, 2-position - air return, spring assist | E |

**5599-1 Mounting**

Valve less base WX

**5599-1 Pilot Source / Pilot Exhaust**

Internal pilot, port #1 / vented B

External pilot, port #12 or #14 / vented X\*

\* Must be specified when using Sandwich Regulators.

**5599-1 Overrides / Lights**

Non-locking, flush, with light G

Locking, flush, with light H

**5599-1 Engineering Level**

D Current

**5599-1 Central Connector Wiring Options**

|              |                              |
|--------------|------------------------------|
| 000C         | Chrysler                     |
| <b>000F*</b> | <b>SAE / Ford, ISO 20401</b> |
| 000G         | General Motors               |

\* Complies to ISO 20401 with Enclosure Lead Length "2".

**Enclosure / Lead length / Voltage\***

|             | AC   |      | DC        |   |
|-------------|------|------|-----------|---|
|             | 60Hz | 50Hz |           |   |
| 1B9†        |      |      | 24        | 3-pin, central mini connector, 3.2 watt       |
| 1F9†        |      |      | 24        | 3-pin, central mini connector, 1.3 watt       |
| 123†        | 120  | 115  |           | 3-pin, central mini connector                 |
| <b>2B9</b>  |      |      | <b>24</b> | <b>4-pin, central M12 connector, 3.2 watt</b> |
| <b>2F9*</b> |      |      | <b>24</b> | <b>4-pin, central M12 connector, 1.3 watt</b> |
| 3B9         |      |      | 24        | 5-pin, central mini connector, 3.2 watt       |
| 3F9*        |      |      | 24        | 5-pin, central mini connector, 1.3 watt       |
| 323         | 120  | 115  |           | 5-pin, central mini connector                 |
| 619*        |      |      | 24        | 2-pin, M12 connector on coil                  |

\* All coils include LED & suppression  
 † Operator function "1" or "E"  
 ‡ Only available with wiring option "000F"  
 \* Override "G" only.

**Valve CNOMO - Non Plug-in, 5599-1 Size 3 (H3)**

H3
E
WX
B
B
L53
D

**Basic Series 5599-1**

ISO 5599-1 Size 3 H3

**5599-1 Operator / Function**

|   |   |
|---|---|
| Single solenoid, 2-position - air return                | 1 |
| Double solenoid, 2-position                             | 2 |
| Double solenoid, 3-position - APB                       | 5 |
| Double solenoid, 3-position - CE                        | 6 |
| Double solenoid, 3-position - PC                        | 7 |
| Single solenoid, 2-position - air return, spring assist | E |

**5599-1 Mounting**

Valve less base WX

**5599-1 Pilot Source / Pilot Exhaust**

Internal pilot, port #1 / vented B

External pilot, port #12 or #14 / vented X\*

\* Must be specified when using Sandwich Regulators.

**5599-1 Overrides / Lights**

|          |  |
|----------|--|
| <b>B</b> | <b>Non-locking, flush, push - no light</b> |
| C        | Locking, flush, push / turn - no light     |

**5599-1 Engineering Level**

D Current

**Enclosure / Lead Length / Voltage**

|            | AC   |      | DC        |  |
|------------|------|------|-----------|--|
|            | 60Hz | 50Hz |           |  |
| L42        | 24   |      |           | 3-pin, 30mm DIN 43650A with CNOMO connector        |
| L45        |      |      | 12        | 3-pin, 30mm DIN 43650A with CNOMO connector        |
| <b>L49</b> |      |      | <b>24</b> | <b>3-pin, 30mm DIN 43650A with CNOMO connector</b> |
| <b>L53</b> | 120  | 115  |           | <b>3-pin, 30mm DIN 43650A with CNOMO connector</b> |
| L57        | 240  |      |           | 3-pin, 30mm DIN 43650A with CNOMO connector        |
| NXX        |      |      |           | Valve less coil                                    |

  Most popular.



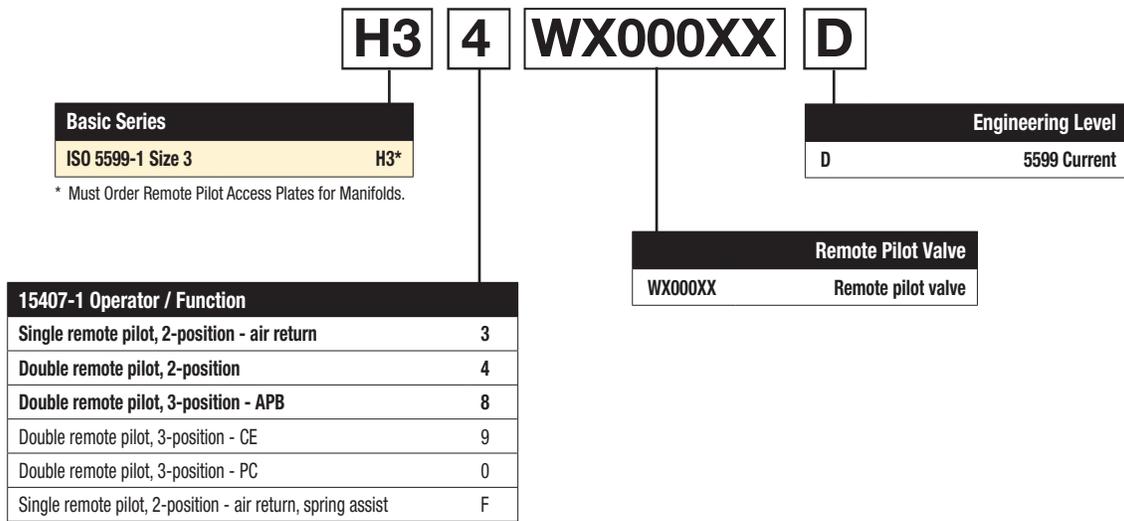
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D119

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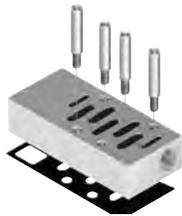
D  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Remote Pilot - Size 3 (H3)**



*Note: For manifolds, end plates, and accessories, see 5599-1 Non Plug-in valve section.*

**Remote Pilot Access Plate Kits**



| Size | Port size | NPT        | BSPG "G"   |
|------|-----------|------------|------------|
| H3   | 1/8"      | PS421500CP | PS421501CP |

Kit includes: Pilot Port Access Plate, Gasket and Mounting Studs.

Most popular.



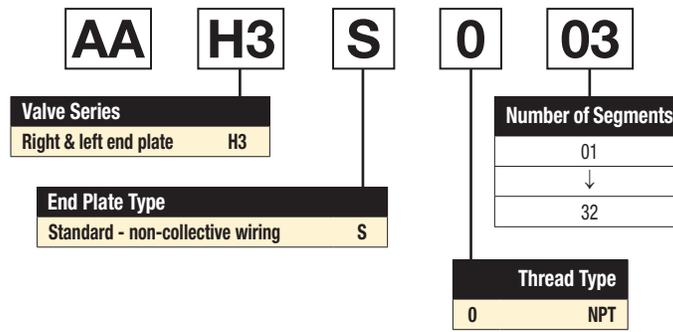
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



**Ordering Information**

**Add-A-Fold Assembly - Non Plug-in, 5599-1, Size 3 (H3) \* Not compatible with H Universal**



**How To Order Non Plug-in Add-A-Fold Assemblies**

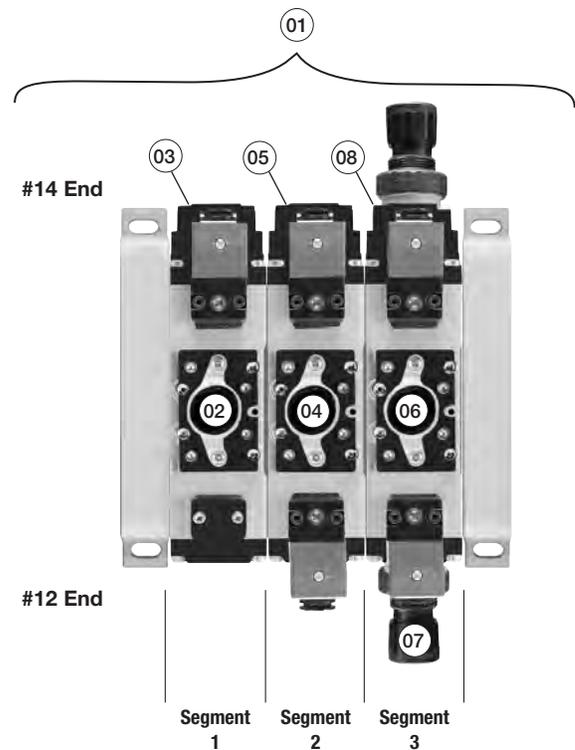
1. List Add-A-Fold Assembly call out. This automatically includes the end plate kit assembly.
2. List complete valve, regulator, flow control and manifold base kit. List left to right, LOOKING AT THE CYLINDER PORTS on the #12 end of the manifold. The left most segment is segment 1. (If a blanking plate part number and the individual manifold part numbers for the required segment.)

**Example**

Application requires a 3 segment manifold and regulator on segment 3.

| Item | Part No.        | Location  |                    |
|------|-----------------|-----------|--------------------|
| 01   | AAH3S003        |           |                    |
| 02   | H31WXBG2B9000FD | Segment 1 | Valve station 1    |
| 03   | PS4211590CP     |           | Manifold base      |
| 04   | H32WXBG2B9000FD | Segment 2 | Valve station 2    |
| 05   | PS4211590CP     |           | Manifold base      |
| 06   | H32WXXG2B9000FD | Segment 3 | Valve station 3    |
| 07   | PS4237166CP     |           | Sandwich regulator |
| 08   | PS4211590CP     |           | Manifold base      |

**NOTE:** Construct manifold assemblies from left to right while looking at the cylinder ports.  
 Valves must be ordered as External Pilot when using Sandwich Regulator.



**Example:**  
 3 segment manifold with (3) H3 valves on manifold bases and regulator at segment 3.

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair-II Series

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Ordering Information**

**Sandwich Regulator - Non Plug-in, 5599-1, Size 3 (H3)**

**PS4237** | **1** | **6** | **6** | **C** | **P**

| Basic Series           |        |
|------------------------|--------|
| H3 5599-1, Non Plug-in | PS4237 |

| Regulator Function             |   |
|--------------------------------|---|
| Common Pressure Regulator      | 1 |
| Independent Pressure Regulator | 2 |

| #2 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| <b>6</b>                   | <b>5-125 PSIG w/Gauge</b>   |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For common pressure regulator option, regulator gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)  
 \*\* Pressure line by-pass option can only be used with independent pressure regulators.

| #4 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| <b>6</b>                   | <b>5-125 PSIG w/Gauge</b>   |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For common pressure regulator option, regulator gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)  
 \*\* Pressure line by-pass option can only be used with independent pressure regulators.

**Ordering Components**

- Sandwich regulator kit configured for internal pilot as standard.
- Order valve as external pilot.

**How to Configure Sandwich Regulator / Valve Combinations**

**Internal Pilot Configuration of Sandwich Regulator H3**  
 Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

**External Pilot Configuration of Sandwich Regulator H3**  
 An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

**Note: Do not use Independent Port Sandwich Regulators with Sandwich Flow Controls.**  
 Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective.

**Sandwich Regulator Cv Flow Chart\***

|           | Common Pressure Code 166 |      |      |      | Single Pressure 2 Code 206 |      |      |      | Single Pressure 4 Code 260 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|----------------------------|------|------|------|----------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>H3</b> | 2.37                     | 2.39 | 4.30 | 4.47 | 2.37                       | 2.81 | 2.75 | 3.01 | 2.65                       | 2.59 | 2.68 | 2.74 | 2.43                   | 2.41 | 3.16 | 3.04 |

\* Regulator Port exhaust through Base Port 3.  
 Note: All Cv's calculated with regulator adjusted full open.

  Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

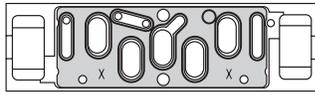
Network Connectivity

DX ISOMAX Series

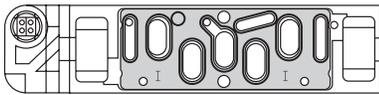
Valvair II Series

**ISO Pneumatic Valve Standard Definitions**

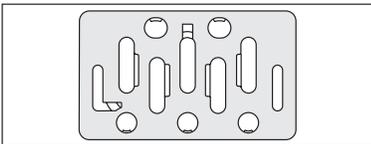
**15407-1:** Non-Plug-in Standards for Size 01 (26mm) & Size 02 (18mm) Wide Valves



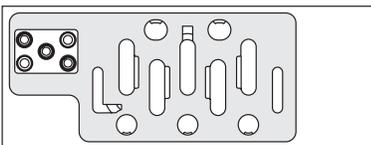
**15407-2:** Plug-in Standards for Size 01 (26mm) & Size 02 (18mm) Wide Valves



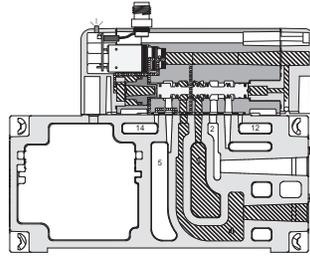
**5599-1:** Non-Plug-in Standards for Sizes 1, 2, 3



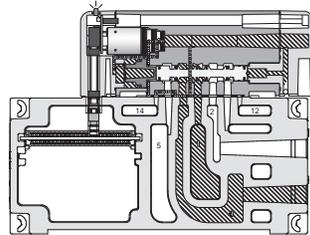
**5599-2:** Plug-in Standards for Size 1, 2, 3



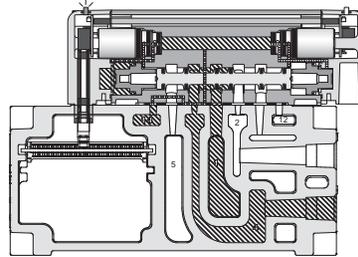
**HB / HA Series**



**15407-1** 18mm Single Solenoid Internal Pilot Manifold Mounted



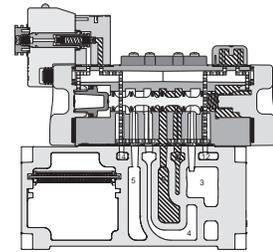
**15407-2** 18mm Single Solenoid Internal Pilot Manifold Mounted



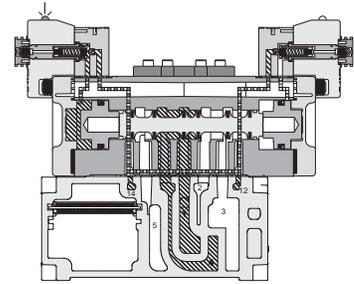
**15407-2** 26mm Double Solenoid External Pilot Manifold Mounted

Pressure Exhaust

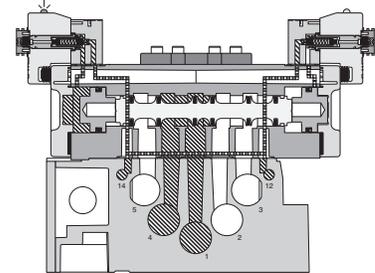
**H1, H2, H3 Series**



**H1 5599-2** Single Solenoid Internal Pilot Manifold Mounted



**H2 5599-2** Double Solenoid External Pilot Manifold Mounted



**H3 5599-2** Double Solenoid External Pilot Subbase Mounted

Pressure Exhaust

**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

**Wear Compensation System**

- Maximum Performance
  - Low Friction
  - Lower Operating Pressures
  - Fast Response
  - Less Wear
- Long Cycle Life - Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore.
- Non-Lube Service - No lubrication required for continuous valve shifting.
- Bi-Directional Spool Seals - Common spool used for any pressure, including vacuum.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Flow Rating (Cv)**

| Valve size | Port size | 2-Position  | 3-Position  |
|------------|-----------|---|---|
| HB         | 1/8"      | 0.55 Cv, C = 1.5 NI/s x bar, b = 0.25, Qn = 390 l/min, Qmax = 648 l/min   | 0.50 Cv, C = 1.4 NI/s x bar, b = 0.25, Qn = 360 l/min, Qmax = 595 l/min   |
| HA         | 1/4"      | 1.1 Cv, C = 3.6 NI/s x bar, b = 0.30, Qn = 918 l/min, Qmax = 1518 l/min   | 1.0 Cv, C = 3.3 NI/s x bar, b = 0.30, Qn = 845 l/min, Qmax = 1395 l/min   |
| H1         | 3/8"      | 1.5 Cv, C = 5.0 NI/s x bar, b = 0.30, Qn = 1248 l/min, Qmax = 2070 l/min  | 1.2 Cv, C = 4.1 NI/s x bar, b = 0.30, Qn = 1000 l/min, Qmax = 1660 l/min  |
| H2         | 1/2"      | 3.0 Cv, C = 9.7 NI/s x bar, b = 0.35, Qn = 2520 l/min, Qmax = 4140 l/min  | 2.8 Cv, C = 9.0 NI/s x bar, b = 0.35, Qn = 2340 l/min, Qmax = 3860 l/min  |
| H3         | 3/4"      | 6.0 Cv, C = 18.7 NI/s x bar, b = 0.35, Qn = 5022 l/min, Qmax = 7848 l/min | 5.0 Cv, C = 15.4 NI/s x bar, b = 0.35, Qn = 4185 l/min, Qmax = 6545 l/min |

Cv tested per ANSI / (NFPA) T3.21.3  
 Flow tested According to ISO 6358.

**Response Time\*\* (ms)**

| Valve size   | Port size | 0 Cu. In. Chamber |         | ## Cu. In. Chamber |         |
|--|-----------|-------------------|---------|--------------------|---------|
|  |           | Fill              | Exhaust | Fill               | Exhaust |
| <b>Single Solenoid 2-Position - Air Return / Spring Assist</b> |           |                   |         |                    |         |
| HB   | 1/8"      | 28                | 30      | 141                | 154     |
| HA   | 1/4"      | 24                | 26      | 77                 | 124     |
| H1   | 3/8"      | 28                | 39      | 124                | 198     |
| H2   | 1/2"      | 38                | 76      | 149                | 295     |
| H3   | 3/4"      | 56                | 70      | 163                | 235     |

**F9, 1.3 W Coil Only  
 Single Solenoid 2-Position - Air Return / Spring Assist**

|    |      |     |     |     |     |
|----|------|-----|-----|-----|-----|
| H1 | 3/8" | 55  | 84  | 188 | 270 |
| H2 | 1/2" | 91  | 146 | 245 | 349 |
| H3 | 3/4" | 126 | 127 | 256 | 328 |

# HB (12), HA (25), H1 (50), H2 (100), H3 (200)

\*\* With 100 PSIG supply, time (ms) required to fill from 0 to 90 PSIG and Exhaust from 100 PSIG to 10 PSIG measured from the instant of energizing or de-energizing 24VDC solenoid.

Tested per ANSI / (NFPA) T3.21.8

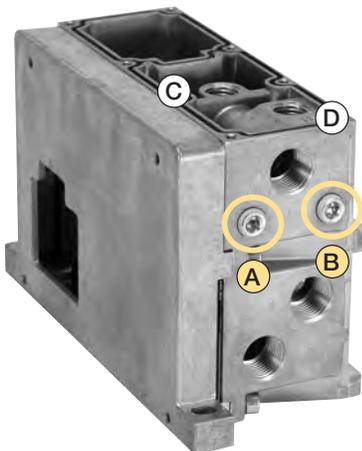
**Left End Plate Field Conversion**

End plate kits and manifold assemblies are ordered as internal or single external pilot however field conversion is possible.

**End Plate Configuration - Internal Pilot \***

Insert 2 pipe plugs in locations A & B (1/8" NPT or G 1/8) as shown

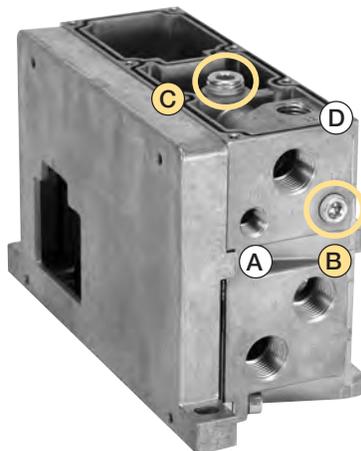
Blocking off the pilot supply ports will configure the left end plate as internally piloted. Pilot pressure required to operate the H Series valves will be drawn from the supply or #1 port and no additional connections are required. Port locations C & D must be left unplugged for this option to function properly.



**End Plate Configuration - Single External Pilot \***

Insert 1 pipe plug into location C (1/4" NPT) as shown to configure the left end plate as single externally piloted.

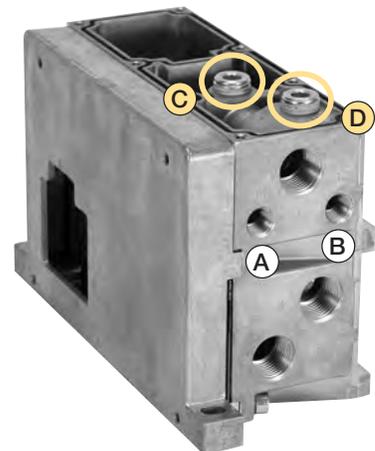
Pilot pressure required to operate the H Series valves must be supplied to the 14 port only at location A which is internally connected to the 12 pilot.



**End Plate Configuration - Double External Pilot**

Insert 2 pipe plugs in locations C & D (1/4" NPT) as shown to configure the left end plate as double externally piloted.

Pilot pressure required to operate the H Series valves must be supplied separately to both ports 14 and 12 (locations A and B).



\* Standard in catalog

Note: Left end plate shown with cover removed.



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D125

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

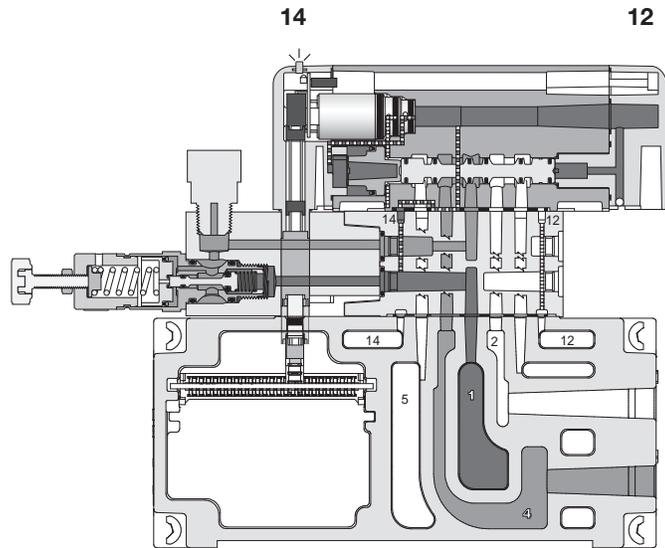
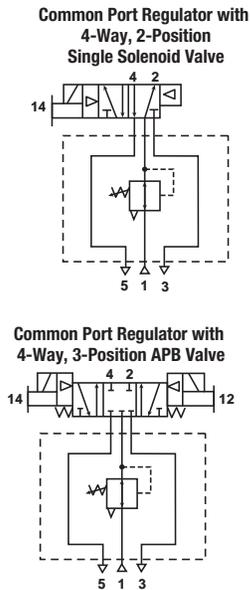
DX ISOMAX Series

Valvair II Series

**Common Port Regulation - Plug-in, HB & HA**

Provides adjustable regulated air pressure to the valve's #1 port which gives the same pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

**HB Common Port Regulator Shown -  
 Single Solenoid, 14 Energized**

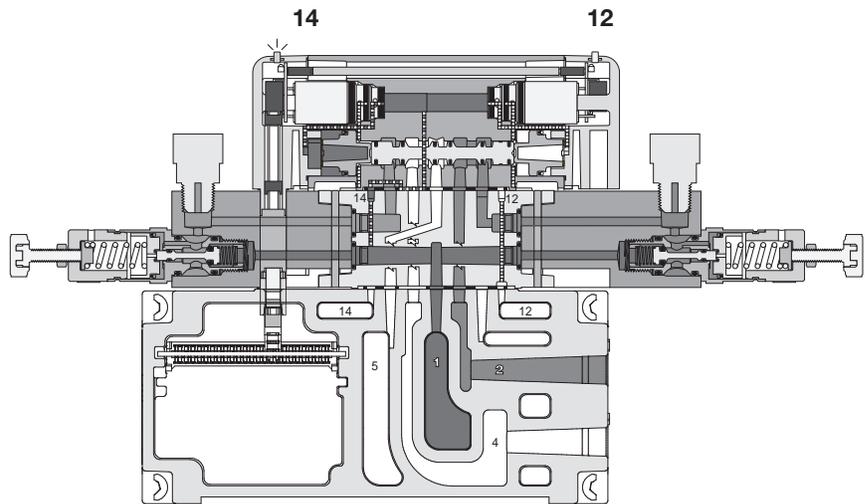
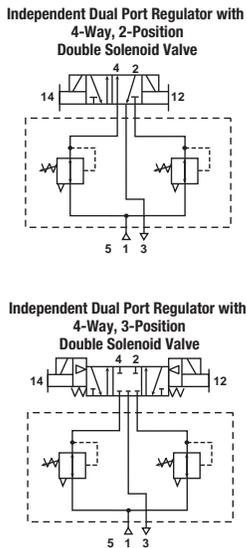


**Independent Dual Port Regulation - Plug-in, HB & HA**

**Dual Port Regulator**

Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

**HB Independent Dual Port Regulator Shown -  
 Double Solenoid, 14 Energized**



*When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. Do not use with Sandwich Flow Controls. Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective. (See schematics above.)*

|   |                         |
|---|-------------------------|
| D | Subbase & Manual Valves |
|   | H Series Micro          |
|   | Modulflex Series        |
|   | H Series ISO            |
|   | Network Connectivity    |
|   | DX ISOMAX Series        |
|   | Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

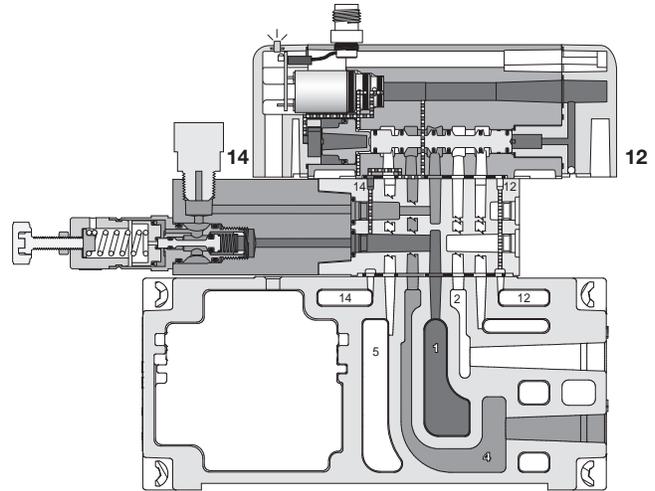
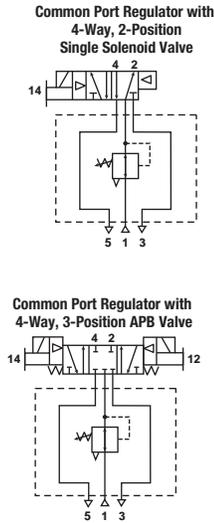
D126

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**Common Port Regulation - Non Plug-in, HB & HA**

Provides adjustable regulated air pressure to the valve's #1 port which gives the same pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

**HB Common Port Regulator Shown - Single Solenoid, 14 Energized**

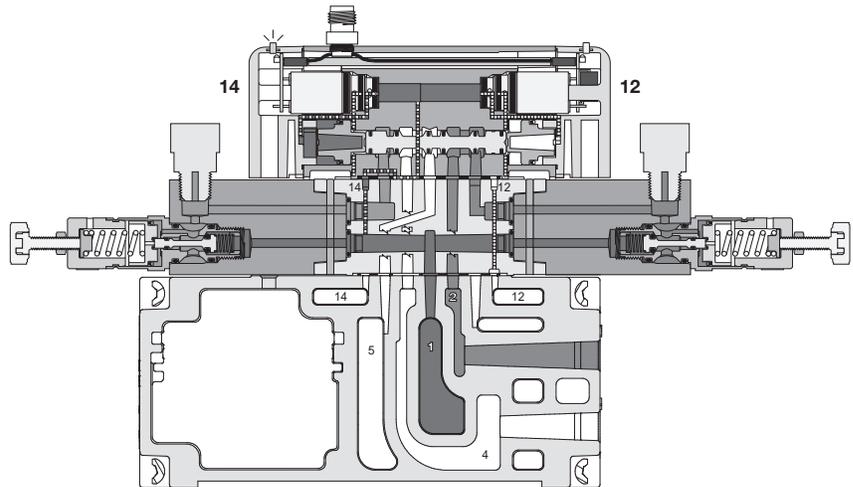
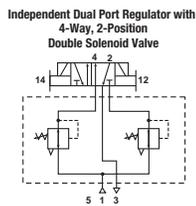


**Independent Dual Port Regulation - Non Plug-in, HB & HA**

**Dual Port Regulator**

Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

**HB Independent Dual Port Regulator Shown - Double Solenoid, 14 Energized**



*When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. Do not use with Sandwich Flow Controls. Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective. (See schematics on above.)*

Most popular.



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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

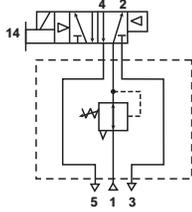
DX ISOMAX Series

Valvair II Series

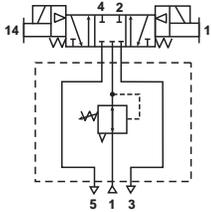
**Common Port Regulation - Plug-in, H1, H2, H3**

Provides adjustable regulated air pressure to the valve's #1 port which gives the same regulated pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

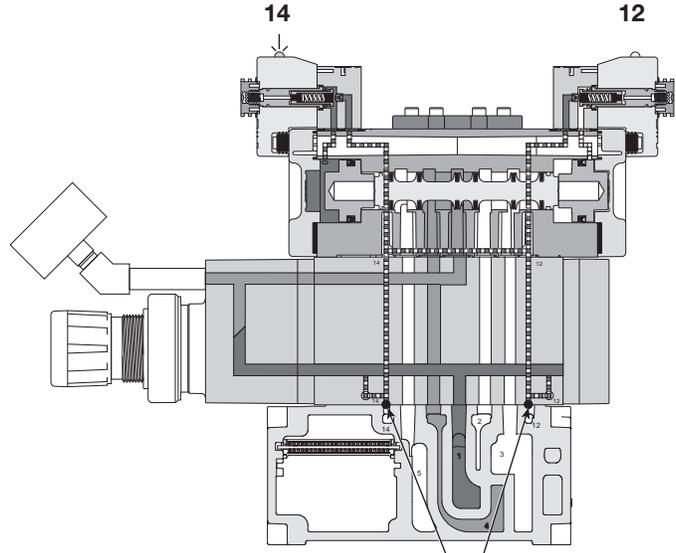
**Common Port Regulator with  
4-Way, 2-Position  
Single Solenoid Valve**



**Common Port Regulator with  
4-Way, 3-Position APB Valve**



**H2 Common Port Regulator Shown -  
Double Solenoid, 14 Energized, Internal Pilot**



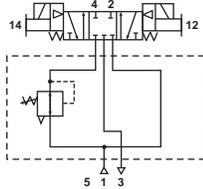
Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom of the I & E Pilot Holes which prevents line pressure from escaping through the manifold.

**Independent Port Regulation - Plug-in, H1, H2, H3**

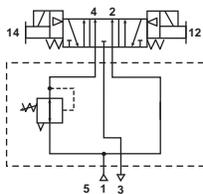
**Single Port Regulator**

Provides regulated pressure to one of the ports and full line pressure to the other by use of the Line Pressure By-Pass Plate. Pressure regulation can occur out of the #4 port of the valve.

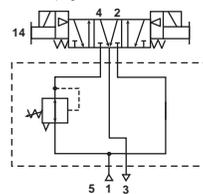
**Independent Port Regulator with  
4-Way, 3-Position All Ports Blocked Valve**



**Independent Port Regulator with 4-Way,  
3-Position, Inlet to Cylinder Function**



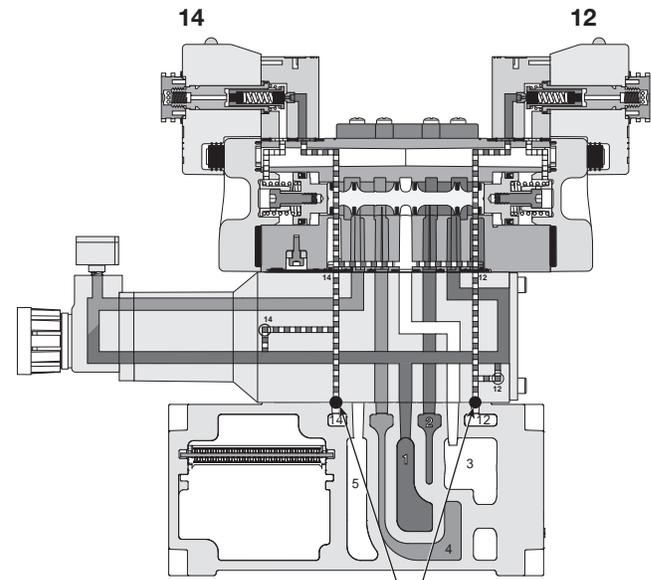
**Independent Port Regulator with 4-Way,  
3-Position, Cylinder to Exhaust Function**



⚠ **CAUTION:** Requires 4-Way, 3-Position, Cylinder to Exhaust Valve

⚠ **CAUTION:** Requires 4-Way, 3-Position, Inlet to Cylinder Valve

**H1 Independent Port Regulator Shown -  
Double Solenoid, De-energized, Internal Pilot**



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom of the I & E Pilot Holes which prevents line pressure from escaping through the manifold.

*When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. Do not use with Sandwich Flow Controls. Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective. (See schematics above.)*

|   |                         |
|---|-------------------------|
| D | Subbase & Manual Valves |
|   | H Series Micro          |
|   | Modulflex Series        |
|   | H Series ISO            |
|   | Network Connectivity    |
|   | DX ISOMAX Series        |
|   | Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

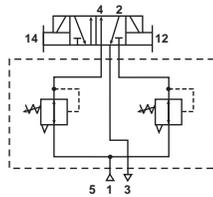
**Independent Dual Port Regulation - Plug-in, H1, H2, H3**

**Dual Port Regulator**

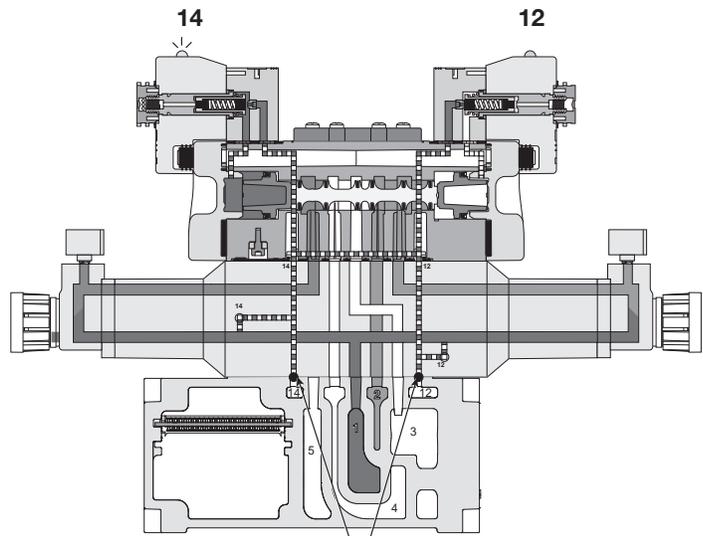
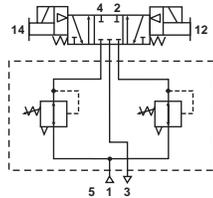
Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

**H1 Independent Dual Port Regulator Shown -  
Double Solenoid, 14 Energized, Internal Pilot**

Independent Dual Port Regulator with  
4-Way, 2-Position  
Double Solenoid Valve



Independent Dual Port Regulator with  
4-Way, 3-Position  
Double Solenoid Valve



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

*When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. Do not use with Sandwich Flow Controls. Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective. (See schematics on above.)*

**D**

Subbase & Manual  
Valves

H Series  
Micro

Moduflex  
Series

H Series  
ISO

Network  
Connectivity

DX ISOMAX  
Series

Valvair II  
Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

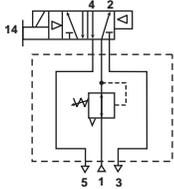
D129

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Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

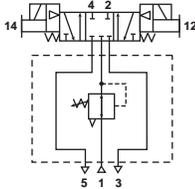
**Common Port Regulation - Non Plug-in, H1, H2, H3**

Provides adjustable regulated air pressure to the valve's #1 port which gives the same regulated pressure to both the #2 and #4 port of the manifold or subbase. The regulator is always on the 14 end of the valve.

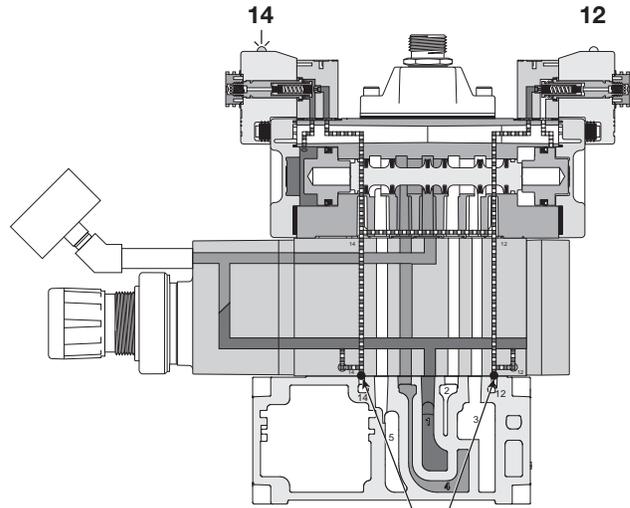
**Common Port Regulator with 4-Way, 2-Position Single Solenoid Valve**



**Common Port Regulator with 4-Way, 3-Position APB Valve**



**H2 Common Port Regulator Shown - Double Solenoid, 14 Energized, Internal Pilot**



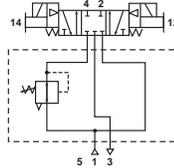
Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom of the I & E Pilot Holes which prevents line pressure from escaping through the manifold.

**Independent Port Regulation - Non Plug-in, H1, H2, H3**

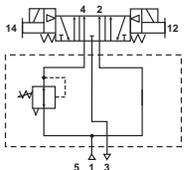
**Single Port Regulator**

Provides regulated pressure to one of the ports and full line pressure to the other by use of the Line Pressure By-Pass Plate. Pressure regulation can occur out of the #4 port of the valve.

**Independent Port Regulator with 4-Way, 3-Position All Ports Blocked Valve**

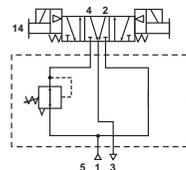


**Independent Port Regulator with 4-Way, 3-Position, Inlet to Cylinder Function**



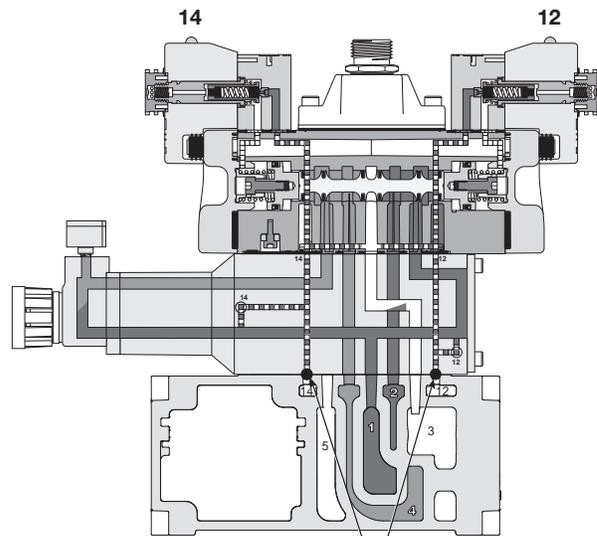
⚠ CAUTION: Requires 4-Way, 3-Position, Cylinder to Exhaust Valve

**Independent Port Regulator with 4-Way, 3-Position, Cylinder to Exhaust Function**



⚠ CAUTION: Requires 4-Way, 3-Position, Inlet to Cylinder Valve

**H1 Independent Port Regulator Shown - Double Solenoid, De-energized, Internal Pilot**



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

*When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. Do not use with Sandwich Flow Controls. Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective. (See schematics on above.)*

|                      |                         |
|----------------------|-------------------------|
| D                    | Subbase & Manual Valves |
| H Series Micro       |                         |
| Modulflex Series     |                         |
| H Series ISO         |                         |
| Network Connectivity |                         |
| DX ISOMAX Series     |                         |
| Valvair II Series    |                         |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

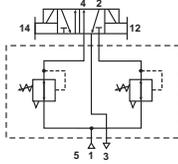
**Independent Dual Port Regulation - Non Plug-in, H1, H2, H3**

**Dual Port Regulator**

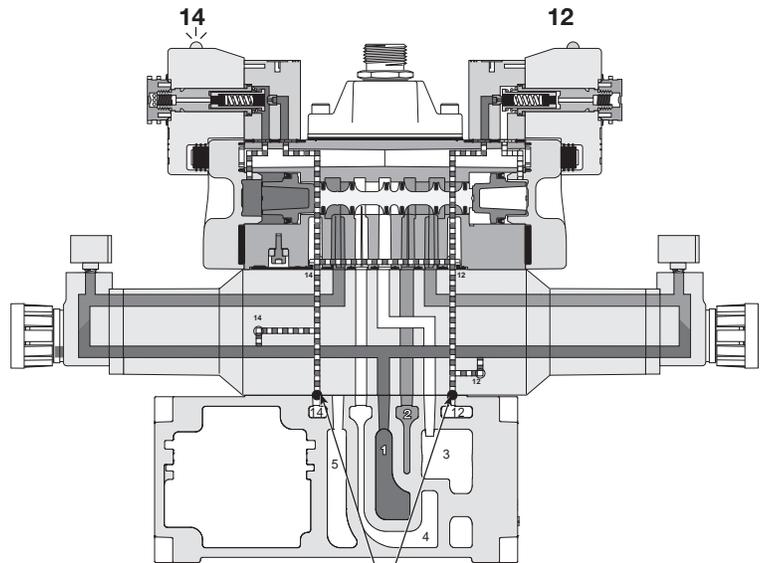
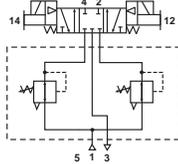
Provides regulated pressure to both ports. Pressure regulation can occur out of the #2 or #4 port of the valve.

**H1 Independent Dual Port Regulator Shown - Double Solenoid, 14 Energized, Internal Pilot**

Independent Dual Port Regulator with 4-Way, 2-Position Double Solenoid Valve



Independent Dual Port Regulator with 4-Way, 3-Position Double Solenoid Valve



Sandwich Regulator has standard configuration of Internal Pilot with the Pilot Plug in the bottom #12 and #14 Pilot Hole which prevents line pressure from escaping through the manifold.

*When using an Independent Pressure Sandwich Regulator, the cylinder outlet ports are reversed. The 12 end energizes the #4 port and the 14 end energizes the #2 port. The 3-Position CE and PC functions are also reversed. Do not use with Sandwich Flow Controls. Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective. (See schematics on above.)*

|                      |                         |
|----------------------|-------------------------|
| D                    | Subbase & Manual Valves |
| H Series Micro       |                         |
| Moduflex Series      |                         |
| H Series ISO         |                         |
| Network Connectivity |                         |
| DX ISOMAX Series     |                         |
| Valvair II Series    |                         |



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[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

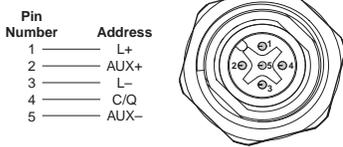
**Minimum Operating Voltage**

|                     | HB   | HA   | H1   | H2   | H3   |
|---------------------|------|------|------|------|------|
| <b>MOV (24VDC)</b>  | 20.4 | 20.4 | 20.4 | 20.4 | 20.4 |
| <b>MOV (120VAC)</b> | 102* | 102* | 102  | 102  | 102  |

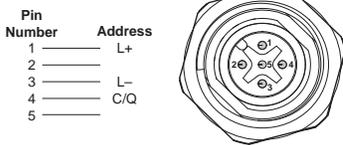
\* 120VAC coils have a dropout voltage of 10VAC when used with solid state relays. A pull-down resistor may be necessary.

**P2H IO-Link**

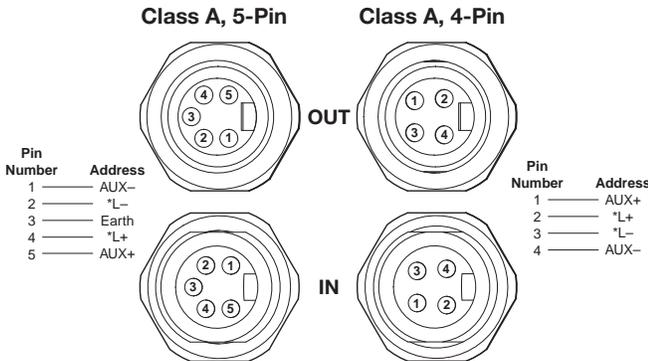
**Class B, M12 pin**



**Class A, M12 pin**



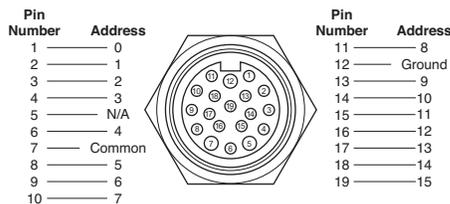
**Class A, Power IN / OUT 7/8 pin**



\* 7/8" logic power has no connection to internal P2H unit but does carryover to OUT 7/8" connector (for jumper logic power only). Logic power for P2H unit will be supplied from M12 (pin 1 & 3).

**19-Pin Connector, Round Brad Harrison**

**Male, face view**



**19-Pin Round Cable Specifications**

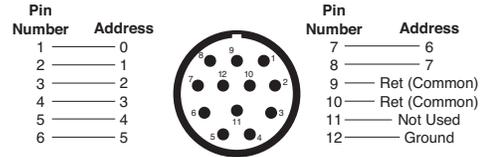
Common Pin "7" is rated for 8 amps. Cable common wire must be greater than total amperage of solenoids on Add-A-Fold assembly.

**Example:** 8 segment manifold, 16 solenoids, 120VAC - 16 x .039 amps = .63 total amp rating.

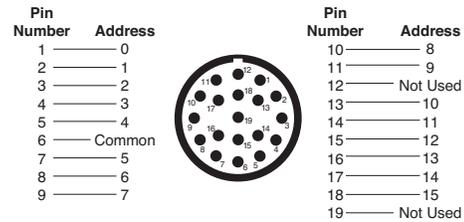
NEMA 4 rated with properly assembled NEMA 4 rated cable.

**M23, Round Connector**

**Male 12-pin connector, face view**

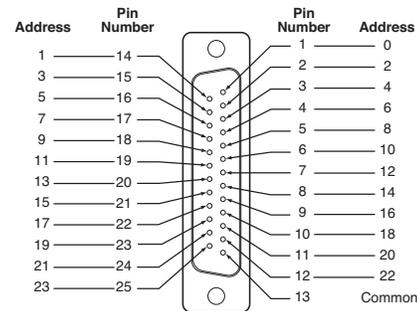


**Male 19-pin connector, view into end plate**

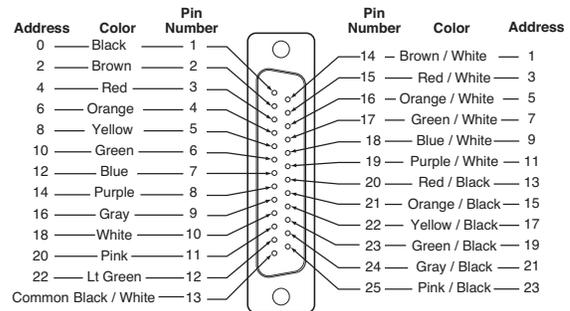


**25-Pin, D-Sub Connector**

**Male, view into end plate connector**



**Female, view into cable connector**



| Description               | Length   | Part number       |
|---------------------------|----------|-------------------|
| 25-pin, D-sub cable, IP20 | 3 Meters | <b>P8LMH25M3A</b> |
| 25-pin, D-sub cable, IP20 | 9 Meters | <b>SCD259D</b>    |
| 25-pin, D-sub cable, IP65 | 3 Meters | <b>SCD253W</b>    |
| 25-pin, D-sub cable, IP65 | 9 Meters | <b>SCD259WE</b>   |

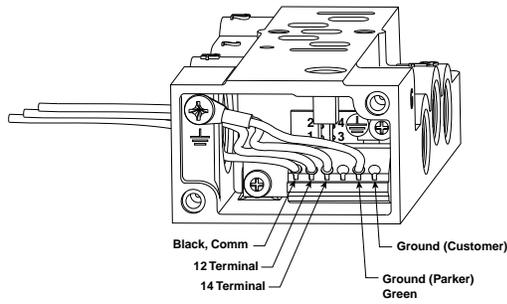


**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

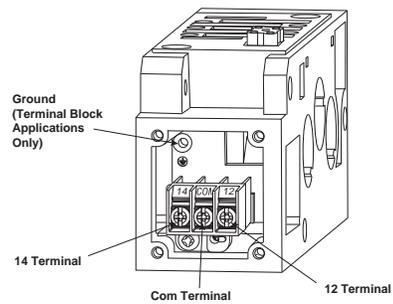
**Subbase Wiring**



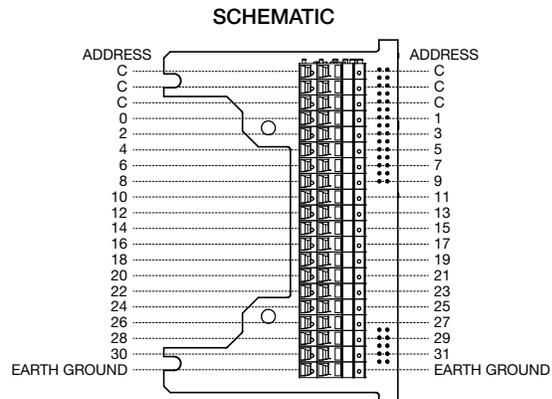
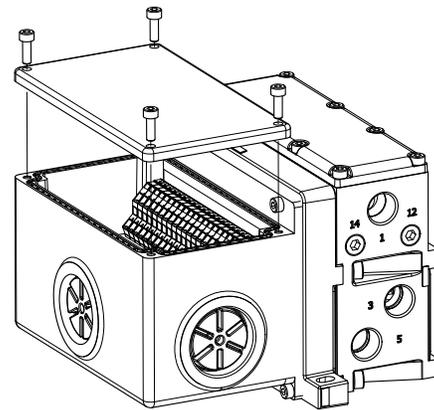
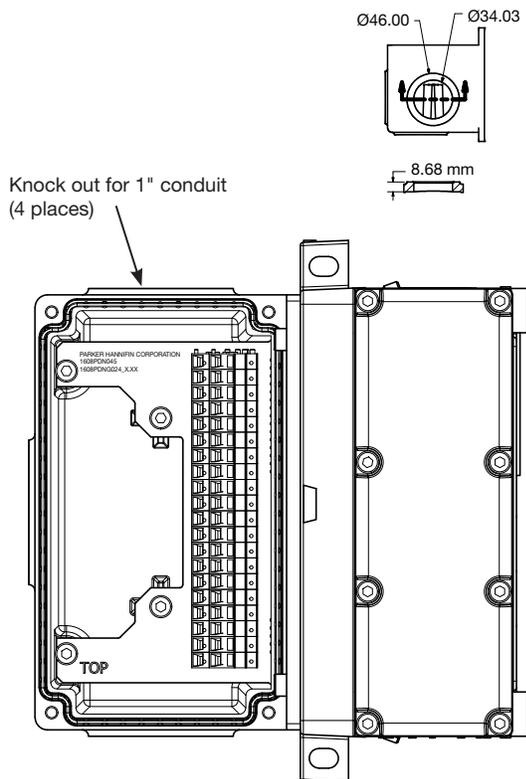
All commons internally connected on terminal strip

| Connections   | 14 Solenoid          | 12 Solenoid          |
|---|----------------------|----------------------|
| Valves with Wires   | Black Wires          | Red Wires            |
| Valves with Terminal Block (Will accept 18 to 24 Gauge Wires) | 14 and Com Terminals | 12 and Com Terminals |

**Manifold Wiring - Size 3**



**Terminal Box Wiring (H Universal)**



All commons internally connected on terminal strip

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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 Richland, Michigan  
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**Electrical Connectors - Size 1, 2 & 3**

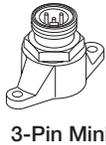
**5599-1 CNOMO**



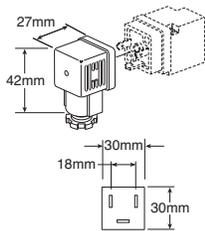
**5599-2**



**5599-1 AUTO**



**30mm Square 3-Pin – ISO 4400, DIN 43650A (Use with Enclosure “A”)**



| Description                     | Connector with 6' (2m) cord | Connector         |
|---------------------------------|-----------------------------|-------------------|
| Unlighted                       | <b>PS2028JCP</b>            | <b>PS2028BP</b>   |
| Light – 6-48V. 50/60Hz. 6-48VDC | <b>PS2032J79CP*</b>         | <b>PS203279BP</b> |
| Light – 120V/60Hz               | <b>PS2032J83CP*</b>         | <b>PS203283BP</b> |

\* LED with surge suppression.

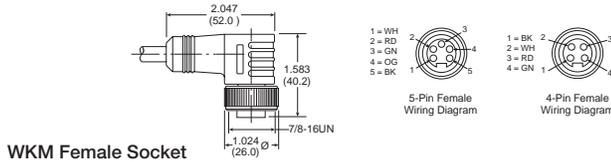
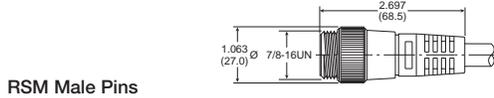
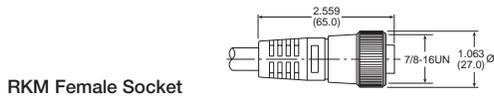
**Note:** Max ø6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

**Engineering data:**

Conductors: 2 poles plus ground; cable range (connector only): 8 to 10mm (0.31 To 0.39 Inch); contact spacing: 18mm

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modutef Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

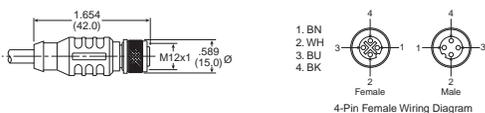
**7/8" Mini Power Cables - use with 5-pin mini connector**



| Description  | Part number               |
|--|---------------------------|
| 4-pin female to flying lead cable, 5 meters, TPE             | <b>RKM 46-5M/S1587</b>    |
| 5-pin female to flying lead cable, 5 meters, TPE             | <b>RKM 56-5M/S1587</b>    |
| 4-pin male to female cable, TPE                              | <b>RSM RKM 46-x/S1587</b> |
| 5-pin male to female cable, TPE                              | <b>RSM RKM 56-x/S1587</b> |
| 4-pin right angle female to flying lead cable, 5 meters, TPE | <b>WKM 46-5M/S1587</b>    |
| 5-pin right angle female to flying lead cable, TPE           | <b>WKM 56-5M/S1587</b>    |

Where x = 2, 4, 5, 6, 8, 10 meter standard lengths

**M12 A-code Cables - use with 4-pin micro, 2-pin micro**



| Description                            | Part number                      |
|--|----------------------------------|
| 4-pin female to flying lead cable, PVC | <b>RKC 4.4T-1</b>                |
| 4-pin male to flying lead cable, PVC   | <b>RSC 4.4T-*</b>                |
| 4-pin male to female cable, PVC        | <b>RKC 4.4T-*/RSC 4.4T</b>       |
| 5-pin female to flying lead cable, TPE | <b>RKC 4.5T-*/S1587</b>          |
| 5-pin male to flying lead cable, TPE   | <b>RSC 4.5T-4/S1587</b>          |
| 5-pin male to female cable, TPE        | <b>RKC 4.5T-*/RSC 4.5T/S1587</b> |

Where \* = 1, 2, 3, 4 meter standard lengths

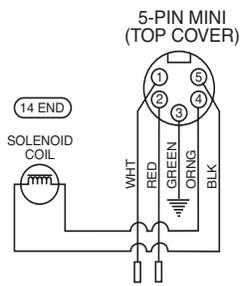


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

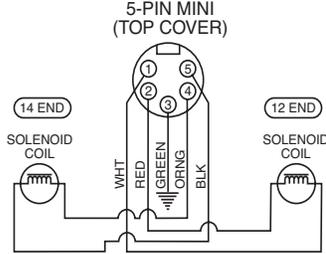
## Automotive Connection – Wiring Options

### ‘C’ Chrysler Connection

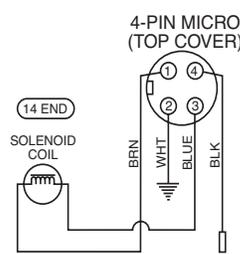
**5-Pin Male / Single Solenoid**  
 (Encl. Option 3, Auto Option C)



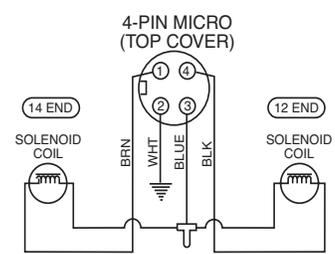
**5-Pin Male / Double Solenoid**  
 (Encl. Option 3, Auto Option C)



**4-Pin Male / Single Solenoid**  
 (Encl. Option 2, Auto Option C)

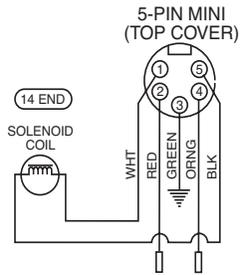


**4-Pin Male / Double Solenoid**  
 (Encl. Option 2, Auto Option C)

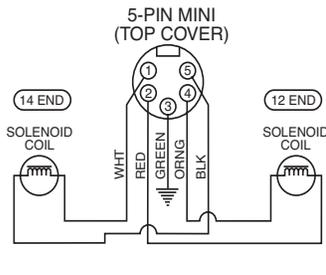


### ‘F’ SAE / Ford Wiring

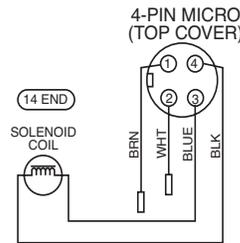
**5-Pin Male / Single Solenoid**  
 (Encl. Option 3, Auto Option F)



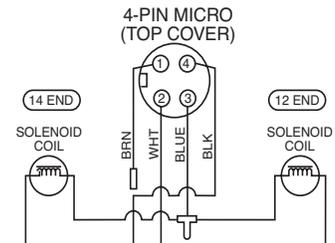
**5-Pin Male / Double Solenoid**  
 (Encl. Option 3, Auto Option F)



**ISO 20401**  
**4-Pin Male / Single Solenoid**  
 (Encl. Option 2, Auto Option F)

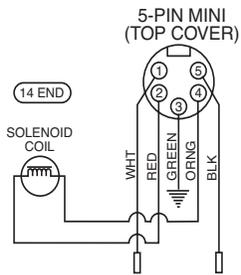


**ISO 20401**  
**4-Pin Male / Double Solenoid**  
 (Encl. Option 2, Auto Option F)

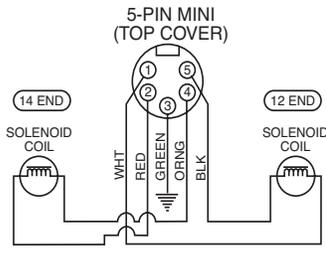


### ‘G’ GM Wiring

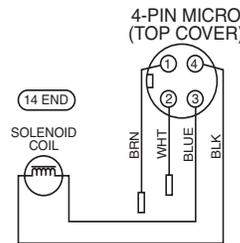
**5-Pin Male / Single Solenoid**  
 (Encl. Option 3, Auto Option G)



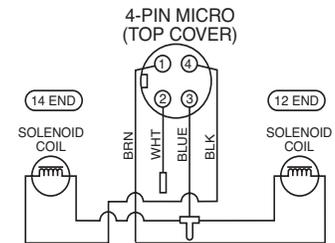
**5-Pin Male / Double Solenoid**  
 (Encl. Option 3, Auto Option G)



**4-Pin Male / Single Solenoid**  
 (Encl. Option 2, Auto Option G)

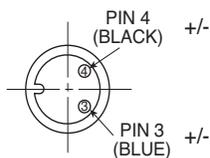


**4-Pin Male / Double Solenoid**  
 (Encl. Option 2, Auto Option G)

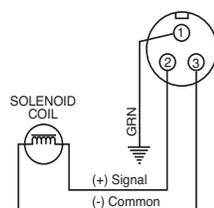


### CNOMO Connection - Wiring Options

**2-Pin Male / Single Solenoid**  
 (Encl. Option 6, Auto Option F)



**3-Pin Male / Single Solenoid**  
 (Encl. Option 1, Auto Options C, F & G)



Technical Data / Accessories

Maximum Number of Solenoids  
(Maximum energized simultaneously)

|                    | Voltage code  | 25-pin D-sub | 19-pin Brad Harrison | 12-Pin M23 | 19-pin M23 | P2H IO-Link Node | P2H Ethernet Node | PCH Portal | Turck Network Portal |            |
|--------------------|---------------|--------------|----------------------|------------|------------|------------------|-------------------|------------|----------------------|------------|
|                    |               |              |                      |            |            |                  |                   |            | 16 Outputs           | 32 Outputs |
| <b>HA &amp; HB</b> |               |              |                      |            |            |                  |                   |            |                      |            |
| 24VDC              | G9 (1.0 watt) | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | 24 (24)          | 32 (32)           | 32 (32)    | 16 (16)              | 32 (32)    |
| 120VAC*            | 23 (1.0 VA)   | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | N/A              | N/A               | N/A        | N/A                  | N/A        |
| <b>H1, H2</b>      |               |              |                      |            |            |                  |                   |            |                      |            |
| 12VDC              | 45 (2.4 watt) | 24 (13)      | 16 (13)              | 8 (8)      | 16 (13)    | N/A              | N/A               | N/A        | N/A                  | N/A        |
| 24VAC*             | 42 (4.0 VA)   | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | N/A              | N/A               | N/A        | N/A                  | N/A        |
| 24VDC              | B9 (3.2 watt) | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | 24 (24)†         | 32 (32)           | 32 (32)    | 16 (16)              | 32 (32)    |
| 24VDC              | F9 (1.3 watt) | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | 24 (24)†         | 32 (32)           | 32 (32)    | 16 (16)              | 32 (32)    |
| 120VAC*            | 23 (4.5 VA)   | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | N/A              | N/A               | N/A        | N/A                  | N/A        |
| <b>H3 Only</b>     |               |              |                      |            |            |                  |                   |            |                      |            |
| 12VDC              | 45 (2.4 watt) | 24 (13)      | 16 (13)              | 8 (8)      | 16 (13)    | N/A              | N/A               | N/A        | N/A                  | N/A        |
| 24VAC*             | 42 (4.0 VA)   | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | N/A              | N/A               | N/A        | N/A                  | N/A        |
| 24VDC              | B9 (3.2 watt) | 24 (20)      | 16 (16)              | 8 (8)      | 16 (16)    | 24 (24)†         | 32 (32)**         | N/A        | 16 (16)              | 24 (21)    |
| 24VDC              | F9 (1.3 watt) | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | 24 (24)†         | 32 (32)**         | N/A        | 16 (16)              | 24 (24)    |
| 120VAC*            | 23 (4.5 VA)   | 24 (24)      | 16 (16)              | 8 (8)      | 16 (16)    | N/A              | N/A               | N/A        | N/A                  | N/A        |

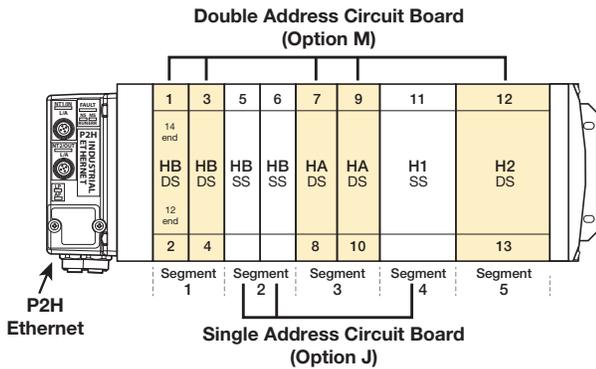
\* Not CSA certified for 25-pin, D-sub option.

\*\* Must use H Universal manifold end plate kit with transition kit to H3 manifold segments.

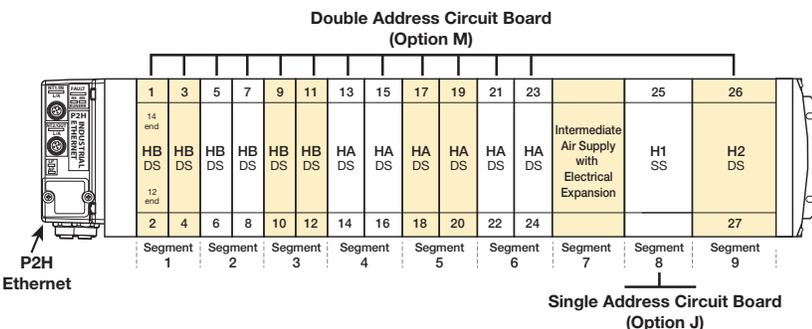
† Use Type A IO-Link module for 24 outputs simultaneously.

I/O Addressing Examples

HB, HA, H1, H2 - Five Segment Manifold Example



HB, HA, H1, H2 - Nine Segment Manifold with Intermediate Supply Example



**Notes:** SS = Single Solenoid Valve  
DS = Double Solenoid Valve  
First output address is the #14 end of the valve closest to the valve driver module.

Intermediate Module with Electrical Expansion to 25th address required for manifolds with greater than 24 solenoid addresses.

D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**Accessories**

**5599-2 & 5599-1 AUTO Solenoid Kits**

| Valve size  | Voltage code         | Coil kit number  |
|-------------|----------------------|------------------|
| H1, H2 & H3 | 42 (24VAC)           | <b>PS404142P</b> |
|             | 45 (12VDC)           | <b>PS404145P</b> |
|             | B9 (24VDC), 3.2 watt | <b>PS4041B9P</b> |
|             | F9 (24VDC), 1.3 watt | <b>PS4041F9P</b> |
|             | 23 (120VAC)          | <b>PS404123P</b> |
|             | 57 (240VAC)          | <b>PS404157P</b> |

Quantity 1

**Pilot Operator - CNOMO**

| Valve size  |               | Kit number      |
|-------------|---------------|-----------------|
| H1, H2 & H3 | Locking       | <b>PS4052CP</b> |
|             | Non-locking   | <b>PS4053CP</b> |
|             | Non-locking † | <b>PS4054CP</b> |

† F9 (1.3 watt) coil option only.

**Manifold Hardware Kits**

| Valve size       | Kit number     |
|------------------|----------------|
| HB, HA, H1, H2 * | <b>PSHU10P</b> |
| H3 **            | <b>PS4212P</b> |

\* Quantity 20

\*\* Quantity 12

**Valve Bolt Kits**

| Valve size | Kit number      |
|------------|-----------------|
| HB         | <b>PS5687P</b>  |
| HA         | <b>PS5587P</b>  |
| H1         | <b>PS4087DP</b> |
| H2         | <b>PS4187DP</b> |
| H3         | <b>PS4287DP</b> |

Quantity 12

**Valve to Base Gasket Kits**

| Valve size | Standard        | Remote pilot    | Dual pressure #3 | Dual pressure #5 |
|------------|-----------------|-----------------|------------------|------------------|
| HB         | <b>PS5605P*</b> | —               | —                | —                |
| HA         | <b>PS5505P*</b> | —               | —                | —                |
| H1         | <b>PS4005DP</b> | <b>PS4006DP</b> | <b>PS40D3DP</b>  | —                |
| H2         | <b>PS4105DP</b> | <b>PS4106DP</b> | <b>PS41D3DP</b>  | <b>PS41D5DP</b>  |
| H3         | <b>PS4205DP</b> | <b>PS4206DP</b> | <b>PS42D3DP</b>  | <b>PS42D5DP</b>  |

Quantity 1

\* Quantity 10

**5599-1 CNOMO Solenoid Kits**

| Voltage code | 3-pin, 30mm 'L' coil kit | 2-pin, M12 Euro '6' coil kit |
|--------------|--------------------------|------------------------------|
| 19           | —                        | <b>PS2828619P</b>            |
| 42           | <b>P2FCA442</b>          | —                            |
| 45           | <b>P2FCA445</b>          | —                            |
| 49           | <b>P2FCA449</b>          | —                            |
| 53           | <b>P2FCA453</b>          | —                            |
| 57           | <b>P2FCA457</b>          | —                            |

Quantity 1

**Body Service Kits**

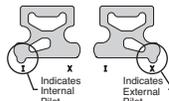
| Valve size | 2-position      | 3-position      |                 |                 |
|------------|-----------------|-----------------|-----------------|-----------------|
|            |                 | APB             | CE              | PC              |
| HB         | <b>PS5601P</b>  | <b>PS5602P</b>  | <b>PS5603P</b>  | <b>PS5604P</b>  |
| HA         | <b>PS5501P</b>  | <b>PS5502P</b>  | <b>PS5503P</b>  | <b>PS5504P</b>  |
| H1         | <b>PS4001CP</b> | <b>PS4002CP</b> | <b>PS4003CP</b> | <b>PS4004CP</b> |
| H2         | <b>PS4101CP</b> | <b>PS4102CP</b> | <b>PS4103CP</b> | <b>PS4104CP</b> |
| H3         | <b>PS4201CP</b> | <b>PS4202CP</b> | <b>PS4203CP</b> | <b>PS4204CP</b> |

HB / HA Kit Includes: Spool assembly with seals.

H1, H2, H3 Kit Includes: Spool assembly with seals, all piston seals, return spring, pilot selector gasket, coil to end cap gasket.

Quantity 1

**Pilot Select Gasket Kits**

|  | Valve size  | Part number    |
|--|-------------|----------------|
|   | HB          | <b>PS5605P</b> |
|   | HA          | <b>PS5505P</b> |
|  | H1, H2 & H3 | <b>PS4007P</b> |

Quantity 10

**Regulator Kits**

| Valve size | Part number    |
|------------|----------------|
| H1         | <b>PS4039P</b> |
| H2, H3     | <b>PS4139P</b> |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Accessories**

**Regulator & Flow Control Mounting Studs**

| Valve type | Type                     | Part number    |
|------------|--------------------------|----------------|
| HB         | Flow Control & Regulator | <b>PS5636P</b> |
| HA         | Flow Control & Regulator | <b>PS5536P</b> |
| H1         | Flow Control             | <b>PS4036P</b> |
|            | Regulator                | <b>PS4040P</b> |
| H2         | Flow Control             | <b>PS4136P</b> |
|            | Regulator                | <b>PS4140P</b> |
| H3         | Flow Control             | <b>PS4236P</b> |
|            | Regulator                | <b>PS4240P</b> |

Quantity 12

**Regulator Gauge Kits – Size H1, H2 & H3**

| Gauge type                      | Part number        |
|---------------------------------|--------------------|
| <b>1" Face Air - Standard</b>   |                    |
| 0 to 60 PSIG                    | <b>PS4051060BP</b> |
| 0 to 160 PSIG                   | <b>PS4051160BP</b> |
| <b>1-1/2" Face Air - Large*</b> |                    |
| 0 to 60 PSIG                    | <b>PS4053060BP</b> |
| 0 to 160 PSIG                   | <b>PS4053160BP</b> |
| <b>1-1/2" Face Liquid*</b>      |                    |
| 0 to 160 PSIG                   | <b>PS4052160BP</b> |

\* Includes brass pipe fitting extensions  
Quantity 1

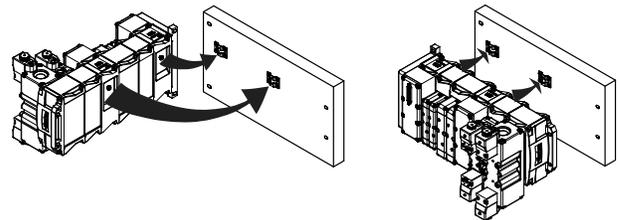
**Pilot By-Pass Plate**

| Valve size | Part number     |
|------------|-----------------|
| H1, H2, H3 | <b>PS4051CP</b> |

Quantity 10

**Installation Bracket**

| Bracket   | Part number    |
|---|----------------|
|  Bracket and Bolt (Quantity 2) | <b>PSHU60P</b> |

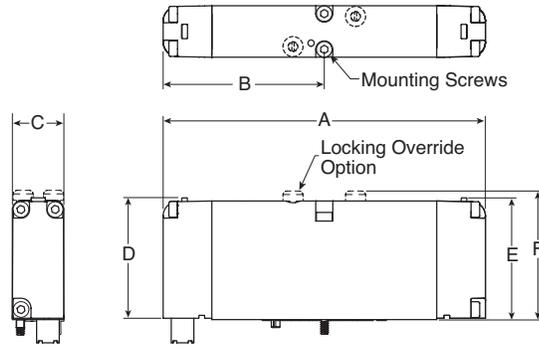


**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**H Series ISO 15407-2, Plug-in, Size 18mm (HB)**

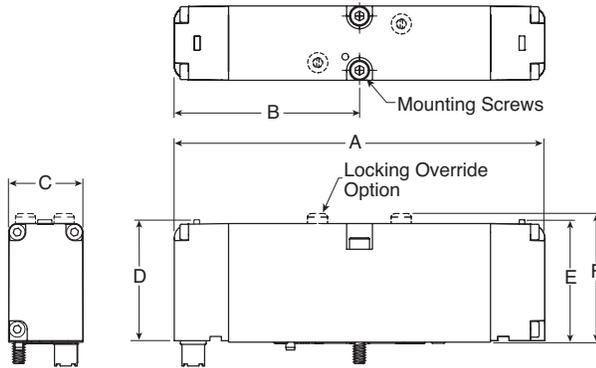


**18mm Dimensions**

| A             | B            | C           | D            |
|---------------|--------------|-------------|--------------|
| 4.43<br>(113) | 2.22<br>(56) | .72<br>(18) | 1.98<br>(50) |
| E             | F            |             |              |
| 1.68<br>(43)  | 1.77<br>(45) |             |              |

Inches (mm)

**H Series ISO 15407-2, Plug-in, Size 26mm (HA)**

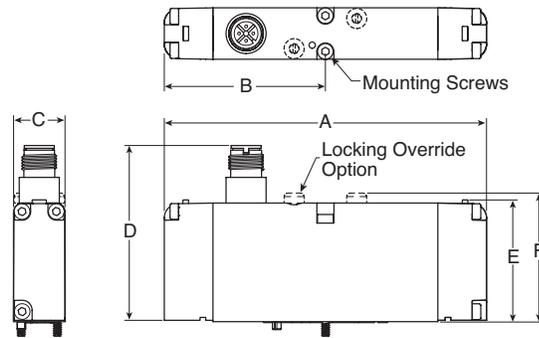


**26mm Dimensions**

| A             | B            | C            | D            |
|---------------|--------------|--------------|--------------|
| 5.10<br>(130) | 2.55<br>(65) | 1.02<br>(26) | 1.98<br>(50) |
| E             | F            |              |              |
| 1.68<br>(43)  | 1.77<br>(45) |              |              |

Inches (mm)

**H Series ISO 15407-1, Non Plug-in, Size 18mm (HB)**

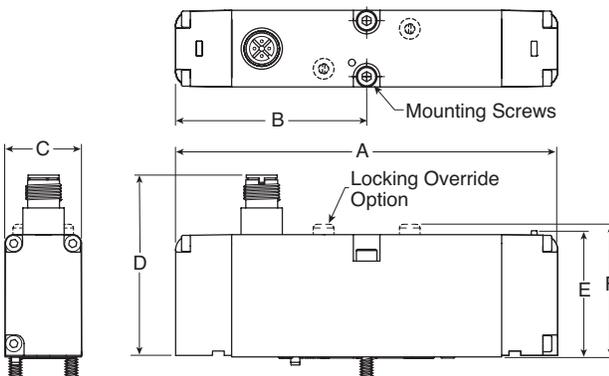


**18mm Dimensions**

| A             | B            | C           | D            |
|---------------|--------------|-------------|--------------|
| 4.43<br>(113) | 2.22<br>(56) | .72<br>(18) | 2.40<br>(61) |
| E             | F            |             |              |
| 1.68<br>(43)  | 1.77<br>(45) |             |              |

Inches (mm)

**H Series ISO 15407-1, Non Plug-in, Size 26mm (HA)**



**26mm Dimensions**

| A             | B            | C            | D            |
|---------------|--------------|--------------|--------------|
| 5.10<br>(130) | 2.55<br>(65) | 1.02<br>(26) | 2.40<br>(61) |
| E             | F            |              |              |
| 1.68<br>(43)  | 1.77<br>(45) |              |              |

Inches (mm)



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 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

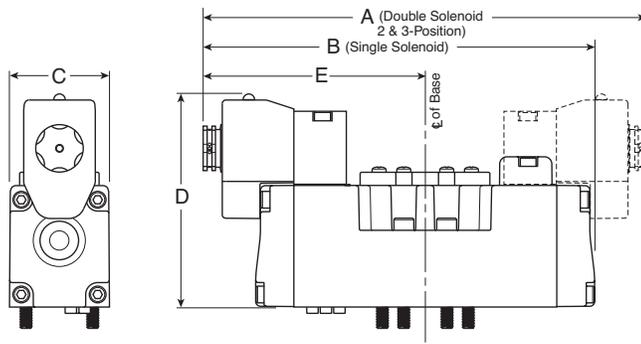
Network Connectivity

DX ISOMAX Series

Valvair II Series

**Dimensional Data**

**H Series ISO 5599-2**



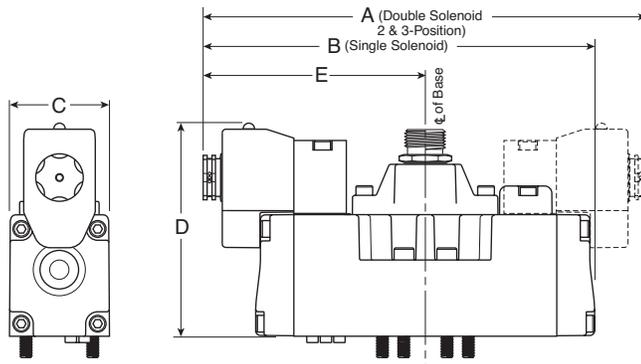
**H1 Valves Shown**

**H1 Dimensions**

| A              | A <sub>1</sub> | B              | C              |
|----------------|----------------|----------------|----------------|
| 7.32<br>(186)  | 5.59<br>(142)  | 6.46<br>(164)  | 1.65<br>(42)   |
| D              | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> |
| 3.54<br>(90)   | 4.29<br>(109)  | 4.29<br>(109)  | 2.50<br>(63.5) |
| D <sub>4</sub> | E              | E <sub>1</sub> |                |
| 2.48<br>(63)   | 3.66<br>(93)   | 2.80<br>(71)   |                |

Inches (mm)

**H Series ISO 5599-1 Auto**

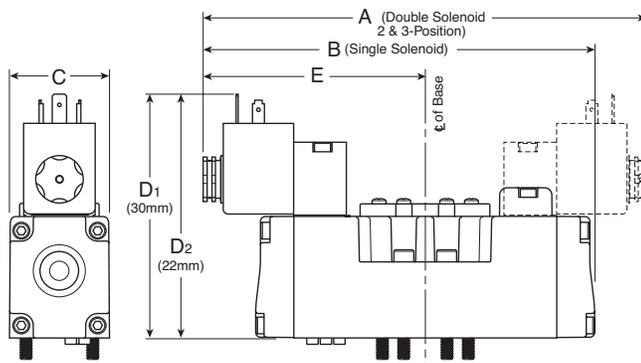


**H2 Dimensions**

| A             | A <sub>1</sub> | B              | C              |
|---------------|----------------|----------------|----------------|
| 8.35<br>(212) | 6.62<br>(168)  | 7.48<br>(190)  | 2.17<br>(55)   |
| D             | D <sub>1</sub> | D <sub>2</sub> | D <sub>3</sub> |
| 4.05<br>(103) | 4.80<br>(122)  | 4.57<br>(116)  | 2.99<br>(76)   |
| E             | E <sub>1</sub> |                |                |
| 4.17<br>(106) | 3.31<br>(84)   |                |                |

Inches (mm)

**H Series ISO 5599-1 CNOMO**

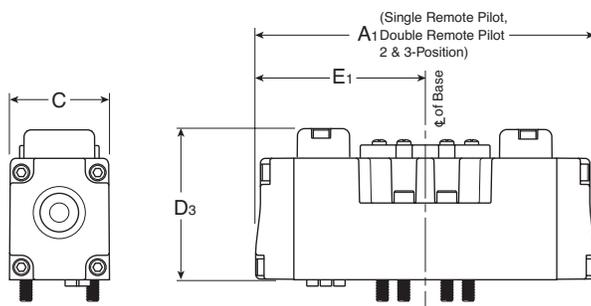


**H3 Dimensions**

| A             | A <sub>1</sub>  | B              | C              |
|---------------|-----------------|----------------|----------------|
| 9.68<br>(246) | 6.98<br>(196.7) | 8.68<br>(220)  | 2.17<br>(65.5) |
| D             | D <sub>1</sub>  | D <sub>2</sub> | D <sub>3</sub> |
| 4.05<br>(103) | 4.80<br>(122)   | 4.57<br>(116)  | 2.99<br>(76)   |
| E             | E <sub>1</sub>  |                |                |
| 4.74<br>(121) | 3.49<br>(89)    |                |                |

Inches (mm)

**H Series ISO 5599-2 / 5599-1 Remote Pilot**



**D**

Subbase & Manual  
Valves

H Series  
Micro

Modulflex  
Series

H Series  
ISO

Network  
Connectivity

DX ISOMAX  
Series

Valvair II  
Series

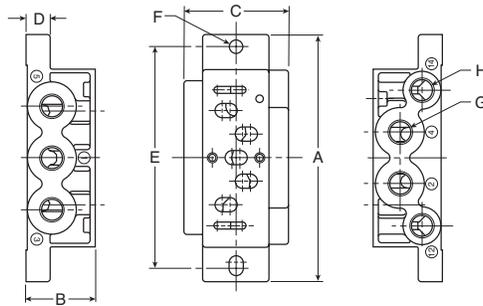


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**HB Series ISO 15407-1, Size 18mm (HB) Single Subbase**

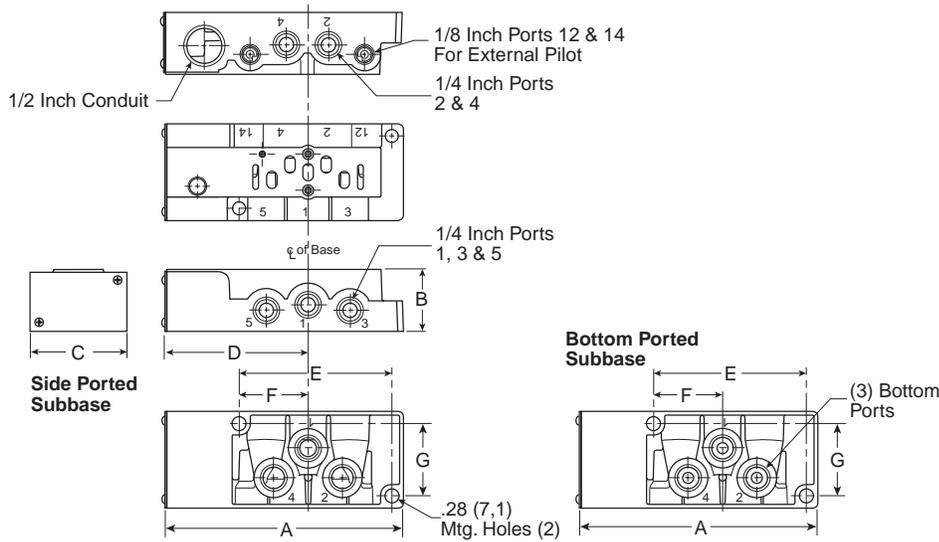


**HB Dimensions (PL02)**

| A            | B                                 | C            | D          |
|--------------|-----------------------------------|--------------|------------|
| 3.15<br>(80) | .87<br>(22)                       | 1.06<br>(27) | .31<br>(8) |
| E            | F                                 | G            | H          |
| 2.76<br>(70) | .216 Dia.<br>( $\varnothing$ 5.5) | 1/8          | M5         |

Inches (mm)

**H Series ISO 15407-2 & 15407-1 Size 26mm (HA), Plug-in Subbases**



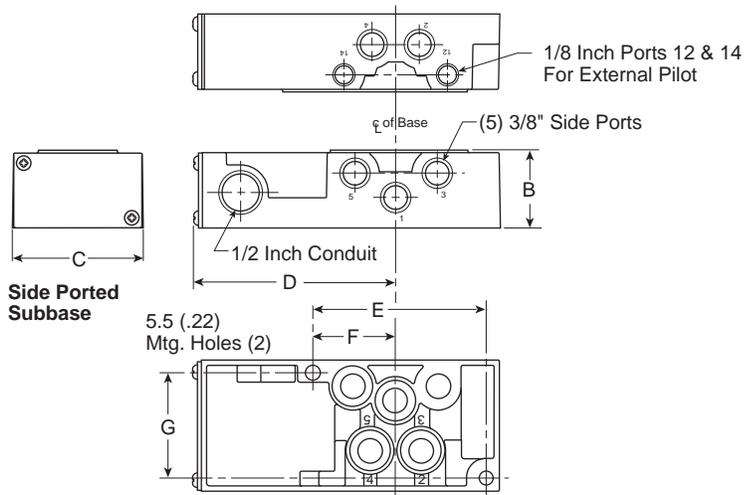
**HA Dimensions**

| A              | B              | C              | D            |
|----------------|----------------|----------------|--------------|
| 4.88<br>(124)  | 1.28<br>(32.5) | 2.00<br>(50.8) | 2.91<br>(74) |
| E              | F              | G              |              |
| 1.43<br>(36.2) | 3.16<br>(80.2) | 1.49<br>(37.9) |              |

Inches (mm)

**Dimensional Data**

**H Series ISO 5599-1 Size H1, PS4011 Subbase**

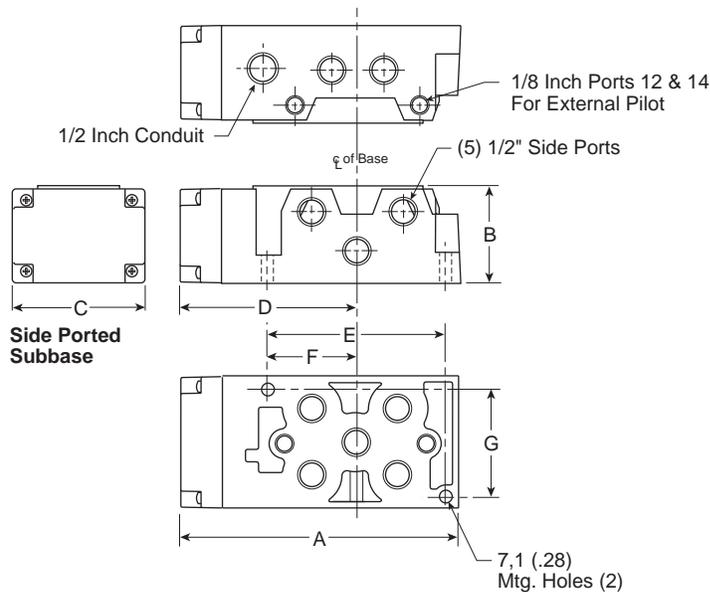


**PS4011 Subbase Dimensions**

| A             | B            | C            | D            |
|---------------|--------------|--------------|--------------|
| 5.83<br>(148) | 1.48<br>(38) | 2.50<br>(64) | 3.86<br>(98) |
| E             | F            | G            |              |
| 3.29<br>(84)  | 1.57<br>(40) | 2.00<br>(51) |              |

Inches (mm)

**H Series ISO 5599-1 Size H2, PS4111 Subbase**



**PS4111 Subbase Dimensions**

| A             | B            | C            | D             |
|---------------|--------------|--------------|---------------|
| 6.69<br>(170) | 2.33<br>(59) | 3.15<br>(80) | 4.25<br>(108) |
| E             | F            | G            |               |
| 4.21<br>(107) | 2.07<br>(52) | 2.56<br>(65) |               |

Inches (mm)

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

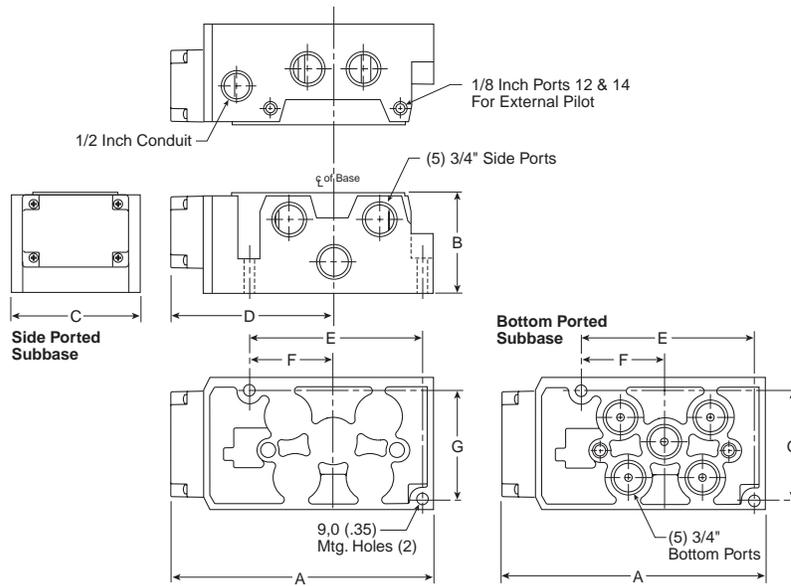
DX ISOMAX Series

Valvair II Series



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**H Series ISO 5599-1 Size H3, PS4211 Subbase**

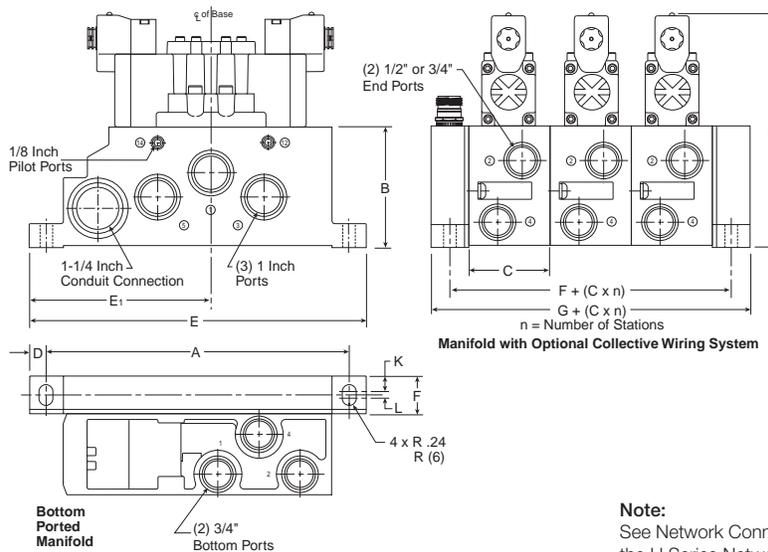


**PS4211 Subbase Dimensions**

| A             | B            | C            | D             |
|---------------|--------------|--------------|---------------|
| 7.90<br>(201) | 2.96<br>(75) | 3.90<br>(99) | 4.92<br>(125) |
| E             | F            | G            |               |
| 5.14<br>(131) | 2.50<br>(64) | 3.24<br>(82) |               |

Inches (mm)

**H Series ISO 5599 Size H3, PS4211 Manifold**



**PS4211 Manifold Dimensions**

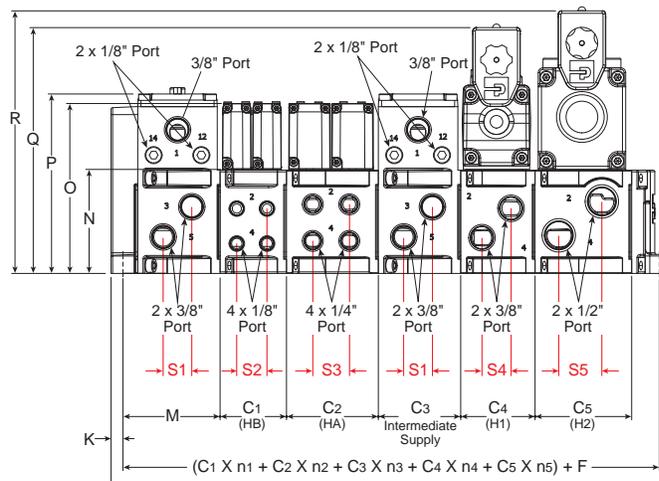
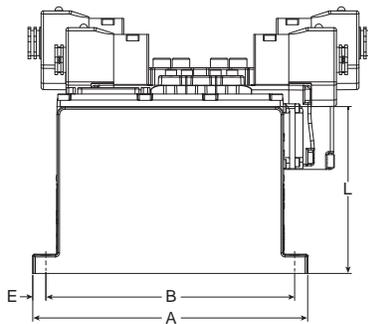
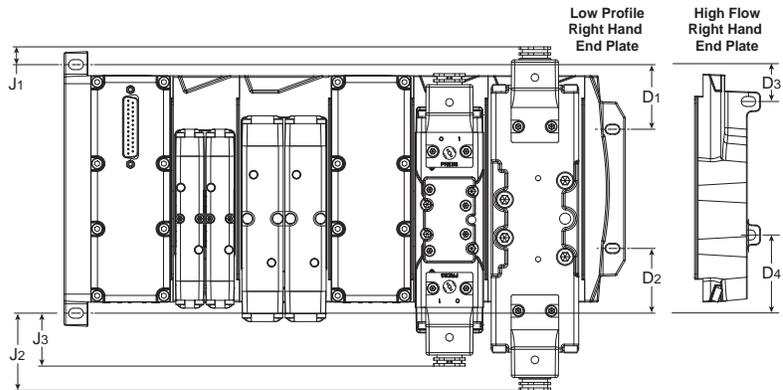
| A              | B             | C            | D             | E              |
|----------------|---------------|--------------|---------------|----------------|
| 10.41<br>(265) | 4.13<br>(105) | 2.80<br>(71) | .59<br>(15)   | 11.61<br>(295) |
| E <sub>1</sub> | F             | G            | H             |                |
| 6.26<br>(159)  | 1.30<br>(33)  | 2.60<br>(63) | 8.19<br>(208) |                |
| K              | L             |              |               |                |
| .53<br>(13.5)  | .24<br>(6)    |              |               |                |

Inches (mm)

**Note:**  
 See Network Connectivity Section for the dimensions of manifolds utilizing the H Series Network, Turck Network, or P2M Network Node end plate type.

**H Series ISO Universal Manifold**

Network Connectivity dimensions (P2H, Turck, H Net, and P2M) are located at the end of the Network Connectivity Section.



|                  |                 |                  |                  |                  |                 |                  |
|------------------|-----------------|------------------|------------------|------------------|-----------------|------------------|
| <b>A</b>         | <b>B</b>        | <b>C1</b>        | <b>C2</b>        | <b>C3</b>        | <b>C4</b>       | <b>C5</b>        |
| 6.81<br>(172.95) | 6.16<br>(156.5) | 1.65<br>(41.79)  | 2.28<br>(57.79)  | 2.04<br>(51.79)  | 1.84<br>(46.79) | 2.39<br>(60.79)  |
| <b>D1</b>        | <b>D2</b>       | <b>D3</b>        | <b>D4</b>        | <b>E</b>         | <b>F</b>        | <b>G</b>         |
| 1.60<br>(40.71)  | 1.60<br>(40.71) | 0.96<br>(24.3)   | 1.92<br>(48.8)   | 0.32<br>(8.0)    | 3.09<br>(78.58) | 4.39<br>(111.58) |
| <b>J1</b>        | <b>J2</b>       | <b>J3</b>        | <b>K</b>         | <b>L</b>         | <b>M</b>        | <b>N</b>         |
| 0.44<br>(11.2)   | 1.92<br>(48.7)  | 1.31<br>(33.3)   | 0.30<br>(7.5)    | 4.14<br>(105.08) | 2.40<br>(61.08) | 1.92<br>(48.7)   |
| <b>O</b>         | <b>P</b>        | <b>Q</b>         | <b>R</b>         | <b>S1</b>        | <b>S2</b>       | <b>S3</b>        |
| 4.21<br>(107)    | 4.45<br>(113)   | 6.09<br>(154.77) | 6.51<br>(165.32) | 0.71<br>(18)     | 0.75<br>(19)    | 0.91<br>(23)     |
| <b>S4</b>        | <b>S5</b>       |                  |                  |                  |                 |                  |
| 0.72<br>(18.3)   | 1.07<br>(27.1)  |                  |                  |                  |                 |                  |

Inches (mm)

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

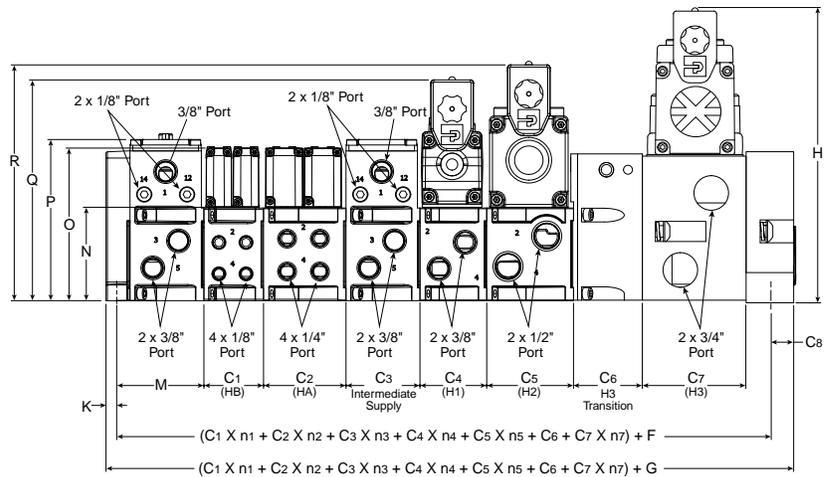
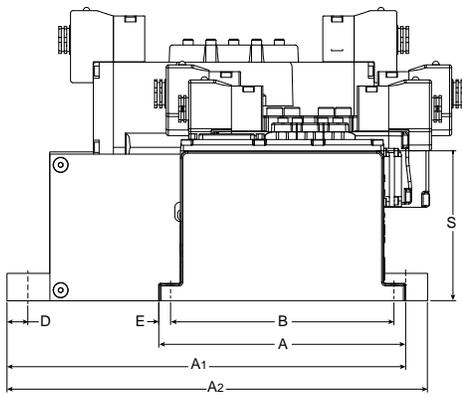
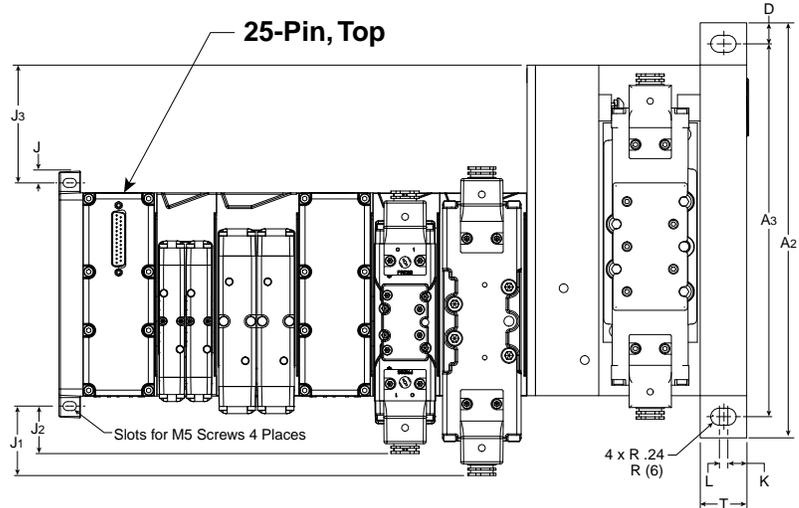
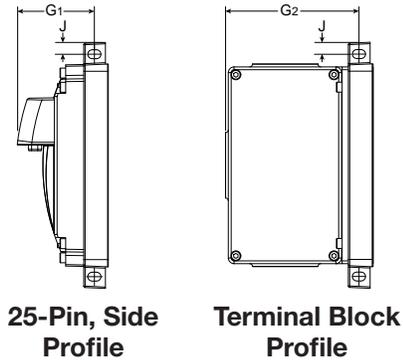
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**H Series ISO Universal Manifold with H3 Transition**

Network Connectivity dimensions (P2H, Turck, H Net, and P2M) are located at the end of the Network Connectivity Section.



|                              |                                |                              |                             |                             |                              |                              |                              |                              |                              |                             |                              |
|------------------------------|--------------------------------|------------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|------------------------------|
| <b>A</b><br>6.81<br>(172.95) | <b>A1</b><br>12.34<br>(313.43) | <b>A2</b><br>14.0<br>(365.3) | <b>A3</b><br>10.41<br>(265) | <b>B</b><br>6.16<br>(156.5) | <b>C1</b><br>1.65<br>(41.79) | <b>C2</b><br>2.28<br>(57.79) | <b>C3</b><br>2.04<br>(51.79) | <b>C4</b><br>1.84<br>(46.79) | <b>C5</b><br>2.39<br>(60.79) | <b>C6</b><br>2.00<br>(51.0) | <b>C7</b><br>2.80<br>(71.0)  |
| <b>C8</b><br>0.95<br>(16.5)  | <b>D</b><br>0.59<br>(15.0)     | <b>E</b><br>0.32<br>(8.0)    | <b>F</b><br>3.05<br>(77.58) | <b>G</b><br>4.00<br>(101.6) | <b>G1</b><br>2.13<br>(54.0)  | <b>G2</b><br>3.69<br>(93.8)  | <b>H</b><br>8.19<br>(208)    | <b>J</b><br>0.33<br>(8.3)    | <b>J1</b><br>1.92<br>(48.7)  | <b>J2</b><br>1.31<br>(33.3) | <b>J3</b><br>3.47<br>(88.25) |
| <b>K</b><br>0.30<br>(7.5)    | <b>L</b><br>0.24<br>(6.0)      | <b>M</b><br>2.40<br>(61.08)  | <b>N</b><br>1.92<br>(48.7)  | <b>O</b><br>4.21<br>(107)   | <b>P</b><br>4.45<br>(113)    | <b>Q</b><br>6.09<br>(154.77) | <b>R</b><br>6.51<br>(165.32) | <b>S</b><br>4.14<br>(105.08) | <b>T</b><br>1.30<br>(33.0)   |                             |                              |

Inches (mm)

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

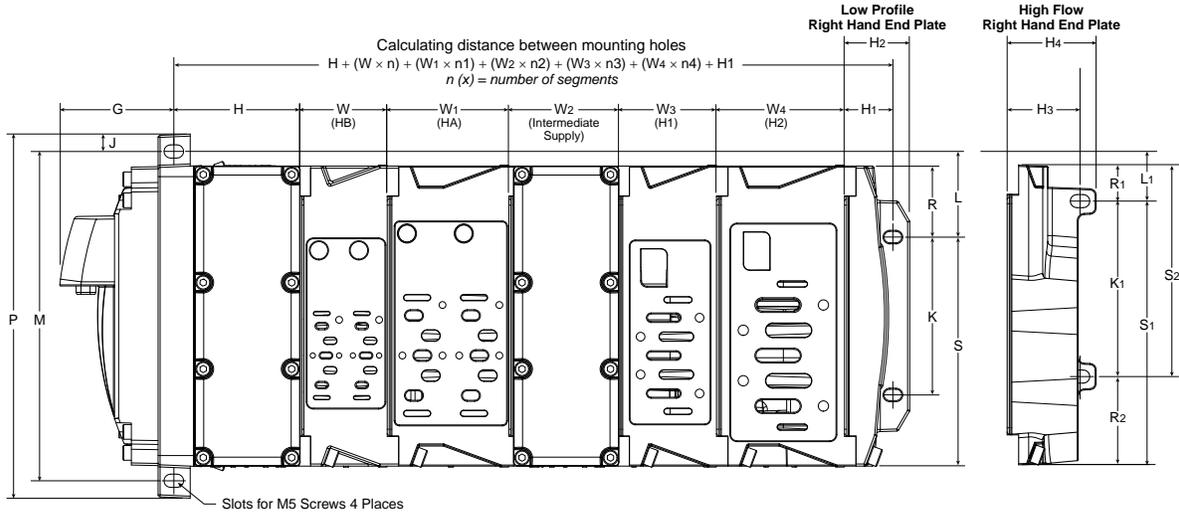


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**25-Pin Side with H Series ISO Valves**

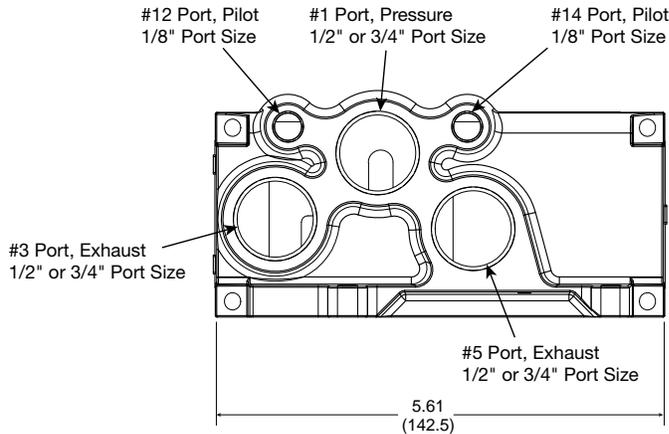


n (x) = number of segments

| G               | H               | H1              | H2              | H3             | H4             | J             | K              | K1             | L              | L1             | M               |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|---------------|----------------|----------------|----------------|----------------|-----------------|
| 2.13<br>(54.0)  | 2.36<br>(60.0)  | 0.90<br>(23.0)  | 1.22<br>(31.0)  | 1.36<br>(34.6) | 1.66<br>(42.3) | 0.33<br>(8.3) | 2.95<br>(75.0) | 3.28<br>(83.4) | 1.60<br>(40.7) | 0.96<br>(24.3) | 6.16<br>(156.5) |
| P               | S               | S1              | S2              | R              | R1             | R2            | W              | W1             | W2             | W3             | W4              |
| 6.81<br>(173.1) | 4.28<br>(108.8) | 4.93<br>(125.2) | 3.96<br>(100.7) | 1.33<br>(33.7) | 0.68<br>(17.3) | 1.6<br>(41.8) | 1.63<br>(41.3) | 2.28<br>(57.8) | 2.06<br>(52.3) | 1.82<br>(46.3) | 2.39<br>(60.8)  |

Inches (mm)

**Hi-Flow Right Hand End Plate**



**Hi-Flow Right Hand End Plate**

**PSHU41** 1/2" port size

**PSHU42** 3/4" port size

Inches (mm)



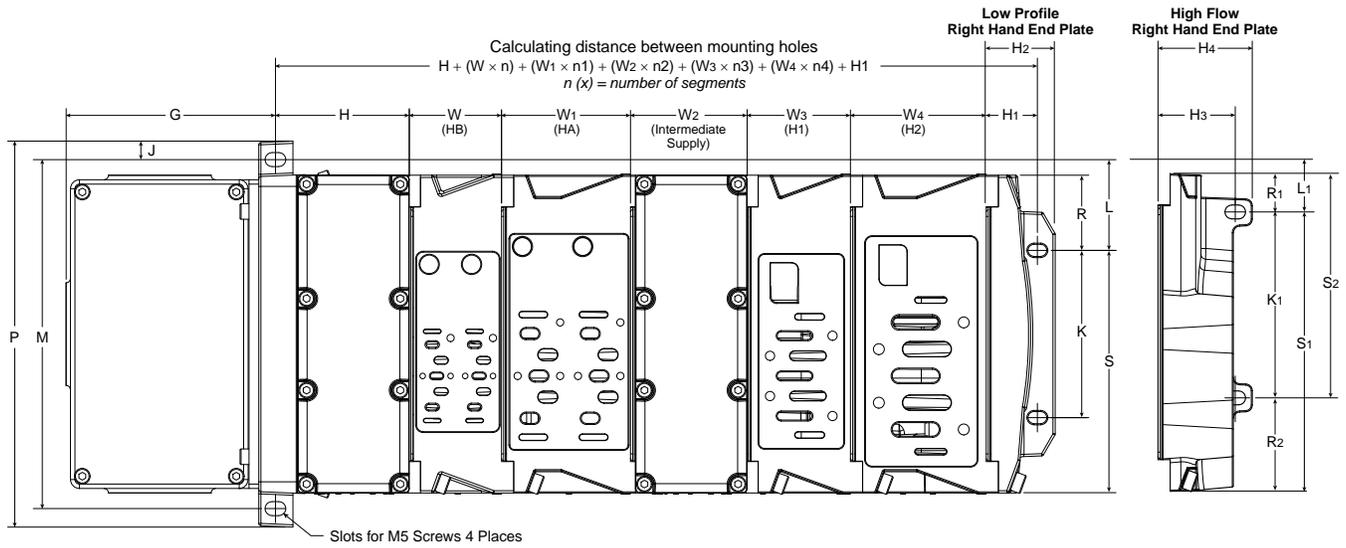
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

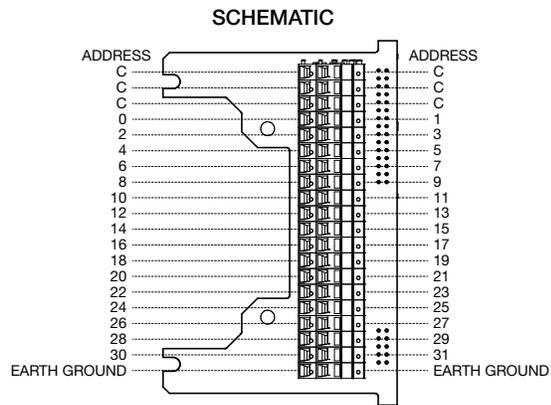
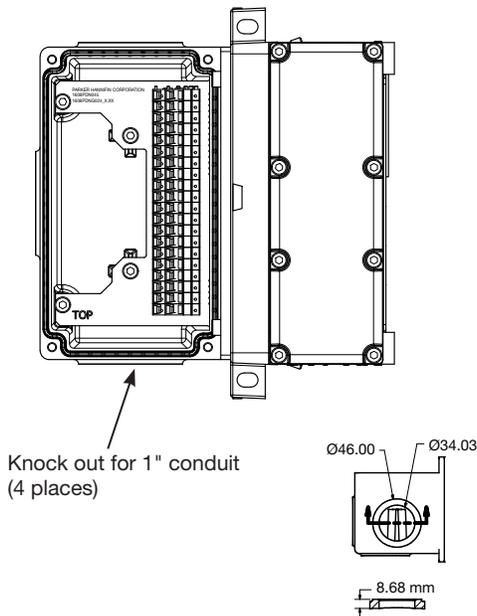
**Terminal Block with H Series ISO Valves**



n (x) = number of segments

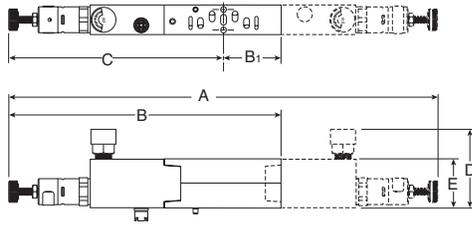
| G               | H               | H1              | H2              | H3             | H4             | J              | K              | K1             | L              | L1             | M               |
|-----------------|-----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| 3.69<br>(93.8)  | 2.36<br>(60.0)  | 0.90<br>(23.0)  | 1.22<br>(31.0)  | 1.36<br>(34.6) | 1.66<br>(42.3) | 0.33<br>(8.3)  | 2.95<br>(75.0) | 3.28<br>(83.4) | 1.60<br>(40.7) | 0.96<br>(24.3) | 6.16<br>(156.5) |
| P               | S               | S1              | S2              | R              | R1             | R2             | W              | W1             | W2             | W3             | W4              |
| 6.81<br>(173.1) | 4.28<br>(108.8) | 4.93<br>(125.2) | 3.96<br>(100.7) | 1.33<br>(33.7) | 0.68<br>(17.3) | 1.65<br>(41.8) | 1.63<br>(41.3) | 2.28<br>(57.8) | 2.06<br>(52.3) | 1.82<br>(46.3) | 2.39<br>(60.8)  |

Inches (mm)



All commons internally connected on terminal strip

**H Series ISO 15407, HB / HA Sandwich Regulator**

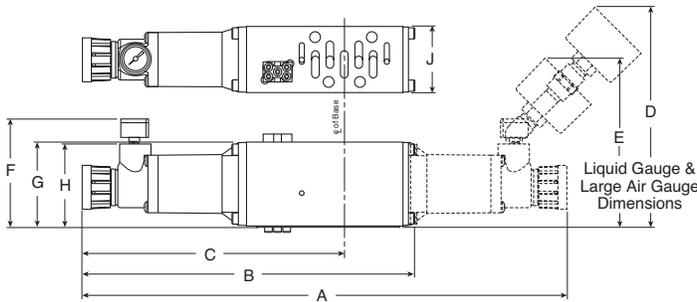


**HB / HA Series Sandwich Regulator, Dimensions**

|                    | A              | B             | B <sub>1</sub> | C             | D            | E            |
|--------------------|----------------|---------------|----------------|---------------|--------------|--------------|
| <b>HB (PS5637)</b> | 10.28<br>(261) | 6.14<br>(156) | 1.02<br>(26)   | 5.13<br>(130) | 2.60<br>(66) | 1.18<br>(30) |
| <b>HA (PS5537)</b> | 10.00<br>(254) | 6.42<br>(163) | 1.42<br>(36)   | 5.00<br>(127) | 2.72<br>(69) | 1.18<br>(30) |

Inches (mm)

**H Series ISO 5599, Size H1 Sandwich Regulator**



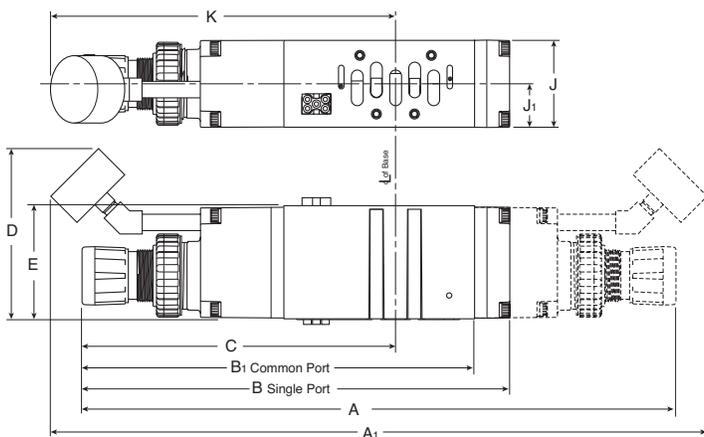
**H1 Series Sandwich Regulator, Dimensions**

|                    | A              | B             | C             | D             | E             | F            |
|--------------------|----------------|---------------|---------------|---------------|---------------|--------------|
| <b>H1 (PS4037)</b> | 11.84<br>(301) | 8.13<br>(207) | 6.40<br>(163) | 5.45<br>(138) | 4.25<br>(108) | 2.85<br>(72) |
| <b>(PS4038)</b>    | <b>G</b>       | <b>H</b>      | <b>J</b>      |               |               |              |
|                    | 2.09<br>(53)   | 2.05<br>(52)  | 1.63<br>(41)  |               |               |              |

Inches (mm)

**H Series ISO 5599, Size H2 & H3 Sandwich Regulator**

H2 Sandwich Regulator shown



**H2 & H3 Series Sandwich Regulator, Dimensions**

|                    | A              | A <sub>1</sub>       | B                    | B <sub>1</sub>       | C             | D             |
|--------------------|----------------|----------------------|----------------------|----------------------|---------------|---------------|
| <b>H2 (PS4137)</b> | 14.65<br>(372) | 16.18<br>(411)       | 10.56<br>(268)       | 9.84<br>(250)        | 7.71<br>(196) | 4.20<br>(107) |
| <b>(PS4138)</b>    | <b>E</b>       | <b>J</b>             | <b>J<sub>1</sub></b> | <b>K</b>             |               |               |
|                    | 2.80<br>(71)   | 2.15<br>(55)         | 1.07<br>(27)         | 8.50<br>(216)        |               |               |
| <b>H3 (PS4237)</b> | <b>A</b>       | <b>A<sub>1</sub></b> | <b>B</b>             | <b>B<sub>1</sub></b> | <b>C</b>      | <b>D</b>      |
| <b>(PS4238)</b>    | 15.67<br>(398) | 17.15<br>(436)       | 11.53<br>(293)       | 10.67<br>(271)       | 8.37<br>(213) | 4.20<br>(107) |
|                    | <b>E</b>       | <b>J</b>             | <b>J<sub>1</sub></b> | <b>K</b>             |               |               |
|                    | 2.93<br>(75)   | 2.50<br>(64)         | 1.25<br>(32)         | 9.10<br>(231)        |               |               |

Inches (mm)

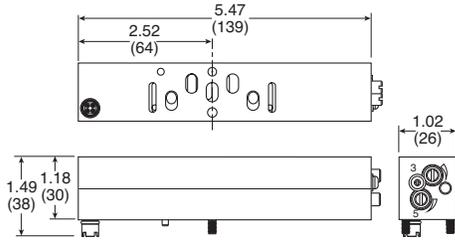
**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



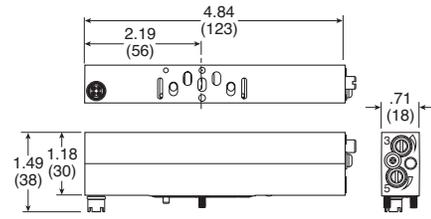
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**H Series ISO 15407, Size 18mm (HB) & 26mm (HA), Flow Control**

**HA Flow Control**

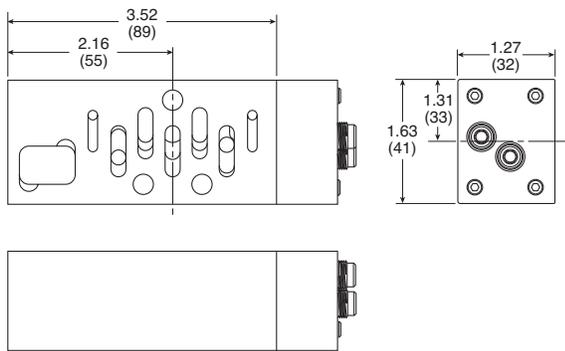


**HB Flow Control**

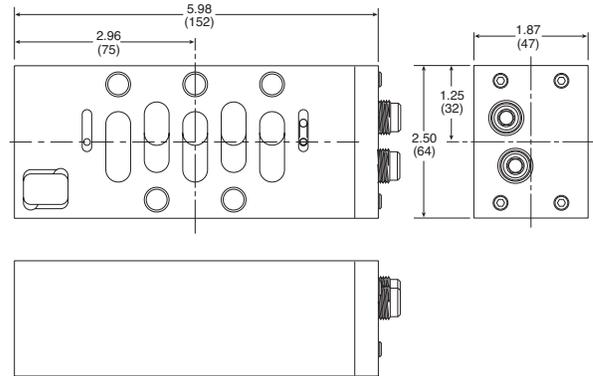


**H Series ISO 5599, Size H1, H2 & H3, Flow Control**

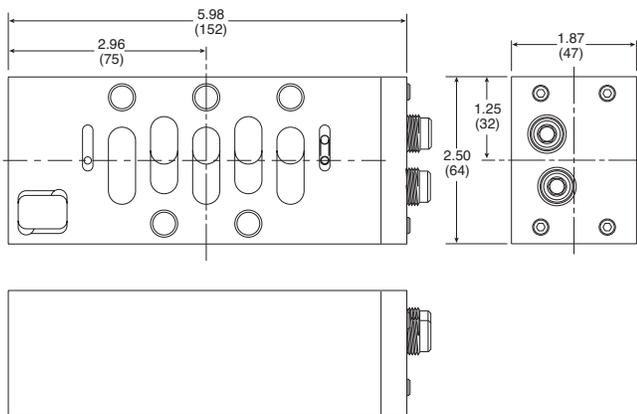
**H1 Flow Control**



**H2 Flow Control**



**H3 Flow Control**



**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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Valves

H Series  
Micro

Modulflex  
Series

H Series  
ISO

Network  
Connectivity

DXISOMAX  
Series

Valvair II  
Series



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Features

Network Connectivity

Offering

| Valve series   | P2M | P2H IO-Link | P2H Ethernet | PCH | Turck BL67 |
|----------------|-----|-------------|--------------|-----|------------|
| Moduflex       | X   |             |              |     |            |
| H Series Micro | X   |             |              |     | X          |
| H Series ISO   |     | X           | X            | X   | X          |

| Protocol     | P2M | P2H IO-Link | P2H Ethernet | PCH | Turck BL67 |
|--------------|-----|-------------|--------------|-----|------------|
| IO-Link      | X   | X           |              | X   |            |
| DeviceNet    |     |             |              |     | X          |
| EtherNet/IP™ | X   |             | X            | X   | X          |
| PROFIBUS-DP  |     |             |              |     | X          |
| PROFINET     | X   |             | X            | X   | X          |
| Modbus/TCP   | X   |             | X            | X   | X          |
| EtherCAT     | X   |             | X            | X   |            |
| PowerLink    | X   |             | X            |     |            |
| CANopen      |     |             |              |     | X          |

| Options                            | P2M | P2H IO-Link | P2H Ethernet | PCH | Turck BL67 |
|------------------------------------|-----|-------------|--------------|-----|------------|
| 24 Solenoid control                | X*  | X           |              |     | X          |
| 32 Solenoid control                |     |             | X            | X   | X          |
| Digital inputs / outputs           |     |             |              | X   | X          |
| Analog inputs / outputs            |     |             |              |     | X          |
| Class A IO-Link master module      |     |             |              | X   | X          |
| Class B IO-Link Master module      |     |             |              | X   |            |
| Short circuit protection on inputs |     |             |              | X   | X          |
| Current sensing outputs            |     |             |              | X   | X          |
| DeviceNet subnet                   |     |             |              |     | X          |
| Power over DeviceNet / CANopen     |     |             |              |     | X          |
| CANopen expansion                  |     |             |              |     | X          |

\* Only 19 usable when used with Moduflex Valve

P2M Network Nodes (shown on H Micro & Moduflex)



Moduflex



H Micro

P2H Network Node: IO-Link (shown on H Series ISO)



Class A



Class B

P2H Network Node: Industrial Ethernet (shown on H Series ISO)



PCH Network Portal (shown on H Series ISO)



Turck Network Portal (shown on H Series ISO)



D

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

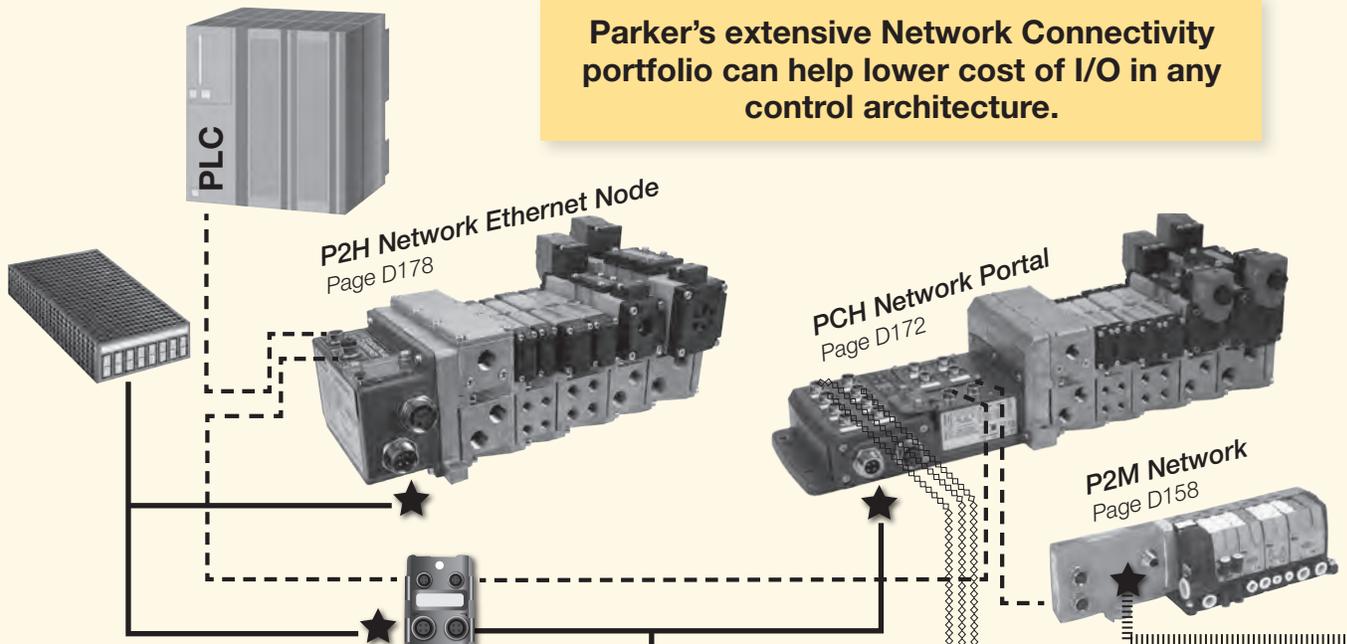
Valvair II Series



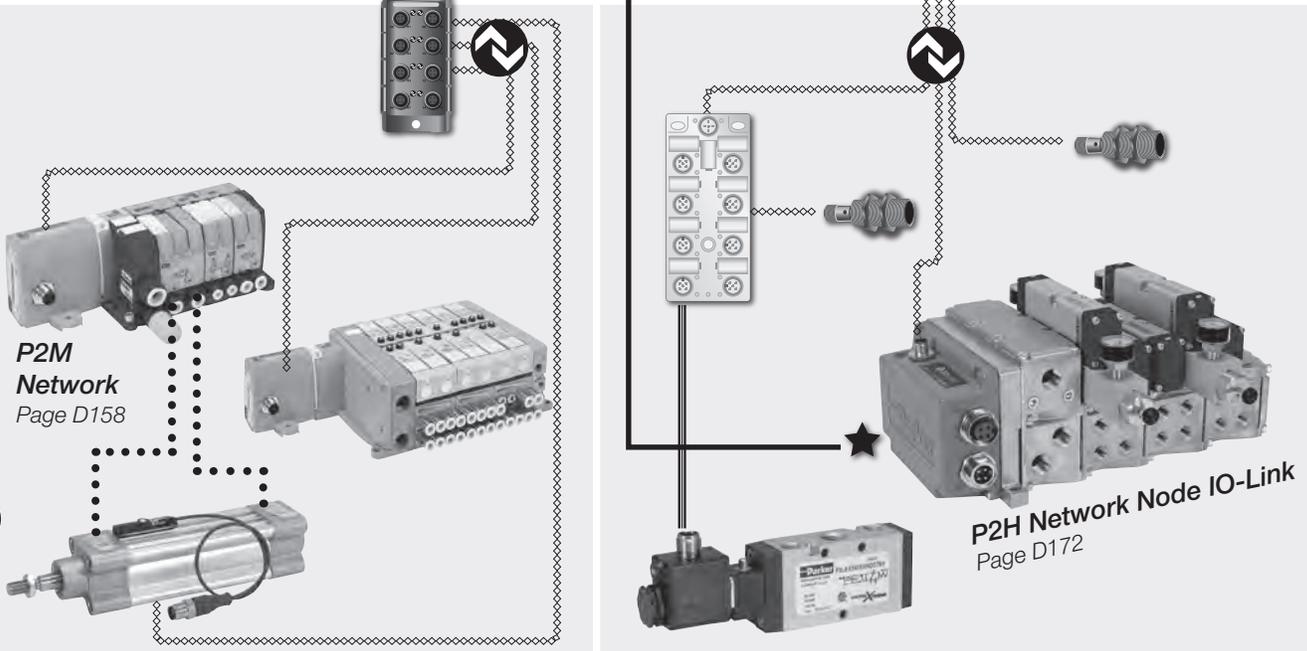
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Industrial Ethernet**

**Parker's extensive Network Connectivity portfolio can help lower cost of I/O in any control architecture.**



**IO-Link**



**Network to Remote IO-Link Master**  
 Reduce cabinet size by using a de-centralized "on-machine" IO-Link Master

- \* Control all local I/O with IO-Link Masters
  - Discrete I/O
  - "Smart" I/O
  - P2M IO-Link Class B & CPS pictured  
[see www.parker.com/pdn/CPS](http://www.parker.com/pdn/CPS)  
 and [www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)

**Node Expansion Using IO-Link**

- Reduce node count by adding an IO-Link Master module onto Turck Network manifold
- \* 20m max length for I/O-Link cables
- \* Control all "smart I/O" on 1 node
- \* Reduce cost of secondary valve manifold
  - P2H IO-Link Class A pictured  
 see [www.parker.com/pdn/P2H\\_IOL](http://www.parker.com/pdn/P2H_IOL)

**D**

Subbase & Manual  
 Valves

H Series  
 Micro

Modulflex  
 Series

H Series  
 ISO

Network  
 Connectivity

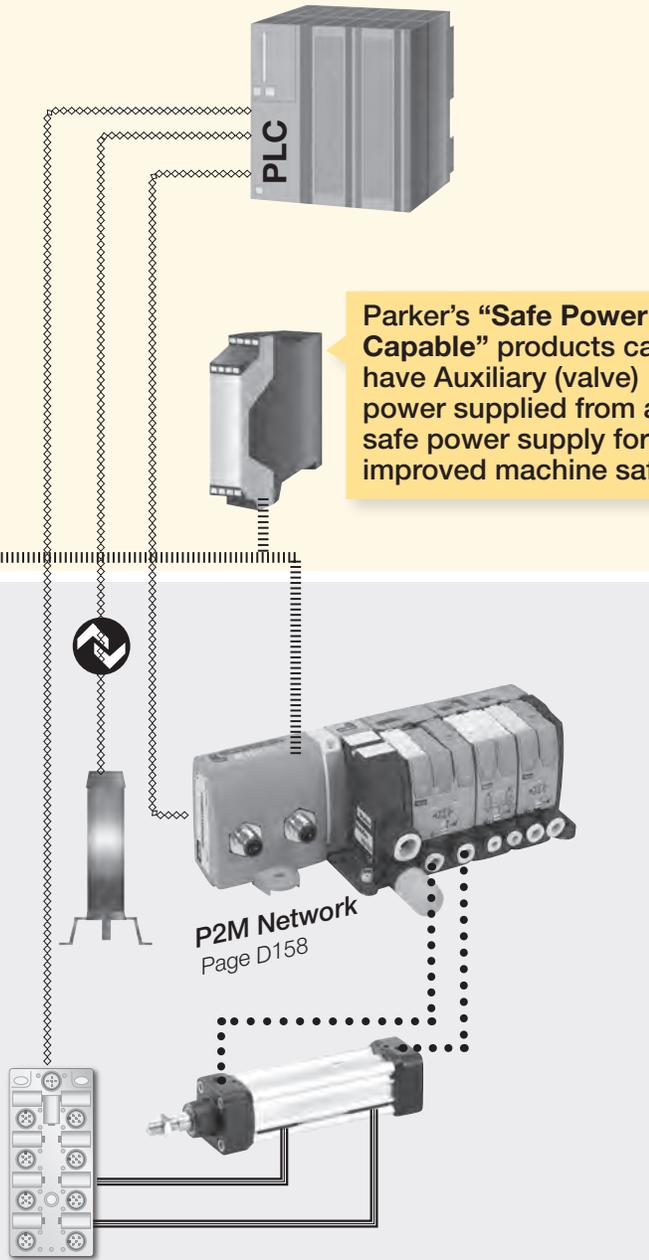
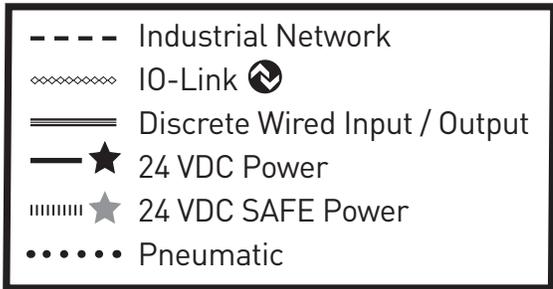
DX ISOMAX  
 Series

Valvair-II  
 Series

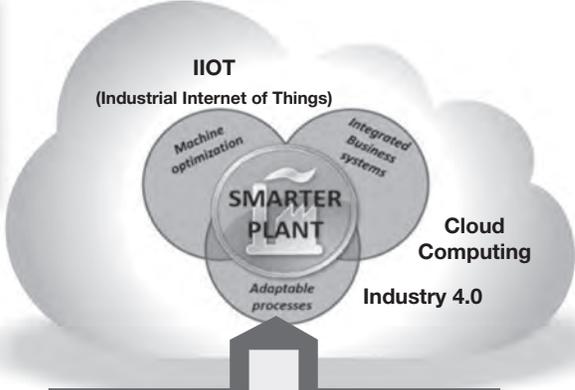


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Features



Parker's "Safe Power Capable" products can have Auxiliary (valve) power supplied from a safe power supply for improved machine safety.



**IO-Link** is another step towards the smarter plant by lowering the cost for gathering component level prognostics and diagnostics.

Out of Tolerance Warnings

- \* Voltage
- \* Temperature

Error Descriptors

- \* Solenoid short circuit
- \* IO-Link communication error cycle count for each valve

**Non-Network I/O Control Using IO-Link**  
Use PLC with integrated IO-Link Master for machines with smaller I/O counts

- \* 20m max length for I/O-Link cables
- \* Control all local I/O with IO-Link
  - Discrete I/O
  - "Smart" I/O
  - P2M IO-Link Class A pictured

**THIS IS EASIER** → Faster installation than discrete wiring  
Standard IP67 M12 cable

**THIS IS SAVINGS** → Fewer network nodes  
Easy expandability

**THIS IS VALUE** → Easy access diagnostics  
Prognostics to prevent downtime



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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|                  |                         |
|------------------|-------------------------|
| D                | Subbase & Manual Valves |
| H Series Micro   | H Series ISO            |
| Moduflex Series  | Network Connectivity    |
| DX ISOMAX Series | Valvair II Series       |

**System Overview - Discrete Wiring**

- Up to 24 solenoids per manifold (19 when used with Moduflex Valve)
- Discretely wired solenoids - optimized for PLCs with onboard inputs and outputs
- 25-Pin D-Sub, 19-Pin Brad Harrison or M23, or 12-Pin M23 connectors available

**Centralized Application**

**Valves Inside Control Cabinet**

- Valves located near machine control
- Applications with caustic wash down, hazardous areas, or extreme temperatures

**Disadvantages**

- Difficult to troubleshoot
- Difficult to maintain
- Expensive bulkhead fittings
- Long wiring time in cabinet

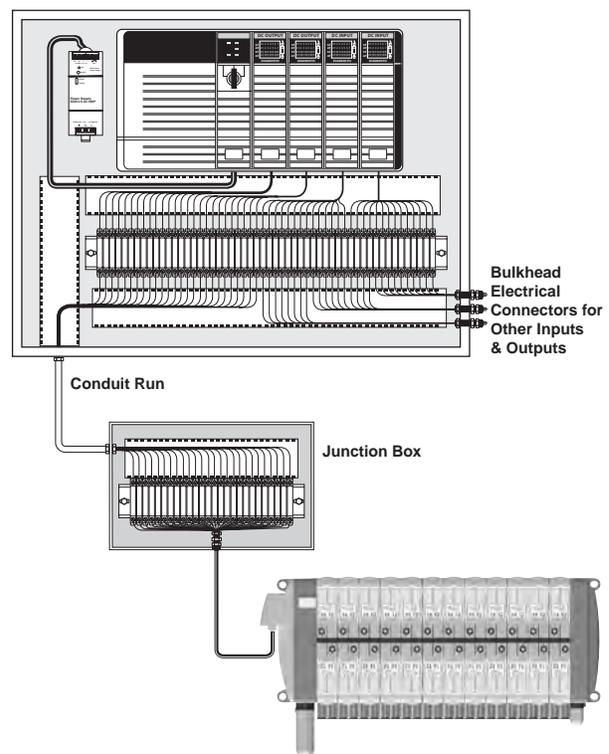
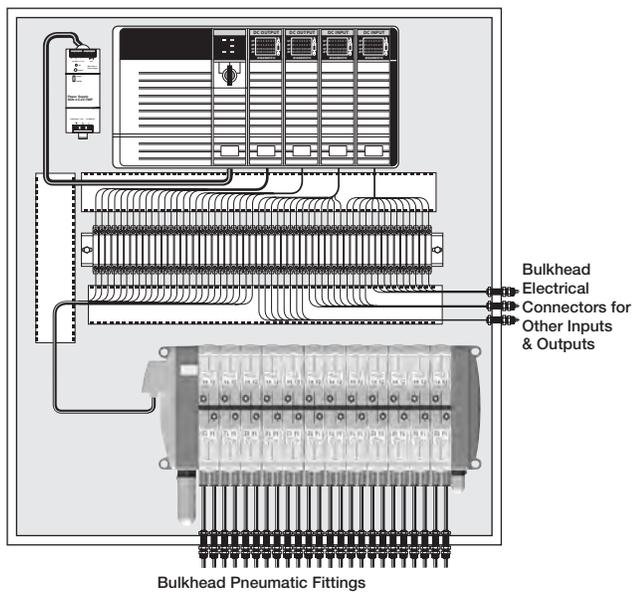
**De-centralized Application**

**Valves Outside Control Cabinet**

- Valves located near application - ready for machine mounting
- IP65 rating suitable for dusty and wet environments

**Disadvantages**

- Difficult to troubleshoot
- Difficult to maintain
- Long wiring time in cabinet
- Long wiring time in junction box



|                      |                         |
|----------------------|-------------------------|
| D                    | Subbase & Manual Valves |
| H Series Micro       |                         |
| Moduflex Series      |                         |
| H Series ISO         |                         |
| Network Connectivity |                         |
| DX ISOMAX Series     |                         |
| Valvair-II Series    |                         |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Introduction to Control Systems**

**System Overview - P2M Network Node**

- Up to 24 solenoids per manifold (19 when used with Moduflex Valve)
- Optimized for PLCs with network capability
- Routinely used on medium sized machines
- Connectivity to Moduflex, H Series Micro and H Series ISO valves

**Centralized Application**

**Valves Inside Control Cabinet**

- Valves located near machine control
- Applications with caustic wash down, hazardous areas, or extreme temperatures
- Additional inputs and outputs are not directly attached to valve manifold

**Advantages**

- Highest degree of environmental protection
- One location for all control devices
- Small size requires minimal cabinet space
- Eliminates terminal strips and wire ways for valves
- Greatly reduces wiring time
- Eliminates junction boxes for valves
- Eliminates conduit runs for valves

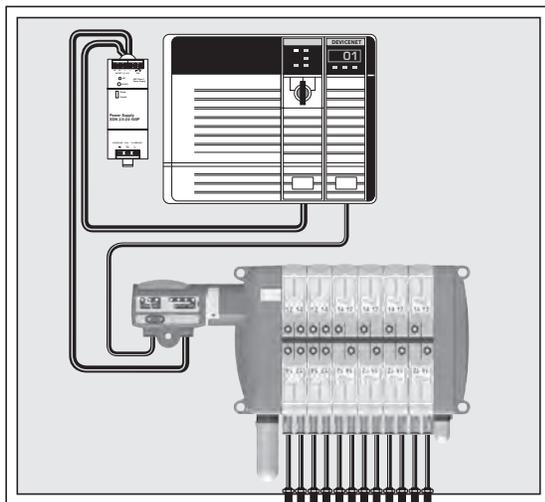
**De-centralized Application**

**H Series Micro Outside Control Cabinet**

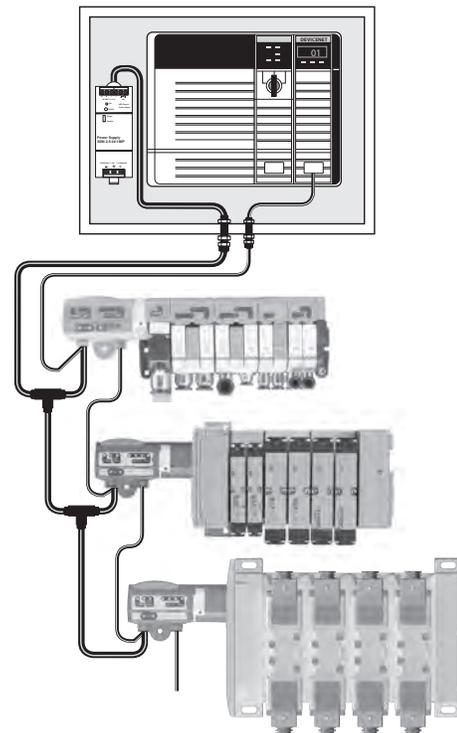
- Valves located near application - ready for machine mounting
- IP65 rating suitable for dusty and wet environments
- Additional inputs and outputs are not directly attached to valve manifold

**Advantages**

- Smallest control cabinet
- Reduces tubing length and improves pneumatic response time
- Eliminates pneumatic bulk fittings on control cabinet
- Many network nodes can be attached to the network with little incremental cost – valve manifolds, inputs, outputs and other devices
- Eliminates terminal strips and wire ways for valves
- Greatly reduces wiring time
- Eliminates junction boxes for valves
- Eliminates conduit runs for valves



Bulkhead Pneumatic Fittings



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Introduction to Control Systems**

**System Overview - Turck Network Portal**

**General Product Features**

- Turck Network Portal with up to 256 inputs / outputs and up to 16 or 32 solenoids per manifold
- Digital inputs / outputs, IO-Link Class A Master analog inputs / outputs, serial interface, counter modules, and RFID modules available
- Connectivity to H Series Micro and H Series ISO valve series

**Advantages**

- Handle all I/O from one node; eliminate PLC input / output cards
- Optimized for PLC's with network capability
- Eliminates junction boxes, terminal strips, and conduit runs for all inputs and outputs, greatly reducing wiring time

**Centralized Application**

**Valves Inside Control Cabinet**

- Valves located near machine control
- Applications with caustic wash down, hazardous areas, or extreme temperatures

**Advantages**

- Highest degree of environmental protection
- One location for all control devices
- Small size requires minimal cabinet space

**De-centralized Application**

**Valves Outside Control Cabinet**

- Valves located near application - ready for machine mounting
- IP65 rating suitable for dusty and wet environments

**Advantages**

- Smallest control cabinet
- Reduces tubing length and improves response time
- Eliminates pneumatic bulk fittings on control cabinet

D

Subbase & Manual  
Valves

H Series  
Micro

Modulflex  
Series

H Series  
ISO

Network  
Connectivity

DX ISOMAX  
Series

Valvair-II  
Series

EtherNet/IP™

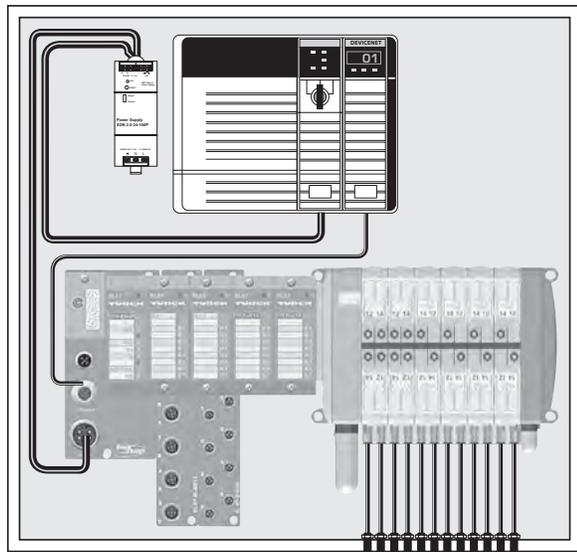


Modbus/TCP™

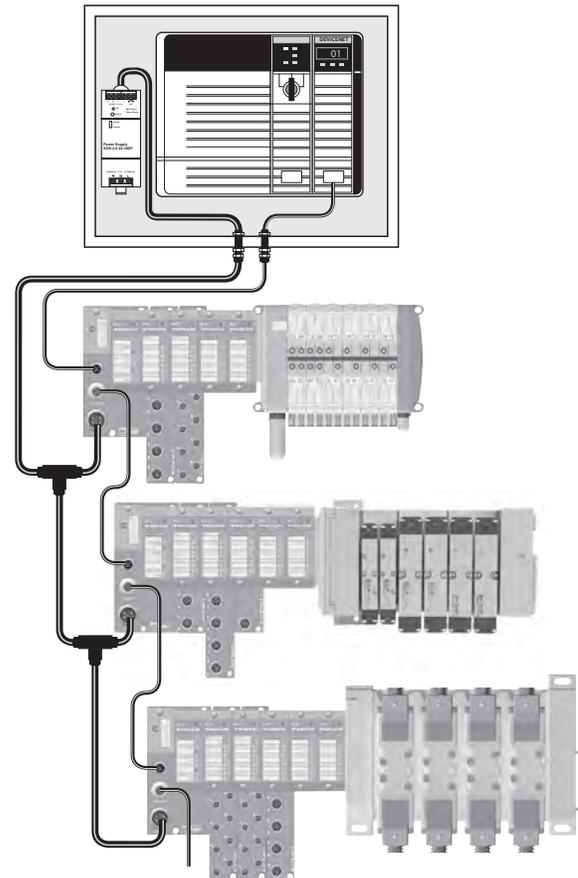
DeviceNet™



CANopen



Bulkhead Pneumatic Fittings



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Introduction to Control Systems**

**System Overview - Turck Network Portal with CANopen Expansion**

**General Product Features**

- Turck Network Portal with up to 256 inputs / outputs and up to 16 or 32 solenoids per manifold
- Digital inputs / outputs, IO-Link Class A Master analog inputs / outputs, serial interface, counter modules, and RFID modules available
- Connectivity to H Series Micro and H Series ISO valves

**CANopen Expansion Features**

- Using a CANopen interface module, a CANopen subnet is created within the Turck Network Portal, controlling an additional 64 inputs, outputs, or solenoids
- The CANopen subnet is independent of the main network, and is not visible to the master PLC
- Additional P2M CANopen modules can be attached to the CANopen subnet to provide a connection for 16 solenoids each
- Other 3rd party CANopen devices can also be used on this network, within the 64 bit CANopen expansion limit

**System Advantages**

- Handle all I/O from one node; eliminate PLC input / output cards
- Optimized for PLC's with network capability
- Several CANopen nodes can be attached to the network – valve manifolds, inputs, outputs or other devices
- CANopen expansion allows additional devices to be attached to the system without a CANopen scanner card
- Eliminates junction boxes, terminal strips, and conduit runs for all inputs and outputs, greatly reducing wiring time

**Centralized Application**

**Valves Inside Control Cabinet**

- Valves located near machine control
- Applications with caustic wash down, hazardous areas, or extreme temperatures

**Advantages**

- Highest degree of environmental protection
- One location for all control devices
- Small size requires minimal cabinet space

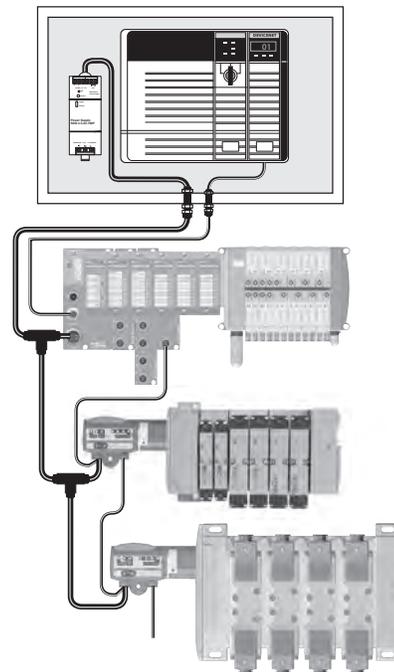
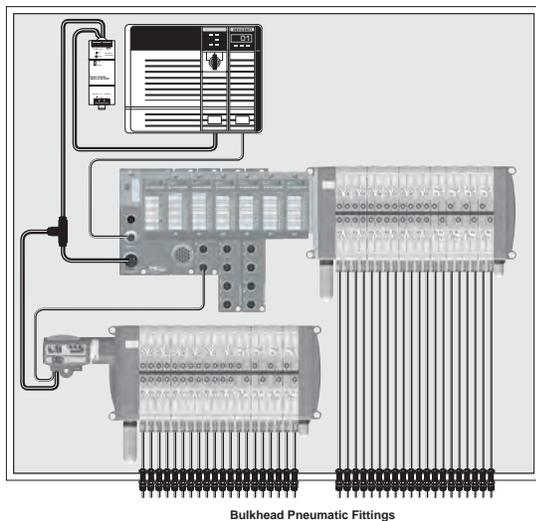
**De-centralized Application**

**Valves Outside Control Cabinet**

- Valves located near application - ready for machine mounting
- IP65 rating suitable for dusty and wet environments

**Advantages**

- Smallest control cabinet
- Reduces tubing length and improves response time
- Eliminates pneumatic bulk fittings on control cabinet



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D157

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Introduction to Control Systems**

**System Overview - Turck Network Portal with BL Remote DeviceNet Subnet**

**General Product Features**

- Turck Network Portal with up to 256 inputs / outputs and up to 16 or 32 solenoids per manifold
- Digital inputs / outputs, IO-Link Class A Master analog inputs / outputs, serial interface, counter modules, and RFID modules available
- Connectivity to H Series Micro and H Series ISO valves

**BL Remote DeviceNet Subnet Features**

- With BL remote DeviceNet subnet functionality, each communication module has its own DeviceNet master which provides a connection for 63 DeviceNet nodes with additional inputs, outputs, and solenoid control
- BL remote DeviceNet subnet is independent of the main network, and is not visible to the master PLC
- P2M DeviceNet modules can be attached to the subnet to provide a connection for 16 solenoids each
- Turck DeviceNet modules can be attached to the subnet to provide a connection for 16 or 32 solenoids each and inputs and outputs up to the 256 input and output limitation

**System Advantages**

- Handle all I/O from one node; eliminate PLC input / output cards
- Optimized for PLC's with network capability
- Many DeviceNet nodes can be attached to the network – valve manifolds, inputs, outputs or other devices
- Eliminates junction boxes, terminal strips, and conduit runs for all inputs and outputs, greatly reducing wiring time

**Centralized Application**

**Valves Inside Control Cabinet**

- Valves located near machine control
- Applications with caustic wash down, hazardous areas or extreme temperatures

**Advantages**

- Highest degree of environmental protection
- One location for all control devices
- Small size requires minimal cabinet space

**De-centralized Application**

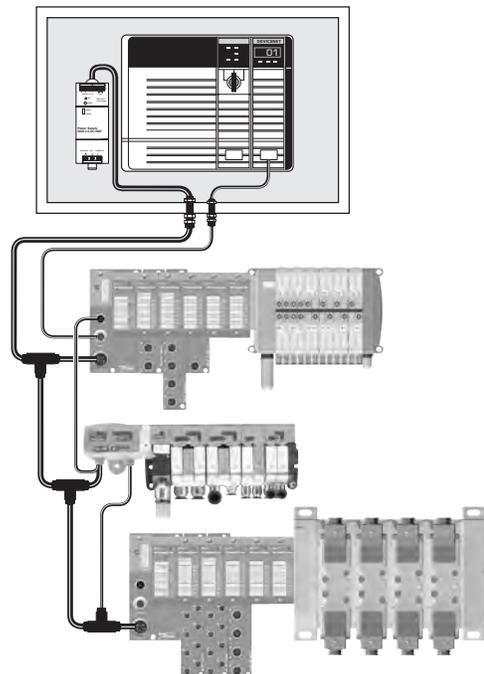
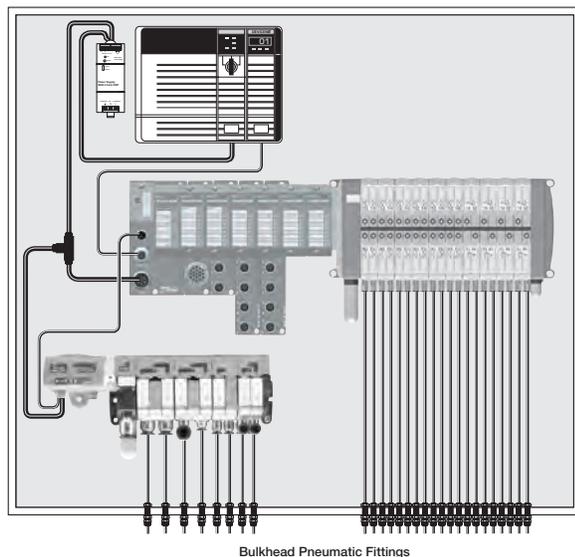
**Valves Outside Control Cabinet**

- Valves located near application - ready for machine mounting
- IP65 rating suitable for dusty and wet environments

**Advantages**

- Smallest control cabinet
- Reduces tubing length and improves response time
- Eliminates pneumatic bulk fittings on control cabinet

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**Introduction to Control Systems**

**System Overview - Turck Network Portal with Stand Alone Control using CoDeSys**

**General Product Features**

- Turck Network Portal with up to 256 inputs / outputs and 32 solenoids per manifold
- Digital inputs / outputs, analog inputs / outputs, serial interface, counter modules, and RFID modules available
- Connectivity to H Series Micro and H Series ISO valves

**Stand Alone Control Features**

- Communication modules equipped with standalone control – programmed according to IEC61131-3 with CoDeSys
- 512KB program memory with 32 bit RISC processor
- Run 1000 instructions in less than 1 ms
- Optimized for PLC’s with network capability or standalone controllers that need to interface with other devices

**System Advantages**

- Handle all I/O and control with one system; eliminate the PLC when used as the main controller for smaller machines
- Reduces programming and bandwidth requirements on large machines with a master PLC controller by handling local I/O and interfacing with the PLC over the network
- Eliminates junction boxes, terminal strips, and conduit runs for all inputs and outputs, greatly reducing wiring time

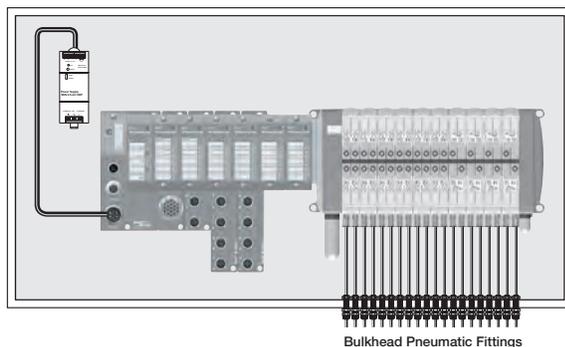
**Centralized Application Valves**

**Inside Control Cabinet**

- Valves attached to the machine control
- Applications with caustic wash down, hazardous areas, or extreme temperatures

**Advantages**

- Highest degree of environmental protection
- One location for all control devices



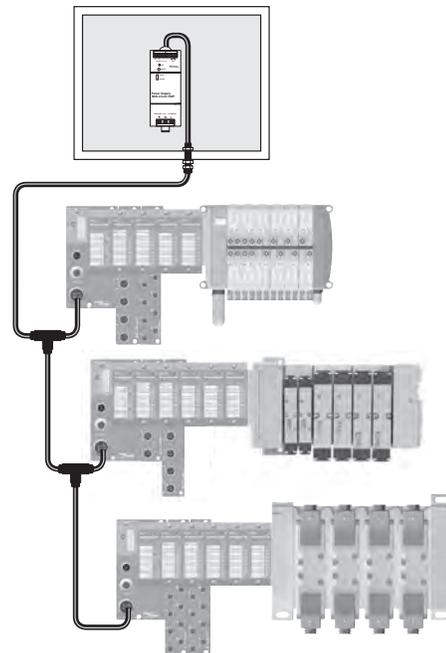
**De-centralized Application**

**Valves Outside Control Cabinet**

- Valves and machine control located near application - ready for machine mounting
- IP65 rating suitable for dusty and wet environments

**Advantages**

- No control cabinet needed when used as the main controller
- Reduces tubing length and improves response time
- Eliminates pneumatic bulk fittings on control cabinet



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**D**

Subbase & Manual  
Valves

H Series  
Micro

Modulflex  
Series

H Series  
ISO

Network  
Connectivity

DXISOMAX  
Series

Valvair II  
Series



For inventory, lead times, and kit  
lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D160

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Features**

**P2M Network Nodes**

P2M communication modules directly attach to the Moduflex valve series as well as the P2M endplates of the H Series Micro. It offers a compact and low cost network solution.

**Features**

- Small, compact product design
- IO-Link Class A & Class B nodes
- Ethernet Communications
  - EtherNet/IP™
  - Profinet
  - EtherCat
  - Powerlink
  - ModbusTCP
- Channel-level diagnostics (LED and Electronic)
- Horizontal and vertical mounting without derating
- 5g vibration
- Quick-disconnects for I/O and network connectivity
- Built-in panel grounding
- CE certification



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D161

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Features

P2M Network Nodes

P2M communication module attaches directly to the end plate. It offers a compact and low cost network solution.

Features

- Small, compact product design
- IO-Link Class A & Class B nodes
- Broad protocol offering
- Built-in panel grounding
- CE certification



**P2M2HBVL12400A13**  
(Class A IO-Link)



**P2M2HBVE12400**  
(EtherNet/IP™)



D

Subbase & Manual Valves

|   | Industrial Ethernet Protocol      | Maximum Addresses † | Part number          |
|---|-----------------------------------|---------------------|----------------------|
|  | EtherNet/IP™ (Safe Power Capable) | 24 †                | <b>P2M2HBVE12400</b> |
|   | PROFINET (Safe Power Capable)     | 24 †                | <b>P2M2HBVN12400</b> |
|   | EtherCAT (Safe Power Capable)     | 24 †                | <b>P2M2HBVT12400</b> |
|   | Modbus/TCP (Safe Power Capable)   | 24 †                | <b>P2M2HBVM12400</b> |
|   | PowerLink (Safe Power Capable)    | 24 †                | <b>P2M2HBVW12400</b> |

H Series Micro

|   | IO-Link class | IO-Link | Aux. power | Aux. power pinout | Maximum addresses † | Part number             |                             |
|---|---------------|---------|------------|-------------------|---------------------|-------------------------|-----------------------------|
|   |               |         |            |                   |                     | Standard                | Safe power capable *        |
|  | Class A       | 3 Pins  | 3 Pins     | 1 & 3             | 24 †                | <b>P2M2HBVL12400A13</b> | <b>P2M2HBVL12400A13-SPC</b> |
|   |               | 3 Pins  | 3 Pins     | 4 & 3             | 24 †                | <b>P2M2HBVL12400A43</b> | <b>P2M2HBVL12400A43-SPC</b> |
|   |               | 3 Pins  | 5 Pins     | 4 & 2             | 24 †                | <b>P2M2HBVL12400A42</b> | <b>P2M2HBVL12400A42-SPC</b> |
|  | Class B       | 5 Pins  |            | 2 & 5             | 24 †                | <b>P2M2HBVL12400B25</b> | <b>P2M2HBVL12400B25-SPC</b> |

\* Safe Power Capable (-SPC) version is suitable for connection to an OSSD (test pulsed) SAFE output source.

† If using with Moduflex valves, maximum solenoid addresses limit is 19.

Further details: [www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)

 Most popular.

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**P2M Industrial Ethernet Node**

The P2M Industrial Ethernet 24 DO node allows a very simple and cost efficient connection to the most popular Industrial Ethernet networks.

Designed with isolated auxiliary power, it can easily be adapted to all power supply architectures and follow any required machine directives as Safe Power Capable.



**Simple Product Set-Up**



The P2M Industrial Ethernet Node offers IP addressing through 3 rotary switches located on the top side.

The 3 rotary switches also allow for Factory Reset, IP address storage, and DHCP addressing.

If supported by the protocol used, the IP address can be modified through the embedded web page.

For an application requiring a regular disconnection / reconnection of communication & power, PROFINET and EtherNet/IP™ protocols allow respectively a Fast Start-Up (FSU) and Quick Connect mode. This mode can be enabled or disabled.

**Topology / Integrated Ethernet Switch**



The P2M Industrial Ethernet 24 DO Node offers 2 Ethernet ports allowing a line topology without external switch. The Ring topology can also be supported (enable/disable) for PROFINET, EtherNet/IP™ and Modbus TCP/IP.

The integrated Ethernet switch supports Class C services allowing use in an isochronous real time (IRT) structure.

**Easy Diagnostics – Local LEDs, Process (cyclic) data, Parameter (acyclic) data**



The P2M Industrial Ethernet 24 DO Node offers local diagnostics through 7 LED's located on the visible top side, showing:

- Logic status
- Ethernet activity on both ports
- Standard status due to protocol
- Output error / Auxiliary power

This local information as well as configuration and predictive maintenance diagnostics (Power monitoring, Solenoid cycle counting, etc) are available via both Process Data (cyclic) and Parameter Data (acyclic) via the PLC through the network and also easily viewable from the embedded web page.

When the PLC is NOT in control, the web page allows the user to force ON/OFF the solenoids state. This function has password protection.

**Safe Power Capable**

Auxiliary power of P2M Industrial Ethernet 24 DO Node can be supplied from a safe output device following machinery directives. This includes:

- Output Signal Switch Device (OSSD) test pulse compatible
- Galvanic isolation between 0 VDC Logic and Auxiliary power
- PP or PM cabling modes

For more details, refer to the user manuals located at [www.parker.com/pdn/P2M\\_IE](http://www.parker.com/pdn/P2M_IE)

|                  |                         |
|------------------|-------------------------|
| D                | Subbase & Manual Valves |
| H Series Micro   | Modulflex Series        |
| H Series ISO     | Network Connectivity    |
| DX ISOMAX Series | Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**P2M Industrial Ethernet Connections & Configuration**

**Ethernet ports and Auxiliary power connection**

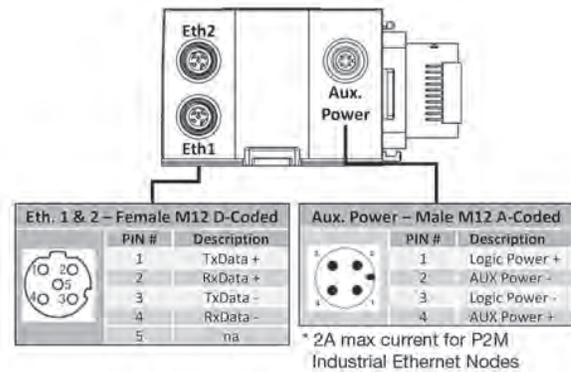
Ethernet ports: 2 x Standard Female M12 D-Coded – 5 pins  
 Auxiliary Power: Standard Male M12 A-Coded – 4 pins

**Configuration file**

The configuration files (.EDS, .GDS, etc) can be download from the product web page.

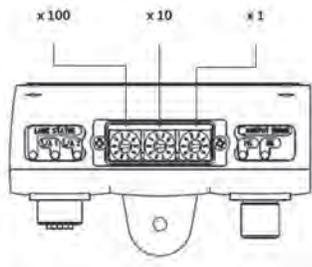
**Add on Instructions & Function Blocks**

Add on Instructions & Function Blocks to assist in the configuration and programming of the P2M Node are available on the product web page – [www.parker.com/pdn/P2M\\_IE](http://www.parker.com/pdn/P2M_IE)



**IP Address Setting**

Can be done via Rotary Switches, DHCP, Web page, Ipconfig Tool or TCP/IP Interface Object, depending on protocol:



| Description  | EtherNet/IP™<br>Profinet IO<br>Modbus TCP/IP | Ethernet PowerLink | EtherCAT   |
|--|--|--------------------|------------|
| IP-Address setting stored into the NV-memory of the P2M node | 000  | 000                | N/A        |
| IP-Address setting determined by the 3 rotary switches:      |  |                    |            |
| • IP Address: 192.168.1.xxx                                  | 001 – 254                                    | 001 – 239          | N/A        |
| • Subnet Mask: 255.255.255.0                                 |  |                    |            |
| • Default Gateway for 001: 192.168.1.2                       |  |                    |            |
| • Default Gateway for 002 - 254: 192.168.1.1                 |  |                    |            |
| The device will obtain its address via DHCP                  | 888  | N/A                | N/A        |
| Reset to factory status                                      | 999  | 999                | 999        |
| Invalid, the module will not start                           | All others                                   | All others         | All others |

**P2M Industrial Ethernet Valve Control**

All P2M Industrial Ethernet Modules can easily connect to and control pneumatic valves sizes ranging from 0.18 Cv to 6.0 Cv utilizing the Moduflex, H Micro, or H ISO valve series including the new H ISO Universal manifold which can mix ISO sizes 15407 (sizes 02 & 01) and 5599 (sizes 1 & 2) without transition plates.

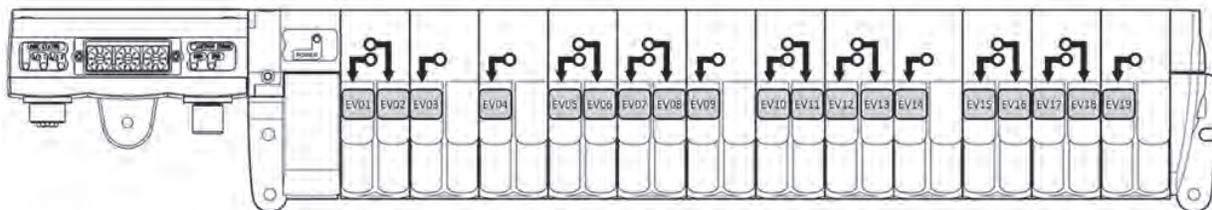
P2M on Moduflex



P2M on H Series Micro



**P2M Industrial Ethernet Node Output (Solenoid) data mapping - shown on Moduflex valve series**



|         | 7 . . . . . 3       | 2 . . . . . 0       |
|---------|---------------------|---------------------|
| Byte 0  | EV08 . . . . . EV01 |                     |
| Byte 1  | EV16 . . . . . EV09 |                     |
| Byte 2* | EV24 . . . . . EV20 | EV19 . . . . . EV17 |

\* Byte 2 / Bits 3 to 7 are only available when connected to H Series Micro or H Series ISO valve manifolds. The Moduflex valve series is limited to 19.

**Process (Cyclic) Diagnostic through network via ADI #9 – “Module Error Input”**

Easy to access diagnostic data transmitted to the PLC as Application Device Instance (ADI) #9

- Voltage warning, short circuit condition, module error, etc
- For more details refer to user manual on product web page – [www.parker.com/pdn/P2M\\_IE](http://www.parker.com/pdn/P2M_IE)

| ADI    | Instance name           | Data type | Access |
|--------|-------------------------|-----------|--------|
| #9     | Module error input      | Unit 16   | Read   |
| Byte 0 | Diag 7 . . . . . Diag 0 |           |        |
| Byte 1 | Reserved                |           |        |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Valve Island V Series with Industrial Ethernet connection**

EtherNet/IP™

EtherCAT®

The P2M Industrial Ethernet Lite node 24DO allows a very simple and cost efficient connection to the most popular Industrial Ethernet networks.

In its compact IP40 version equipped with two RJ45 Ethernet ports, it saves size in cabinet applications and offers an easy connection to the network in a line topology.



| Industrial Ethernet Protocol | Part Number            |
|------------------------------|------------------------|
| Profinet IO                  | <b>P2M2HBVE12400RJ</b> |
| EtherNet/IP™                 | <b>P2M2HBVN12400RJ</b> |
| EtherCAT                     | <b>P2M2HBVT12400RJ</b> |

**Product Set-Up**



The P2M Lite Node 24DO is by default in DHCP mode. The module must be assigned to a static IP-Address in order to be controlled via the network.

The Network Configuration settings can be done through the embedded web server of the node as well as "IPconfig", "TIA Portal" or similar methods.

For an application requiring a regular disconnection / reconnection of the node, Profinet and EtherNet/IP™ protocols allow respectively a Fast Start-Up (FSU) and Quick Connect mode. This mode can be enable or disable .

**Technology / Integrated Ethernet Switch**



The P2M Industrial Ethernet Lite node 24DO offers 2 RJ45 ports allowing a line topology without external switch. The Ring topology can also be supported (enable/disable) for Profinet and EtherNet/IP™.

The integrated Ethernet switch support Class C Services allowing used in an isochronous real time (IRT) structure.

**Diagnostic**



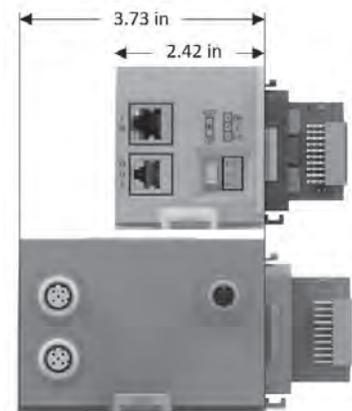
The P2M Industrial Ethernet Lite node 24DO offers a local diagnostic through 5 LED's located on the visible top side and 4 additional on both Ethernet connectors showing:

- Logic status
- Ethernet activity on both ports
- Standard Status due to protocol
- Output error / Power Supply

This local information as well as trouble shooting and predictive maintenance diagnostics (Power monitoring, Life cycle counting, ...) are available in PLC through the network and reported on imbedded web page.

When PLC is in "STOP", the web page allows to force ON/OFF solenoids state. This function has a password protection.

Save 1.31 inches with P2M Lite Node compared to P2M Ethernet Node



**Industrial Ethernet Lite Node Connections and Diagnostic Functions**

**Ethernet and Power Connections**

**Network Communication Ports:**

2 x Standard RJ45 Female connectors

Usage of standard manufactured cables available from your usual electrical supplier is recommended.

**Power Supply:**

Standard 3-Pin Male Connector - 3,81 mm pitch

**Working mode selector:**

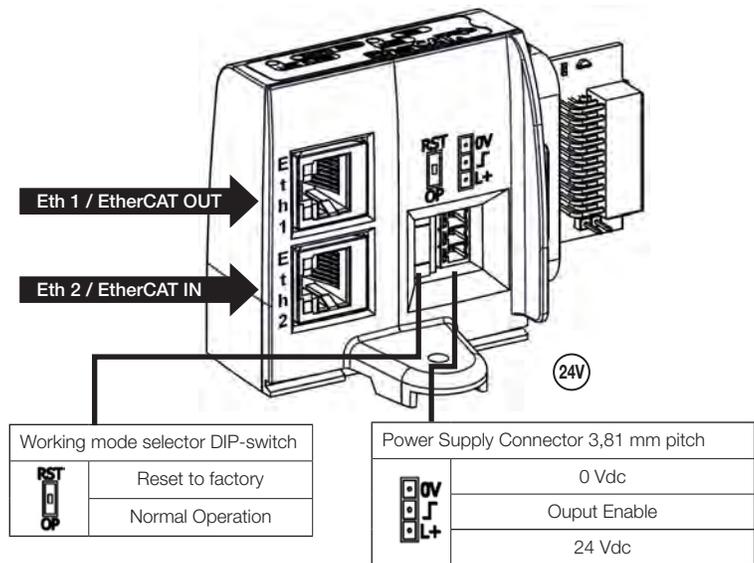
DIP-switch

**Configuration Files**

The configuration files can be download from the product web page: [www.parker.com/pde/P2M\\_IE](http://www.parker.com/pde/P2M_IE)

**IP Address Setting**

For both Profinet IO and EtherNet/IP™ protocols, the P2M Lite 24DO Node is by default in DHCP mode. The module must be assigned to a static IP-Address in order to be controlled via network. Please, refer to the user manual for IP-Address assignment process.



**Local and Network Diagnostic Functions**

**Local Diagnostic**

The P2M Lite 24DO node offers a local diagnostic via 9 LED's. Please refer to user manual with interpretation table.

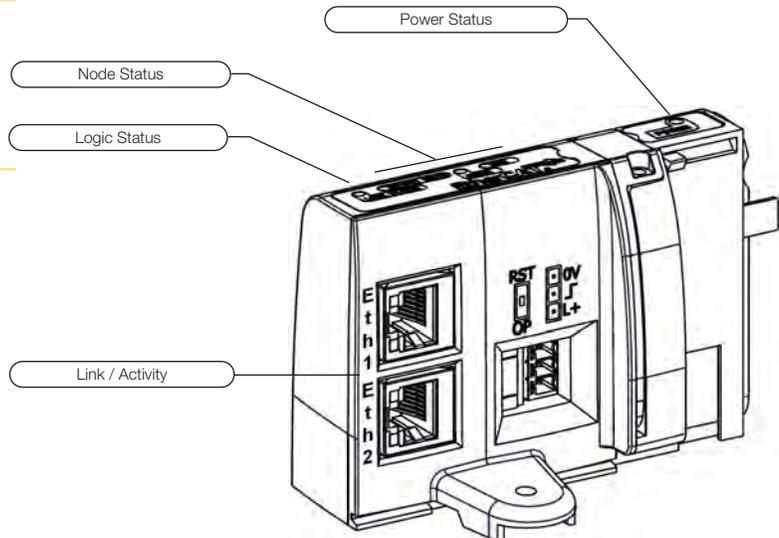
**Network Diagnostic**

The P2M Lite 24DO Node offers additional useful module status information:

- Pilot overload or short circuit
- Power Voltage out of tolerance
- Cycle counter for every pilot
- Module temperature

For detailed technical information on the P2M Lite 24DO Node and a complete interpretation of node's diagnostic functionalities, please refer to the User Manual available from the product web page:

[www.parker.com/pde/P2M\\_IE](http://www.parker.com/pde/P2M_IE)



**EtherNet/IP™**



**EtherCAT®**

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modutex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**Valve Island V Series with IO-Link connection**

The P2M Moduflex IO-Link 24 DO node allows a very simple and cost efficient connection to any IO-Link master, centralised into the PLC or decentralised through an industrial Ethernet network.

Designed in both Class A and Class B versions with an isolated auxiliary power, it can easily be adapted to all power supply architectures and follow machine directives.



**“V” Series Valve Island - P2M head module for IO-Link**

Electrical Module for 24 outputs  
 (The last 5 outputs of this 24 DO module can not be used with Moduflex Valve)



M12 A coded Connector connection

| Description                                 | IO-Link class | IO-Link | Aux. power | Aux. power pinout | Weight (g) | Part number                |                      |
|---|---------------|---------|------------|-------------------|------------|----------------------------|----------------------|
|   |               |         |            |                   |            | Standard                   | Safe power capable   |
| Class A<br>P2M IO-Link communication module | Class A       | 3 Pin's | 3 Pin's    | 1 & 3             | 160        | P2M2HBVL12400A13           | P2M2HBVL12400A13-SPC |
|   |               | 3 Pin's | 3 Pin's    | 4 & 3             | 160        | P2M2HBVL12400A43           | P2M2HBVL12400A43-SPC |
|   |               | 3 Pin's | 5 Pin's    | 4 & 2             | 160        | P2M2HBVL12400A42           | P2M2HBVL12400A42-SPC |
| Class B                                     | Class B       | 5 Pin's |            | 2 & 5             | 140        | P2M2HBVL12400B25           | P2M2HBVL12400B25-SPC |
| Power & communication cable                 |               |         |            |                   |            | RKC 4.5T-* -RSC 4.5T/S1587 |                      |

IODD file can be downloaded from IODD Finder or the Moduflex web site:  
<https://ioddfinder.io-link.com> or [www.parker.com/pdn/io-link](http://www.parker.com/pdn/io-link)

Where \* = 1, 2, 3, 4, 5, 10, 20 meter standard lengths

**P2M Class A Module with Independent Auxiliary Power Supply**



The P2M IO-Link Class A module can handle a Moduflex valve manifold having up to 19 solenoid outputs, or H Series Micro / ISO up to 24 solenoid outputs.

Thanks to its 2 x M12 A coded male connectors, the P2M node can be connected to any IO-Link Class A master and separately receive its auxiliary power supply for valves from an independent source.

The P2M IO-Link Class A module exists in 3 versions with the auxiliary power M12 connector pin out adapted to any sourcing through a standard M12 cable:

- P2M2HBVL12400A13 version: 24VDC / 0VDC on pins 1 & 3 – Standard version
- P2M2HBVL12400A43 version: 24VDC / 0VDC on pins 4 & 3 – Compatible with Siemens wiring
- P2M2HBVL12400A42 version: 24VDC / 0VDC on pins 4 & 2 – Compatible with Rockwell wiring and Turck wiring

**P2M Class B Module**



The P2M IO-Link Class B module can handle a Moduflex valve manifold having up to 19 solenoid outputs, or H Series Micro / ISO up to 24 solenoid outputs.

Thanks to its single M12 A coded male connectors, P2M node can be connected to any IO-Link Class B master receiving its auxiliary power supply for valves on pins 2 & 5 from the only cable simplifying the connection.

- P2M2HBVL12400B25 version: 24VDC / 0VDC on pins 2 & 5

**Valve Series**

Check the total maximum solenoid current consumption against the limit of the power supply and P2M module (standard version 4A, SPC version 2A).



**Moduflex Valve**  
 Cv: .18 - 0.80  
 19 Solenoids  
 42mA per Sol.



**H Micro**  
 Cv: 0.35  
 24 Solenoids  
 42mA per Sol.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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D

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**IO-Link Module Connection and Diagnostic Functions**



**IO-Link Module Connection**

Standard male M12 – type A

Usage of standard manufactured cables available from your usual electrical supplier is recommended.

Note: Auxiliary power for solenoids can be wired allowing the user to turn outputs off while the communications remains on.

**Configuration**

IODD file can be downloaded from IODD Finder or the P2M web site:

<https://ioddfinder.io-link.com>  
[www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)

**Class B**



**Class A**



**Legend**

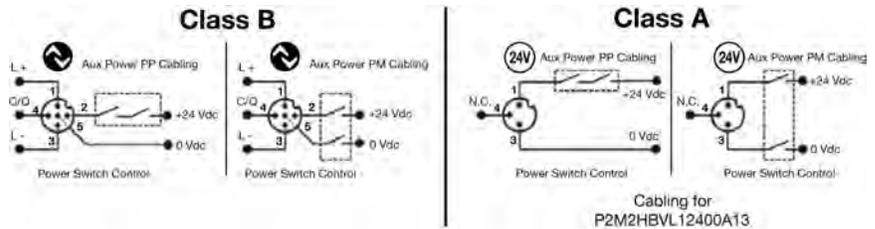
| Symbol | Description                   |
|--------|-------------------------------|
| L+     | IO-Link power supply "+"      |
| L-     | IO-Link power supply "-"      |
| C/Q    | IO-Link communication         |
| Aux +  | Auxiliary power supply 24 VDC |
| Aux -  | Auxiliary power supply 0 VDC  |

| M12 pin's | Class A   |           |           |
|-----------|-----------|-----------|-----------|
|           | 3 pin's   |           | 5 pin's   |
|           | P2M...A13 | P2M...A43 | P2M...A42 |
| 1         | Aux +     | Not used  | Not used  |
| 2         | -         | -         | Aux -     |
| 3         | Aux -     | Aux -     | Not used  |
| 4         | n.c.      | Aux +     | Aux +     |
| 5         | -         | -         | Not used  |

**Auxiliary Power Supply Compatibility**

The P2M IO-Link Node can be powered from a 24VDC auxiliary source in PP or PM mode as grounds are isolated.

The P2M Safe Power Capable (-SPC) versions can be connected from a SAFE OSSD test pulsed power source.



**IO-Link Module Diagnostic Functions**

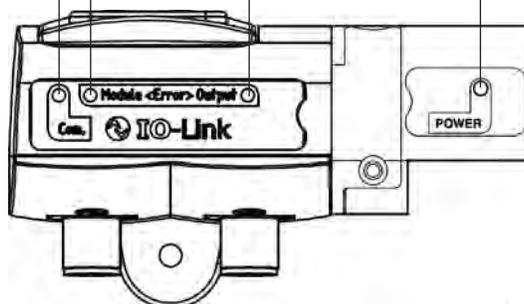
The P2M IO-Link module offers additional useful module status information:

- Solenoid overload or short circuit
- Auxiliary voltage out of tolerance
- Cycle counter for each solenoid
- Module temperature

For more information on product technical information and module diagnostic functionalities, please refer to the user manual available from the product web page:

[www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)

| COM Green LED |                              |                                    | Module - Error Red LED |  |                                     | Error - Output Red LED |   |   | POWER Green LED |  |                              |
|---------------|------------------------------|------------------------------------|------------------------|--|-------------------------------------|------------------------|---|---|-----------------|--|------------------------------|
| LED Status    | Description                  | Solving                            | LED Status             | Description  | Solving                             | LED Status             | Description   | Solving                                   | LED Status      | Description                            | Solving                      |
| OFF           | IO-Link L+ / L- not powered  | Check connection                   | OFF                    | Standard mode                                      | NA                                  | OFF                    | Standard mode                                       | NA  | OFF             | AUX power failure                      | Check Auxiliary Power Supply |
| ON            | IOL L+ / L- powered IO mode  | Set IO-Link mode in IO-Link master | ON                     | 24 VDC AUX power missing or any active malfunction | Check power supply or change module | ON                     | Any driver error (overload, over temperature, etc.) | Fix solenoid issue then acknowledge error | ON              | Standard                               | NA                           |
| Blinking      | IO-Link communication active | NA                                 |                        |  |                                     |                        |   |   | Blinking        | Aux Power is out of range, alarm level | Check Auxiliary Power Supply |



**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modutefx Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series



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**Input Data**

One byte of diagnostic input data is transferred from P2M IO-Link to the IO-Link Master.

**Process input data**

|                         |                             |                  |                     |           |                   |                     |                      |
|-------------------------|-----------------------------|------------------|---------------------|-----------|-------------------|---------------------|----------------------|
| 7                       | 6                           | 5                | 4                   | 3         | 2                 | 1                   | 0                    |
| Output driver SPI error | Output driver channel error | Polyfuse tripped | Temperature warning | SPI error | AUX voltage error | AUX voltage warning | Acknowledge Required |

**Output Data**

Three bytes of process data are received by P2M IO-Link from the IO-Link Master for control of solenoids.

**Process output data (Byte 0)**

|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 7   | 6   | 5   | 4   | 3   | 2   | 1   | 0   |
| EV8 | EV7 | EV6 | EV5 | EV4 | EV3 | EV2 | EV1 |

**Process output data (Byte 1)**

|      |      |      |      |      |      |      |     |
|------|------|------|------|------|------|------|-----|
| 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0   |
| EV16 | EV15 | EV14 | EV13 | EV12 | EV11 | EV10 | EV9 |

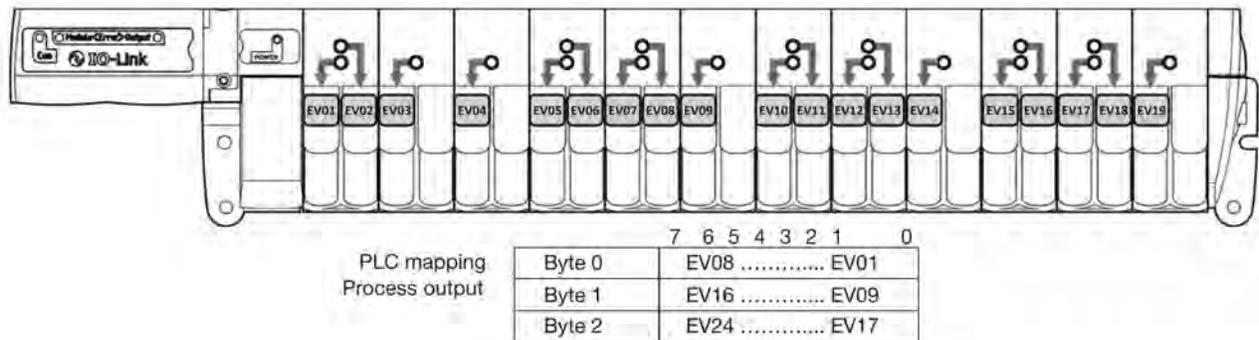
**Process output data (Byte 2)**

|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
| EV24 | EV23 | EV22 | EV21 | EV20 | EV19 | EV18 | EV17 |

**Solenoid Pilots Addressing and Process Mapping**

**P2M IO-Link node addressing used with Moduflex Valve System**

The P2M IO-Link node, when used with Moduflex Valve System can handle up to 19 pilot solenoid valves. Addressing will be done as shown below.

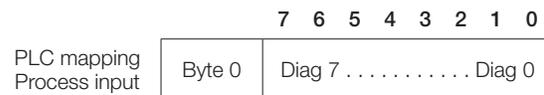


**P2M IO-Link Module Electrical Specifications**

|                            |                                      |
|----------------------------|--------------------------------------|
| IO-Link power supply       | According to IO-Link standard V1.1.2 |
| Speed communication        | Com 2 – 38 kBd                       |
| Auxiliary power supply     | 20.4 VDC to 26.4 VDC                 |
| Current limit per channel  | 150 mA                               |
| Max current limit          | 4 A                                  |
| Polarity inversion         | YES                                  |
| Short circuit protection   | YES                                  |
| Operating temperature      | 0°C to 55°C                          |
| Storage temperature        | -25°C to 70°C                        |
| Shock according to IEC     | 60068-2-27:2008                      |
| Vibration according to IEC | 60068-2-6:2007                       |
| EMC according to IEC       | 61000-4-2 up to -4-6                 |

**Network Diagnostic Through Process Mapping:**

The P2M IO-Link module offers diagnostic data transmitted to the PLC through the master:



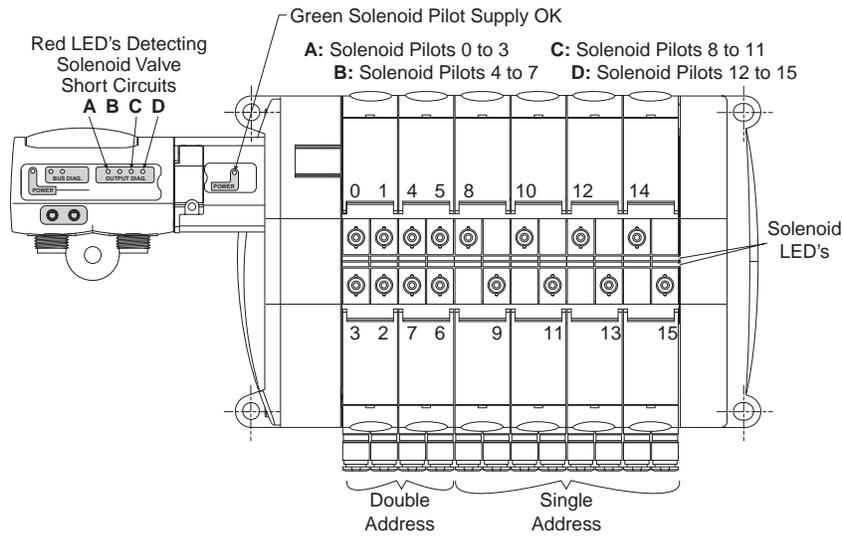
| Diag bit    | Error message                        | Detail                      |
|-------------|--------------------------------------|-----------------------------|
| Diag 0..... | Fail-safe status .....               | Acknowledgement required    |
| Diag 1..... | Auxiliary voltage warning.....       | Check auxiliary power       |
| Diag 2..... | Auxiliary voltage failure.....       | Check auxiliary power       |
| Diag 3..... | Module failure .....                 | Module HS. must be replaced |
| Diag 4..... | Module over-temperature              |                             |
| Diag 5..... | Module over-load                     |                             |
| Diag 6..... | Pilot solenoid(s) short circuit..... | Solenoid must be replaced   |
| Diag 7..... | Outputs stage failure                |                             |

For further details, refer to the user manual: can be downloaded from [www.parker.com/pdn/P2M\\_IOL](http://www.parker.com/pdn/P2M_IOL)



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**Solenoid Pilot Diagnostic Common to All P2M Nodes**



Inside the communication module, solenoid valve control is protected against short-circuits with the following visual indication provided:

- The red LEDs with code, shown above, detect solenoid valve short-circuits
- Supply is OK when the solenoid pilot power supply indicator is green

|                         |
|-------------------------|
| D                       |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



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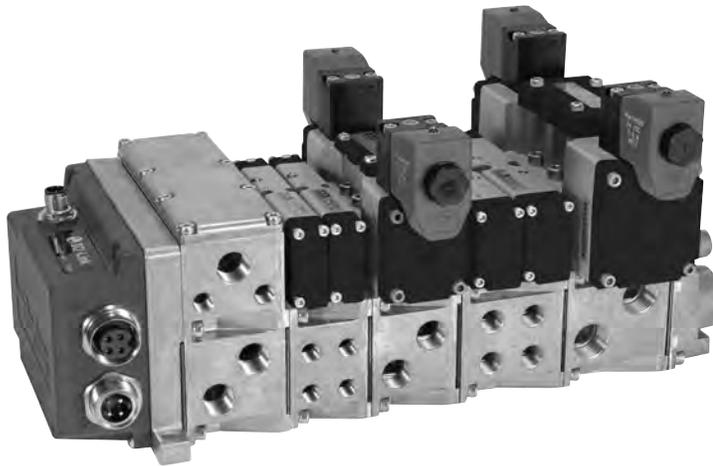
**Features**

**P2H IO-Link Node 24 DO**

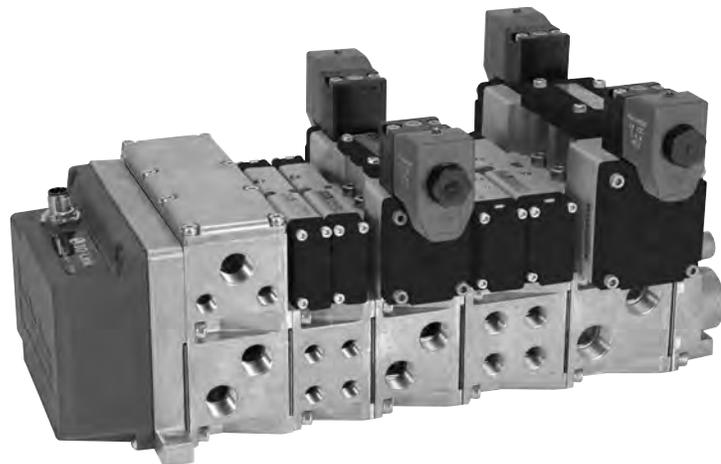
The P2H Network Node is available with IO-Link connectivity for the industries first connection of ISO valves (5599 & 15407) to the low cost IO-Link network.

**Features**

- Compact, robust product design
- Weld splatter resistant housing material
- Simple connection to IO-Link Class A or Class B masters
- Industries first power in & out capability for Class A version
- Industries first 7/8" power connectors on Class A version
- IO-Link connection to new H Series ISO Universal Manifold, capable of mixing valve sizes from 0.5 Cv – 3 Cv
- Safe Power Capable for supplying valve power from a safety device (ie. safe relay)
- Diagnostics made SIMPLE! Useful diagnostic flags in process (cyclic) data for easy access and use for preventative maintenance
- Certified to IP65 ingress protection
- CE certification



Class A Node



Class B Node

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



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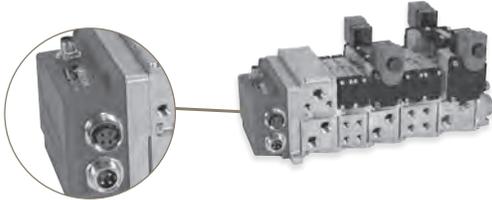
**Features**

**Overview - P2H IO-Link Node 24 DO**

Designed to integrate directly with all H Series ISO valve sizes, the P2H IO-Link Network Node provides a compact, robust and cost efficient solution for IO-Link capability. The P2H IO-Link network node is offered as an end plate kit on the H Series valve for five sizes (HB, HA, H1, H2 and H3). The P2H node is suitable for use on a valve manifold with up to 24 solenoid outputs.

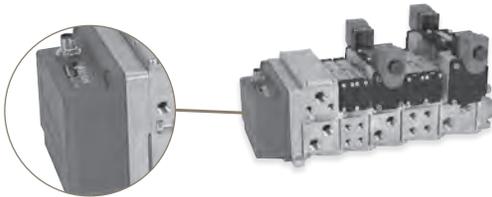
**Connection Types and Power:**

**Class A Node**



The Class A node has (1) 3 pin M12 connector for communication and logic power from any class A IO-Link master, and (2) 7/8" connectors for auxiliary valve power IN and OUT.

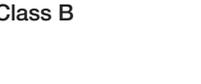
**Class B Node**



The Class B node has (1) 5 pin M12 connector to connect IO-Link for communication to a Class B IO-Link master, logic power and auxiliary power for the valve solenoids (up to the limit of the Class B node output\*).

\*It is recommended to use the Class A node with auxiliary power if the Class B master cannot provide enough power.

**Left and Right Hand End Plate**

|  | IO-Link class / type                                      | Current  | HB, HA, H1, H2 Valves |             | H3 Valves   |             |
|--|---|----------|-----------------------|-------------|-------------|-------------|
|  |   |          | NPT port              | BSPP port   | NPT port    | BSPP port   |
| <br>Class B  | P2H IO-Link Class B, standard version, 24 address         | 3.2A max | PSHU20N200P           | PSHU20N201P | PS4220N20DP | PS4220N21DP |
| <br>Class B | P2H IO-Link Class B, Safe Power Capable, 24 address       | 2.0A max | PSHU20S200P           | PSHU20S201P | PS4220S20DP | PS4220S21DP |
| <br>Class A | P2H IO-Link Class A, 4-pin Safe Power Capable, 24 address | 3.2A max | PSHU20S400P           | PSHU20S401P | PS4220S40DP | PS4220S41DP |
| <br>Class A | P2H IO-Link Class A, 5-pin Safe Power Capable, 24 address | 3.2A max | PSHU20S500P           | PSHU20S501P | PS4220S50DP | PS4220S51DP |

[www.parker.com/pdn/P2H\\_IOL](http://www.parker.com/pdn/P2H_IOL)

| Description              | Standard version                             | - Safe power capable versions |
|--------------------------|--|-------------------------------|
| IO-Link power supply     | According to IO-Link standard V1.1.2         |                               |
| Speed communication      | Com 2 – 38 kBd                               |                               |
| Auxiliary power supply   | voltage                                      | 20,4 VDC to 26,4 VDC          |
|                          | OSSD compatibility                           | No Yes                        |
| Short circuit protection | Yes  |                               |
| Operating temperature    | 0°C to +55°C                                 |                               |
| Shock                    | According to IEC 60068-2-27:2008             |                               |
| Vibration                | According to IEC 60068-2-6:2007              |                               |
| EMC                      | According to EN 55011 & EN 61000-4-2 to -4-6 |                               |
| Ingress protection       | Certified to IP65                            |                               |

**D**  
 Subbase & Manual Valves  
 H Series Micro Series  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

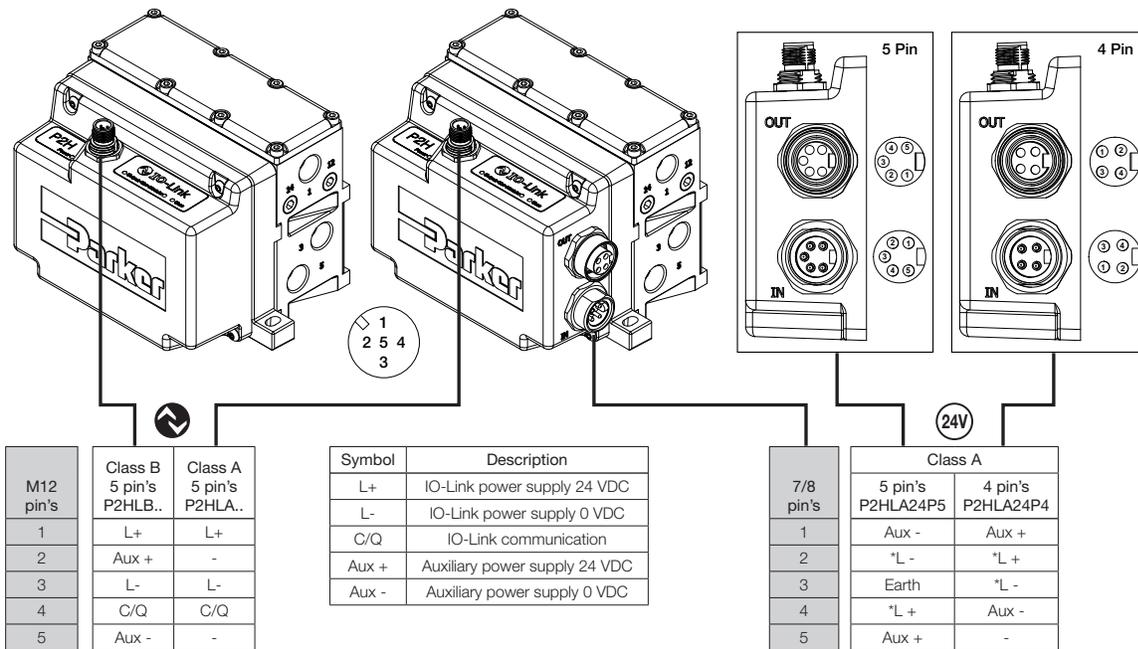


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**P2H IO-Link Node 24 DO – Connections and LED Diagnostics**



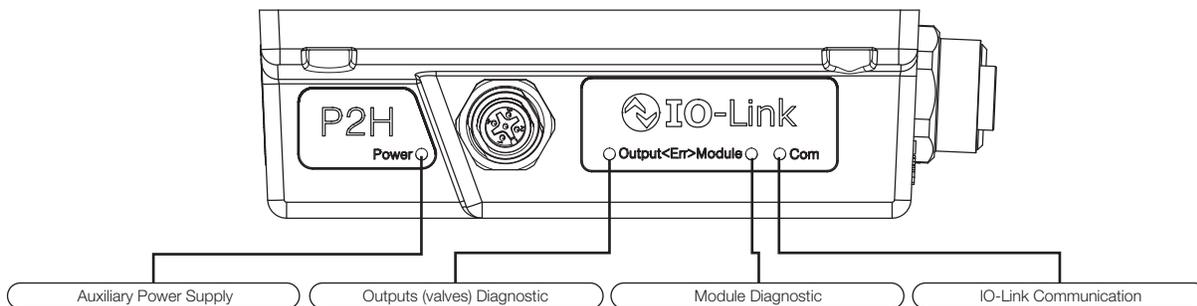
**Note:**

\*7/8" logic power has no connection to internal P2H unit but does carryover to OUT 7/8" connector (for jumper logic power only). Logic power for P2H unit will be supplied from M12 (pin 1 & 3)

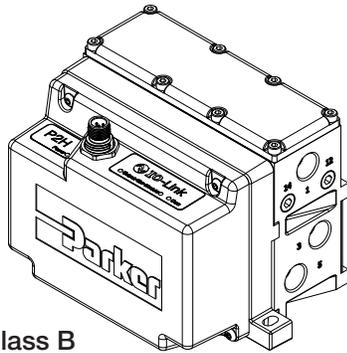
**Local diagnostic through LED:**

The P2H IO-Link Node offers a local diagnostic through 4 LED's status with interpretation described in the table below:

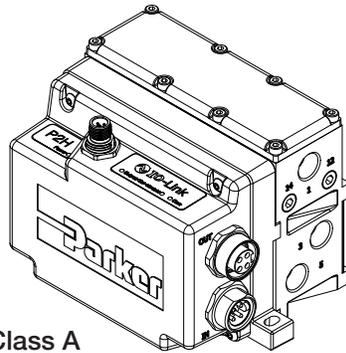
| Power  Green LED |  |   | Output<Err> Red LED |  |  | <Err>Module  Red LED |  |   | Com Green LED |                                  |  |
|------------------|--|---|---------------------|--|--|----------------------|--|---|---------------|----------------------------------|--|
| LED Status       | Description  | Solving   | LED Status          | Description  | Solving  | LED Status           | Description  | Solving   | LED Status    | Description                      | Solving  |
| OFF              | Auxiliary power failure < 18V or > 28.5V                             | Check auxiliary power supply                              | OFF                 | Standard mode (No error active)  | N/A  | OFF                  | Standard mode (No error active)                          | N/A   | OFF           | IO-Link L+ / L- line not powered | Check IO-Link power supply from IO-Link Master (pin's 1 & 3) |
| ON               | Standard mode (auxiliary power within normal range 20.4V* to 26.4V*) | N/A   | ON                  | Any outputs driver error (auxiliary power error, overload, short circuit, over temperature, ...) | If auxiliary power OK (see Power LED status), check error messages and related troubleshooting | ON                   | 24 VDC auxiliary power missing or any active malfunction | Check Auxiliary power supply. If auxiliary power supply OK, module must be replaced | ON            | IO-Link L+ / L- line powered     | Set IO-Link master channel in IO-Link mode                   |
| Blinking         | Auxiliary power out of range (warning level*)                        | Check auxiliary power supply, check/reset adjusted values |                     |  |  |                      |  |   | Blinking      | IO-Link communication active     | N/A  |



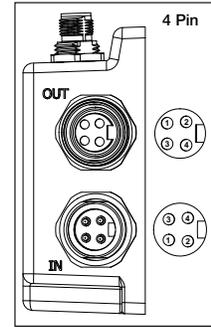
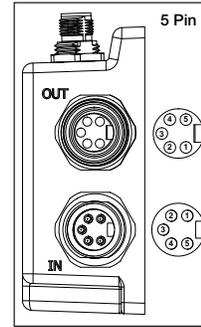
**P2H IO-Link Node 24 DO – Connections and LED Diagnostics**



Class B



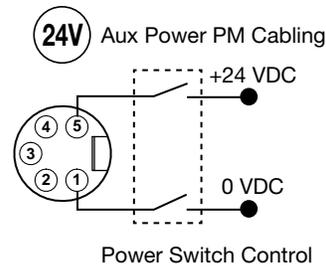
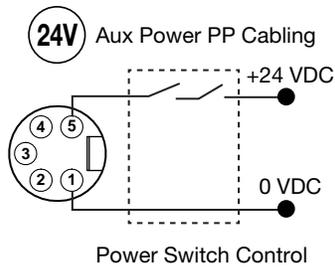
Class A



**P2H IO-Link 24DO Node connection to SAFE Power PP / PM mode for valve control**

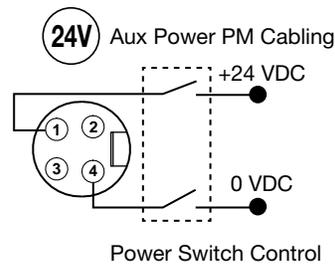
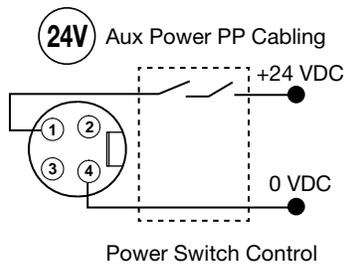
The P2H IO-Link 24DO node can be powered from a SAFE 24 VDC auxiliary source in PP or PM mode as grounds are isolated. Auxiliary power for solenoids can be wired allowing the functionality to turn outputs OFF while communications remain active.

**Class A – 5 Pin**



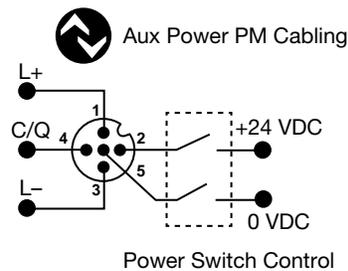
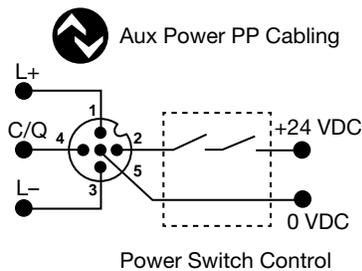
| Pin Number | Address |
|------------|---------|
| 1          | AUX-    |
| 2          | *L-     |
| 3          | Earth   |
| 4          | *L+     |
| 5          | AUX+    |

**Class A – 4 Pin**



| Pin Number | Address |
|------------|---------|
| 1          | AUX+    |
| 2          | *L+     |
| 3          | *L-     |
| 4          | AUX-    |

**Class B**



| Pin Number | Address |
|------------|---------|
| 1          | L+      |
| 2          | AUX+    |
| 3          | L-      |
| 4          | C/Q     |
| 5          | AUX-    |

\* 7/8" logic power has no connection to internal P2H unit but does carryover to OUT 7/8" connector (for jumper logic power only). Logic power for P2H unit will be supplied from M12 (pin 1 & 3).

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**P2H IO-Link Node 24 DO – Input / Output Data Mapping**

**Input Data**

One byte of diagnostic input data is transferred from Moduflex to the IO-Link Master.

**Process Input Data**

|                         |                             |                  |                     |           |                   |                     |                      |
|-------------------------|-----------------------------|------------------|---------------------|-----------|-------------------|---------------------|----------------------|
| 7                       | 6                           | 5                | 4                   | 3         | 2                 | 1                   | 0                    |
| Output driver SPI error | Output driver channel error | Polyfuse tripped | Temperature warning | SPI error | Aux voltage error | Aux voltage warning | Acknowledge required |

| Diag bit | Error Message                   | Detail   |
|----------|---------------------------------|--|
| Diag 0   | Fail-safe status                | Acknowledgment required  |
| Diag 1   | Auxiliary voltage warning       | Auxiliary voltage out of range, check auxiliary power line                         |
| Diag 2   | Auxiliary voltage failure       | Auxiliary voltage out of order, check auxiliary power source                       |
| Diag 3   | Module failure                  | Switch OFF / ON auxiliary power, if error message persists, replace the module     |
| Diag 4   | Module over-temperature         | Switch OFF / ON auxiliary power, if error message persists, replace the module     |
| Diag 5   | Module over-load                | Check overall pilot solenoid valves, if error message persists, replace the module |
| Diag 6   | Pilot solenoid(s) short circuit | Check faulty pilot solenoid valve(s), replace if necessary                         |
| Diag 7   | Outputs stage not available     | Auxiliary power is OFF   |

**Output Data**

Three bytes of process data are received by Moduflex from the IO-Link Master for control of solenoids.

**Process Output Data (Byte 0)**

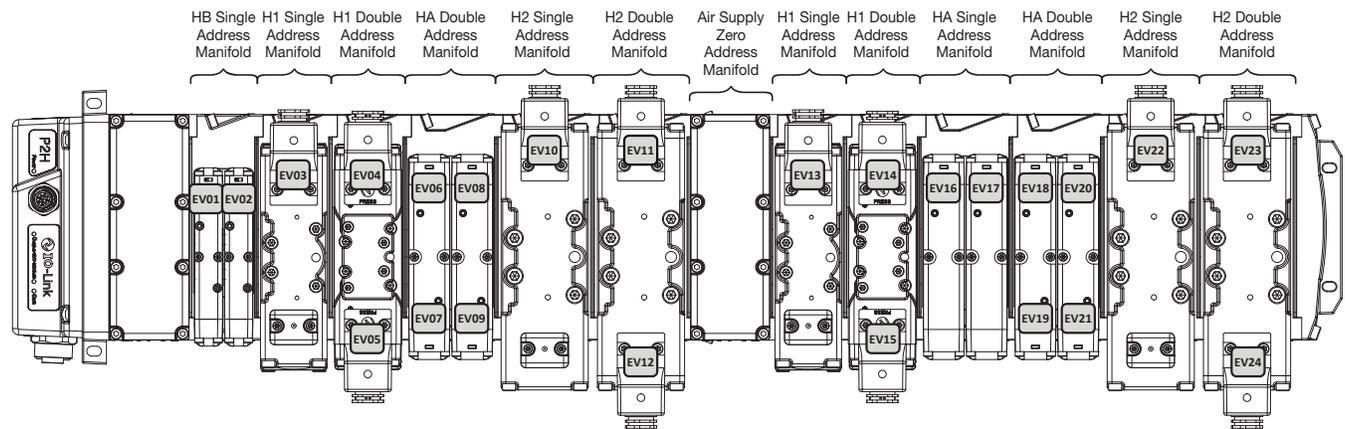
|     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|
| 7   | 6   | 5   | 4   | 3   | 2   | 1   | 0   |
| EV8 | EV7 | EV6 | EV5 | EV4 | EV3 | EV2 | EV1 |

**Process Output Data (Byte 1)**

|      |      |      |      |      |      |      |     |
|------|------|------|------|------|------|------|-----|
| 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0   |
| EV16 | EV15 | EV14 | EV13 | EV12 | EV11 | EV10 | EV9 |

**Process Output Data (Byte 2)**

|      |      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|------|
| 7    | 6    | 5    | 4    | 3    | 2    | 1    | 0    |
| EV24 | EV23 | EV22 | EV21 | EV20 | EV19 | EV18 | EV17 |



PLC Process outputs data mapping

|        |                              |
|--------|------------------------------|
| Byte 0 | 7 ..... 0<br>EV08 ..... EV01 |
| Byte 1 | EV16 ..... EV09              |
| Byte 2 | EV24 ..... EV17              |

**Configuration IODD File**

IODD file can be downloaded from IODD Finder or the P2H IO-Link web site:

- <https://ioddfinder.io-link.com>
- [www.parker.com/pdn/P2H\\_IOL](http://www.parker.com/pdn/P2H_IOL)



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**D**

**Subbase & Manual Valves**

**H Series Micro**

**Moduflex Series**

**H Series ISO**

**Network Connectivity**

**DX ISOMAX Series**

**Valvair II Series**

**Features**

**P2H Ethernet Node 32 DO**

The P2H Ethernet Node has been designed to be connected to a many popular Ethernet Networks. It can be used with Parker’s H-Universal ISO 15407-2 (size 02 & 01) and 5599-2 (sizes 1, 2 & 3) valve series. It can control up to 32 pilot solenoid addresses with different power configuration options available and provides local visual and remote diagnostics through the Network. Designed for industrial environments, the P2H Ethernet Node is constructed of PBT material, which is glass-filled and offers weld splatter resistance, UV stability and has significant flame-retardant properties making it suitable for the durability required in industrial applications with high heat and welding applications.

**Features**

Industrial Ethernet Protocols:

- EtherNet/IP
- Profinet
- EtherCAT
- Modbus TCP
- Powerlink

Power Options:

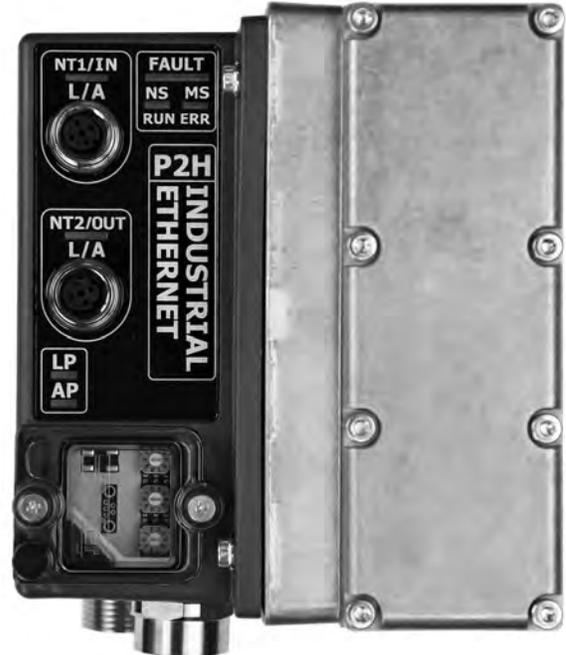
- Power IN/OUT Connection
- 7/8 4 pin
- 7/8 5 pin
- L- Code M12 5 pin
- Safe Power Capable
- OSSD Compatible

Environment:

- IP65
- Weld Spatter Resistant
- Weld Noise Immune

Diagnostics:

- PLC
- Web Interface
- Network Specific LED’s



|   |                         |
|---|-------------------------|
| D | Subbase & Manual Valves |
|   | H Series Micro          |
|   | Modulflex Series        |
|   | H Series ISO            |
|   | Network Connectivity    |
|   | DX ISOMAX Series        |
|   | Valvair-II Series       |



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**Ordering Information**

**P2H Ethernet Node 32 DO - Popular Module Combinations**

- Listed below are popular module configurations
- For full model number structure, please refer to next page

**EtherNet/IP™**

| Popular Part Number Configurations |             |                                     |  |                       |
|------------------------------------|-------------|-------------------------------------|--|-----------------------|
| Pilot Type                         | Thread Type | Power Source for Output 25-32       | Power Connector  | End Plate Part Number |
| Internal                           | NPT         | Aux Power                           | 7/8" 4-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PE000A-P4   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | 7/8" 4-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PE000L-P4   |
| Internal                           | NPT         | Aux Power                           | 7/8" 5-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PE000A-P5   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | 7/8" 5-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PE000L-P5   |
| Internal                           | NPT         | Aux Power                           | M12 L-Coded, 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P200PE000A-L5   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | M12 L-Coded, 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P200PE000L-L5   |



| Popular Part Number Configurations |             |                                     |  |                       |
|------------------------------------|-------------|-------------------------------------|--|-----------------------|
| Pilot Type                         | Thread Type | Power Source for Output 25-32       | Power Connector  | End Plate Part Number |
| Internal                           | NPT         | Aux Power                           | 7/8" 4-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PN000A-P4   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | 7/8" 4-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PN000L-P4   |
| Internal                           | NPT         | Aux Power                           | 7/8" 5-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PN000A-P5   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | 7/8" 5-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PN000L-P5   |
| Internal                           | NPT         | Aux Power                           | M12 L-Coded, 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P200PN000A-L5   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | M12 L-Coded, 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P200PN000L-L5   |



| Popular Part Number Configurations |             |                                     |  |                       |
|------------------------------------|-------------|-------------------------------------|--|-----------------------|
| Pilot Type                         | Thread Type | Power Source for Output 25-32       | Power Connector  | End Plate Part Number |
| Internal                           | NPT         | Aux Power                           | 7/8" 4-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PT000A-P4   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | 7/8" 4-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PT000L-P4   |
| Internal                           | NPT         | Aux Power                           | 7/8" 5-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PT000A-P5   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | 7/8" 5-pin power IN/OUT with 1 safe power capable zone         | PSHU20P200PT000L-P5   |
| Internal                           | NPT         | Aux Power                           | M12 L-Coded, 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P200PT000A-L5   |
| Internal                           | NPT         | Logic Power Isolated from Aux Power | M12 L-Coded, 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P200PT000L-L5   |



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Ordering Information**

**P2H Ethernet Node 32 DO - Overview**

Designed to integrate directly with all H Series ISO valve sizes, the P2H Ethernet Network Node provides a compact, robust and cost-efficient solution for industrial ethernet connectivity to a PLC or other controls device that supports industrial ethernet protocols. The P2H Ethernet Network Node is offered as an end plate kit on the H Series valve for five sizes (HB, HA, H1, H2 and H3). The P2H Ethernet Network Node is suitable for use on a valve manifold with up to 32 solenoid outputs. P2H Ethernet Node connects to a network with two standard M12 D-coded connections. These two connections function as a switch to enable the network to be connected to another network device.

Power connectors are available in three styles:

- 7/8 4-pin
- 7/8 5-pin
- M12 L-Code 5-pin

The power connectors are arranged in an IN/OUT design, and this allows the flexibility to connect power to another down stream device, instead of running two separate cables from a power supply. Each power connector can supply up to 12 A of current on both Logic and Auxiliary power pins. All power connections support (OSSD) test pulsing if the P2H Ethernet Node is connected to a safety rated output device that uses test pulses to detect faults in a safety system.



**PSHU20 P2 0 0 P E 000 A - P4**

| Valve Type               |        |
|--------------------------|--------|
| Plug-in (Internal pilot) | PSHU20 |
| Plug-in (External pilot) | PSHU2X |

| Thread Type |   |
|-------------|---|
| NPT         | 0 |
| BSPG "G"    | 1 |

| Network Connections |   |
|---------------------|---|
| EtherNet/IP™        | E |
| EtherCAT            | T |
| PROFINET            | N |
| Modbus TCP          | M |
| Powerlink           | W |

| Power Connector  |    |
|--|----|
| 7/8 4-pin Power IN/OUT with 1 Safe Power Capable Zone  | P4 |
| 7/8 5-pin Power IN/OUT with 1 Safe Power Capable Zone  | P5 |
| M12 L-Code 5-pin IN/OUT with 1 Safe Power Capable Zone | L5 |

| Right Hand End Plate Type / Thread Size   |   |
|---|---|
| Low profile (no ports)  | 0 |
| 1/2 Exhaust and Inlet Port  | 1 |
| 3/4 Exhaust and Inlet Port  | 2 |
| H3 Transition Plate and End Plate (electrical pass through for plug-in valves only)   | 3 |
| H3 Transition Plate and End Plate (expansion to 25th address for plug-in valves only) | 4 |

| Expansion Module / Power Source            |   |
|--|---|
| Power Source for Output 25-32: AUX Power   | A |
| Power Source for Output 25-32: Logic Power | L |

**D**

Subbase & Manual Valves

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**Ordering Information**

**P2H Ethernet Node 32 DO - Expansion Module**

Note: An optional intermediate air supply module must be installed to the manifold for expansion from 25 – 32 solenoids, 24 to 31 addresses.

**PSHU115A E 1 P**

| Mounting Style / Port Size                     |           |
|--|-----------|
| Intermediate Air Supply, NPT / Internal Pilot  | PSHU115A  |
| Intermediate Air Supply, BSPP / Internal Pilot | PSHU115B* |
| Intermediate Air Supply, NPT / External Pilot  | PSHU115C  |
| Intermediate Air Supply, BSPP / External Pilot | PSHU115D* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

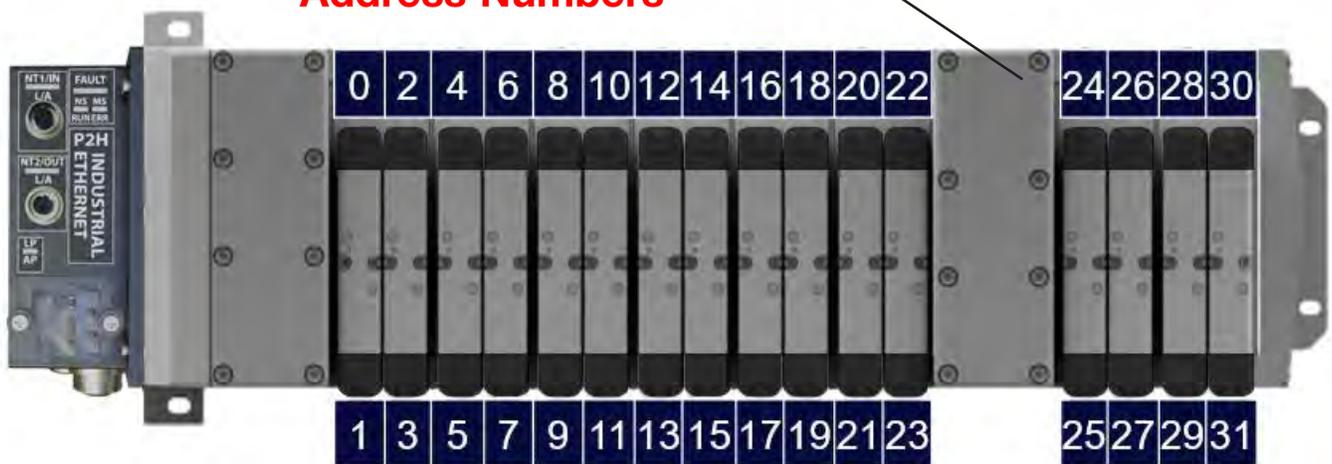
| Gasket Options |   |
|----------------|---|
| 1              | 1,3,5 Ports Open And Pilots Open                |
| 2              | 1,3,5 Ports Closed And Pilots Open              |
| 3              | 1 Closed, 3,5 Ports Open And Pilots Open        |
| 4              | 1 Port Open, 3,5 Ports Closed And Pilots Open   |
| 5              | 1,3,5 Ports Open And Pilots Closed              |
| 6              | 1,3,5 Ports Closed And Pilots Closed            |
| 7              | 1 Closed, 3,5 Ports Open And Pilots Closed      |
| 8              | 1 Port Open, 3,5 Ports Closed And Pilots Closed |

**Circuit Board Address Configuration**  
E With Electrical Expansion To 24th Address



Intermediate air supply module shown

**Address Numbers**



|                         |
|-------------------------|
| <b>D</b>                |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



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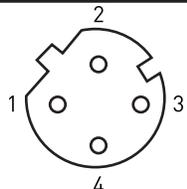
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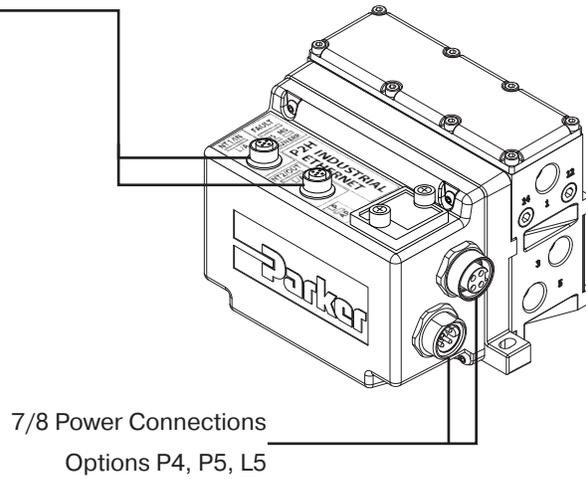
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**Ordering Information**

**P2H Ethernet Node 32 DO - Network Interface**

The P2H Node 32DO allows connection to an industrial Ethernet Network via two M-12 D-Coded connectors (NT1 and NT2). An embedded switch allows for daisy-chaining ethernet communications. The connectors pin assignments are as follows:

| M12, D-coded, Female  | Pin No. | Function |
|---|---------|----------|
|  | 1       | Tx+      |
|   | 2       | Rx+      |
|   | 3       | Tx-      |
|   | 4       | Rx-      |



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H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair-II Series

**Industrial Ethernet Options**



| Network Connections |          |
|---------------------|----------|
| EtherNet/IP™        | <b>E</b> |
| EtherCAT            | T        |
| PROFINET            | N        |
| Modbus TCP          | M        |
| Powerlink           | W        |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

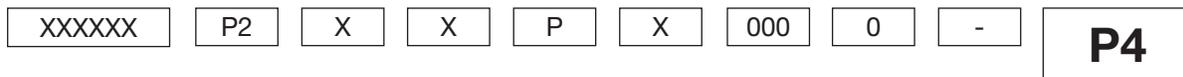
**P2H Ethernet Node 32 DO - Power Options**

- The P2H Ethernet Network Node has 3 available power connectors
- There are two power schemes that can be achieved detailed below
- H ISO Universal manifold valves draw power from the AUX power pins of the power connector

**Consumption @ 24 VDC**

|                             |     |
|-----------------------------|-----|
| AUX power max consumption   | 12A |
| Logic power max consumption | 12A |

Left over power that is not used by the P2H Ethernet Node can be passed on to other devices in the system through the power OUT connector



| Power Connector *                                      |    |
|--|----|
| 7/8 4-pin power in/out with 1 safe power capable zone  | P4 |
| 7/8 5-pin power in/out with 1 safe power capable zone  | P5 |
| M12 L-Code 5-Pin in/out with 1 Safe Power Capable zone | L5 |

**Power Connection Layout**

The following three types of power connectors are available based on the end user's requirement. Current considerations should be used in the power connection selection process. Each power connection type can support a maximum of 12 A of current on each channel (VAUX and VLOG). When daisy chaining power is used, care must be taken in knowing the downstream current draw in order not to overload the maximum current rating of the pins.

|                         | P4 - 7/8", 4-pin   | P5 - 7/8", 5-pin | L5 - L-Coded, M12 |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|-------------------------|--|------------------|-------------------|-------------|---|--------|-----------|---|--------|-----------|---|-----|---------------|---|-----|---------------|--|-----|----------|-------------|---|-----|---------------|---|-----|---------------|---|----|------------------|---|--------|-----------|---|--------|-----------|--|-----|----------|-------------|---|--------|-----------|---|-----|---------------|---|-----|---------------|---|--------|-----------|---|----|------------------|
| <b>TOP CONNECTOR</b>    | <b>Power OUT</b>   | <b>Power OUT</b> | <b>Power OUT</b>  |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|                         |  |                  |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|                         | <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+ 24 V</td> <td>V2 (VAUX)</td> </tr> <tr> <td>2</td> <td>+ 24 V</td> <td>V1 (VLOG)</td> </tr> <tr> <td>3</td> <td>0 V</td> <td>GND V1 (VLOG)</td> </tr> <tr> <td>4</td> <td>0 V</td> <td>GND V2 (VAUX)</td> </tr> </tbody> </table> | Pin              | Function          | Description | 1 | + 24 V | V2 (VAUX) | 2 | + 24 V | V1 (VLOG) | 3 | 0 V | GND V1 (VLOG) | 4 | 0 V | GND V2 (VAUX) | <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0 V</td> <td>GND V2 (VAUX)</td> </tr> <tr> <td>2</td> <td>0 V</td> <td>GND V1 (VLOG)</td> </tr> <tr> <td>3</td> <td>PE</td> <td>Protective Earth</td> </tr> <tr> <td>4</td> <td>+ 24 V</td> <td>V1 (VLOG)</td> </tr> <tr> <td>5</td> <td>+ 24 V</td> <td>V2 (VAUX)</td> </tr> </tbody> </table> | Pin | Function | Description | 1 | 0 V | GND V2 (VAUX) | 2 | 0 V | GND V1 (VLOG) | 3 | PE | Protective Earth | 4 | + 24 V | V1 (VLOG) | 5 | + 24 V | V2 (VAUX) | <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+ 24 V</td> <td>V1 (VLOG)</td> </tr> <tr> <td>2</td> <td>0 V</td> <td>GND V2 (VAUX)</td> </tr> <tr> <td>3</td> <td>0 V</td> <td>GND V1 (VLOG)</td> </tr> <tr> <td>4</td> <td>+ 24 V</td> <td>V2 (VAUX)</td> </tr> <tr> <td>5</td> <td>PE</td> <td>Protective Earth</td> </tr> </tbody> </table> | Pin | Function | Description | 1 | + 24 V | V1 (VLOG) | 2 | 0 V | GND V2 (VAUX) | 3 | 0 V | GND V1 (VLOG) | 4 | + 24 V | V2 (VAUX) | 5 | PE | Protective Earth |
|                         | Pin  | Function         | Description       |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|                         | 1  | + 24 V           | V2 (VAUX)         |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 2                       | + 24 V   | V1 (VLOG)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 3                       | 0 V  | GND V1 (VLOG)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 4                       | 0 V  | GND V2 (VAUX)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| Pin                     | Function   | Description      |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 1                       | 0 V  | GND V2 (VAUX)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 2                       | 0 V  | GND V1 (VLOG)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 3                       | PE   | Protective Earth |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 4                       | + 24 V   | V1 (VLOG)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 5                       | + 24 V   | V2 (VAUX)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| Pin                     | Function   | Description      |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 1                       | + 24 V   | V1 (VLOG)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 2                       | 0 V  | GND V2 (VAUX)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 3                       | 0 V  | GND V1 (VLOG)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 4                       | + 24 V   | V2 (VAUX)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 5                       | PE   | Protective Earth |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| <b>BOTTOM CONNECTOR</b> | <b>Power IN</b>  | <b>Power IN</b>  | <b>Power IN</b>   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|                         |  |                  |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|                         | <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+ 24 V</td> <td>V2 (VAUX)</td> </tr> <tr> <td>2</td> <td>+ 24 V</td> <td>V1 (VLOG)</td> </tr> <tr> <td>3</td> <td>0 V</td> <td>GND V1 (VLOG)</td> </tr> <tr> <td>4</td> <td>0 V</td> <td>GND V2 (VAUX)</td> </tr> </tbody> </table> | Pin              | Function          | Description | 1 | + 24 V | V2 (VAUX) | 2 | + 24 V | V1 (VLOG) | 3 | 0 V | GND V1 (VLOG) | 4 | 0 V | GND V2 (VAUX) | <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0 V</td> <td>GND V2 (VAUX)</td> </tr> <tr> <td>2</td> <td>0 V</td> <td>GND V1 (VLOG)</td> </tr> <tr> <td>3</td> <td>PE</td> <td>Protective Earth</td> </tr> <tr> <td>4</td> <td>+ 24 V</td> <td>V1 (VLOG)</td> </tr> <tr> <td>5</td> <td>+ 24 V</td> <td>V2 (VAUX)</td> </tr> </tbody> </table> | Pin | Function | Description | 1 | 0 V | GND V2 (VAUX) | 2 | 0 V | GND V1 (VLOG) | 3 | PE | Protective Earth | 4 | + 24 V | V1 (VLOG) | 5 | + 24 V | V2 (VAUX) | <table border="1"> <thead> <tr> <th>Pin</th> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>+ 24 V</td> <td>V1 (VLOG)</td> </tr> <tr> <td>2</td> <td>0 V</td> <td>GND V2 (VAUX)</td> </tr> <tr> <td>3</td> <td>0 V</td> <td>GND V1 (VLOG)</td> </tr> <tr> <td>4</td> <td>+ 24 V</td> <td>V2 (VAUX)</td> </tr> <tr> <td>5</td> <td>PE</td> <td>Protective Earth</td> </tr> </tbody> </table> | Pin | Function | Description | 1 | + 24 V | V1 (VLOG) | 2 | 0 V | GND V2 (VAUX) | 3 | 0 V | GND V1 (VLOG) | 4 | + 24 V | V2 (VAUX) | 5 | PE | Protective Earth |
|                         | Pin  | Function         | Description       |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
|                         | 1  | + 24 V           | V2 (VAUX)         |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 2                       | + 24 V   | V1 (VLOG)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 3                       | 0 V  | GND V1 (VLOG)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 4                       | 0 V  | GND V2 (VAUX)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| Pin                     | Function   | Description      |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 1                       | 0 V  | GND V2 (VAUX)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 2                       | 0 V  | GND V1 (VLOG)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 3                       | PE   | Protective Earth |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 4                       | + 24 V   | V1 (VLOG)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 5                       | + 24 V   | V2 (VAUX)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| Pin                     | Function   | Description      |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 1                       | + 24 V   | V1 (VLOG)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 2                       | 0 V  | GND V2 (VAUX)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 3                       | 0 V  | GND V1 (VLOG)    |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 4                       | + 24 V   | V2 (VAUX)        |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |
| 5                       | PE   | Protective Earth |                   |             |   |        |           |   |        |           |   |     |               |   |     |               |  |     |          |             |   |     |               |   |     |               |   |    |                  |   |        |           |   |        |           |  |     |          |             |   |        |           |   |     |               |   |     |               |   |        |           |   |    |                  |

\*PE – Protective Earth



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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

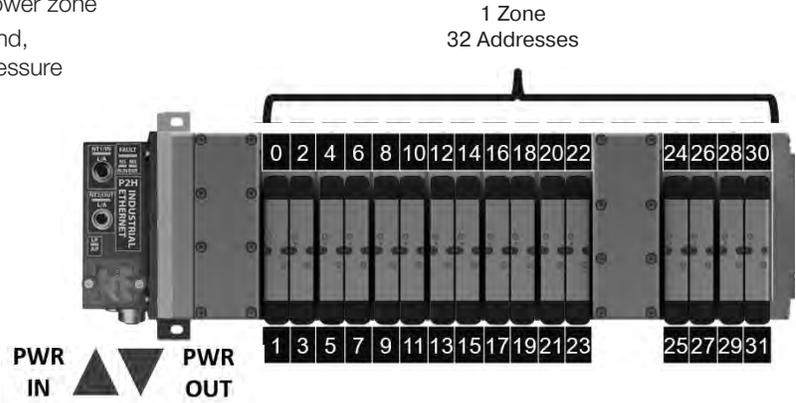
DX ISOMAX Series

Valvair II Series

Ordering Information

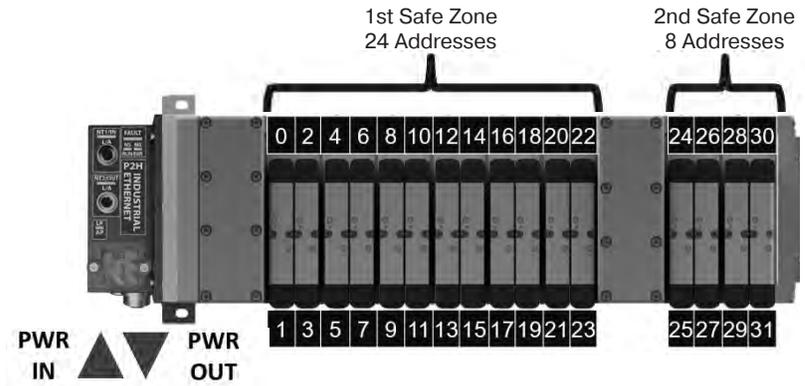
**P2H Ethernet Node 32 DO - Power Scheme 1 Option "A"**

- All 32 addresses are controlled in the same power zone
- Safety zoning is possible for valve solenoids and, with the H ISO Universal valves, pneumatic pressure
- Power zone is safe power capable



**Power Scheme 2 Option "L"**

- The 1st 24 addresses are supplied by auxiliary voltage power. The last 8 addresses are supplied by the logic voltage power.
- Each zone has an isolated safe ground pin so each can be powered by a SAFE 24 VDC auxiliary source in PP or PM mode. **NOTE:** You can treat each zone as a separate power zone/safe zone. Be aware that the last 8 addresses will be supplied by logic power. If power is shut down to this zone the P2H Ethernet module loses power and communication. This may cause extra time to reconnect to the network when power is restored.



**Industrial Ethernet Options**

XXXXXX P2 X X P X 000 A - XX

| Expansion Module / Power Source            |   |
|--|---|
| Power Source for Output 25-32: AUX Power   | A |
| Power Source for Output 25-32: Logic Power | L |

|                      |                         |
|----------------------|-------------------------|
| D                    | Subbase & Manual Valves |
| H Series Micro       |                         |
| Modulflex Series     |                         |
| H Series ISO         |                         |
| Network Connectivity |                         |
| DX ISOMAX Series     |                         |
| Valvair-II Series    |                         |



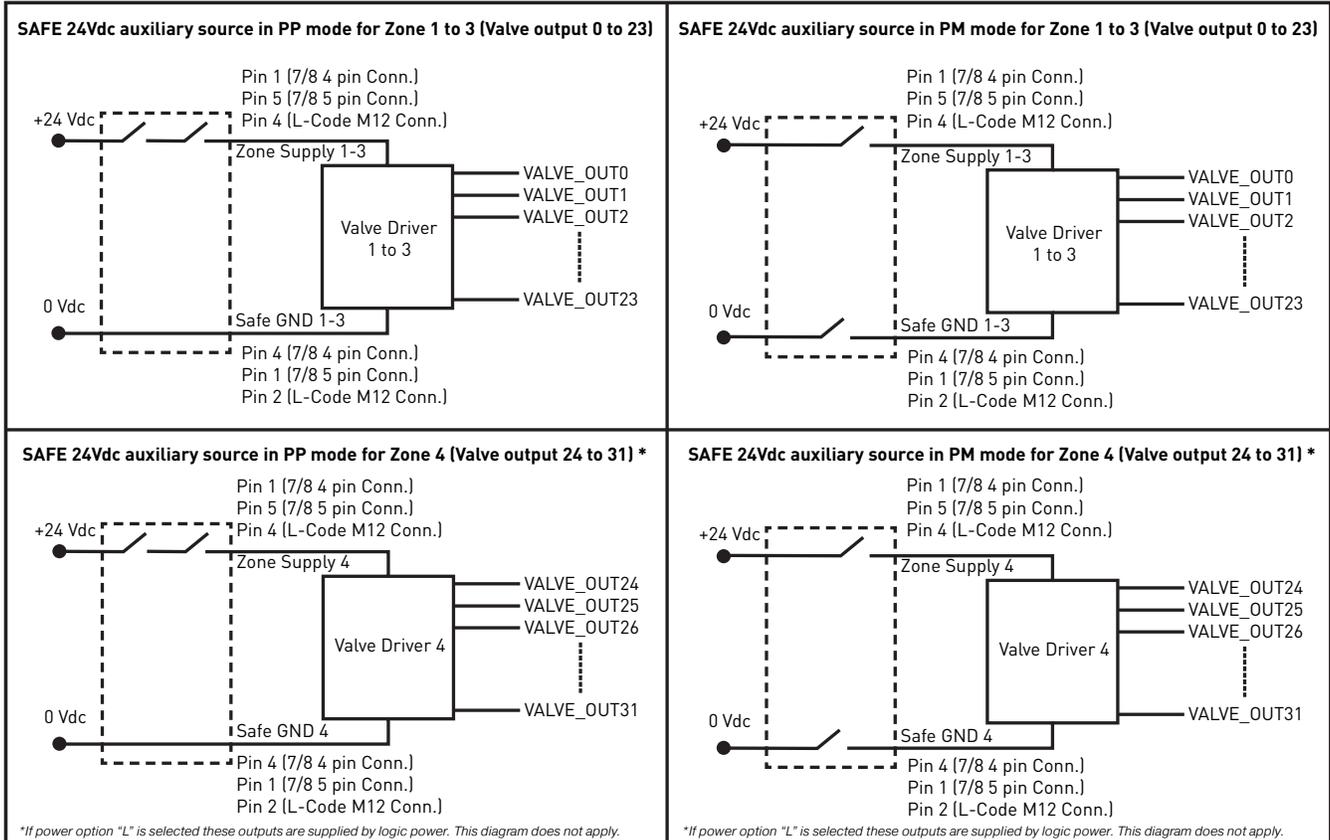
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**P2H Ethernet Node 32 DO - Safe Power Connectivity**



**P2H Ethernet Node connection to SAFE Power PP / PM mode for valve control**

The P2H Ethernet Node 32DO Auxiliary Power for valves can be supplied from an OSSD (Output Signal Switching Device) 24 VDC safe output power source in PP (plus plus) or PM (plus minus) configurations. The connection diagram below represents power option "A". For power option "L" valve driver number 4 power would be supplied from the logic pins of the connection selected (please reference the power pinout diagram).



Note: Please check max. power available from the source. Refer to the ["Auxiliary power consumption calculation"](#) section.

\* 7/8" logic power has no connection to internal P2H unit but does carryover to OUT 7/8" connector (for jumper logic power only). Logic power for P2H unit will be supplied from M12 (pin 1 & 3).



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**P2H Ethernet Node 32 DO - Auxiliary Power Consumption Calculation**

The P2H Node 32DO auxiliary power consumption calculation depends on the combination of the valves selected and the number of coils used. The table below can be used for power consumption calculation by valve type and the number of each type used. Take note that there are two types of coils for sizes 1,2,3. An energy efficient coil and standard coil.

| Valve Range   | Number of Pilots Simultaneously powered | Power    | Total      |
|---|---|----------|------------|
| H ISO - 15407-2 - Sizes 02 & 01                             | _____                                   | x 40 mA  | = _____ mA |
| H ISO - 5599-2 - Sizes 1, 2 & 3 (Energy Efficiency Coils) * | _____                                   | x 54 mA  | = _____ mA |
| H ISO - 5599-2 - Sizes 1, 2 & 3 (Standard Coils) **         | _____                                   | x 133 mA | = _____ mA |
|   |   | Total :  | _____ mA   |

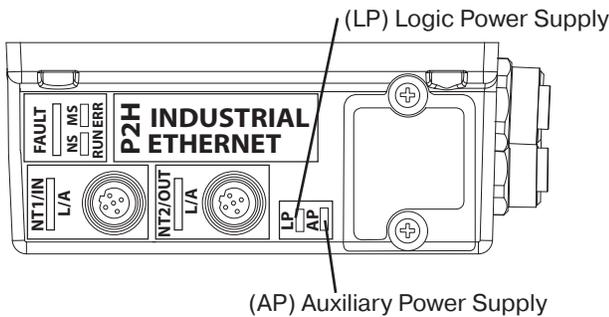
\* F9 Valve Voltage Code

\*\* B9 Valve Voltage Code

**Power Supply Diagnostics**

**Power Supply Diagnostics through LED**

The P2H Node 32DO monitors the logic and auxiliary power supply voltages and manages two levels of diagnostics: warning and error range. Status is indicated via LEDs located on the device. The range limits can be modified through parameter data. To restore default value (factory setting), refer to "Factory Reset Section" in the manual.



| LP and AP (Green / Yellow) LEDs |  |  |
|---------------------------------|--|--|
| LED Status                      | Description  | Troubleshooting  |
| OFF                             | Logic and/or Aux lines not powered                                 | Check power supply (see Power Supply section for pin assignments)  |
| ON (Green)                      | Voltage in normal range  | N/A  |
| ON (Red)                        | Voltage in error range (too low or too high)                       | Check power supply (see Power Supply section for pin assignments)  |
| Blinking (Red)                  | Voltage in warning range (out of normal range, not in error range) | Check power supply (see Power Supply section for pin assignments)  |
| Blinking (Yellow)               | Invalid rotary switch setting                                      | Check rotary switch setting  |
| Blinking (Red / Yellow)         | Firmware version error or Completed "Reset to Factory" procedure   | If switches setting different from "999" and no "Reset to Factory" performed via webpage, then contact technical support |

**LED function details:**

- "Logic power" or "Aux power" error is active from 9.6 to 19.4 VDC or above 28.5 VDC
- When "Logic power error" or "Aux power error" is active, LED is solid red

**Power Supply Diagnostics through Network and Process Data Mapping**

Diagnostics are available in Process Input data (byte 0) to indicate whether Logic and Auxiliary voltages are within range. There is a warning range (normal operation with fault indication) and an error range (module enters Failsafe state).

The default warning range is set as 20.4 VDC < power supply < 26.4 VDC. These limits can be modified via acyclic data, objects # 11 and # 12. The error range is set as 19.4 VDC < power supply < 28.5 VDC. These limits cannot be modified.

The voltage measured by the module, both Logic and Auxiliary, can be accessed via acyclic data, in Object #4. The displayed value is in mV.

**D**

Subbase & Manual Valves

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H Series ISO

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**P2H Ethernet Node 32 DO - Process Data mapping - Inputs**

The following tables describes the input mapping for P2H Ethernet Node. The byte mapping order varies by protocol please reference the manual for specific byte order arrangement.

**Channel Error – Input Mapping**

| Byte # | Input Bits |      |      |      |      |      |      |      | Description   |
|--------|------------|------|------|------|------|------|------|------|---|
|        | 7          | 6    | 5    | 4    | 3    | 2    | 1    | 0    |   |
| 1      | EV07       | EV06 | EV05 | EV04 | EV03 | EV02 | EV01 | EV00 | Valve Error Data<br>EVxx = Output on Valve range is 0 to 31 |
| 2      | EV15       | EV14 | EV13 | EV12 | EV11 | EV10 | EV9  | EV08 |   |
| 3      | EV23       | EV22 | EV21 | EV20 | EV19 | EV18 | EV17 | EV16 |   |
| 4      | EV31       | EV30 | EV29 | EV28 | EV27 | EV26 | EV25 | EV24 |   |

**Module Info Flags - Input Mapping**

| Byte # | Module Info Flags |                              |  |  |
|--------|-------------------|------------------------------|--|--|
|        | Output Bits       | Error Name                   | Error Description  |  |
| 1      | 0                 | Heartbeat not toggling AUX 1 | Heartbeat is currently not toggling  |  |
|        | 1                 | Heartbeat not toggling AUX 2 |  |  |
|        | 2                 | SPI COM Error AUX 1          | Error in SPI Communication between AUX and Logic. Outputs are switched off |  |
|        | 3                 | SPI COM Error AUX 2          |  |  |
|        | 4                 | SPI COM Lost AUX 1           |  |  |
|        | 1                 | 5                            | SPI COM Lost AUX 2   | Communication not possible. Outputs are switched off |
|        |                   | 6                            | Output Interconnect Error  |  |
| 7      |                   | SPI NP40 Error               |  |  |
| 2      | 0                 | NP40 Version Error           | Comm Module Version error. Outputs are switched off                        |  |
|        | 1-7               | Reserved                     | These bits will be always set as 0   |  |

**Module Error Input – Input Mapping**

| Byte # | Module Error Input |                               |   |
|--------|--------------------|-------------------------------|---|
|        | Output Bits        | Error Name                    | Error Description   |
| 1      | 0                  | AUX Voltage Warning           | Set if Auxiliary Voltage in warning range. Module keeps normal operation                                |
|        | 1                  | AUX Voltage Error             | Auxiliary Voltage in Error range. Outputs are switched OFF  |
|        | 2                  | Logic Voltage Warning         | Set if Logic voltage is out of range for warning.   |
|        | 3                  | Logic Voltage Error           | Set if Logic voltage is out of range for error. Outputs are switched OFF                                |
|        | 4                  | Temperature Warning           | Set if a temperature increase above warning levels is detected by the output drivers                    |
|        | 5                  | Output Driver Channel Error   | Set if a major fault is detected at the output stage – solenoid short circuit. Outputs are switched OFF |
|        | 6                  | Module Error                  | Set if an internal communication error is active  |
| 2      | 7                  | Auxiliary Power Not Available | Auxiliary Power is off  |
|        | 0 - 7              | Reserved                      | These bits will be always set as 0  |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
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**P2H Ethernet Node 32 DO - Process Data mapping - Outputs**

The following tables describes the input mapping for P2H Ethernet Node. The byte mapping order varies by protocol please reference the manual for specific byte order arrangement.

**System Command – Output Mapping**

| Byte # | System Command Module |   |   |   |   |   |   |   | Description   |
|--------|-----------------------|---|---|---|---|---|---|---|---|
|        | Output Bits           |   |   |   |   |   |   |   |   |
|        | 7                     | 6 | 5 | 4 | 3 | 2 | 1 | 0 |   |
| 1      | System Command Value  |   |   |   |   |   |   |   | One Byte that accepts the system command value see table below for values |

| Command Value | Command Name                   | Description   |
|---------------|--------------------------------|---|
| 0X02          | Store Switching Cycle Counters | When this command is executed, the current values of the switching cycle counters are stored into EEPROM. This command is intended to be used before powering off the device. |
| 0X03          | Store Diagnostic Log           | When this command is executed, the diagnostic log is stored to the EEPROM.  |
| 0X04          | Delete Diagnostic Log          | Removes all diagnostic log entries in EEPROM (required by webpage).   |

**Solenoids – Output Mapping**

| Byte # | Solenoid Module |      |      |      |      |      |      |      | Description   |
|--------|-----------------|------|------|------|------|------|------|------|---|
|        | Output Bits     |      |      |      |      |      |      |      |   |
|        | 7               | 6    | 5    | 4    | 3    | 2    | 1    | 0    |   |
| 1      | EV07            | EV06 | EV05 | EV04 | EV03 | EV02 | EV01 | EV00 | Valve Output Data<br>EVxx -> Output on Valve range is 0 to 31 |
| 2      | EV15            | EV14 | EV13 | EV12 | EV11 | EV10 | EV9  | EV08 |   |
| 3      | EV23            | EV22 | EV21 | EV20 | EV19 | EV18 | EV17 | EV16 |   |
| 4      | EV31            | EV30 | EV29 | EV28 | EV27 | EV26 | EV25 | EV24 |   |

**D**

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Network Connectivity

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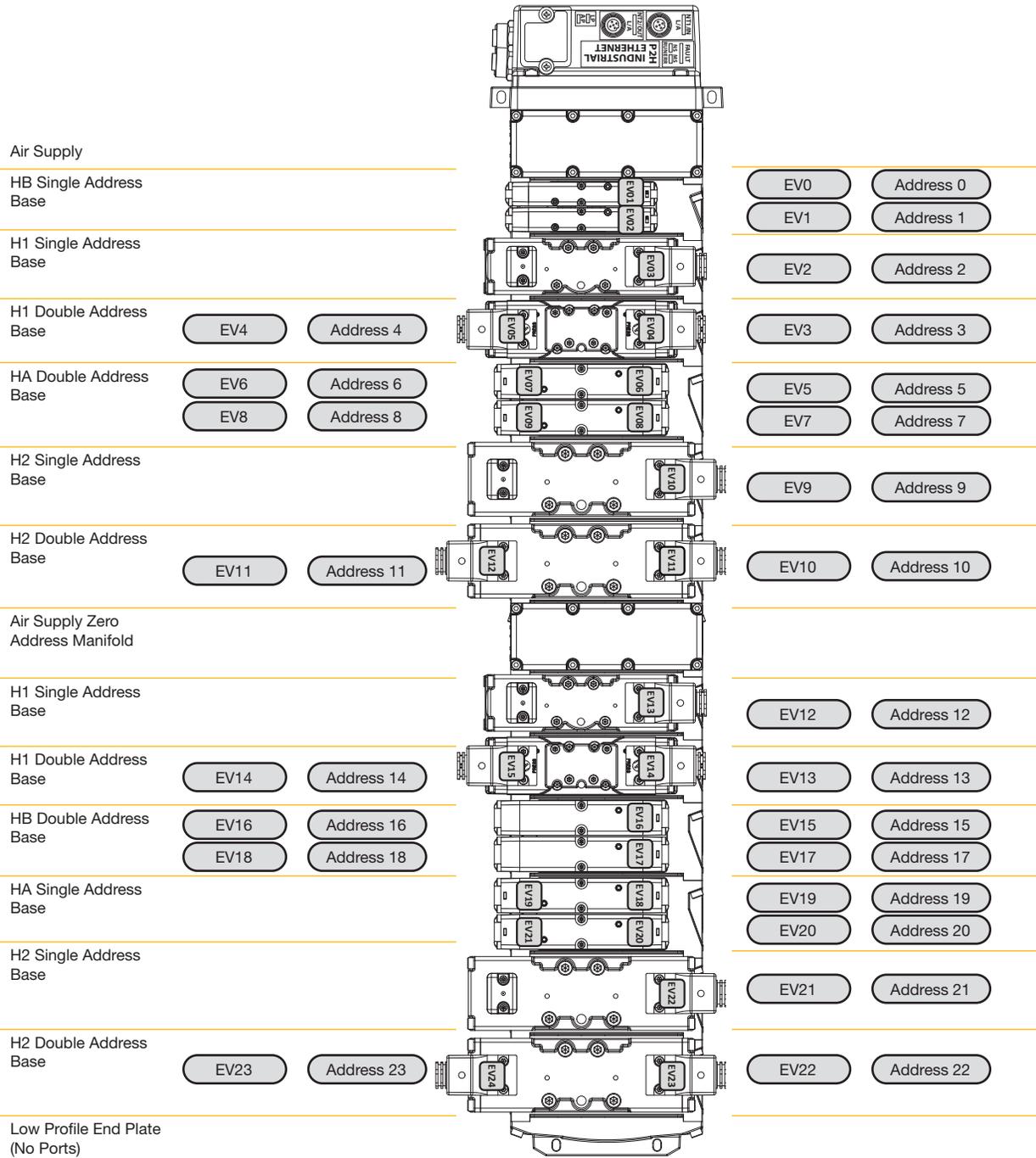
Valvair II Series



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**P2H Ethernet Node 32 DO - Solenoid Addressing**

- The P2H Ethernet Network Node can support up to 32 addresses as shown
- Addresses 25-31 can be accessed using an Intermediate Air Supply with Electric Expansion
- Each address is one solenoid



|   |                         |
|---|-------------------------|
| D | Subbase & Manual Valves |
|   | H Series Micro          |
|   | Modulflex Series        |
|   | H Series ISO            |
|   | Network Connectivity    |
|   | DX ISOMAX Series        |
|   | Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**P2H Ethernet Node 32 DO - Technical Data**

**Mechanical Data**

|                              |  |
|------------------------------|--|
| Housing Material             | Housing /Enclosure: PBT with 33% GF and UL94-V0<br>Base Cover (plate): Aluminium 380 |
| Enclosure rating             | IP 65 (only when plugged-in and threaded-in)   |
| Power Connectors             | 7/8" 4 pin or 7/8" 5 pin or L-Coded M12 5-pin male and female pin connector          |
| Dimensions (L x B x H in mm) | 226.6mm x 130.7mm x 55mm   |
| Mounting type                | Screw Mount  |
| Ground strap attachment      | M5   |
| Weight                       | Approx. 1.3 kg   |

**Electrical Data**

|                                |   |
|--------------------------------|---|
| Supply Voltage                 | 24VDC (-15% to +20%)                                    |
| Logic current at 24 V (V1)     | Max Current 8A – Actual usage depends on configuration  |
| Auxiliary current at 24 V (V2) | Max Current 12A – Actual usage depends on configuration |

**Valve Configuration**

|                   |                        |
|-------------------|------------------------|
| Compatible Valves | H Universal ISO Valves |
|-------------------|------------------------|

**Operating Conditions**

|                                  |  |
|----------------------------------|--|
| Operating Temperature            | 0°C to 50°C  |
| Storage Temperature              | -25°C to 70°C  |
| CE as per                        | IEC 61000-6-2 (Industrial Immunity)<br>IEC 61000-6-4 (Industrial Emission) |
| Shock/Vibrations                 | IEC 60068-2-27:2008<br>IEC 60068-2-6:2007                                  |
| Electrostatic Discharge          | IEC 61000-4-2  |
| Electrical Fast Transient/ Burst | IEC 61000-4-4  |
| Surge Immunity                   | IEC 61000-4-5  |

**D**

**Subbase & Manual Valves**

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

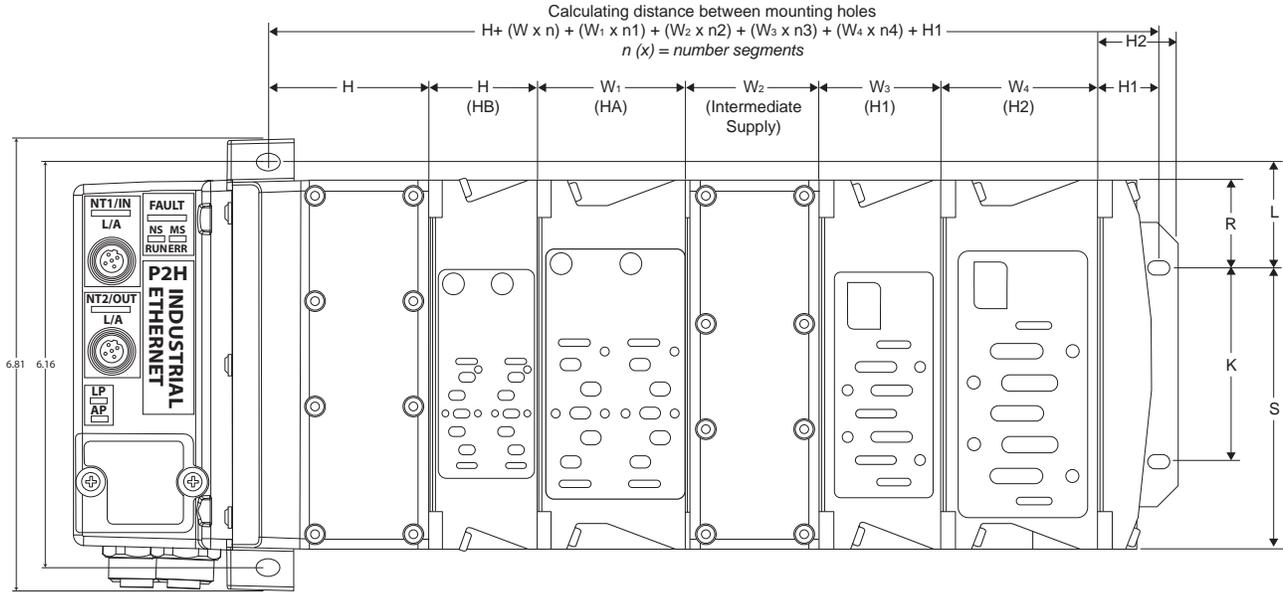


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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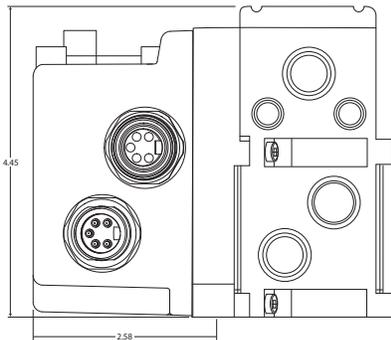
**P2H Ethernet Node 32 DO - H Series ISO Valves**



n (x) = number of segments

| A               | B               | C               | D              | E              | F               | G               | H              | H <sub>1</sub> | H <sub>2</sub> | J              | K              | L             |
|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| 4.42<br>(112.3) | 2.64<br>(67.1)  | 2.46<br>(62.5)  | 1.17<br>(29.7) | .55<br>(14)    | 9.32<br>(236.7) | 1.51<br>(38.4)  | 2.36<br>(59.9) | .9<br>(22.9)   | 1.22<br>(31)   | 1.55<br>(39.4) | 2.95<br>(74.9) | 1.6<br>(40.6) |
| M               | O               | P               | Q              | R              | S               | T               | W              | W <sub>1</sub> | W <sub>2</sub> | W <sub>3</sub> | W <sub>4</sub> |               |
| 8.91<br>(226.3) | 5.61<br>(142.5) | 6.86<br>(174.2) | 6.18<br>(157)  | 1.33<br>(33.8) | 4.28<br>(108.7) | 7.14<br>(181.4) | 1.63<br>(41.4) | 2.28<br>(57.9) | 2.03<br>(51.6) | 1.82<br>(46.2) | 2.39<br>(60.7) |               |

Inches (mm)



**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



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|                         |
|-------------------------|
| <b>D</b>                |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DXISOMAX Series         |
| Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D190

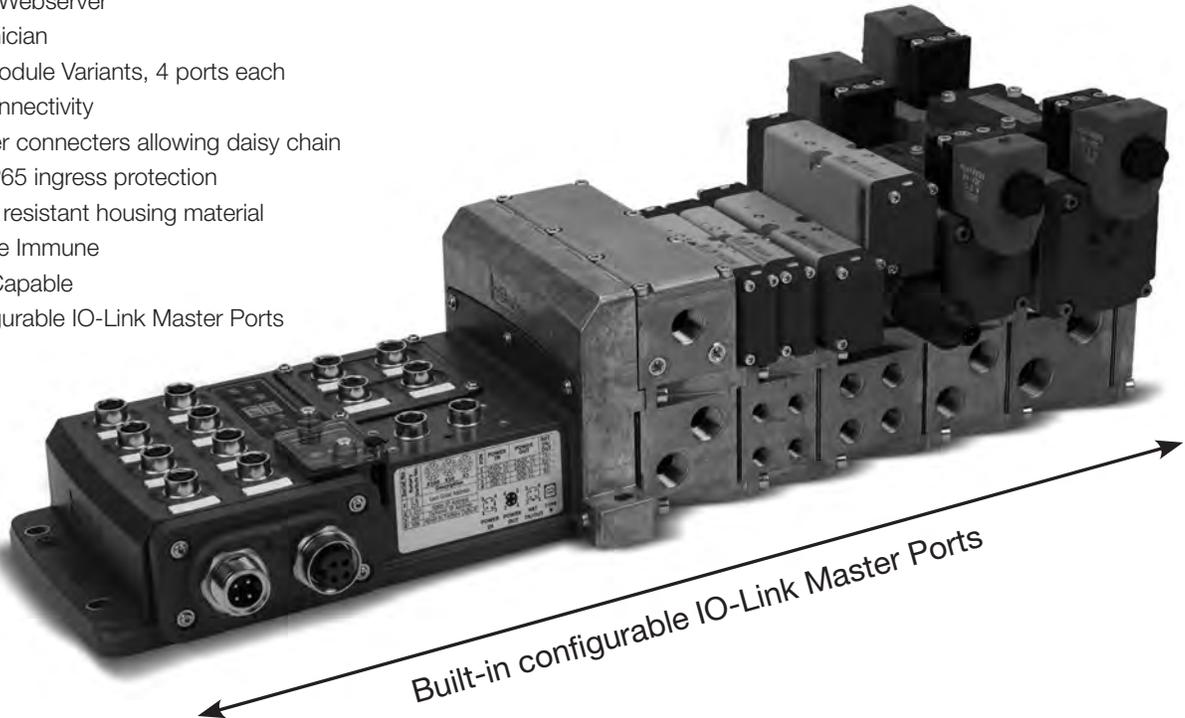
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[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Features**

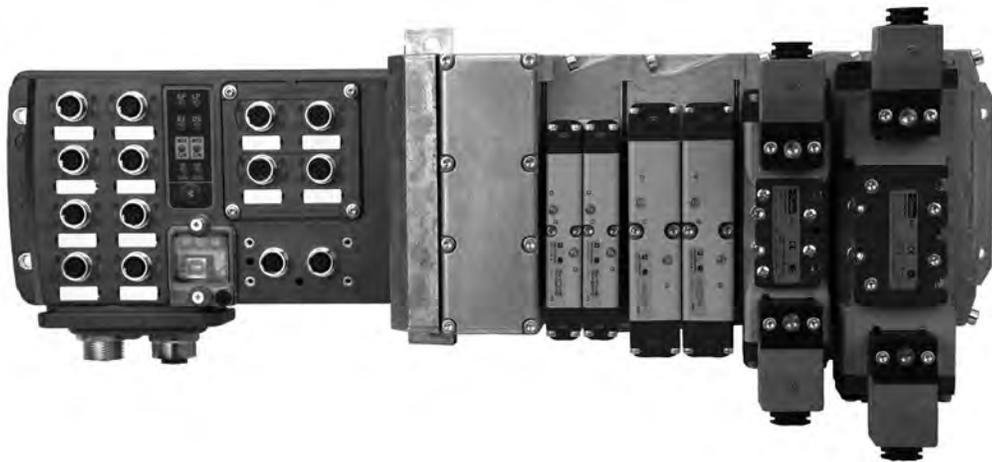
**PCH Network Portal**

**Features**

- Industrial Ethernet Communication
- Truly Configurable I/O
- Feature Rich Webserver
- Built-In Technician
- 3 Available Module Variants, 4 ports each
- Bluetooth Connectivity
- Flexible power connectors allowing daisy chain
- Certified to IP65 ingress protection
- Weld splatter resistant housing material
- Welding Noise Immune
- Safe Power Capable
- Built-in configurable IO-Link Master Ports



The PCH Network Portal redefines and revolutionizes decentralized machine I/O's architecture. The PCH Network Portal was engineered to support industrial ethernet protocols and the open protocol IO-Link with configurable inputs/outputs with true PNP/ NPN circuitry switching on each port for easy machine design changes. This integrated configurability gives the user flexibility in designing custom I/O architecture on the fly.



**EtherNet/IP™**

**PROFINET**  
INDUSTRIAL ETHERNET

**EtherCAT®**

**Modbus**  
TCP/IP

The PCH Network Portal can be assembled to Parker's H ISO Universal Manifold Platform, giving you access to a wide variety of low ranges all on one manifold.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

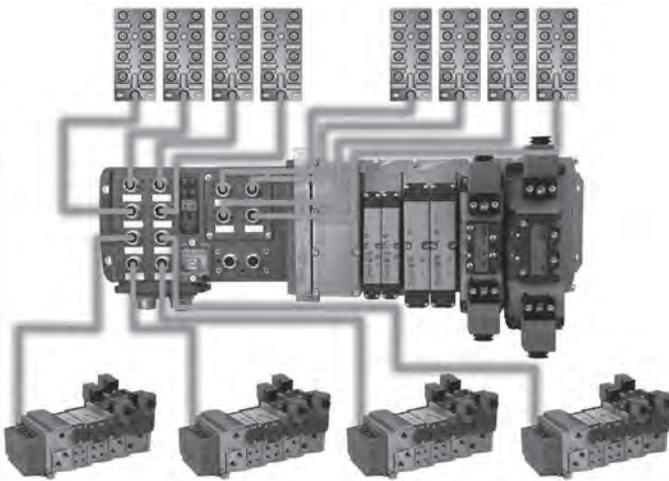
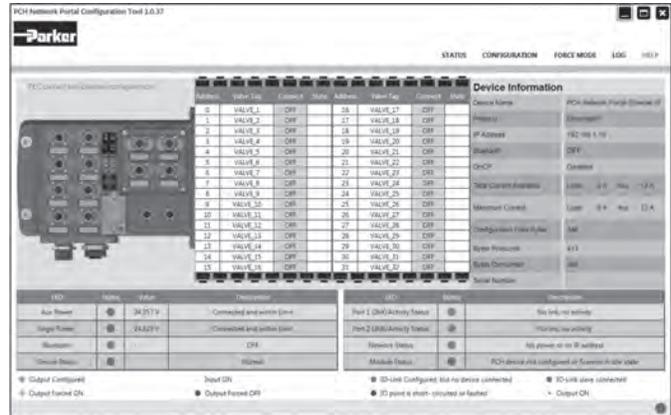
Valvair II Series

Features

Intuitive Interfaces

Modern factories recognize that plant floor architecture is an important structural part of machine design that can make a real difference in managing costs for future changes, integrations and expansions. The PCH Network Portal design team lived in this environment, therefore intuitive interfaces and complete modularity was the heart of PCH Network Portal design concepts.

As with all Cyber Physical Systems (CPS), intuitive interfaces are the backbone of simplicity in application. The PCH Network Portal offers several means of intuitive and embedded interfaces to shorten commission time.



Value Redefined

The PCH Network Portal minimizes machine costs by redefining the traditional process of connectivity within a single footprint that provides multiple configurations. The flexibility of configurable I/O combined with built-in IO-Link master ports revolutionizes machine design and can save thousands of dollars at the design phase which typically accounts for 30-40% of overall costs. Changes can be made to the system with easy software reconfiguration of ports eliminating the need for additional hardware or time consuming programming.



Can't access the PLC? No Problem!

With meticulously designed embedded configuration tools, the PCH Network Portal can serve as your **virtual technician** to make problems easy to troubleshoot. A laptop, tablet or phone can access usable prognostic/diagnostic data and time stamped event logs to make accessing data and commissioning your machine simple. Once you've finished your configuration, the device's configuration profile can be downloaded and easily uploaded to other PCH Network Portals on your machine.

Configure via:

- Bluetooth App via phone or tablet
- Bluetooth connection via PC
- Integrated Webpage via ethernet connection
- Stand-a-lone "PCH Portal Configuration Tool" software via USB-B

Safety Foot Note:  
Bluetooth application cannot turn on outputs if a PLC where present and in control. The application cannot override the PLC at any time.



**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduteflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

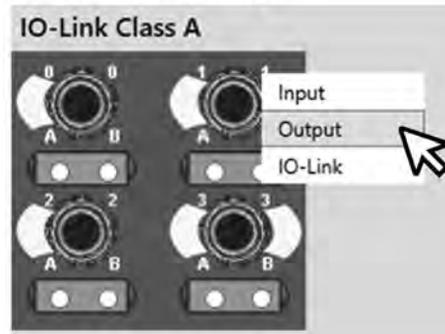
## Features

### Truly Configurable I/O

Configurable I/O means last minute design changes are now simple. Each PCH Network Portal is offered with three selectable modules that make up twelve configurable ports. All modules can be configured IO-Link A, IO-Link B or dual configurable I/O ports with true PNP/NPN circuitry switching on each port providing easy point and click changes on individual pins to customize a setup. Last minute design changes to the machine require minimal effort and no additional software or hardware. The ability to customize the machine design is no longer limited by the product.

## H Series ISO & Network Connectivity PCH Network Portal

### Port Config

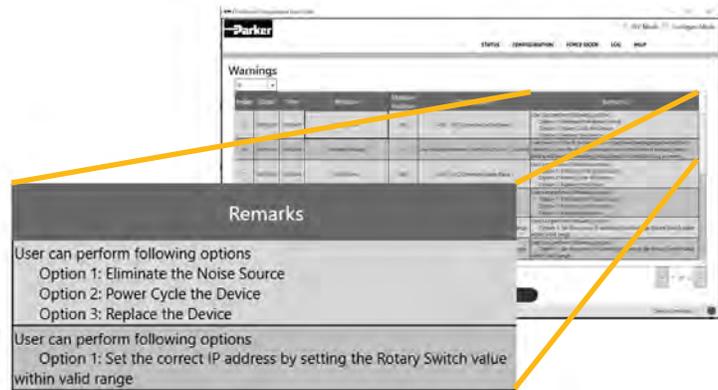


### Tools Designed for Productivity

When a line stops and needs a reset you are often left wondering why. The root cause can seem a mystery and often stems back to over voltage or other power issues caused by the plant floor. Working with the PCH Network Portal is like having your own built-in technician. Rolling 40 errors, warnings and events are time and date stamped allowing you to spend time on what matters - running the facility. Let PCH Network Portal give you the detail so time can be better utilized elsewhere.

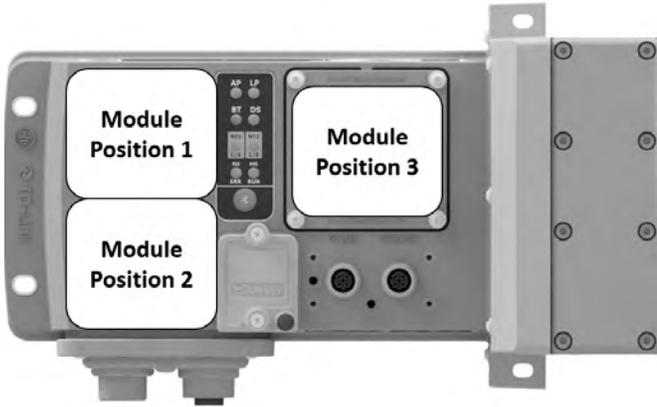
### Built-In Technician

When using the 'PCH Portal Configuration Tool' your built-in technician comes to life with easy to follow screens for readouts, adjustments, and settings. Configuring the PCH Network Portal to the network is easy. Fast and storable configurations combined with embedded smart diagnostic and prognostic tools like built-in debounce times and up/down counters translate to quick change-over and short downtime. Further problems are easy to spot with the rolling 40 error, warnings, and events log which are time stamped. No more guessing at what went wrong in plant. Commissioning and troubleshooting a tool can even be done remotely from outside the work cell via the device's secure and lockable Bluetooth connectivity.



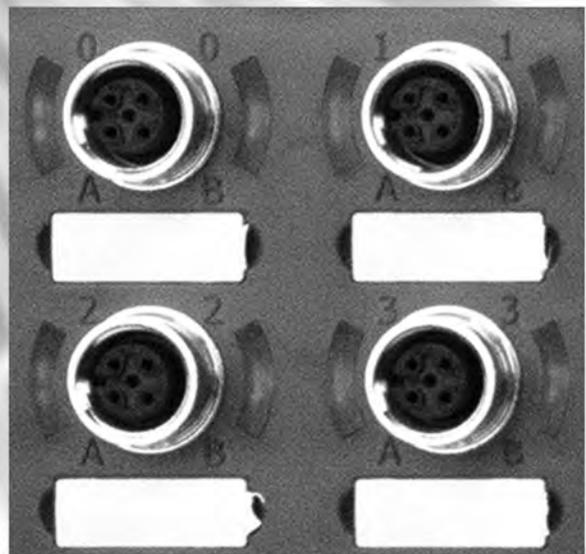
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**Value Redefined**



**What are Module Positions?**

- The PCH Network Portal is split into 3 Module Positions
- Each Module Position can accept different Module Variants to meet the application needs
- Populating a Module Position with an I/O Module Variant gives the PCH Network Portal 4 configurable M12 ports



**What is a Module Variant?**

- 3 Module Variant are proposed offering each different capabilities (see details of Modules Variant A, B or C in next pages)
- A Module Variant offers 4 configurable M12 ports
- Depending on the Module Variant A, B or C selected, each M12 port can be individually configured differently between a variety of different behaviors

*For Example*

- With the Module Position 1 populated with Module Variant A, each M12 port can be individually configured as either IO-Link Class A Master or 2 Digital Inputs or 2 Digital Outputs
- A summary of the Module Variant offerings is on page D179

|                         |
|-------------------------|
| <b>D</b>                |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Features

PCH Network Portal

Module Variants

Module  
**A**

What is a Module Variant?

- The PCH Network Portal has 3 available Module Positions. Each module position can be populated with three different Module Variants
- Each Module Position can accept all module variants

Port Behavior

- Each port is capable of the following behavior listed below
- Through software, the user can click and change how the port behaves on the fly
- The A Module Variant gives the user access to IO-Link Class A Master ports



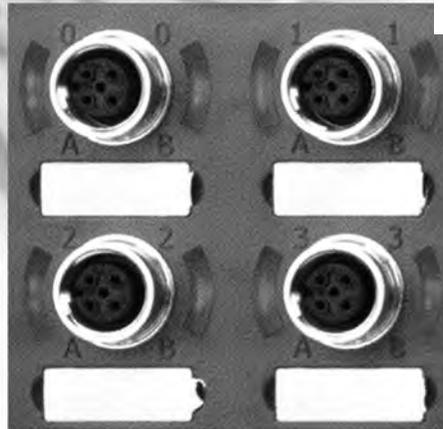
Possible Port Behavior

IO-Link, Class A Master or  
2 x Digital Inputs or  
2 x Digital Outputs\*

IO-Link, Class A Master or  
2 x Digital Inputs or  
2 x Digital Outputs\*

IO-Link, Class A Master or  
2 x Digital Inputs or  
2 x Digital Outputs\*

IO-Link, Class A Master or  
2 x Digital Inputs or  
2 x Digital Outputs\*



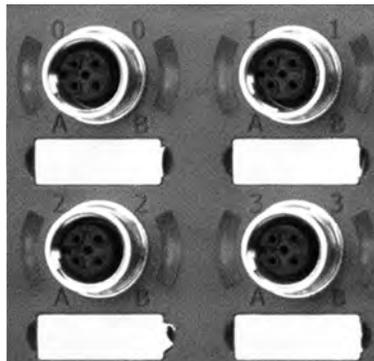
\*Digital Output draws current from logic power

Port Behavior

- Each port's behavior can differ from one another
- For example, the user can select the behavior listed below through software (shown below)

IO-Link, Class A Master or  
**2 x Digital Inputs**  
2 x Digital Outputs

IO-Link, Class A Master or  
2 x Digital Inputs or  
**2 x Digital Outputs**



**IO-Link, Class A Master**  
2 x Digital Inputs or  
2 x Digital Outputs

IO-Link, Class A Master or  
2 x Digital Inputs or  
**2 x Digital Outputs**



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D

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Features

PCH Network Portal

Module Variants

Module

**B**

What is a Module Variant?

- The PCH Network Portal has 3 available Module Positions. Each module position can be populated with three different Module Variants
- Each Module Position can accept all module variants

Port Behavior

- Each port is capable of the following behavior listed below
- Through software, the user can click and change how the port behaves on the fly
- The B Module Variant gives the user access to IO-Link Class B Master ports



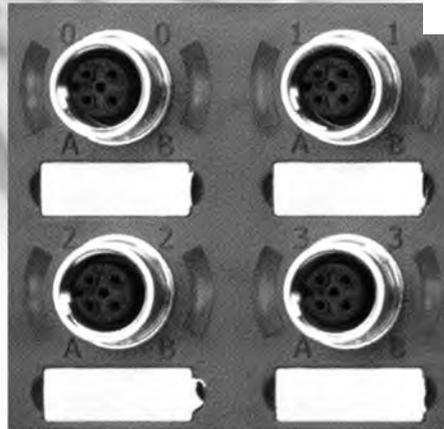
Possible Port Behavior

IO-Link, Class B Master or  
1 x Digital Input or  
1 x Digital Output\*

IO-Link, Class B Master or  
1 x Digital Input or  
1 x Digital Output\*

IO-Link, Class B Master or  
1 x Digital Input or  
1 x Digital Output\*

IO-Link, Class B Master or  
1 x Digital Input or  
1 x Digital Output\*



\*Digital Output draws current from logic power

Port Behavior

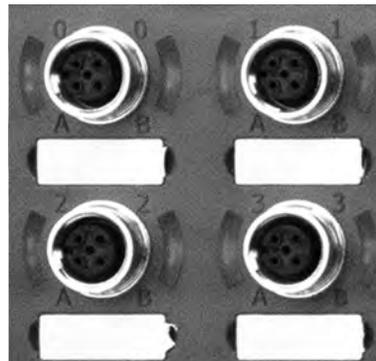
- Each port's behavior can differ from one another
- For example, the user can select the behavior listed below through software (shown below)

IO-Link, Class B Master or  
**1 x Digital Input**  
1 x Digital Output

IO-Link, Class B Master or  
1 x Digital Input or  
**1 x Digital Output**

**IO-Link, Class B Master**  
1 x Digital Input or  
1 x Digital Output

IO-Link, Class B Master or  
1 x Digital Input or  
**1 x Digital Output**



**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

Features

PCH Network Portal

Module Variants

Module



What is a Module Variant?

- The PCH Network Portal has 3 available Module Positions. Each module position can be populated with three different Module Variants
- Each Module Position can accept all module variants

Port Behavior

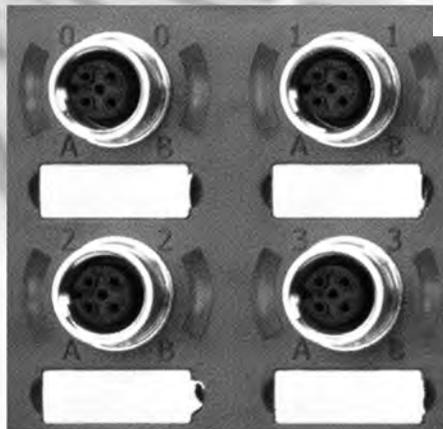
- Each port is capable of the following behavior listed below
- Through software, the user can click and change how the port behaves on the fly
- The C Module Variant gives the user access to IO-Link Class B Master ports and fixed high current outputs



Possible Port Behavior

2 x Digital Outputs, 500 mA each, Fixed ¥

IO-Link, Class B Master or  
1 x Digital Input or  
1 x Digital Output\*



2 x Digital Outputs, 500 mA each, Fixed ¥

IO-Link, Class B Master or  
1 x Digital Input or  
1 x Digital Output\*

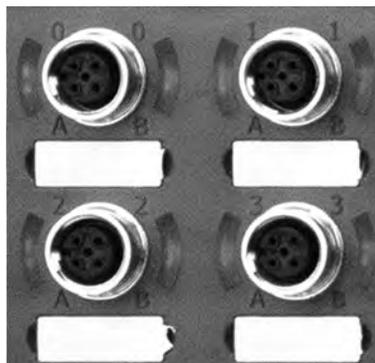
¥ Digital Outputs draw current from auxiliary power  
\* Digital Output draws current from logic power

Port Behavior

- Each port's behavior can differ from one another
- For example, the user can select the behavior listed below through software (shown below)

**2 x Digital Outputs, 500 mA each, Fixed**

IO-Link, Class B Master or  
1 x Digital Input or  
**1 x Digital Output**



**2 x Digital Outputs, 500 mA each, Fixed**

**IO-Link, Class B Master**  
1 x Digital Input or  
1 x Digital Output



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D

Subbase & Manual Valves

H Series Micro

Modulflex Series

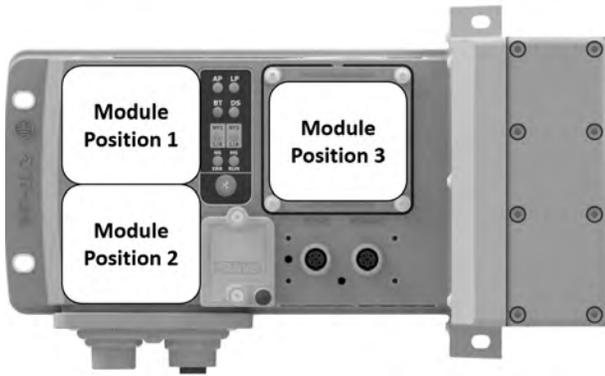
H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

I/O Module Combinations



- The PCH Network Portal gives true port flexibility
- The PCH Network Portal can be ordered with 3 available module variants
- Each module variant has 4, M12 Ports
- Each module variants can be chosen in any module position
- Each port is individually software configurable
- A blanking plate is available for Module Position 3
- **Important:** Once Module Variants are selected on the PCH Network Portal, they cannot be changed in the field

**Before** it comes through your door  
Select which Module Variant you want in each Module Position



**After** it comes through your door  
Truly Configurable I/O - Select port behavior from listed options

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair-II Series

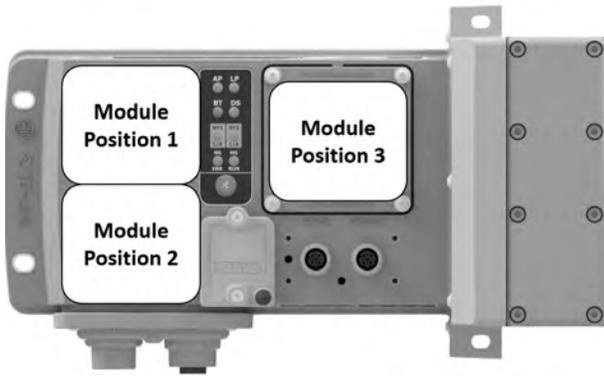
Module Variants

|                    |   |  |  |  |
|--------------------|---|--|--|--|
| Module<br><b>A</b> |   | <ul style="list-style-type: none"> <li>• IO-Link, Class A Master <b>OR</b></li> <li>• 2 Inputs, PNP/NPN <b>OR</b></li> <li>• 2 Outputs, 250 mA ea</li> </ul> |  | <ul style="list-style-type: none"> <li>• IO-Link, Class A Master <b>OR</b></li> <li>• 2 Inputs, PNP/NPN <b>OR</b></li> <li>• 2 Outputs, 250 mA ea</li> </ul> |
|                    |   | <ul style="list-style-type: none"> <li>• IO-Link, Class A Master <b>OR</b></li> <li>• 2 Inputs, PNP/NPN <b>OR</b></li> <li>• 2 Outputs, 250 mA ea</li> </ul> |  | <ul style="list-style-type: none"> <li>• IO-Link, Class A Master <b>OR</b></li> <li>• 2 Inputs, PNP/NPN <b>OR</b></li> <li>• 2 Outputs, 250 mA ea</li> </ul> |
| Module<br><b>B</b> |   | <ul style="list-style-type: none"> <li>• IO-Link, Class B Master <b>OR</b></li> <li>• 1 Input, PNP/NPN <b>OR</b></li> <li>• 1 Output, 250 mA ea</li> </ul>   |  | <ul style="list-style-type: none"> <li>• IO-Link, Class B Master <b>OR</b></li> <li>• 1 Input, PNP/NPN <b>OR</b></li> <li>• 1 Output, 250 mA ea</li> </ul>   |
|                    |   | <ul style="list-style-type: none"> <li>• IO-Link, Class B Master <b>OR</b></li> <li>• 1 Input, PNP/NPN <b>OR</b></li> <li>• 1 Output, 250 mA ea</li> </ul>   |  | <ul style="list-style-type: none"> <li>• IO-Link, Class B Master <b>OR</b></li> <li>• 1 Input, PNP/NPN <b>OR</b></li> <li>• 1 Output, 250 mA ea</li> </ul>   |
| Module<br><b>C</b> |   | <ul style="list-style-type: none"> <li>• 2 Outputs, 500 mA ea</li> </ul>   |  | <ul style="list-style-type: none"> <li>• 2 Outputs, 500 mA ea</li> </ul>   |
|                    |   | <ul style="list-style-type: none"> <li>• IO-Link, Class B Master <b>OR</b></li> <li>• 1 Input, PNP/NPN <b>OR</b></li> <li>• 1 Output, 250 mA ea</li> </ul>   |  | <ul style="list-style-type: none"> <li>• IO-Link, Class B Master <b>OR</b></li> <li>• 1 Input, PNP/NPN <b>OR</b></li> <li>• 1 Output, 250 mA ea</li> </ul>   |
| Module<br><b>N</b> | Blank Cover, No Ports, Only available in Position 3 |  |  |  |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**I/O Module Combinations**



- Below are 16 standard module combinations
- For simplicity, similar combinations of modules are consolidated into one combination



**Example Model Structure**



Below are the standard module configurations

Refer to page 183 for full product Module Structure.

| Order Code | Module Position 1 | Module Position 2 | Module Position 3 |
|------------|-------------------|-------------------|-------------------|
| AAA        | A                 | A                 | A                 |
| AAB        | A                 | A                 | B                 |
| AAC        | A                 | A                 | C                 |
| AAN        | A                 | A                 | N                 |
| ABB        | A                 | B                 | B                 |
| ABC        | A                 | B                 | C                 |
| ABN        | A                 | B                 | N                 |
| ACC        | A                 | C                 | C                 |
| ACN        | A                 | C                 | N                 |
| BBB        | B                 | B                 | B                 |
| BBC        | B                 | B                 | C                 |
| BBN        | B                 | B                 | N                 |
| BCC        | B                 | C                 | C                 |
| BCN        | B                 | C                 | N                 |
| CCC        | C                 | C                 | C                 |
| CCN        | C                 | C                 | N                 |

For any module configurations not listed, consult factory.

|                         |
|-------------------------|
| D                       |
| Subbase & Manual Valves |
| H Series Micro          |
| Moduflex Series         |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



**Power Options**

- The PCH Network Portal has 4 available power connectors
- There are two power schemes that can be achieved detailed below
- Any I/O ports using AUX power and any attached H ISO Universal manifold valves draw power from the AUX power pins of the power connector

**Consumption @ 24 VDC**

AUX power max consumption 12A  
 Logic power max consumption 8A

**Total possible passthrough for AUX line and Logic 20A**

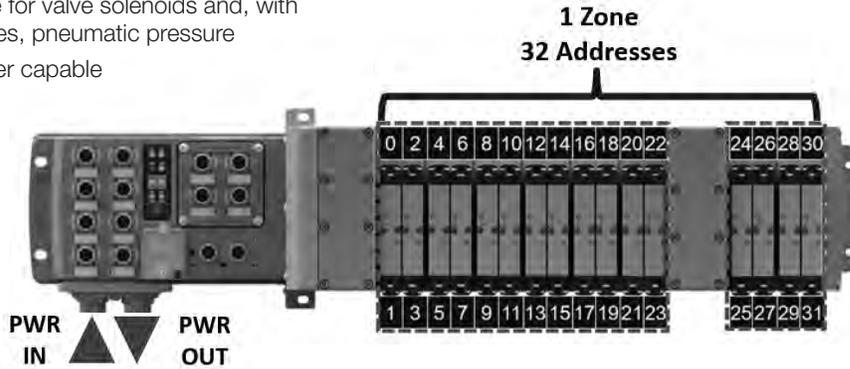
Any power left over can be passed on to other devices on the network



| Power Connector *                                 |    |
|---|----|
| 4-pin power in/out with 1 safe power capable zone | P4 |
| 5-pin power in/out with 1 safe power capable zone | P5 |
| 4-pin power in/in with 2 safe power zones         | S4 |
| 5-pin power in/in with 2 safe power zones         | S5 |

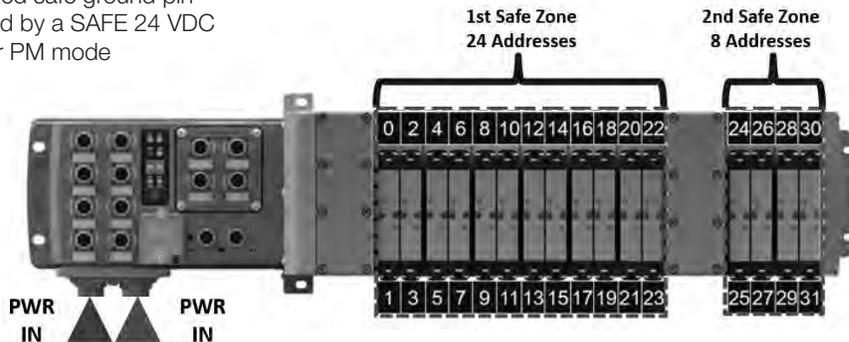
**Power Scheme 1**

- All 32 addresses are controlled in the same power zone
- Safety zoning is possible for valve solenoids and, with the H ISO Universal valves, pneumatic pressure
- Power zone is safe power capable
- Available in 4 or 5-pin 7/8" power connectors



**Power Scheme 2**

- The power connector separates the valve power
- Each zone has an isolated safe ground pin so each can be powered by a SAFE 24 VDC auxiliary source in PP or PM mode
- Available in 4 or 5 pin 7/8" power connectors



**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D200

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 Pneumatic Division  
 Richland, Michigan  
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**Common Part Numbers**

**Popular Module Combinations**

- Listed below are popular module configurations
- For full model number structure, please refer to next page

**EtherNet/IP™**

| Popular Part Number Configurations |             |                 |   |   |   |                       |
|------------------------------------|-------------|-----------------|---|---|---|-----------------------|
| Pilot Type                         | Thread Type | Module Position |   |   | Power Connector                                   | End Plate Part Number |
|                                    |             | 1               | 2 | 3 |   |                       |
| Internal                           | NPT         | A               | A | A | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAA0-P4   |
| Internal                           | NPT         | A               | A | B | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAB0-P4   |
| Internal                           | NPT         | A               | B | C | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEABC0-P4   |
| Internal                           | NPT         | A               | A | N | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAN0-P4   |
| Internal                           | NPT         | A               | A | A | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAA0-P5   |
| Internal                           | NPT         | A               | A | B | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAB0-P5   |
| Internal                           | NPT         | A               | A | C | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAC0-P5   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PEAAN0-P5   |
| Internal                           | NPT         | A               | A | A | 4-pin power IN/IN with 2 safe power zones         | PSHU20P300PEAAA0-S4   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PEAAN0-S5   |



| Popular Part Number Configurations |             |                 |   |   |   |                       |
|------------------------------------|-------------|-----------------|---|---|---|-----------------------|
| Pilot Type                         | Thread Type | Module Position |   |   | Power Connector                                   | End Plate Part Number |
|                                    |             | 1               | 2 | 3 |   |                       |
| Internal                           | NPT         | A               | A | A | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PNAAA0-P5   |
| Internal                           | NPT         | A               | A | B | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PNAB0-P5    |
| Internal                           | NPT         | A               | B | C | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PNABC0-P5   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PNAAN0-P5   |
| Internal                           | NPT         | A               | A | A | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PNAAA0-P5   |
| Internal                           | NPT         | A               | A | B | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PNAB0-S5    |
| Internal                           | NPT         | A               | A | C | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PNAAC0-S5   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PNAAN0-S5   |
| Internal                           | NPT         | A               | A | A | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PNAAA0-S5   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PNAAN0-S5   |



| Popular Part Number Configurations |             |                 |   |   |   |                       |
|------------------------------------|-------------|-----------------|---|---|---|-----------------------|
| Pilot Type                         | Thread Type | Module Position |   |   | Power Connector                                   | End Plate Part Number |
|                                    |             | 1               | 2 | 3 |   |                       |
| Internal                           | NPT         | A               | A | A | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAA0-P4   |
| Internal                           | NPT         | A               | A | B | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAB0-P4   |
| Internal                           | NPT         | A               | B | C | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTABC0-P4   |
| Internal                           | NPT         | A               | A | N | 4-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAN0-P4   |
| Internal                           | NPT         | A               | A | A | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAA0-P5   |
| Internal                           | NPT         | A               | A | B | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAB0-P5   |
| Internal                           | NPT         | A               | A | C | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAC0-P5   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/OUT with 1 safe power capable zone | PSHU20P300PTAAN0-P5   |
| Internal                           | NPT         | A               | A | A | 4-pin power IN/IN with 2 safe power zones         | PSHU20P300PTAAA0-S4   |
| Internal                           | NPT         | A               | A | N | 5-pin power IN/IN with 2 safe power zones         | PSHU20P300PTAAN0-S5   |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D201

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D

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Ordering Information**

**End Plate Kit – Universal Plug-in**

The PCH Network Portal is ordered as an endplate kit. This includes the PCH Network Portal, left hand air supply module, and right hand end plate.

For fully assembled manifold Add-A-Fold part number, reference page D88



**PSHU20 P3 0 0 P E AAA 0 - P4**

| Valve Type               |        |
|--------------------------|--------|
| Plug-in (Internal pilot) | PSHU20 |
| Plug-in (External pilot) | PSHU2X |

| Thread Type |   |
|-------------|---|
| NPT         | 0 |
| BSPP "G"    | 1 |

| Network Connections |   |
|---------------------|---|
| EtherNet/IP™        | E |
| EtherCAT            | T |
| PROFINET            | N |
| Modbus TCP          | M |

| Power Connector                                   |    |
|---|----|
| 4-pin power IN/OUT with 1 safe power capable zone | P4 |
| 5-pin power IN/OUT with 1 safe power capable zone | P5 |
| 4-pin power IN/IN with 2 safe power zones         | S4 |
| 5-pin power IN/IN with 2 safe power zones         | S5 |

| Right Hand End Plate Type / Thread Size   |   |
|---|---|
| Low profile (no ports)  | 0 |
| 1/2 Exhaust and inlet port  | 1 |
| 3/4 Exhaust and inlet port  | 2 |
| H3 Transition plate and end plate (electrical pass through for plug-in valves only)   | 3 |
| H3 Transition plate and end plate (expansion to 25th address for plug-in valves only) | 4 |

| Module Combinations |                   |                   |
|---------------------|-------------------|-------------------|
| Module Position 1   | Module Position 2 | Module Position 3 |
| A                   | A                 | A                 |
| A                   | A                 | B                 |
| A                   | A                 | C                 |
| A                   | A                 | N                 |
| A                   | B                 | B                 |
| A                   | B                 | C                 |
| A                   | B                 | N                 |
| A                   | C                 | C                 |
| A                   | C                 | N                 |
| B                   | B                 | B                 |
| B                   | B                 | C                 |
| B                   | B                 | N                 |
| B                   | C                 | C                 |
| B                   | C                 | N                 |
| C                   | C                 | C                 |
| C                   | C                 | N                 |

For any module configurations not listed, consult factory.

|   |                         |
|---|-------------------------|
| D | Subbase & Manual Valves |
|   | H Series Micro          |
|   | Modulflex Series        |
|   | H Series ISO            |
|   | Network Connectivity    |
|   | DX ISOMAX Series        |
|   | Valvair II Series       |

Most popular.



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**Mechanical Data**

|                              |  |
|------------------------------|--|
| Housing Material             | Housing /Enclosure: PBT with 33% GF and UL94-V0 Base Cover (plate): Aluminum 380 |
| Enclosure rating             | IP 65 (only when plugged-in and threaded-in)                                     |
| Power Connectors             | 7/8" 4 or 5 pin male and female pin connector                                    |
| Input ports/ Output ports    | M12, A-coded (12 x female)   |
| Dimensions (L x B x H in mm) | 226.6mm x 130.7mm x 55mm   |
| Mounting type                | Screw Mount  |
| Ground strap attachment      | M5   |
| Weight                       | Approx. 1.3 kg   |

**Operating Conditions**

|                                  |                                     |
|----------------------------------|-------------------------------------|
| Operating Temperature            | 0°C to 50°C                         |
| Storage Temperature              | -25°C to 70°C                       |
| CE as per                        | IEC 61000-6-2 (Industrial Immunity) |
|                                  | IEC 61000-6-4 (Industrial Emission) |
| Shock/Vibrations                 | IEC 60068-2-27:2008                 |
|                                  | IEC 60068-2-6:2007                  |
| Electrostatic Discharge          | IEC 61000-4-2                       |
| Electrical Fast Transient/ Burst | IEC 61000-4-4                       |
| Surge Immunity                   | IEC 61000-4-5                       |

**Electrical Data**

|                                |   |
|--------------------------------|---|
| Supply Voltage                 | 24VDC (-15% to +20%)                                    |
| Logic current at 24 V (V1)     | Max Current 8A – Actual usage depends on configuration  |
| Auxiliary current at 24 V (V2) | Max Current 12A – Actual usage depends on configuration |

**Valve Configuration**

|                     |   |
|---------------------|---|
| Compatible Valves   | H Universal ISO Valves                                      |
| Available addresses | 24 addresses, 32 addresses with H Universal Extension Slice |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D203

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

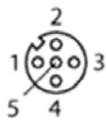
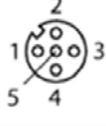
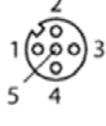
Network Connectivity

DX ISOMAX Series

Valvair II Series

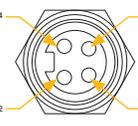
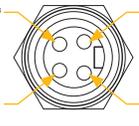
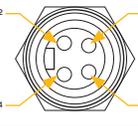
**I/O Port Pin Outs**

- The PCH Network Portal uses threaded M12 Ports for I/O Connections
- All configurable ports are configurable through software at any time

| Module Variant                                   | Connector   | Pin No. | Function   |
|--|---|---------|--|
| <b>A</b><br>*Applies to ports 1-4 of this module |  | 1       | +24V, 500mA VLOG (V1)                                |
|  |   | 2       | Input (PNP or NPN) / Output +24V, 250 mA (V1)        |
|  |   | 3       | GND (V1)   |
|  |   | 4       | IO-Link/Input (PNP or NPN) / Output +24V, 250mA (V1) |
|  |   | 5       | Not Connected  |
| <b>B</b><br>*Applies to ports 1-4 of this module |  | 1       | +24V, 250mA VLOG (V1)                                |
|  |   | 2       | +24V, 1.2A VAUX (V2)                                 |
|  |   | 3       | GND (V1)   |
|  |   | 4       | IO-Link/Input (PNP or NPN) / Output +24V, 250mA (V1) |
|  |   | 5       | GND (V2)   |
| <b>C</b><br>*Applies to ports 1-2 of this module |  | 1       | Not Connected  |
|  |   | 2       | Output +24VAUX (V2), 500mA                           |
|  |   | 3       | GND (V2)   |
|  |   | 4       | Output +24VAUX (V2), 500mA                           |
|  |   | 5       | Not Connected  |
| <b>D</b><br>*Applies to ports 3-4 of this module |  | 1       | +24V, 250mA VLOG (V1)                                |
|  |   | 2       | +24V, 1.2A VAUX (V2)                                 |
|  |   | 3       | GND (V1)   |
|  |   | 4       | IO-Link/Input (PNP or NPN) / Output +24V, 250mA (V1) |
|  |   | 5       | GND (V2)   |

**Power Conector Pin Outs**

- The PCH Network Portal uses 7/8" ports for its left IN and right OUT or IN power connectors.
- Any power configuration below can be ordered
- For AIDA power connector, consult factory

|  | Left Power Connector: Power IN |                  |                  |             | Right Power Connector: Power OUT  |         |                  |                  |
|--|--------------------------------|------------------|------------------|-------------|---|---------|------------------|------------------|
|  | Connector                      | Pin No.          | Function         | Description | Connector   | Pin No. | Function         | Description      |
| <b>P4</b><br> | 1                              | +24 V            | V2 (VAUX), 12A   |             |  | 1       | +24 V            | V2 (VAUX), 3.8A  |
|  | 2                              | +24 V            | V1 (VLOG), 8A    |             |   | 2       | +24 V            | V1 (VLOG), 1.28A |
|  | 3                              | 0 V              | GND V1 (VLOG)    |             |   | 3       | 0 V              | GND V1 (VLOG)    |
|  | 4                              | 0 V              | GND V2 (VAUX)    |             |   | 4       | 0 V              | GND V2 (VAUX)    |
|  | 5                              | 0 V              | GND V2 (VAUX)    |             |   | 5       | 0 V              | GND V2 (AUX)     |
| <b>P5</b><br> | 1                              | 0 V              | GND V2 (VAUX)    |             |  | 1       | 0 V              | GND V2 (VLOG)    |
|  | 2                              | 0 V              | GND V1 (VLOG)    |             |   | 2       | 0 V              | GND V1 (VLOG)    |
|  | 3                              | Protective Earth | Protective Earth |             |   | 3       | Protective Earth | Protective Earth |
|  | 4                              | +24 V            | V1 (VLOG), 8A    |             |   | 4       | +24 V            | V1 (VLOG)        |
|  | 5                              | +24 V            | V2 (VAUX), 12A   |             |   | 5       | +24 V            | V2 (VAUX)        |
| <b>S4</b><br> | 1                              | +24 V            | V2 (VAUX), 12A   |             |  | 1       | +24 V            | V2 (VAUX), 3.8A  |
|  | 2                              | +24 V            | V1 (VLOG), 8A    |             |   | 2       | +24 V            | V1 (VAUX), 1.28A |
|  | 3                              | 0 V              | GND V1 (VLOG)    |             |   | 3       | 0 V              | Safe GND 1-3*    |
|  | 4                              | 0 V              | GND V2 (VAUX)    |             |   | 4       | 0 V              | Safe GND 4*      |
|  | 5                              | 0 V              | GND V2 (VAUX)    |             |   | 5       | +24 V            | V2 (VAUX), 3.8A  |
| <b>S5</b><br> | 1                              | 0 V              | GND V2 (VAUX)    |             |  | 1       | +24 V            | V2 (VAUX), 3.8A  |
|  | 2                              | 0 V              | GND V1 (VLOG)    |             |   | 2       | +24 V            | V1 (VAUX), 1.28A |
|  | 3                              | Protective Earth | Protective Earth |             |   | 3       | Protective Earth | Protective Earth |
|  | 4                              | +24 V            | V1 (VLOG), 8A    |             |   | 4       | 0 V              | Safe GND 1-3*    |
|  | 5                              | +24 V            | V2 (VAUX), 12A   |             |   | 5       | 0 V              | Safe GND 4*      |

\*"Safe GND 1-3" refers to solenoid addresses 0-23 and "Safe GND 4" refers to solenoid addresses 24-31



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D204

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Subbase & Manual Valves  
 H Series Micro  
 Moduteflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Solenoid Addressing**

- The PCH Network Portal can use the following H ISO Universal Valves:
  - ISO 15407-2 – sizes 02 & 01
  - ISO 5599-2 – sizes 1, 2 & 3
- The PCH Network Portal can support up to 32 addresses as shown
- The data map and PCH Tool refers to each address with a Valve\_X designator. Each Valve\_X designator is as shown.
- Addresses 25-31 can be accessed using an Intermediate Air Supply with Electric Expansion
- Each address is one solenoid

Air Supply

HB Single Address  
 Manifold

H1 Single Address  
 Manifold

H1 Double Address  
 Manifold

HA Double Address  
 Manifold

H2 Single Address  
 Manifold

H2 Double Address  
 Manifold

Air Supply Zero  
 Address Manifold

H1 Single Address  
 Manifold

H1 Double Address  
 Manifold

HB Double Address  
 Manifold

HA Single Address  
 Manifold

H2 Single Address  
 Manifold

H2 Double Address  
 Manifold

Low Profile End Plate  
 (No Ports)

EV4 Address 4

EV6 Address 6

EV8 Address 8

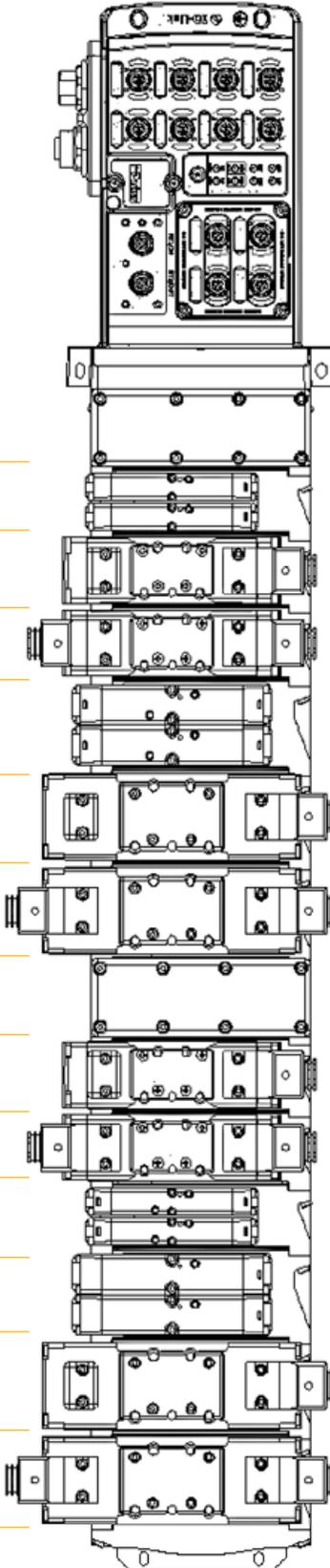
EV11 Address 11

EV14 Address 14

EV16 Address 16

EV18 Address 18

EV23 Address 23



EV0 Address 0

EV1 Address 1

EV2 Address 2

EV3 Address 3

EV5 Address 5

EV7 Address 7

EV9 Address 9

EV10 Address 10

EV12 Address 12

EV13 Address 13

EV15 Address 15

EV17 Address 17

EV19 Address 19

EV20 Address 20

EV21 Address 21

EV22 Address 22

**D**

Subbase & Manual  
 Valves

H Series  
 Micro

Moduflex  
 Series

H Series  
 ISO

Network  
 Connectivity

DX ISOMAX  
 Series

Valvair II  
 Series

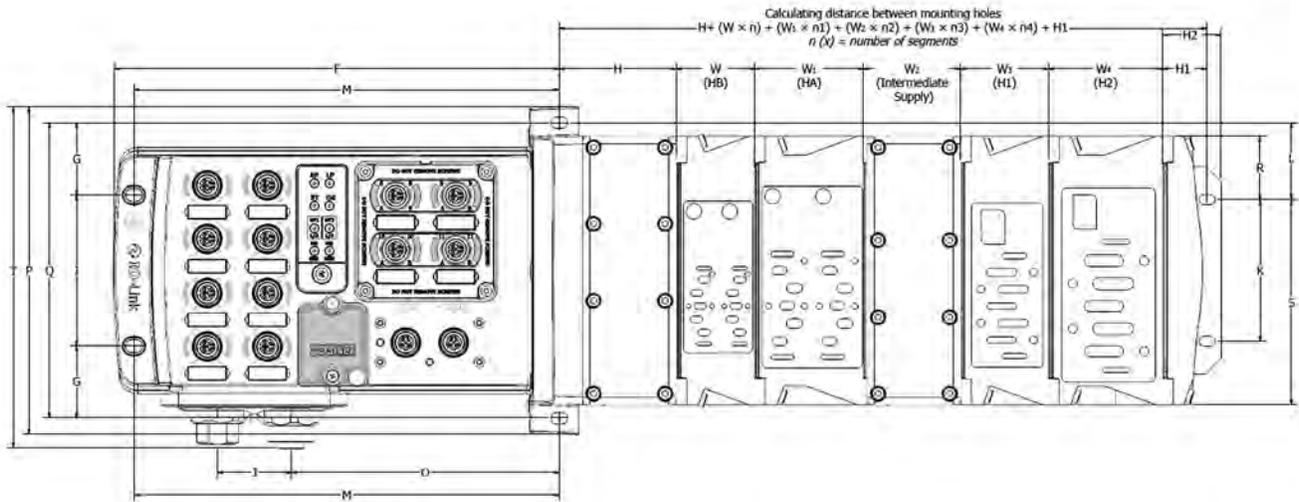


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D205

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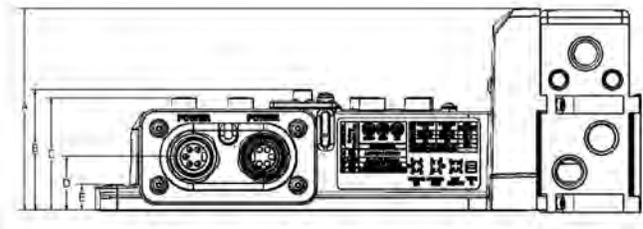
**PCH Network Portal with H Series ISO Valves**



**n (x)** = number of segments

| A               | B               | C               | D              | E              | F               | G               | H              | H <sub>1</sub> | H <sub>2</sub> | J              | K              | L             |
|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| 4.42<br>(112.3) | 2.64<br>(67.1)  | 2.46<br>(62.5)  | 1.17<br>(29.7) | .55<br>(14)    | 9.32<br>(236.7) | 1.51<br>(38.4)  | 2.36<br>(59.9) | .9<br>(22.9)   | 1.22<br>(31)   | 1.55<br>(39.4) | 2.95<br>(74.9) | 1.6<br>(40.6) |
| M               | O               | P               | Q              | R              | S               | T               | W              | W <sub>1</sub> | W <sub>2</sub> | W <sub>3</sub> | W <sub>4</sub> |               |
| 8.91<br>(226.3) | 5.61<br>(142.5) | 6.86<br>(174.2) | 6.18<br>(157)  | 1.33<br>(33.8) | 4.28<br>(108.7) | 7.14<br>(181.4) | 1.63<br>(41.4) | 2.28<br>(57.9) | 2.03<br>(51.6) | 1.82<br>(46.2) | 2.39<br>(60.7) |               |

Inches (mm)



**D**  
**Subbase & Manual Valves**  
H Series Micro  
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Network Connectivity  
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Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D206

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Richland, Michigan  
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**Product Support**

- The PCH Network Portal Product Landing page can be accessed at the following:



[www.parker.com/pdn/PCHPortal](http://www.parker.com/pdn/PCHPortal)

- The PCH Network Portal support material can be accessed at the following:



[www.parker.com/pdn/networkconnectivity](http://www.parker.com/pdn/networkconnectivity)

- The PCH Connect - Bluetooth App



User Manuals

- The PCH Network Portal User Manuals can be accessed at the following website. Click on QR code for hyperlink.

**EtherNet/IP™** EtherNet/IP™ User Manual



Profinet User Manual



**EtherCAT®** EtherCAT User Manual



Modbus User Manual



For more information on IO-link  
[www.io-link.com](http://www.io-link.com)



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

### Features

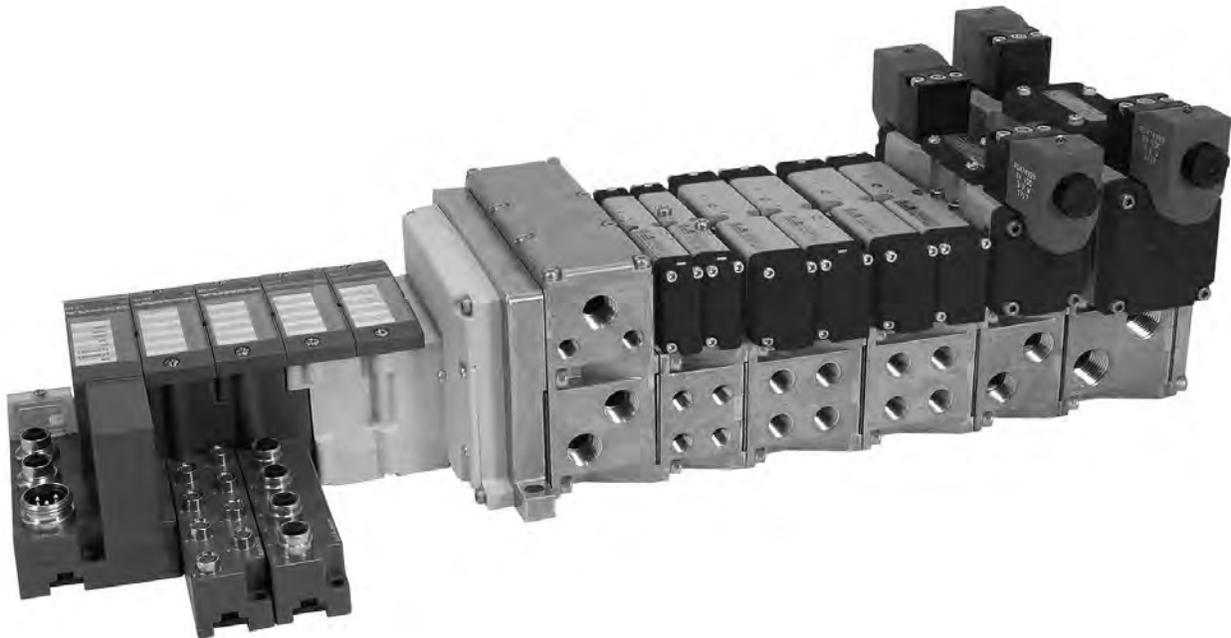
#### The Turck Network Portal

Turck Network Portal has four major components:

- **Valve Driver Module** provide control for either 16 or 32 solenoids on a manifold
- **I/O Modules** provide the field interface and system-interface circuitry
- **Communication Modules** provide the network-interface circuitry
- **Power Distribution Module** provide 5 additional power inputs to the Turck system

#### Turck Features

- Highly modular design (4pt – 16pt modularity)
- Broad application coverage
- Expandable 4 port Class A IO-Link master
- Channel-level diagnostics (LED and electronic)
- Channel-level alarm and annunciation (electronic)
- Channel-level open-wire detection with electronic feedback
- Channel-level short-circuit detection with electronic feedback
- Horizontal and vertical mounting without derating
- 5g vibration
- Electronic and mechanical keying
- Robust backplane design
- Quick-disconnects for I/O and network connectivity
- Built-in panel grounding
- Color-coded module labels
- UL, cCSAus, and CE certifications (as marked)
- Highly reliable structural integrity
- Optical isolation between field and system circuits



D

Subbase & Manual  
ValvesH Series  
MicroModulflex  
SeriesH Series  
ISONetwork  
ConnectivityDX ISOMAX  
SeriesValvair-II  
Series

For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D208

**Parker Hannifin Corporation**  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Turk Network Portal**

- A complete network communication offering for all H Series ISO and H Series Micro valves
- CSA, cULus and CE certifications (as marked)

**I/O Configuration**

- Centralized Turk Network Portal
- Pneumatics and I/O are in close proximity with one another
- M23, 12-Pin or 19-Pin output extension to an additional H Series valve manifold
- I/O density per module = 4, 8 or 16

EtherNet/IP™

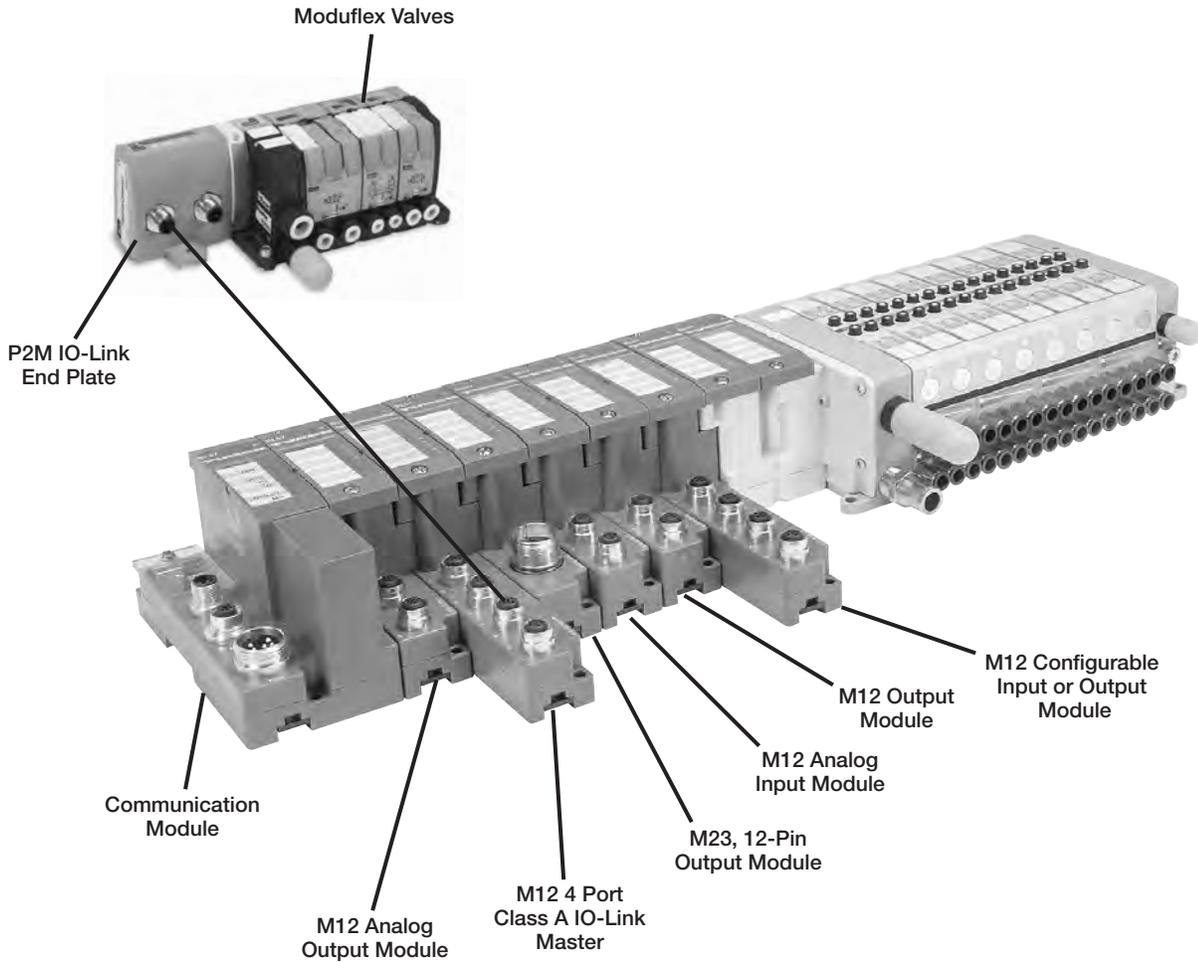
DeviceNet™

PROFI®  
 PROCESS FIELD BUS

PROFI®  
 INDUSTRIAL NETWORK

Modbus/TCP™

CANopen



**Configure / Program any module with RS232, or directly through Ethernet for any module with an Ethernet physical layer.**



**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



**Turk Network Portal**

- A complete network communication offering for all H Series ISO and H Series Micro valves.
- CSA, cCSAus and CE certifications (as marked).

**I/O Configuration**

- Complete control of all I/O and valves with stand alone control
- Additional I/O and valves connected over DeviceNet with BL Remote Subnet
- BL Remote connection to P2M and Turk DeviceNet equipped communication modules
- I/O density per module = 4, 8 or 16

EtherNet/IP™

DeviceNet™

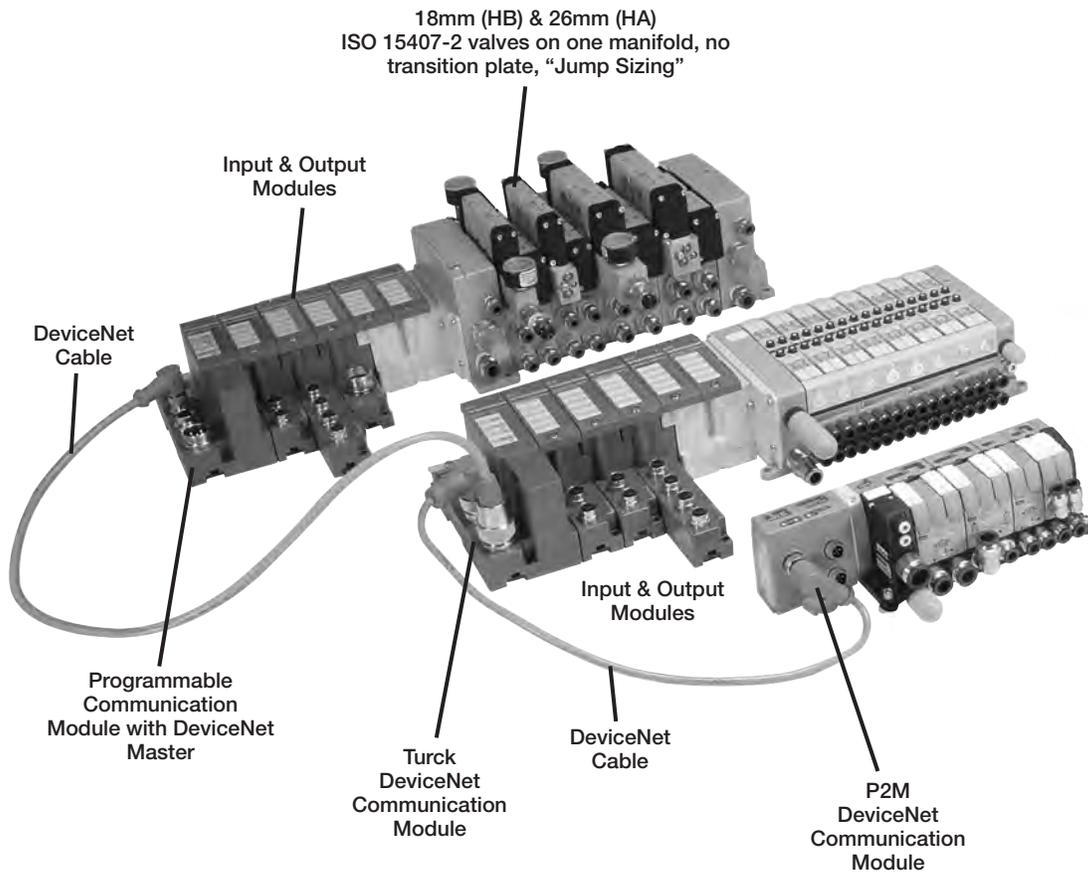
PROFIBUS  
PROCESS FIELD BUS

PROFIBUS  
INDUSTRIAL ETHERNET

Modbus/TCP™

CANopen

|                         |
|-------------------------|
| D                       |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |

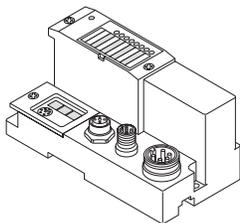


For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D210

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Communications Module**

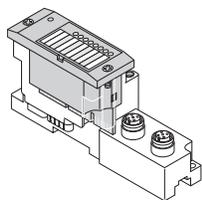


BL67 communication modules are the heart of a BL67 station. They are designed to connect the modular nodes to the higher level network (PROFIBUS-DP, DeviceNet, CANopen, Ethernet).

All BL67 electronic modules communicate over the internal module bus with the communication modules. The communication module structures the data and sends them clustered via network nodes to the higher control system.

This way all I/O modules can be configured independently of the system.

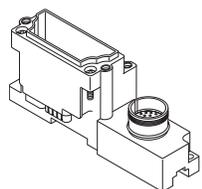
**Electronic Module**



BL67 electronic modules are inserted into the passive base modules from above and then simply affixed with two screws. Maintenance is extremely simplified due to the separation of connection level and module electronics.

Moreover, flexibility is enhanced because the base modules provide different types of connectors. Voltage supply for the electronic modules is either provided via the communication modules or a Power Extender module. Power Extender modules can be used to create galvanically isolated potential groups.

**Base Module**



BL67 base modules are aligned one by one to the right of the communication module and are tightened each with two screws, either with the communication modules or with the previous module. A DIN rail is not required. This way a compact and stable unit is created which can be mounted directly on the machine.

The base modules serve for connection of the field devices and are available with different connection types (M8, M12, M23 and 7/8).

A BL67 system can be extended to a total length of 1 m, comprising of a communication module for PROFIBUS-DP, DeviceNet / CANopen or Ethernet and a maximum of 32 modules.

System supply: The power supply for the BL67 system is either derived separately for Profibus-DP and Ethernet communication modules or directly from the DeviceNet / CANopen cable for the DeviceNet / CANopen communication module.

Power Extender modules can be inserted anywhere in the BL67 station. They provide isolated field voltage for the I/O modules mounted to their right.

Thus Power Extender modules can also be used to create different potential groups.



**Maximum System Extension**

| Module type     |         | PROFIBUS        |                | DeviceNet       |                | CANopen         |                | ModbusTCP       |                | EtherNet/IP     |                | PROFIBUS NET    |                |
|-----------------|---------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|
|                 |         | Number of chan. | Number of mod. |
| Digital inputs  | 4 DI    | 128             | 32             | 128             | 32             | 128             | 32             | 128             | 32             | 128             | 32             | 128             | 32             |
|                 | 8 DI    | 256             | 32             | 256             | 32             | 256             | 32             | 256             | 32             | 256             | 32             | 256             | 32             |
| Digital outputs | 4 DO    | 128             | 32             | 128             | 32             | 128             | 32             | 128             | 32             | 128             | 32             | 128             | 32             |
|                 | 8 DO    | 256             | 32             | 256             | 32             | 256             | 32             | 256             | 32             | 256             | 32             | 256             | 32             |
|                 | 16 DO   | 512             | 32             | 512             | 32             | 512             | 32             | 512             | 32             | 512             | 32             | 512             | 32             |
| Analog inputs   | 2AI     | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             |
|                 | 4AI     | 112             | 28             | 124             | 31             | 124             | 31             | 128             | 32             | 128             | 32             | 128             | 32             |
|                 | 2 AI-PT | 56              | 28             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             |
|                 | 2 AI-TC | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             |
| Analog outputs  | 2 AO-I  | 38              | 19             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             | 64              | 32             |
|                 | 2 AO-V  | 38              | 19             | 50              | 25             | 50              | 25             | 50              | 25             | 50              | 25             | 50              | 25             |



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

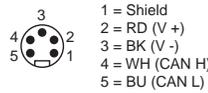
Valvair II Series

**BL67-GW-DN**

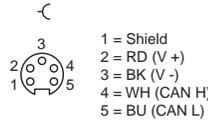
DeviceNet Communication  
 Module with Power Over  
 the Network



7/8 Mini bus in wiring,  
 view into male connector



7/8 Mini bus out wiring,  
 view into female connector



Turck Network Portal with up to 256 inputs, outputs, and 32 solenoids per H Series Micro or H Series ISO manifold. Digital inputs / outputs, analog inputs / outputs, serial interface, and counter modules are available. DeviceNet communication speeds selectable between 120, 250, 500 kbps, and CANopen communication speeds are selectable between 10 kbps up to 1 Mbps. Addressing for either module can be selected via rotary switches or set through software.

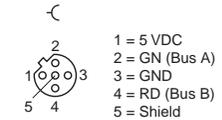
With the Power over the Network feature, it is only necessary to connect one cable to the communication module. For networks requiring additional power, a Bus Power Tee can be installed to combine separate network and power feeds into the communication module. See the Cables and Cordsets section for additional information.

**BL67-GW-DPV1**

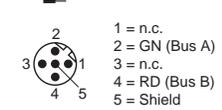
PROFIBUS Communication  
 Module



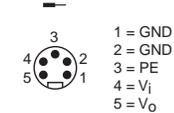
M12 B-code bus out Wiring,  
 view into female connector



M12 B-code bus In Wiring,  
 view into male connector



7/8 Mini Power in wiring,  
 view into male connector



Turck Network Portal with up to 256 inputs, outputs, and 32 solenoids per H Series Micro or H Series ISO manifold. Digital inputs / outputs, analog inputs / outputs, serial interface, and counter modules are available. PROFIBUS communication speeds are selectable between 9.6 kbps up to 12 Mbps, and addressing can be selected via rotary switches or set through software.

**BL67-GW-CO**

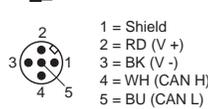
CANopen Communication  
 Module



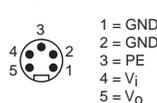
M12 A-code bus out Wiring,  
 view into female connector



M12 A-code bus In Wiring,  
 view into male connector



7/8 Mini Power in wiring,  
 view into male connector



Turck Network Portal with up to 256 inputs, outputs, and 32 solenoids per H Series Micro or H Series ISO manifold. Digital inputs / outputs, analog inputs / outputs, serial interface, and counter modules are available. CANopen communication speeds are selectable between 10 kbps up to 1 Mbps, and addressing can be selected via rotary switches or set through software.

**BL67-GW-EN**

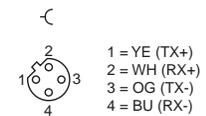
Modbus/TCP, EtherNet/IP™, and PROFINET

**BL67-GW-EN-PN**

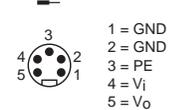
PROFINET Communication Module



M12 D-code  
 Ethernet in Wiring,  
 view into female connector



7/8 Mini Power in wiring,  
 view into male connector



Turck Network Portal with up to 256 inputs, outputs, and 32 solenoids per H Series Micro or H Series ISO manifold. Digital inputs / outputs, analog inputs / outputs, serial interface, and counter modules are available. Communication speeds of 10/100 Mbps, and addressing can be selected via rotary switches, BOOTP, DHCP, or through software.

**D**

Subbase & Manual  
 Valves

H Series  
 Micro

Modulflex  
 Series

H Series  
 ISO

Network  
 Connectivity

DX ISOMAX  
 Series

Valvair II  
 Series



For inventory, lead times, and kit  
 lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**BL67-GW-EN-DN**

Modbus/TCP Communication Module with DeviceNet Subnet

**BL67-GW-EN-IP-DN**

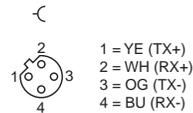
EtherNet/IP™ Communication Module with DeviceNet Subnet



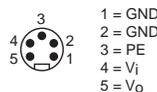
**DeviceNet OUT**



**M12 D-code Ethernet in Wiring, view into female connector**



**7/8 Mini Power in wiring, view into male connector**



With BL Remote DeviceNet subnet functionality, each communication module has its own DeviceNet master which provides a connection for 63 DeviceNet nodes with additional inputs, outputs, and solenoid control. BL Remote DeviceNet subnet is independent of the main network, and is not visible to the master PLC.

**BL67-PG-EN-DN**

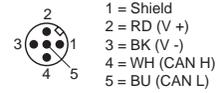
Modbus/TCP Programmable Communication Module with DeviceNet Subnet

**BL67-PG-EN-IP-DN**

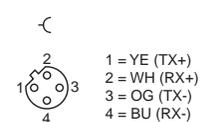
EtherNet/IP™ Programmable Communication Module with DeviceNet Subnet



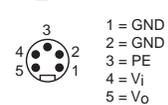
**DeviceNet OUT**



**M12 D-code Ethernet in Wiring, view into female connector**



**7/8 Mini Power in wiring, view into male connector**



Communication modules are equipped with a built in standalone controller which is programmed according to IEC61131-3 with CoDeSys. Each module has 512KB Program memory with 32 bit RISC processor, and can run 1000 instructions in less than 1 ms. These network equipped modules are optimized to interface with PLC's with network capability or act as standalone controllers that need to interface with other network equipped devices.

With BL Remote DeviceNet subnet functionality, each communication module has its own DeviceNet master which provides a connection for 63 DeviceNet nodes with additional inputs, outputs, and solenoid control. BL Remote DeviceNet subnet is independent of the main network, and is not visible to the master PLC.

**BL67-PG-DP**

PROFIBUS Programmable Communication Module

**BL67-PG-EN**

Modbus/TCP Programmable Communication Module

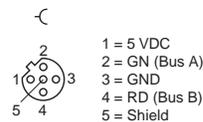
**BL67-PG-EN-IP**

EtherNet/IP™ Programmable Communication Module

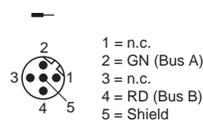


**Profibus Wiring**

**M12 B-code bus out Wiring, view into female connector**

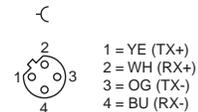


**M12 B-code bus in Wiring, view into female connector**

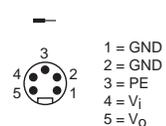


**Ethernet Wiring**

**M12 D-code Ethernet in Wiring, view into female connector**



**7/8 Mini Power in wiring, view into male connector Common to modules**



Communication modules are equipped with a built in standalone controller which is programmed according to IEC61131-3 with CoDeSys. Each module has 512KB Program memory with 32 bit RISC processor, and can run 1000 instructions in less than 1 ms. These network equipped modules are optimized to interface with PLC's with network capability or act as standalone controllers that need to interface with other network equipped devices.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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 Pneumatic Division  
 Richland, Michigan  
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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DXISOMAX Series  
 Valvair II Series

| Base Modules                                       |            |            |             |               |             |               |             |               |             |                |             |               |              |
|--|------------|------------|-------------|---------------|-------------|---------------|-------------|---------------|-------------|----------------|-------------|---------------|--------------|
|  | BL67-B-4M8 | BL67-B-8M8 | BL67-B-1M12 | BL67-B-1M12-8 | BL67-B-2M12 | BL67-B-2M12-P | BL67-B-4M12 | BL67-B-4M12-P | BL67-B-1M23 | BL67-B-1M23-19 | BL67-B-1RSM | BL67-B-1RSM-4 | BL67-1RSM-VO |
| <b>Power Extender Modules</b>                      |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-PF-24VDC                                      |            |            |             |               |             |               |             |               |             |                | ✓           | ✓             | ✓            |
| <b>Digital Input Modules</b>                       |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-4DI-P   | ✓          |            |             |               | ✓           | ✓             | ✓           |               | ✓           |                |             |               |              |
| BL67-8DI-P   |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| BL67-4DI-PD  | ✓          |            |             |               | ✓           | ✓             | ✓           |               | ✓           |                |             |               |              |
| BL67-8DI-PD  |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| BL67-4DI-N   | ✓          |            |             |               | ✓           | ✓             | ✓           |               | ✓           |                |             |               |              |
| BL67-8DI-N   |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| <b>Digital Output Modules</b>                      |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-4DO-0.5A-P                                    | ✓          |            |             |               | ✓           | ✓             | ✓           |               | ✓           |                |             |               |              |
| BL67-4DO-2A-P                                      | ✓          |            |             |               | ✓           | ✓             | ✓           |               | ✓           |                |             |               |              |
| BL67-8DO-0.5A-P                                    |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| BL67-16DO-0.1A-P                                   |            |            |             |               |             |               |             |               |             | ✓              |             |               |              |
| BL67-4DO-2A-N                                      | ✓          |            |             |               | ✓           | ✓             | ✓           |               | ✓           |                |             |               |              |
| BL67-8DO-0.5A-N                                    |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| <b>Relay Output Modules</b>                        |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-8DO-R-NO                                      |            |            |             |               |             |               |             | ✓             |             |                |             |               |              |
| <b>Digital Input / Output Modules</b>              |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-4DI4DO-PD                                     |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| <b>Configurable Digital Input / Output Modules</b> |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-8XSG-PD                                       |            | ✓          |             |               |             |               | ✓           | ✓             | ✓           |                |             |               |              |
| <b>Analog Input Modules</b>                        |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-2AI-I   |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| BL67-2AI-V   |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| BL67-4AI-V/I                                       |            |            |             |               |             |               | ✓           |               |             |                |             |               |              |
| BL67-2AI-PT  |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| BL67-2AI-TC  |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| <b>Analog Output Modules</b>                       |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-2AO-I   |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| BL67-2AO-V   |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| <b>Technology Modules</b>                          |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-1RS232  |            |            | ✓           | ✓             |             |               |             |               | ✓           |                |             |               |              |
| BL67-1RS485/422                                    |            |            | ✓           | ✓             |             |               |             |               | ✓           |                |             |               |              |
| BL67-1SSI  |            |            |             | ✓             |             |               |             |               | ✓           |                |             |               |              |
| BL67-1CNT/ENC                                      |            |            |             | ✓             |             |               |             |               | ✓           |                |             |               |              |
| BL67-1CVI  |            |            | ✓           |               |             |               |             |               |             |                |             |               |              |
| <b>BL Ident® RFID Modules</b>                      |            |            |             |               |             |               |             |               |             |                |             |               |              |
| BL67-2RFID-A                                       |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |
| BL67-2RFID-S                                       |            |            |             |               | ✓           |               |             |               |             |                |             |               |              |



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 Richland, Michigan  
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### System Supply via the Module Bus

The number of BL67 modules that can be powered by the communication module, depends on the nominal current draw of all the modules in the system. The total bus power current consumption of the installed BL67 modules may not exceed 1.5 A. The total field power current for inputs may not exceed 4 A, and the total field power for outputs may not exceed 8 A for DeviceNet and CANopen with power over the network, or 10A for all other communication modules.

When using the software PACTware, the menu item <Station - Verify> will automatically generate an error message if the system supply via the module bus is not reliably ensured.

### Nominal Current Consumption

The following table shows the nominal current consumption of the various BL67 modules:

| Modules                          | Bus power current (mA) | Field power for inputs <sup>1)</sup> (mA) | Field power for outputs (mA) |
|----------------------------------|------------------------|---|------------------------------|
| PROFIBUS-DP communication module | 0                      |   | 150                          |
| DeviceNet communication module   | 0                      |   | 150                          |
| CANopen communication module     | 0                      |   | 150                          |
| Ethernet communication module    | 0                      |   | 150                          |
| Valve driver with 16 outputs     | 30                     |   | < 109 mA (plus load current) |
| Valve driver with 32 outputs     | 60                     |   | < 218 mA (plus load current) |
| BL67-PF-24VDC                    | 30                     |   | 9                            |
| BL67-4DI-P                       | 30                     | < 49 mA                                   |                              |
| BL67-4DI-N                       | 30                     | < 10 mA                                   |                              |
| BL67-4DI-PD                      | 30                     | < 109 mA                                  |                              |
| BL67-8DI-P                       | 30                     | < 49 mA                                   |                              |
| BL67-8DI-N                       | 30                     | < 10 mA                                   |                              |
| BL67-8-DI-PD                     | 30                     | < 109 mA                                  |                              |
| BL67-4DO-0.5A-P                  | 30                     |   | < 109 mA (plus load current) |
| BL67-4DO-2A-P                    | 30                     |   | < 109 mA (plus load current) |
| BL67-4DO-2A-N                    | 30                     |   | < 109 mA (plus load current) |
| BL67-8DO-0.5A-P                  | 30                     |   | < 109 mA (plus load current) |
| BL67-8DO-0.5A-N                  | 30                     |   | < 109 mA (plus load current) |
| BL67-16DO-0.1A-P                 | 30                     |   | < 109 mA (plus load current) |
| BL67-4DI4DO-PD                   | 30                     |   | < 109 mA (plus load current) |
| BL67-8XSG-PD                     | 30                     |   | < 109 mA (plus load current) |
| BL67-8DO-R-NO                    | 30                     |   | < 109 mA (plus load current) |
| BL67-2AI-V                       | 35                     | < 22 mA                                   |                              |
| BL67-2AI-I                       | 35                     | < 22 mA                                   |                              |
| BL67-4AI-I/V                     | 35                     | < 22 mA                                   |                              |
| BL67-2AI-TC                      | 35                     | < 40 mA                                   |                              |
| BL67-2AI-PT                      | 45                     | < 58 mA                                   |                              |
| BL67-2AO-I                       | 40                     |   | < 62 mA                      |
| BL67-2AO-V                       | 60                     |   | < 67 mA                      |
| BL67-1RS232                      | 140                    | < 90 mA                                   |                              |
| BL67-1RS485/422                  | 60                     | < 42 mA                                   |                              |
| BL67-1SSI                        | 50                     | < 39 mA                                   |                              |
| BL67-1CNT/ENC                    | 30                     | < 109 mA                                  |                              |
| BL67-1CVI                        | 30                     | < 109 mA                                  |                              |

1) Is limited to 4A by means of the integrated short-circuit protection.



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## Part Numbers

### Digital Input Modules

| I/O modules  | Voltage     | Part number        |
|--|-------------|--------------------|
|  8 PNP input module | 7 to 30 VDC | <b>BL67-8DI-P</b>  |
| 8 PNP input module, with diagnostics   | 7 to 30 VDC | <b>BL67-8DI-PD</b> |
| 8 NPN input module   | 24 VDC      | <b>BL67-8DI-N</b>  |

| Base module   | Part number          |
|---|----------------------|
|  8 x M8, 3 pole, female          | <b>BL67-B-8M8</b>    |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b>   |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12-P</b> |
|  1 x M23, 12 pole, female        | <b>BL67-B-1M23</b>   |

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| I/O modules                          | Voltage     | Part number        |
|--------------------------------------|-------------|--------------------|
| 4 PNP input module                   | 7 to 30 VDC | <b>BL67-4DI-P</b>  |
| 4 PNP input module, with diagnostics | 7 to 30 VDC | <b>BL67-4DI-PD</b> |
| 4 NPN input module                   | 24 VDC      | <b>BL67-4DI-N</b>  |

| Base module   | Part number          |
|---|----------------------|
|  4 x M8, 3 pole, female          | <b>BL67-B-4M8</b>    |
|  2 x M12, 5 pole, female, A-code | <b>BL67-B-2M12</b>   |
|  2 x M12, 5 pole, female, A-code | <b>BL67-B-2M12-P</b> |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b>   |
|  1 x M23, 12 pole, female        | <b>BL67-B-1M23</b>   |

### Digital Output Modules

| I/O modules   | Output current       | Part number            |
|---|----------------------|------------------------|
|  8 PNP output module | 0.5 amps per channel | <b>BL67-8DO-0.5A-P</b> |
| 8 NPN output module   | 0.5 amps per channel | <b>BL67-8DO-0.5A-N</b> |

| Base module   | Part number          |
|---|----------------------|
|  8 x M8, 3 pole, female          | <b>BL67-B-8M8</b>    |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b>   |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12-P</b> |
|  1 x M23, 12 pole, female        | <b>BL67-B-1M23</b>   |

| I/O modules         | Output Current       | Part number            |
|---------------------|----------------------|------------------------|
| 4 PNP output module | 0.5 amps per channel | <b>BL67-4DO-0.5A-P</b> |
| 4 PNP output module | 2 amps per channel   | <b>BL67-4DO-2A-P</b>   |
| 4 PNP output module | 4 amps per channel   | <b>BL67-4DO-4A-P</b>   |
| 4 NPN output module | 2 amps per channel   | <b>BL67-4DO-2A-N</b>   |

| Base module   | Part number          |
|---|----------------------|
|  4 x M8, 3 pole, female          | <b>BL67-B-4M8</b>    |
|  2 x M12, 5 pole, female, A-code | <b>BL67-B-2M12</b>   |
|  2 x M12, 5 pole, female, A-code | <b>BL67-B-2M12-P</b> |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b>   |
|  1 x M23, 12 pole, female        | <b>BL67-B-1M23</b>   |

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### Digital Output Modules

| I/O modules          | Output current        | Part number             |
|----------------------|-----------------------|-------------------------|
| 16 PNP output module | 0.14 amps per channel | <b>BL67-16DO-0.1A-P</b> |

| Base module  | Part number           |
|--|-----------------------|
|  1 x M23, 19 pole, female | <b>BL67-B-1M23-19</b> |

### Relay Output Modules

| I/O modules            | Output current        | Part number          |
|------------------------|-----------------------|----------------------|
| 8 normally open relays | 0.14 amps per channel | <b>BL67-8DO-R-NO</b> |

| Base module   | Part number          |
|---|----------------------|
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12-P</b> |

### Analog Input Modules

| I/O modules   | Input type   | Part number         |
|---|--|---------------------|
| 4 configurable current or voltage analog input module | 4 to 20 mA or 0 to 20 mA<br>-10 to +10 VDC or 0 to +10 VDC | <b>BL67-4AI-V/I</b> |

| Base module   | Part number        |
|---|--------------------|
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b> |

| I/O modules                       | Input type                                 | Part number        |
|-----------------------------------|--|--------------------|
| 2 current analog input module     | 4 to 20 mA or 0 to 20 mA                   | <b>BL67-2AI-I</b>  |
| 2 voltage analog input module     | -10 to +10 VDC or 0 to +10 VDC             | <b>BL67-2AI-V</b>  |
| 2 temperature analog input module | PT100, PT200, PT500, PT1000, Ni100, Ni1000 | <b>BL67-2AI-PT</b> |
| 2 temperature analog input module | Type B, E, J, K, N, R, S, T                | <b>BL67-2AI-TC</b> |

| Base module   | Part number        |
|---|--------------------|
|  2 x M12, 5 pole, female, A-code | <b>BL67-B-2M12</b> |

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### Combination Input / Output Modules

| I/O modules   | Input voltage & output current | Part number           |
|---|--------------------------------|-----------------------|
| 4 PNP output 4 PNP input module, with diagnostics           | 7 to 30 VDC<br>0.5 Amps        | <b>BL67-4DI4DO-PD</b> |
| 8 PNP configurable input or output module, with diagnostics | 7 to 30 VDC<br>0.5 Amps        | <b>BL67-8XSG-PD</b>   |

| Base module  | Part number       |
|--|-------------------|
|  8 x M8, 3 pole, female | <b>BL67-B-8M8</b> |

| Base module   | Part number        |
|---|--------------------|
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b> |

| Base module   | Part number          |
|---|----------------------|
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12-P</b> |

### Analog Output Modules

| I/O modules                    | Input type                     | Part number       |
|--------------------------------|--------------------------------|-------------------|
| 4 voltage analog output module | -10 to +10 VDC or 0 to +10 VDC | <b>BL67-4AO-V</b> |

| Base module   | Part number        |
|---|--------------------|
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b> |

| I/O modules                    | Input type                     | Part number       |
|--------------------------------|--------------------------------|-------------------|
| 2 current analog output module | 4 to 20 mA or 0 to 20 mA       | <b>BL67-2AO-I</b> |
| 2 voltage analog output module | -10 to +10 VDC or 0 to +10 VDC | <b>BL67-2AO-V</b> |

| Base module   | Part number        |
|---|--------------------|
|  2 x M12, 5 pole, female, A-code | <b>BL67-B-2M12</b> |

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## Part Numbers

### Combination Analog Input / Output Modules

| I/O modules   | Output current   | Part number            |
|---|--|------------------------|
| 4 configurable input and 4 configurable output current or voltage analog module | 4 to 20 mA or 0 to 20 mA<br>-10 to +10 VDC or 0 to +10 VDC | <b>BL67-4AI4AO-V/I</b> |

| Base module   | Part number        |
|---|--------------------|
|  8 x M8, 3 pole, female          | <b>BL67-B-8M8</b>  |
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b> |

### CANopen Subnet Module

| Extender module      | Capacity                     | Part number      |
|----------------------|------------------------------|------------------|
| 1 CANopen connection | 64 bits of inputs or outputs | <b>BL67-1CVI</b> |

| Base module   | Part number        |
|---|--------------------|
|  1 x M12, 5 pole, female, A-code | <b>BL67-B-1M12</b> |

### IO-Link Class A Master

| Extender module   | Part number      |
|-------------------|------------------|
| 4 master channels | <b>BL67-4IOL</b> |

| Base module   | Part number        |
|---|--------------------|
|  4 x M12, 5 pole, female, A-code | <b>BL67-B-4M12</b> |

### Power Extender Module

| Extender module           | Current capacity | Part number          |
|---------------------------|------------------|----------------------|
| 24 VDC field power module | 10 amps input    | <b>BL67-PF-24VDC</b> |

| Base module   | Part number           |
|---|-----------------------|
|  5 pole mini connector to supply bus power and field power | <b>BL67-B-1RSM</b>    |
|  5 pole mini connector to field power only                 | <b>BL67-B-1RSM-VO</b> |
|  4 pole mini connector to supply bus power and field power | <b>BL67-B-1RSM-4</b>  |

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| I/O modules   | Output current   | Part number            |
|---|--|------------------------|
| 2 configurable input and 2 configurable output current or voltage analog module | 4 to 20 mA or 0 to 20 mA<br>-10 to +10 VDC or 0 to +10 VDC | <b>BL67-2AI2AO-V/I</b> |

| Base module  | Part number       |
|--|-------------------|
|  8 x M8, 3 pole, female | <b>BL67-B-8M8</b> |

### Serial Interface Module

| Extender module                 | Capacity          | Part number            |
|---------------------------------|-------------------|------------------------|
| 1 RS232 serial interface        | 300 to 115200 bps | <b>BL67-1RS232</b>     |
| 1 RS485 or 422 serial interface | 300 to 115200 bps | <b>BL67-1RS485/422</b> |

| Base module   | Part number          |
|---|----------------------|
|  1 x M12, 5 pole, female, A-code  | <b>BL67-B-1M12</b>   |
|  1 x M12, 8 pole, female, A-code | <b>BL67-B-1M12-8</b> |
|  1 x M23, 12 pole, female        | <b>BL67-B-1M23</b>   |

### SSI and Counting Modules

| Extender module        | Capacity             | Part number          |
|------------------------|----------------------|----------------------|
| 1 SSI sensor interface | 65 kbps up to 1 Mbps | <b>BL67-1SSI</b>     |
| 1 counter interface    | Up to 250 kHz        | <b>BL67-1CNT/ENC</b> |

| Base module   | Part number          |
|---|----------------------|
|  1 x M12, 8 pole, female, A-code | <b>BL67-B-1M12-8</b> |
|  1 x M23, 12 pole, female        | <b>BL67-B-1M23</b>   |

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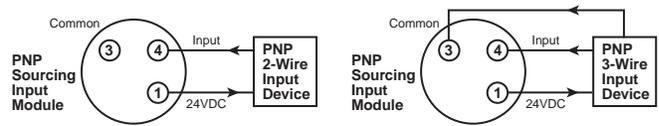
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**Digital PNP Input Modules**

| DC Input Module                            | BL67-4DI-P        | BL67-8DI-P | BL67-4DI-PD         | BL67-8DI-PD |
|--|-------------------|------------|---------------------|-------------|
| Number of inputs                           | 4                 | 8          | 4                   | 8           |
| Sensor requirement                         | PNP Sourcing      |            | PNP Sourcing        |             |
| Voltage, on-state input, nom.              | 24 VDC            |            | 24 VDC              |             |
| Field power for inputs current consumption | 49 mA             |            | 109 mA              |             |
| Bus power current consumption              | 30 mA             |            | 30 mA               |             |
| Low level signal voltage                   | <4.5 V            |            | <4.5 V              |             |
| High level signal voltage                  | 7...30V           |            | 7...30V             |             |
| Low level signal current                   | <1.5 mA           |            | <1.5 mA             |             |
| High level signal current                  | 2.1...3.7 mA      |            | 2.1...3.7 mA        |             |
| Type of diagnostics                        | Group Diagnostics |            | Channel Diagnostics |             |
| Short circuit protection                   | Group Protection  |            | Channel Protection  |             |
| Input delay                                | 0.25 ms           |            | 0.25; 2.5 ms        |             |

**PNP (Sourcing)**

PNP input modules provide sourcing capabilities. When the input field device is passing, current flows from the input device into the Turck input module.

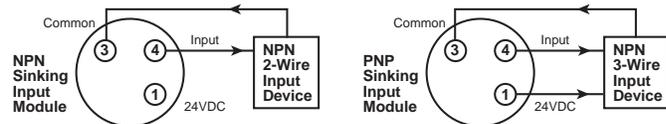


**Digital NPN Input Modules**

| Digital DC Input Module                    | BL67-4DI-N        | BL67-8DI-N        |
|--|-------------------|-------------------|
| Number of inputs                           | 4                 | 8                 |
| Sensor requirement                         | NPN Sinking       | NPN Sinking       |
| Voltage, on-state input, nom.              | 24 VDC            | 24 VDC            |
| Field power for inputs current consumption | 10 mA             | 10 mA             |
| Bus power current consumption              | 30 mA             | 30 mA             |
| Low level signal voltage                   | >7 V              | >7 V              |
| High level signal voltage                  | <5 V              | <5 V              |
| Low level signal current                   | <2.5 mA           | <1.2 mA           |
| High level signal current                  | >3 mA             | >1.5 mA           |
| Type of diagnostics                        | Group Diagnostics | Group Diagnostics |
| Short circuit protection                   | Group Protection  | Group Protection  |
| Input delay                                | 0.25 ms           | 0.25 ms           |

**NPN (Sinking)**

NPN input modules provide sinking capabilities. When the input field device is passing, current out of the Turck input module into the field input device.



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**D**

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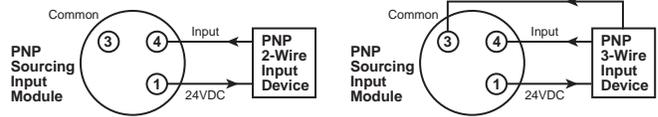
Valvair II Series

**Digital PNP Output Modules**

| Digital DC Output Module                    | BL67-4DO-0.5A-P                 | BL67-8DO-0.5A-P                 | BL67-4DO-2A-P                   | BL67-16DO-0.1A-P           |
|---|---------------------------------|---------------------------------|---------------------------------|----------------------------|
| Number of outputs                           | 4                               | 8                               | 4                               | 16                         |
| Sensor requirement                          | PNP Sourcing                    | PNP Sourcing                    | PNP Sourcing                    | PNP Sourcing               |
| Output voltage                              | 24 VDC                          | 24 VDC                          | 24 VDC                          | 24 VDC                     |
| Field power for outputs current consumption | 109 mA (Plus load current)      | 109 mA (Plus load current)      | 109 mA (Plus load current)      | 109 mA (Plus load current) |
| Bus power current consumption               | 30 mA                           | 30 mA                           | 30 mA                           | 30 mA                      |
| Output current per channel                  | 0.5 A                           | 0.5 A                           | 2.0A                            | 0.1 A                      |
| Output delay                                | 3 ms                            | 3 ms                            | 3 ms                            | 3 ms                       |
| Load type                                   | Resistive, Inductive, Lamp Load | Resistive, Inductive, Lamp Load | Resistive, Inductive, Lamp Load | Resistive, Inductive       |
| Load resistance, resistive                  | >48 Ohm                         | >48 Ohm                         | >12 Ohm                         | >250 Ohm                   |
| Load resistance, inductive                  | <1.2 H                          | <1.2 H                          | <1.2 H                          | <1.2 H                     |
| Lamp load                                   | < 3W                            | < 3W                            | < 10W                           | < 10W                      |
| Switching frequency, resistive              | <200 Hz                         | <200 Hz                         | <200 Hz                         | <200 Hz                    |
| Switching frequency, inductive              | < 2 Hz                          | < 2 Hz                          | < 2 Hz                          | < 2 Hz                     |
| Switching frequency, lamp load              | < 20 Hz                         | < 20 Hz                         | < 20 Hz                         | < 20 Hz                    |
| Short-circuit protection                    | Group Protection                | Group Protection                | Group Protection                | Group Protection           |
| Diagnostic bits                             | 4                               | 8                               | 4                               | 16                         |

**PNP (Sourcing)**

PNP input modules provide sourcing capabilities. When the input field device is passing, current flows from the input device into the Turck input module.

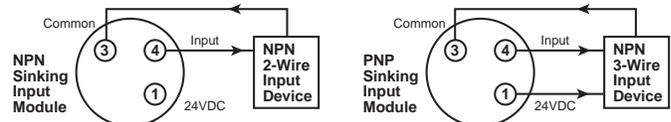


**Digital NPN Output Modules**

| Digital DC Output Module                    | BL67-8DO-0.5A-N                 | BL67-4DO-2A-N                   |
|---|---------------------------------|---------------------------------|
| Number of outputs                           | 8                               | 4                               |
| Sensor requirement                          | NPN Sinking                     | NPN Sinking                     |
| Output voltage                              | 24 VDC                          | 24 VDC                          |
| Field power for outputs current consumption | 109 mA (Plus load current)      | 109 mA (Plus load current)      |
| Bus power current consumption               | 30 mA                           | 30 mA                           |
| Output current per channel                  | 0.5 A                           | 2.0 A                           |
| Output delay                                | 3 ms                            | 3 ms                            |
| Load type                                   | Resistive, Inductive, Lamp Load | Resistive, Inductive, Lamp Load |
| Load resistance, resistive                  | >48 Ohm                         | >48 Ohm                         |
| Load resistance, inductive                  | <1.2 H                          | <1.2 H                          |
| Lamp load                                   | < 3W                            | < 3W                            |
| Switching frequency, resistive              | <200 Hz                         | <200 Hz                         |
| Switching frequency, inductive              | < 2 Hz                          | < 2 Hz                          |
| Switching frequency, lamp load              | < 20 Hz                         | < 20 Hz                         |
| Short-circuit protection                    | Group Protection                | Group Protection                |
| Diagnostic bits                             | 4                               | 8                               |

**NPN (Sinking)**

NPN input modules provide sinking capabilities. When the input field device is passing, current out of the Turck input module into the field input device.



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**Relay Output Modules**

| Relay Output Module                         | BL67-8DO-R-NO              |
|---|----------------------------|
| Number of outputs                           | 8                          |
| Output type                                 | Relay                      |
| Output voltage                              | 24 VDC                     |
| Field power for outputs current consumption | 109 mA (Plus load current) |
| Bus power current consumption               | 30 mA                      |
| Output current per channel                  | 100 mA                     |
| Output delay                                | 3 ms                       |
| Load type                                   | Resistive, TTL logic       |
| Switching resistor                          | <31 Ohm                    |
| Switching frequency, resistive              | <200 Hz                    |
| Short-circuit protection                    | None                       |

**Combination Digital Modules**

| Combination Input and Output Modules        | BL67-4DI4DO-PD                  | BL-67-8XSG-PD                   |
|---|---------------------------------|---------------------------------|
| Number of outputs                           | 4                               | Configurable 0 to 8             |
| Number of inputs                            | 4                               | Configurable 0 to 8             |
| Total channels                              | 8                               | 8                               |
| Sensor requirement                          | PNP Sourcing                    | PNP Sourcing                    |
| Voltage, on-state input, nom.               | 24 VDC                          | 24 VDC                          |
| Output voltage                              | 24 VDC                          | 24 VDC                          |
| Field power for outputs current consumption | 109 mA                          | 109 mA                          |
| Bus power current consumption               | 30 mA                           | 30 mA                           |
| Input low level signal voltage              | <4.5 V                          | <4.5 V                          |
| Input high level signal voltage             | 7...30V                         | 7...30V                         |
| Input low level signal current              | <1.5 mA                         | <1.5 mA                         |
| Input high level signal current             | 2.1...3.7 mA                    | 2.1...3.7 mA                    |
| Input delay                                 | 0.25; 2.5 ms                    | 0.25; 2.5 ms                    |
| Output current per channel                  | 0.5 A                           | 0.5 A                           |
| Output delay                                | 3 ms                            | 3 ms                            |
| Load type                                   | Resistive, Inductive, Lamp Load | Resistive, Inductive, Lamp Load |
| Load resistance, resistive                  | >48 Ohm                         | >48 Ohm                         |
| Load resistance, inductive                  | <1.2 H                          | <1.2 H                          |
| Lamp load                                   | < 3W                            | < 3W                            |
| Switching frequency, resistive              | <200 Hz                         | <200 Hz                         |
| Switching frequency, inductive              | < 2 Hz                          | < 2 Hz                          |
| Switching frequency, lamp load              | < 20 Hz                         | < 20 Hz                         |
| Short-circuit protection                    | Channel Protection              | Channel Protection              |
| Diagnostic bits                             | 8                               | 12                              |

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**Analog Input Modules**

| Analog Input Module                                     | BL67-2AI-I   | BL67-2AI-V   | BL67-4AI-V/I   |
|---|--|--|--|
| Number of inputs  | 2  | 2  | 4  |
| Nominal voltage   | 24 VDC   | 24 VDC   | 24 VDC   |
| Field power for inputs current consumption              | 22 mA  | 22 mA  | 22 mA  |
| Bus power current consumption                           | 35 mA  | 35 mA  | 35 mA  |
| Analog input type                                       | 0/4...20mA   | -10/0...+10 VDC  | 0/4...20mA or<br>-10/0...+10 VDC                           |
| Input resistance  | <0.125 kOhm  | <98.5 kOhm   | <0.125 kOhm or<br><98.5 kOhm                               |
| Maximum limiting frequency                              | 50 Hz  |  | 20 Hz  |
| Fault limit @ 23 degree C                               | <0.2%  |  | <0.3%  |
| Repeatability   | 0.05%  | 0.05%  | 0.05%  |
| Temperature coefficient<br>(ppm/degree C of full scale) | <300   | <150   | <300   |
| Resolution  | 16 Bit   | 16 Bit   | 16 Bit   |
| Measuring principle                                     | Sigma Delta  | Sigma Delta  | Sigma Delta  |
| Measured value display                                  | 16 bit signed integer,<br>12 bit full range left justified | 16 bit signed integer,<br>12 bit full range left justified | 16 Bit signed integer,<br>12 bit full range left justified |
| Diagnostic bits   | 16   |  | 32   |

**Temperature Inputs**

| Analog Input Module                                     | BL67-2AI-PT  | BL67-2AI-TC  |
|---|--|--|
| Number of inputs  | 2  | 2  |
| Nominal voltage   | 24 VDC   | 24 VDC   |
| Field power for inputs current consumption              | 58 mA  | 40 mA  |
| Bus power current consumption                           | 45 mA  | 35 mA  |
| Temperature input type                                  | PT100, PT200, PT500, PT1000,<br>Ni100, Ni1000              | B, E, J, K, N, R, S, T                                     |
| Voltage resolution                                      | n/a  | +/- 50mV; <2uV   |
| Fault limit @ 23 degree C                               | <0.2%  | <0.2%  |
| Repeatability   | 0.05%  | 0.05%  |
| Temperature coefficient<br>(ppm/degree c of full scale) | <300   | <300   |
| Resolution  | 16 Bit   | 16 Bit   |
| Measured value display                                  | 16 bit signed integer,<br>12 bit full range left justified | 16 bit signed integer,<br>12 bit full range left justified |
| Diagnostic bits   | 16   | 16   |

**D**  
Subbase & Manual Valves  
H Series Micro Series  
Modulflex Series  
H Series ISO  
Network Connectivity  
DXISOMAX Series  
Valvair-II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D222

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**Analog Input Modules**

| Analog Input Module                                  | BL67-2AO-I   | BL67-2AO-V   |
|--|--|--|
| Number of inputs                                     | 2  | 2  |
| Nominal voltage                                      | 24 VDC   | 24 VDC   |
| Field power for outputs current consumption          | 62 mA  | 67 mA  |
| Bus power current consumption                        | 40 mA  | 60 mA  |
| Analog output type                                   | 0/4...20mA   | -10/0...+10 VDC  |
| Output current per channel                           | n/a  | 250 mA   |
| Load resistance, resistive                           | <0.45 kOhm   | > 1kOhm  |
| Load resistance, inductive                           | <1 mH  | n/a  |
| Load resistance, capacitive                          | n/a  | > 1 uF   |
| Transmission frequency                               | <200 Hz  | <100 Hz  |
| Fault limit @ 23 degree C                            | <0.2%  | <0.2%  |
| Repeatability  | 0.05%  | 0.05%  |
| Temperature coefficient (ppm/degree c of full scale) | <150   | <300   |
| Resolution   | 16 bit   | 16 bit   |
| Measured value display                               | 16 bit signed integer,<br>12 bit full range left justified | 16 bit signed integer,<br>12 bit full range left justified |

**Combination Analog Modules**

| Analog Combination Module                            | BL67-4AI4AO-V/I  | BL67-2AI2AO-V/I  |
|--|--|--|
| Number of analog inputs                              | 4  | 2  |
| Number of analog outputs                             | 4  | 2  |
| Nominal voltage                                      | 24 VDC   | 24 VDC   |
| Field power for outputs current consumption          | 67 mA  | 67 mA  |
| Bus power current consumption                        | 60 mA  | 60 mA  |
| Analog input type                                    | 0/4...20mA or -10/0...+10 VDC                              | 0/4...20mA or -10/0...+10 VDC                              |
| Input resistance                                     | 0.065 or 225 kOhm  | 0.065 or 225 kOhm  |
| Maximum limiting frequency                           | 20 Hz  | 20 Hz  |
| Fault limit @ 23 degree c                            | <0.3%  | <0.3%  |
| Repeatability  | 0.05%  | 0.05%  |
| Temperature coefficient (ppm/degree c of full scale) | <300   | <300   |
| Resolution   | 16 bit   | 16 bit   |
| Measuring principle                                  | Sigma Delta  | Sigma Delta  |
| Measured value display                               | 16 bit signed integer,<br>12 bit full range left justified | 16 bit signed integer,<br>12 bit full range left justified |
| Analog output type                                   | -10/0...+10 VDC  | -10/0...+10 VDC  |
| Output current per channel                           | 250 mA   | 250 mA   |
| Load resistance, resistive                           | >1 kOhm  | >1 kOhm  |
| Load resistance, capacitive                          | <1 uF  | <1 uF  |
| Transmission frequency                               | <100 Hz  | <100 Hz  |
| Fault limit @ 23 degree C                            | <0.3%  | <0.3%  |
| Repeatability  | 0.05%  | 0.05%  |
| Temperature coefficient (ppm/degree c of full scale) | <300   | <300   |
| Resolution   | 16 bit   | 16 bit   |
| Measured value display                               | 16 bit signed integer,<br>12 bit full range left justified | 16 bit signed integer,<br>12 bit full range left justified |
| Diagnostic bits                                      | 8  | 4  |

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



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D223

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**Power Extender Module**

| Power Extender Module                       | BL67-PF-24VDC |
|---|---------------|
| Nominal voltage                             | 24 VDC        |
| Field power for outputs current consumption | 9 mA          |
| Bus power current consumption               | 30 mA         |
| Supply for field power for inputs current   | 4.0 A         |
| Supply for field power for outputs current  | 10 A          |
| Diagnostic bits                             | 3             |

**RS232 Interface**

| RS232 Interface                            | BL67-1RS232   |
|--|---|
| Number of channels                         | 1   |
| Field power for inputs current consumption | 90 mA   |
| Bus power current consumption              | 140 mA  |
| Transmission level active (u rs1)          | -15 to -3 VDC   |
| Transmission level inactive (urso)         | 3 to 15 VDC   |
| Common-mode range (ugl)                    | -7 to 12 VDC  |
| Transmission signals                       | RxD, TxD, RTS, CTS  |
| Data buffer received                       | 128 Byte  |
| Send data buffer                           | 64 Byte   |
| Connection type                            | Full Duplex   |
| Transmission rate                          | 300 to 115200 bps   |
| Parameter                                  | Transmission Rate, Diagnostics, Data Bits, Stop Bits, XON - Character, XOFF - Character, Parity, Flow Control |
| Cable length                               | 15 m  |
| Diagnostic bits                            | 8   |

**RS485 / 422 Interface**

| RS485/422 Interface                        | BL67-1RS485/422  |
|--|--|
| Number of channels                         | 1  |
| Field power for inputs current consumption | 42 mA  |
| Bus power current consumption              | 60 mA  |
| Transmission signals                       | RxD, TxD   |
| Connection type                            | 2 Wire Half Duplex or 4 Wire Full Duplex   |
| Transmission rate                          | 300 to 115200 bps  |
| Parameter                                  | RS485/422, Transmission Rate, Diagnostics, Data Bits, Stop Bits, XON - Character, XOFF - Character, Parity, Flow Control |
| Cable length                               | 1000 m   |
| Line impedence                             | 120 Ohm  |
| Bus termination                            | External   |
| Diagnostic bits                            | 8  |

**D**  
Subbase & Manual  
Valves  
H Series  
Micro  
Modulflex  
Series  
H Series  
ISO  
Network  
Connectivity  
DXISOMAX  
Series  
Valvair II  
Series



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**SSI Sensor Interface**

| SSI Sensor Interface                       | BL67-1SSI   |
|--|---|
| Number of channels                         | 1   |
| Field power for inputs current consumption | 39 mA   |
| Bus power current consumption              | 50 mA   |
| Transmission signals                       | CL, D   |
| Connection type                            | 4 Wire Full Duplex (Clock Output/Signal Input)  |
| Transmission rate                          | 62.5 kbps up to 1 Mbps  |
| Parameter                                  | Transmission Rate, Diagnostics, Data Format (Binary / GRAY coded), Data Fram Bits (1-32), Number of Invalid Bits (LSB: 0-15, MSB 0-7) |
| Cable length                               | 30 m  |
| Diagnostic bits                            | 8   |

**Counting Module**

| Counting Module                            | BL67-1CNT/ENC               |
|--|-----------------------------|
| Number of channels                         | 1                           |
| Field power for inputs current consumption | 109 mA                      |
| Bus power current consumption              | 30 mA                       |
| Input type                                 | PNP                         |
| Output type                                | PNP                         |
| Output current per channel                 | 0.5 A                       |
| Output delay                               | 2 ms                        |
| Load type                                  | Resistive                   |
| Frequency measurement                      | Up to 250 kHz               |
| Speed measurement                          | Factor Configurable         |
| Period duration measurement                | 2 usec                      |
| Upper count limit                          | 0x80000000 up to 0xFFFFFFFF |
| Lower count limit                          | 0x80000000 up to 0xFFFFFFFF |
| Short circuit protection                   | Channel Protection          |

**CANopen Expansion Module**

| CANopen Expansion Module                   | BL67-1CVI  |
|--|--|
| Number of channels                         | 1  |
| Field power for inputs current consumption | 109 mA   |
| Bus power current consumption              | 30 mA  |
| Transmission signals                       | CAN High, CAN Low  |
| Connection type                            | CANopen  |
| Transmission speed                         | 10 kbps up to 1 Mbps   |
| Parameter                                  | Transmission Rate, Diagnostics, Bus Termination, Range of I/O Data |
| Bus termination                            | Internal   |
| Diagnostic bits                            | 48   |
| Max number of CANopen nodes                | 8  |
| Max processing data per module             | 8 Byte   |
| Max data per node                          | 4 Byte   |



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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

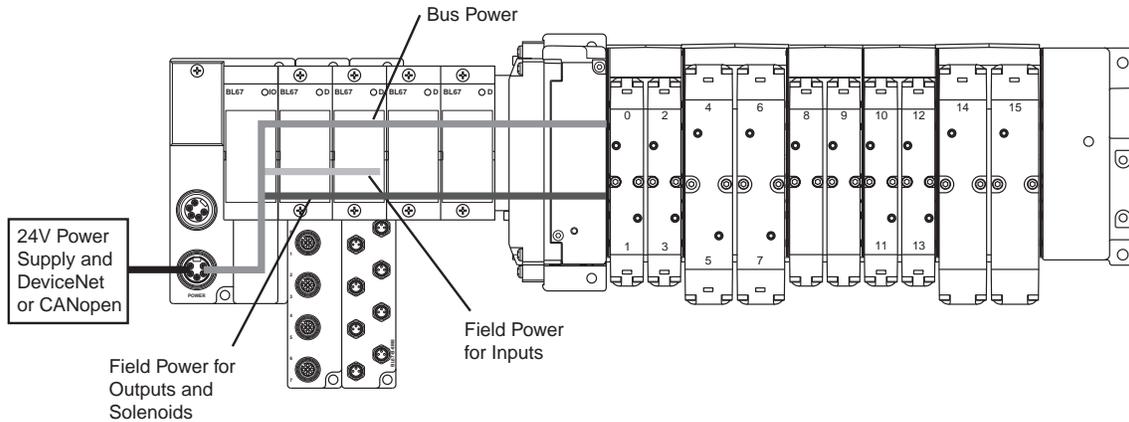
DX ISOMAX Series

Valvair II Series

**Power Distribution Options for Turck Network Portal**

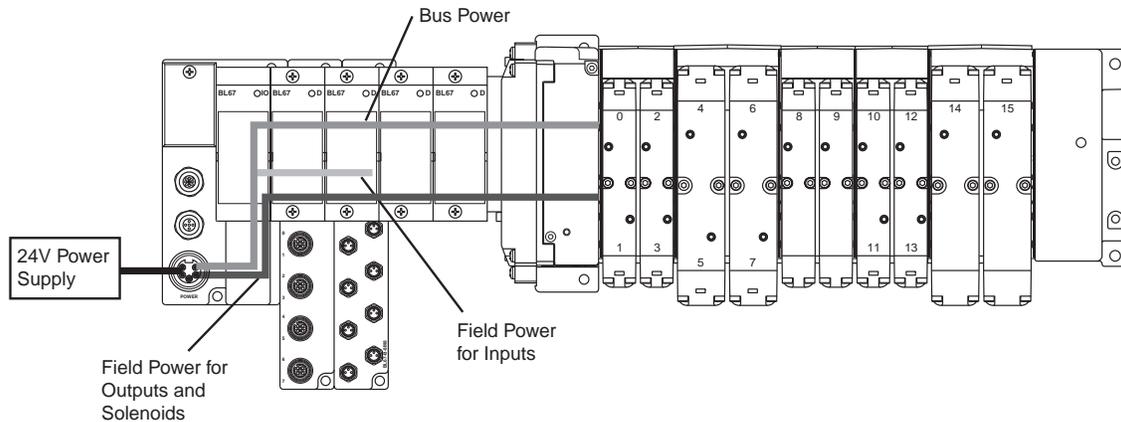
**Turck Communication and I/O Modules - DeviceNet and CANopen, Power Over Network**

The 24VDC power supply pins from the DeviceNet or CANopen network connection on the communication module provides a single power circuit. This circuit provides 1.5A bus power, 4A field power for inputs and 8A field power for outputs.



**Turck Communication and I/O Modules - EtherNet/IP™, Modbus/TCP, PROFINET, PROFIBUS, and CANopen**

An auxiliary 24VDC power supply from the communication module provides power across two separate circuits. The first circuit provides 1.5A bus power and 4A field power for inputs. The second circuit provides 10A field power for outputs which can be wired to an e-stop circuit to kill all outputs.



|                      |                  |
|----------------------|------------------|
| D                    | Subbase & Manual |
| Valves               | H Series Micro   |
| Modulflex Series     | H Series ISO     |
| Network Connectivity | DX ISOMAX Series |
| Valvair II Series    |                  |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

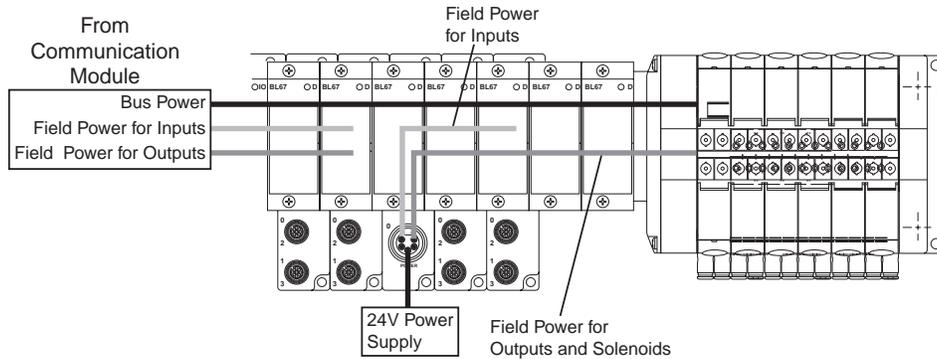
D226

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**Power Distribution Options for Turk Network Portal (continued)**

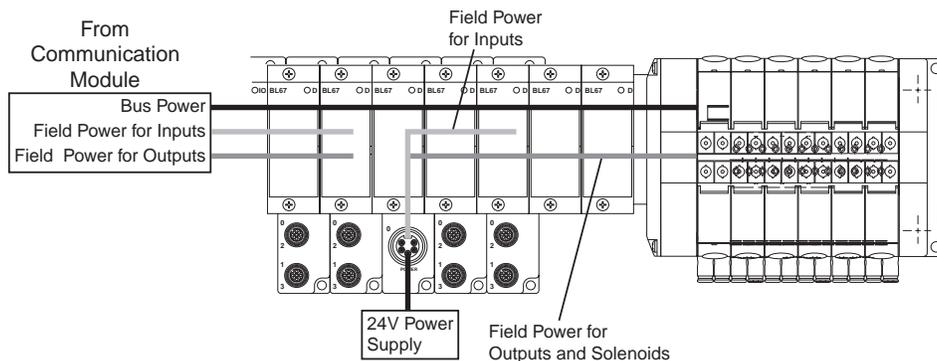
**24VDC Power Extender Module (BL67-PF-24VDC) with Base Module BL67-B-1RSM**

This configuration creates an auxiliary 24VDC power supply and provides power across two separate circuits, regardless of the communication module used. The first circuit provides 4A field power for inputs. The second circuit provides 10A field power for outputs which can be wired to an e-stop circuit to kill all outputs and solenoids to the right of the module. The 1.5A bus power is uninterrupted, and is still supplied from the communication module.



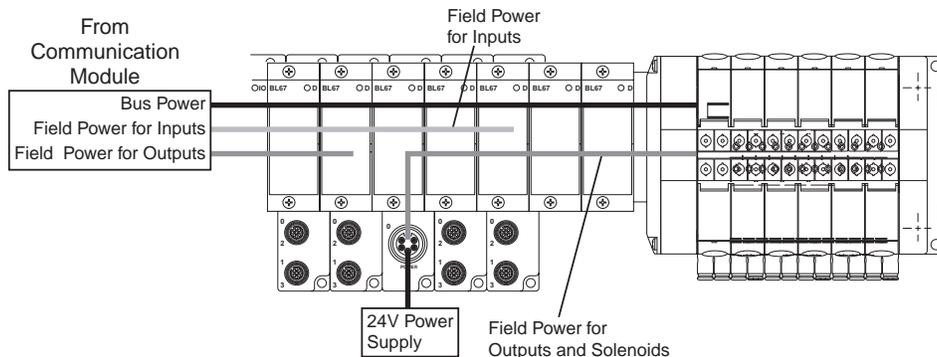
**24VDC Power Extender Module (BL67-PF-24VDC) with Base Module BL67-B-1RSM-4**

This configuration creates an auxiliary 24VDC power supply and provides power across one circuit, regardless of the communication module used. This circuit provides 4A field power for inputs and 10A field power for outputs. The 1.5A bus power is uninterrupted, and is still supplied from the communication module.



**24VDC Power Extender Module (BL67-PF-24VDC) with Base Module BL67-B-1RSM-VO**

This configuration creates an auxiliary 24VDC power supply and provides power across one circuit, regardless of the communication module used. This circuit provides 10A field power for outputs which can be wired to an e-stop circuit to kill all outputs and solenoids to the right of the module. The 1.5A bus power and 4A field power for inputs are uninterrupted, and are still supplied from the communication module.



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D227

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

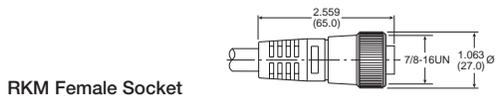
H Series ISO

Network Connectivity

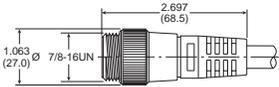
DX ISOMAX Series

Valvair II Series

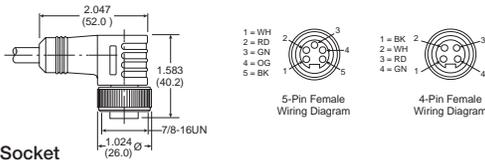
7/8" Mini Power Cables - P2H Network Node, H Series Network Portal, Turck Network Portal



RKM Female Socket



RSM Male Pins

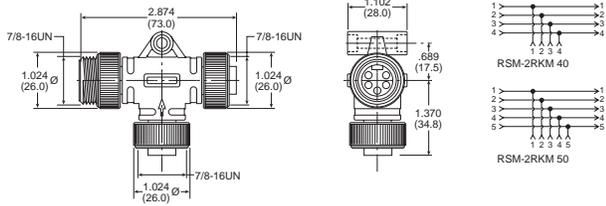


WKM Female Socket

| Description  | Part number               |
|--|---------------------------|
| 4-pin female to flying lead cable, 5 meters, TPE             | <b>RKM 46-5M/S1587</b>    |
| 5-pin female to flying lead cable, 5 meters, TPE             | <b>RKM 56-5M/S1587</b>    |
| 4-pin male to female cable, TPE                              | <b>RSM RKM 46-x/S1587</b> |
| 5-pin male to female cable, TPE                              | <b>RSM RKM 56-x/S1587</b> |
| 4-pin right angle female to flying lead cable, 5 meters, TPE | <b>WKM 46-5M/S1587</b>    |
| 5-pin right angle female to flying lead cable, 5 meters, TPE | <b>WKM 56-5M/S1587</b>    |

Where x = 2, 4, 5, 6, 8, 10 meter standard lengths

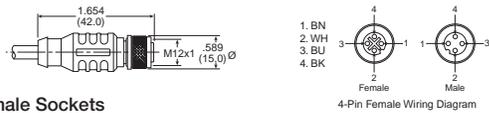
Power Tee - P2H Network Node, H Series Network Portal, Turck Network Portal



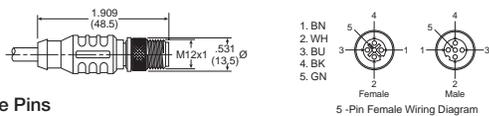
| Description                    | Part number        |
|--------------------------------|--------------------|
| 4-pin Male to 2 female sockets | <b>RSM-2RKM 40</b> |
| 5-pin Male to 2 female sockets | <b>RSM-2RKM 50</b> |

**D**  
 Subbase & Manual Valves  
 H Series Micro Modulflex Series  
 H Series ISO Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

M12 A-code Cables - P2M IO-Link, P2H IO-Link, H Series IO-Link Network Portal, Turck IO-Link Network Portal



RKC Female Sockets

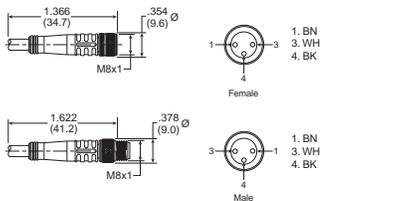


RSC Male Pins

| Description                            | Part number                      |
|--|----------------------------------|
| 4-pin female to flying lead cable, PVC | <b>RKC 4.4T-1</b>                |
| 4-pin male to flying lead cable, PVC   | <b>RSC 4.4T-*</b>                |
| 4-pin male to female cable, PVC        | <b>RKC 4.4T-*/RSC 4.4T</b>       |
| 5-pin female to flying lead cable, TPE | <b>RKC 4.5T-*/S1587</b>          |
| 5-pin male to flying lead cable, TPE   | <b>RSC 4.5T-4/S1587</b>          |
| 5-pin male to female cable, TPE        | <b>RKC 4.5T-*/RSC 4.5T/S1587</b> |

Where \* = 1, 2, 3, 4 meter standard lengths

M8 Cables - H Series IO-Link Network Portal, Turck IO-Link Network Portal



| Description                            | Part number                |
|--|----------------------------|
| 3-pin female to flying lead cable, PUR | <b>PKG 3M-4/S90</b>        |
| 3-pin male to flying lead cable, PUR   | <b>PSG 3M-*/S90</b>        |
| 3-pin male to female cable, PUR        | <b>PKG 3M-*/PSG 3M/S90</b> |

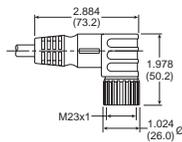
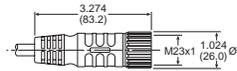
Where \* = 1, 2, 3, 4 meter standard lengths

Most popular.



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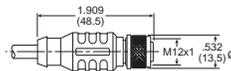
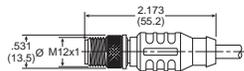
M23 Cables



| Description  | Part number                      |
|--|----------------------------------|
| 12-pin, double ended female thread with male pins and female socket, PUR. Pinout optimized for H Series Network Portal.  | <b>CSCM CKCM 12-11-x/S90</b>     |
| 19-pin, double ended female thread with male pins and female socket, PUR. Pinout optimized for H Series Network Portal.  | <b>CSM CKM 19-19-x/S90</b>       |
| 19-pin, 90° double ended female thread with male pins and female socket, PUR. Pinout optimized for Turck Network Portal. | <b>CSWM CKWM 19-19-x/CS12852</b> |

Where x = 1, 2, 3, 4 meter standard lengths

PROFIBUS Cables - P2M Network Node, Turck Network Portal



| Description                 | Part number             |
|-----------------------------|-------------------------|
| M12 male to M12 female, PUR | <b>RSSW RKSX 455-xM</b> |

Where x = 2, 4, 5, 6, 8, 10 meter standard lengths

RSSW Side, Male Pins

RKSX Side, Female Sockets

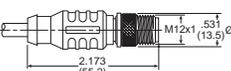
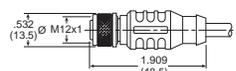
PROFIBUS Terminating Resistor - P2M Network Node, Turck Network Portal



Male Pins

| Description                       | Part number      |
|-----------------------------------|------------------|
| M12 male pin terminating resistor | <b>P8BPA00MB</b> |

Ethernet Cables - P2M Network Node, H Series Network Portal, Turck Network Portal

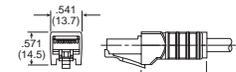


RKSD Side, Female Sockets

RSSD Side, Male Pins

| Description                 | Part number              |
|-----------------------------|--------------------------|
| M12 female to M12 male, PUR | <b>RSSD RKSD 443-xM</b>  |
| RJ45 to M12 male, PUR       | <b>RSSD RJ45S 443-2M</b> |

Where x = 2, 5, 10, 15, 20, 30 meter standard lengths



RJ45S Side

25-pin, D-Sub Cable (Female)

| Description                    | Length   | Part number       |
|--------------------------------|----------|-------------------|
| 25-pin, D-sub cable, IP20, PUR | 3 meters | <b>P8LMH25M3A</b> |
| 25-pin, D-sub cable, IP20, PUR | 9 meters | <b>SCD259D</b>    |
| 25-pin, D-sub cable, IP65, PUR | 3 meters | <b>SCD253W</b>    |
| 25-pin, D-sub cable, IP65, PUR | 9 meters | <b>SCD259WE</b>   |

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D229

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

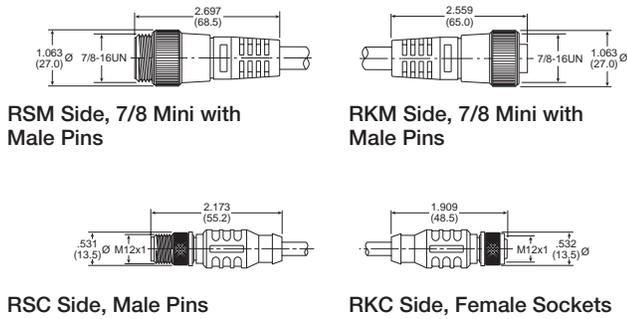
Network Connectivity

DX ISOMAX Series

Valvair II Series

Accessories, Cables & Cordsets

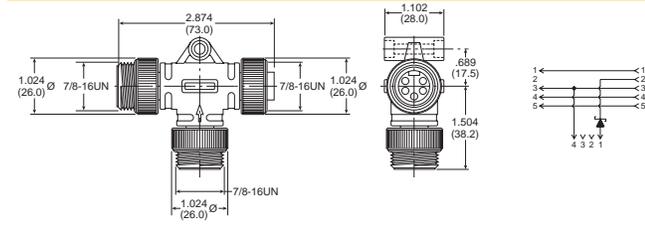
DeviceNet and CANopen Cables - P2M Network Node, H Series Network Portal, Turck Network Portal



| Description                             | Part Number            |
|---|------------------------|
| 7/8" mini male to 7/8" mini female, PUR | <b>RSM RKM 5711-xM</b> |
| 7/8" mini male to M12 female, PUR       | <b>RSM RKC 5711-xM</b> |
| M12 male to M12 female, PUR             | <b>RSC RKC 5711-xM</b> |
| M12 male to 7/8" mini female, PUR       | <b>RSC RKM 5711-xM</b> |

Where x = 2, 4, 5, 6, 8, 10 meter standard lengths

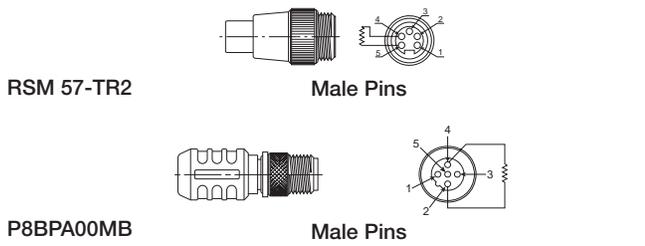
Bus Power Tee - P2M Network Node, H Series Network Portal, Turck Network Portal



| Description   | Part Number                  |
|---------------|------------------------------|
| Bus power tee | <b>RSM RKM 57 WSM 40 PST</b> |

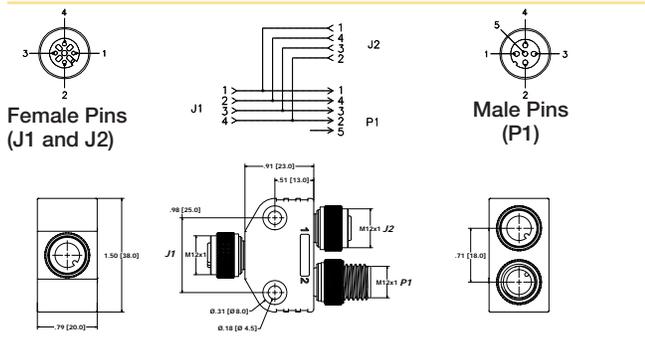
For systems not equipped with Power over network, combines separate network and power feeds into the communication module. Includes reverse current protection

DeviceNet & CANopen Terminating Resistor - P2M Network Node, H Series Network Portal, Turck Network Portal



| Description                             | Part Number       |
|---|-------------------|
| 7/8" Mini Male Pin Terminating Resistor | <b>RSM 57-TR2</b> |
| M12 Male Pin Terminating Resistor       | <b>P8BPA00MA</b>  |

M12 Power Splitter - PCH Network Portal, H Series Network Portal, Turck Network Portal, P2M IO-Link, P2H IO-Link



| Description           | Part Number      |
|-----------------------|------------------|
| M12 Parallel Splitter | <b>100010909</b> |

Most popular.



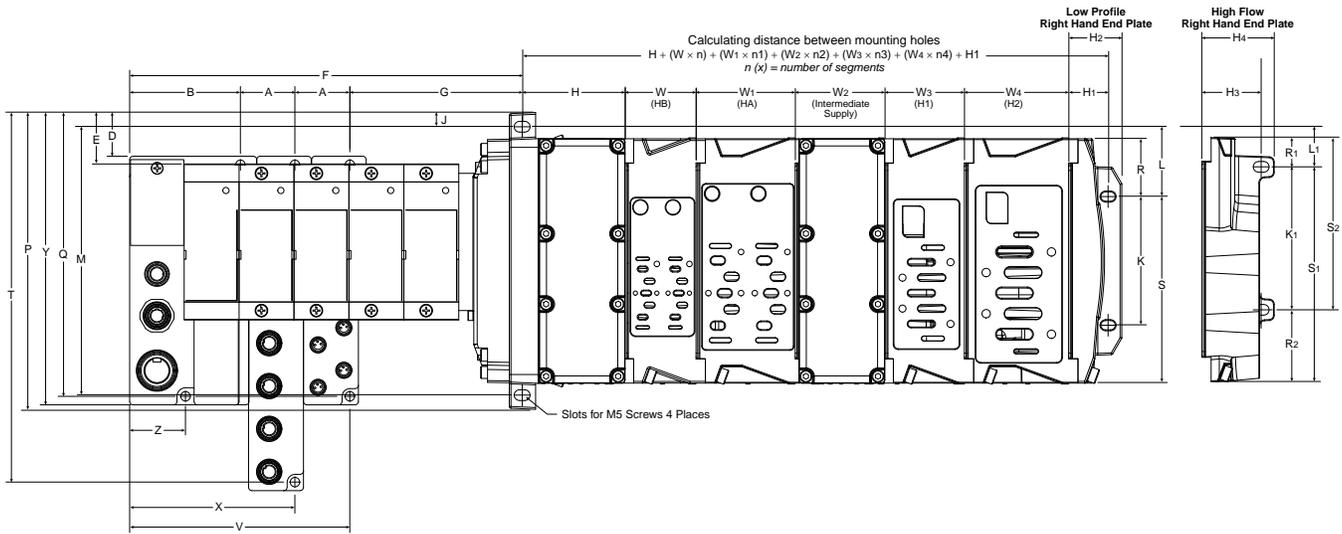
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D230

Parker Hannifin Corporation  
Pneumatic Division  
Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

D  
 Subbase & Manual Valves  
 H Series Micro  
 Modutex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Turck with H Series ISO Valves**

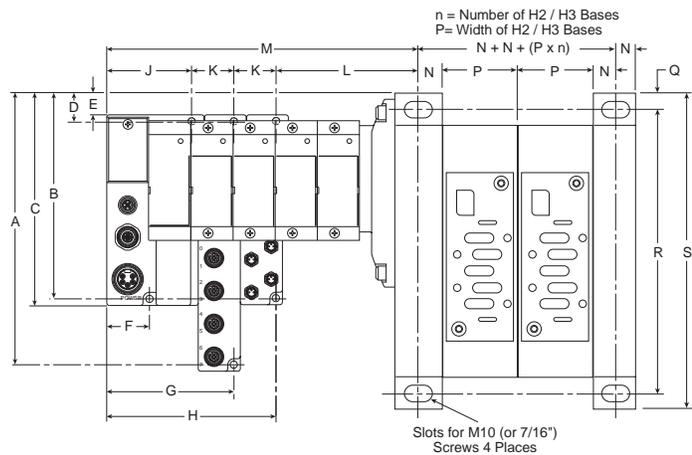


$n(x)$  = number of segments

|                 |                 |                 |                |                 |                 |                 |                |                |                 |                 |                 |
|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|-----------------|
| <b>A</b>        | <b>B</b>        | <b>D</b>        | <b>E</b>       | <b>F</b>        | <b>G</b>        | <b>H</b>        | <b>H1</b>      | <b>H2</b>      | <b>H3</b>       | <b>H4</b>       | <b>J</b>        |
| 1.26<br>(32.0)  | 2.54<br>(64.5)  | 1.00<br>(25.4)  | 1.18<br>(29.9) | 8.99<br>(228.4) | 3.94<br>(100.1) | 2.36<br>(60.0)  | 0.90<br>(23.0) | 1.22<br>(31.0) | 1.36<br>(34.6)  | 1.66<br>(42.3)  | 0.33<br>(8.3)   |
| <b>K</b>        | <b>K1</b>       | <b>L</b>        | <b>L1</b>      | <b>M</b>        | <b>P</b>        | <b>Q</b>        | <b>R</b>       | <b>R1</b>      | <b>R2</b>       | <b>S</b>        | <b>S1</b>       |
| 2.95<br>(75.0)  | 3.28<br>(83.4)  | 1.60<br>(40.7)  | 0.96<br>(24.3) | 6.16<br>(156.5) | 6.81<br>(173.1) | 6.51<br>(165.4) | 1.33<br>(33.7) | 0.68<br>(17.3) | 1.65<br>(41.8)  | 4.28<br>(108.8) | 4.93<br>(125.2) |
| <b>S2</b>       | <b>T</b>        | <b>V</b>        | <b>W</b>       | <b>W1</b>       | <b>W2</b>       | <b>W3</b>       | <b>W4</b>      | <b>X</b>       | <b>Y</b>        | <b>Z</b>        |                 |
| 3.96<br>(100.7) | 8.48<br>(215.4) | 5.05<br>(128.3) | 1.63<br>(41.3) | 2.28<br>(57.8)  | 2.06<br>(52.3)  | 1.82<br>(46.3)  | 2.39<br>(60.8) | 3.79<br>(96.3) | 6.71<br>(170.4) | 1.28<br>(32.5)  |                 |

Inches (mm)

**H3 Manifold Assembly**



|                 |                 |                 |                |                |                |                |                 |                |              |               |               |               |              |             |                |                |
|-----------------|-----------------|-----------------|----------------|----------------|----------------|----------------|-----------------|----------------|--------------|---------------|---------------|---------------|--------------|-------------|----------------|----------------|
| <b>A</b>        | <b>B</b>        | <b>C</b>        | <b>D</b>       | <b>E</b>       | <b>F</b>       | <b>G</b>       | <b>H</b>        | <b>J</b>       | <b>K</b>     | <b>L</b>      | <b>M</b>      | <b>N</b>      | <b>P</b>     | <b>Q</b>    | <b>R</b>       | <b>S</b>       |
| 8.62<br>(218.9) | 6.65<br>(168.9) | 6.85<br>(173.9) | 1.33<br>(33.9) | 1.14<br>(28.9) | 1.28<br>(32.5) | 3.79<br>(96.5) | 5.06<br>(128.5) | 2.53<br>(64.5) | 1.26<br>(32) | 4.34<br>(110) | See<br>note 1 | .65<br>(16.5) | 2.80<br>(71) | .59<br>(15) | 10.43<br>(265) | 11.61<br>(295) |

Note 1:  $M = J + L + n_2 \times K$ , where  $n_2$  = Number of Turck input / output modules

Inches (mm)



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D231

**Parker Hannifin Corporation**  
 Pneumatic Division  
 Richland, Michigan  
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**D**

**Subbase & Manual  
 Valves**

**H Series  
 Micro**

**Moduflex  
 Series**

**H Series  
 ISO**

**Network  
 Connectivity**

**DX ISOMAX  
 Series**

**Valvair II  
 Series**

**DX ISOMAX Series**

The ISOMAX range of directional control valves complies with ISO 15407-1 and VDMA 24563 for sizes 02 and 01 and ISO 5599-1 for sizes 1, 2 and 3. ISOMAX provides flows from 0.55 Cv to 4.15 Cv.

The ISOMAX range includes valves for pneumatic and electrical actuation with a wide choice of subbases and manifolds to suit different application needs.

All ISOMAX products use high-tech ceramic switching technology providing:

Excellent reliability

- Long life in excess of 100 million operations\*
- Operates with lubricated or non-lubricated air
- Low sensitivity to air quality changes

High performance

- Slide valve concept allows high flow / size ratio and short response time due to short slide stroke and low friction

Stable long lasting performances

- Low friction switching: minimum wear of the valve member / seal assembly

Valves fitted with switchable selector to give internal or external pilot supply

Corrosion free and modern design

Vacuum operation

Dual pressure

\* Refer to our warranty conditions.



**Operating information**

Operating Pressure: Vacuum to 145 PSIG (10 bar)

| Function       |                           | M.O.P (PSIG) |
|----------------|---------------------------|--------------|
| 20, 21, 22, 23 | 2-position, spring return | 36           |
| 50, 51, 53, 54 | 2-position, air return    | 30           |
| 04, 05, 06, 08 | 2-position                | 15           |
| 09, 11, 12, 27 | 3-position, CE            | 45           |
| 16, 18, 19, 25 | 3-position, APB           | 45           |

Working temperatures:

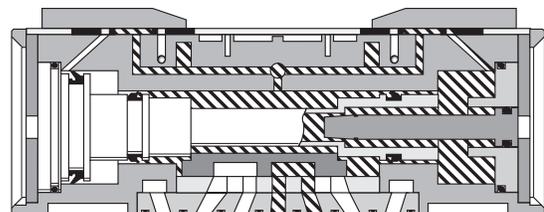
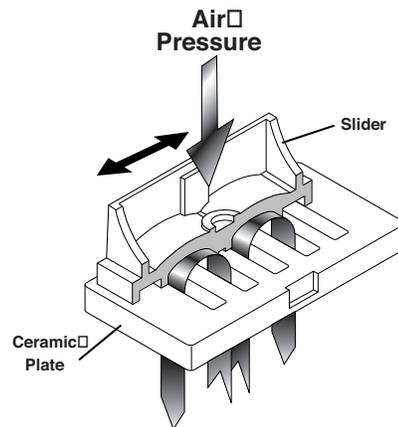
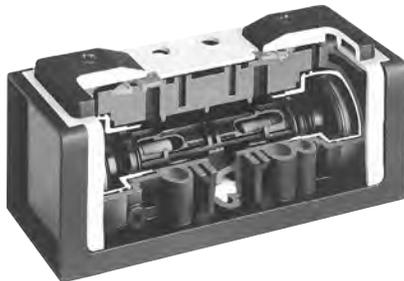
-10°C to 60°C (14°F to 140°F)

Storage temperatures:

-20°C to 70°C (-4°F to 158°F)

**Material specifications**

|                   |                                 |
|-------------------|---------------------------------|
| Body              | Polyamide reinforced fiberglass |
| Casing            | Anodized aluminum               |
| End plates        | Painted zinc plated steel       |
| Function selector | Polyamide reinforced fiberglass |
| Screws            | Zinc plated steel               |
| Seals             | Nitrile                         |
| Seat              | Ceramic                         |
| Springs           | Stainless steel                 |
| Top cover seals   | Polyester                       |
| Valve members     | Self lubricating acetal         |
| Valve plate       | Zinc                            |



Remote Pilot

**D**

Subbase & Manifold Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



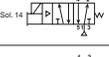
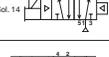
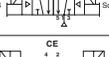
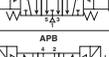
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D232

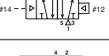
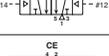
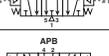
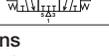
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Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)

**Common Part Numbers**

**DX02 ISO Solenoid Valves**

| Symbol  | Type                                 | Cv   | Operator        | Pilot    | Override    | 24 VDC               | 120 VAC              |
|---|--------------------------------------|------|-----------------|----------|-------------|----------------------|----------------------|
|  | 4-way, 2-position, spring return     | 0.55 | Single solenoid | Internal | Non-locking | <b>DX02-621-951M</b> | <b>DX02-621-951J</b> |
|  | 4-way, 2-position, air return        | 0.55 | Single solenoid | Internal | Non-locking | <b>DX02-651-951M</b> | <b>DX02-651-951J</b> |
|  | 4-way, 2-position                    | 0.55 | Double solenoid | Internal | Non-locking | <b>DX02-606-951M</b> | <b>DX02-606-951J</b> |
|  | 4-way, 3-position, center exhaust    | 0.4  | Double solenoid | Internal | Non-locking | <b>DX02-611-951M</b> | <b>DX02-611-951J</b> |
|  | 4-way, 3-position, all ports blocked | 0.4  | Double solenoid | Internal | Non-locking | <b>DX02-616-951M</b> | <b>DX02-616-951J</b> |

**DX02 ISO Remote Pilot Valves**

| Symbol  | Type                                 | Cv   | Operator            | Pilot  | Part Number        |
|---|--------------------------------------|------|---------------------|--------|--------------------|
|  | 4-way, 2-position, spring return     | 0.55 | Single remote pilot | Remote | <b>DX02-421-60</b> |
|  | 4-way, 2-position, air return        | 0.55 | Single remote pilot | Remote | <b>DX02-451-60</b> |
|  | 4-way, 2-position                    | 0.55 | Double remote pilot | Remote | <b>DX02-406-60</b> |
|  | 4-way, 3-position, center exhaust    | 0.4  | Double remote pilot | Remote | <b>DX02-411-60</b> |
|  | 4-way, 3-position, all ports blocked | 0.4  | Double remote pilot | Remote | <b>DX02-416-60</b> |

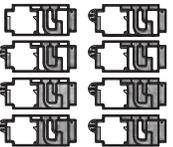
**Torque Specifications**

DX02: 15 to 25 in-lbs (1.69 to 2.82 Nm) DX01: 20 to 30 in-lbs (2.26 to 3.39 Nm)

**Base / End Plate - 15407-1, Non Plug-in, Size DX02**

|   | Description                                      | NPT                | BSPP               |
|---|--|--------------------|--------------------|
|  | Universal manifold base<br>2 station, end ported | <b>PSHU115101P</b> | <b>PSHU115201P</b> |
|  | Universal end plate<br>Non-collective wiring     | <b>PSHU31L000P</b> | <b>PSHU31L001P</b> |

**Accessories - 15407-1, Non plug-in, Size DX02**

| Accessories   | Description  | Part number             |                      |                   |
|---|--|-------------------------|----------------------|-------------------|
|  | Gauge adapter kit<br>Includes 1/8" coupling and long nipple                    | <b>PS5651160P</b>       |                      |                   |
|  | Blanking plate kit   | <b>PS5634P</b>          |                      |                   |
|  | Sandwich flow control<br>Do not use with Independent Port Sandwich Regulators. | <b>PS5642P</b>          |                      |                   |
|  | Sandwich supply module   | 1/8" NPT                | <b>PS562600P</b>     |                   |
|   |  | 1/8" BSPP               | <b>PS562601P</b>     |                   |
|  | Sandwich regulator   | Common pressure         | Independent pressure |                   |
|   |  | 2-60 PSIG w/ gauge      | <b>PS5637155P</b>    | <b>PS5637255P</b> |
|  | Manifold to manifold gasket kits   | 5-125 PSIG w/ gauge     | <b>PS5637166P</b>    | <b>PS5637266P</b> |
|   |  | Pilot open              | Pilot blocked        |                   |
|   |  | #1, 3, 5 ports open     | <b>PSHU11P</b>       | <b>PSHU15P</b>    |
|   |  | Blocked #1 port         | <b>PSHU12P</b>       | <b>PSHU16P</b>    |
|   |  | Blocked #1, 3, 5, ports | <b>PSHU13P</b>       | <b>PSHU17P</b>    |
|   | Blocked #3, 5 ports  | <b>PSHU14P</b>          | <b>PSHU18P</b>       |                   |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D233

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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

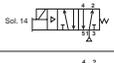
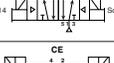
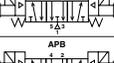
Network Connectivity

DX ISOMAX Series

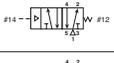
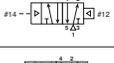
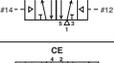
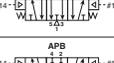
Valvair II Series

**Common Part Numbers**

**DX01 ISO Solenoid Valves**

| Symbol  | Type                                 | Cv   | Operator        | Pilot    | Override    | 24 VDC               | 120 VAC              |
|---|--------------------------------------|------|-----------------|----------|-------------|----------------------|----------------------|
|  | 4-way, 2-position, spring return     | 0.75 | Single solenoid | Internal | Non-locking | <b>DX01-621-951M</b> | <b>DX01-621-951J</b> |
|  | 4-way, 2-position, air return        | 0.75 | Single solenoid | Internal | Non-locking | <b>DX01-651-951M</b> | <b>DX01-651-951J</b> |
|  | 4-way, 2-position                    | 0.75 | Double solenoid | Internal | Non-locking | <b>DX01-606-951M</b> | <b>DX01-606-951J</b> |
|  | 4-way, 3-position, center exhaust    | 0.5  | Double solenoid | Internal | Non-locking | <b>DX01-611-951M</b> | <b>DX01-611-951J</b> |
|  | 4-way, 3-position, all ports blocked | 0.5  | Double solenoid | Internal | Non-locking | <b>DX01-616-951M</b> | <b>DX01-616-951J</b> |

**DX01 ISO Remote Pilot Valves**

| Symbol  | Type                                 | Cv   | Operator            | Pilot  | Part Number        |
|---|--------------------------------------|------|---------------------|--------|--------------------|
|  | 4-way, 2-position, spring return     | 0.75 | Single remote pilot | Remote | <b>DX01-421-60</b> |
|  | 4-way, 2-position, air return        | 0.75 | Single remote pilot | Remote | <b>DX01-451-60</b> |
|  | 4-way, 2-position                    | 0.75 | Double remote pilot | Remote | <b>DX01-406-60</b> |
|  | 4-way, 3-position, center exhaust    | 0.5  | Double remote pilot | Remote | <b>DX01-411-60</b> |
|  | 4-way, 3-position, all ports blocked | 0.5  | Double remote pilot | Remote | <b>DX01-416-60</b> |

**Torque Specifications**

DX02: 15 to 25 in-lbs (1.69 to 2.82 Nm)    DX01: 20 to 30 in-lbs (2.26 to 3.39 Nm)

**Base / End Plate - 15407-1, Non Plug-in, Size DX01**

|   | Description             | NPT  | BSPP               |
|---|-------------------------|--|--------------------|
|  | Single subbase          | Side ported base, 1/4" port<br><b>PS5511130P</b> | <b>PS5511140P</b>  |
|  | Universal manifold base | 2 station, end ported<br><b>PSHU115301P</b>      | <b>PSHU115401P</b> |
|  | Universal end plate     | Non-collective wiring<br><b>PSHU31L000P</b>      | <b>PSHU31L001P</b> |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

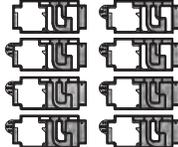
D234

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 Richland, Michigan  
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**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair-II Series

**Common Part Numbers**

**Accessories - 15407-1, Non Plug-in, Size DX01**

| Accessories   | Description   | Part number  |                   |
|---|---|--|-------------------|
|  | Blanking plate kit  | <b>PS5534P</b>   |                   |
|  | Sandwich flow control   | <b>PS5542P</b>   |                   |
|   | Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control <b>MUST</b> be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators. |  |                   |
|  | Pilot exhaust module  | Pilot pressure control, without sensor, 1/8" BSPP<br><b>PS55XA0P</b> |                   |
|  | Sandwich supply module  | 1/4" NPT   | <b>PS552600P</b>  |
|   |   | 1/4" BSPP  | <b>PS552601P</b>  |
|  | Sandwich regulator  | 2-60 PSIG w/ gauge   | <b>PS5537155P</b> |
|   |   | 5-125 PSIG w/ gauge  | <b>PS5537166P</b> |
|   |   | Common pressure  | <b>PS5537255P</b> |
|   |   | Independent pressure   | <b>PS5537266P</b> |
|  | Manifold to manifold gasket kits  | Pilot open   | Pilot blocked     |
|   |   | #1, 3, 5 ports open  | <b>PSHU11P</b>    |
|   |   | Blocked #1 port  | <b>PSHU12P</b>    |
|   |   | Blocked #1, 3, 5, ports  | <b>PSHU13P</b>    |
|   |   | Blocked #3, 5 ports  | <b>PSHU14P</b>    |
|   |   | <b>PSHU15P</b>   | <b>PSHU16P</b>    |
|   |   | <b>PSHU17P</b>   | <b>PSHU18P</b>    |

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D235

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Model Number**

**DX02 - 6 06 - 95 1 M**

| Basic Series       |      |
|--------------------|------|
| ISO 15407-1 (18mm) | DX02 |
| ISO 15407-1 (26mm) | DX01 |

| Pilot                     |   |
|---------------------------|---|
| Air Operated Remote Pilot | 4 |
| Solenoid Operated         | 6 |

| Voltage & Frequency |              |      |    |
|---------------------|--------------|------|----|
|                     | AC           |      | DC |
|                     | 60Hz         | 50Hz |    |
| J                   | 120          | 110  |    |
| M                   |              |      | 24 |
| Blank               | Remote Pilot |      |    |

| Function   |    |
|--|----|
| <b>Internal Pilot Supply / Captured Exhaust 12</b>     |    |
| 2-Position, Spring Return                              | 21 |
| 2-Position, Air Return                                 | 51 |
| 2-Position   | 06 |
| 3-Position, CE   | 11 |
| 3-Position, APB  | 16 |
| <b>External Pilot 14 Supply / Captured Exhaust 12*</b> |    |
| 2-Position, Spring Return                              | 23 |
| 2-Position, Air Return                                 | 54 |
| 2-Position   | 05 |
| 3-Position, CE   | 09 |
| 3-Position, APB  | 19 |
| <b>Internal Pilot Supply / Vented Exhaust</b>          |    |
| 2-Position, Spring Return                              | 20 |
| 2-Position, Air Return                                 | 50 |
| 2-Position   | 04 |
| 3-Position, CE   | 27 |
| 3-Position, APB  | 25 |
| <b>External Pilot Supply / Vented Exhaust*</b>         |    |
| 2-Position, Spring Return                              | 22 |
| 2-Position, Air Return                                 | 53 |
| 2-Position   | 08 |
| 3-Position, CE   | 12 |
| 3-Position, APB  | 18 |

| Override |                    |
|----------|--------------------|
| Blank    | Remote Pilot       |
| 1        | Non-Locking, Flush |
| 3        | Locking, Flush     |

| Operator |                          |
|----------|--------------------------|
| 60       | None, Remote Pilot Valve |
| 95       | 15mm, 3-Pin, DIN 43650C  |

\* Must be specified when using Sandwich Regulators.

*Note: DX02 18mm Valve Remote Pilot Option only available with PL02 Individual Subbase Kits*

- D
- Subbase & Manual Valves
- H Series Micro
- Modulflex Series
- H Series ISO
- Network Connectivity
- DX ISOMAX Series
- Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D236

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 Richland, Michigan  
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**Ordering Information**

**15407-1, DX02 & DX01 Manifold / Subbase Kits**

**PSHU1153 0 1 P**

| Mounting Style / Port Size            |           |
|---------------------------------------|-----------|
| DX02 manifold with 1/8 NPT end ports  | PSHU1151  |
| DX02 manifold with 1/8 BSPP end ports | PSHU1152* |
| DX01 manifold with 1/4 NPT end ports  | PSHU1153  |
| DX01 manifold with 1/4 BSPP end ports | PSHU1154* |
| DX1 manifold with 3/8 NPT end ports   | PSHU1155  |
| DX1 manifold with 3/8 BSPP end ports  | PSHU1156* |
| DX2 manifold with 1/2 NPT end ports   | PSHU1157  |
| DX2 manifold with 1/2 BSPP end ports  | PSHU1158* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Gasket Options |   |
|----------------|---|
| 1              | 1,3,5 ports open and pilots open              |
| 2              | 1,3,5 ports closed and pilots open            |
| 3              | 1 closed, 3,5 ports open and pilots closed    |
| 4              | 1 port open, 3,5 ports closed and pilots open |
| 5              | 1,3,5 ports open and pilots closed            |
| 6              | 1,3,5 ports closed and pilots closed          |
| 7              | 1 closed, 3,5 ports open and pilots closed    |
| 8              | 1 port open, 3,5 ports closed and pilots open |

| Circuit Board Address Configuration |                 |
|-------------------------------------|-----------------|
| 0                                   | No interconnect |



DX01 manifold

**Subbase Kit - Non Plug-in**

**PS55 1113 0 P**



HA non plug-in subbase shown

| Series       |      |
|--------------|------|
| DX01 Subbase | PS55 |
| DX1 Subbase  | PS40 |
| DX2 Subbase  | PS41 |

| Engineering Level |           |
|-------------------|-----------|
| Blank             | HA Series |
| D                 | H1 Series |
| C                 | H2 Series |

| Mounting Style / Port Size   |       |
|------------------------------|-------|
| DX01 Series                  |       |
| 1/4 NPT side ports           | 1113  |
| 1/4 BSPP side ports          | 1114* |
| 1/4 NPT bottom / side ports  | 1123  |
| 1/4 BSPP bottom / side ports | 1124* |
| DX1 Series                   |       |
| 3/8 NPT side ports           | 1115  |
| 3/8 BSPP side ports          | 1116* |
| DX2 Series                   |       |
| 1/2 NPT side ports           | 1117  |
| 1/2 BSPP side ports          | 1118* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Enclosures / Lead Length |                          |
|--------------------------|--------------------------|
| 0                        | None, No Electrical Plug |

**DX02 Series ISO 15407-1 Size 18mm (DX02) Single Subbase**



DX01 Series Subbase

Side ported base  
18mm DX02 / HB

| 1/8" NPT   | 1/8" BSPP  |
|------------|------------|
| PL02-01-80 | PL02-01-70 |

Note: Can be used for external, single, or double remote pilot.

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**15407-1, DX02 & DX01 End Plate Kits**



Left hand end plate

**PSHU31 L0 0 0 P**

| Valve Type                   |        |
|------------------------------|--------|
| Non Plug-in (internal pilot) | PSHU31 |
| Non Plug-in (external pilot) | PSHU3X |

| Left Hand End Plate Type |    |
|--------------------------|----|
| Non Plug-in              | L0 |

| Thread Type |          |
|-------------|----------|
| 0           | NPT      |
| 1*          | BSPP "G" |

\* BSPP Conforms to ISO 1179-1 w 228-1 Threads

| Right Hand End Plate Type / Port |   |
|----------------------------------|---|
| 0                                | Low profile (no ports)                    |
| 1                                | 1/2 Exhaust and inlet port                |
| 2                                | 3/4 Exhaust and inlet port                |
| 5*                               | H3 Transition plate, 1" exhaust and inlet |

\* 1, 3 & 5 manifold galley blocked at transition plate. 12 & 14 pass through.

**Right Hand End Plate**



Low Profile High Flow

| Description                                     | NPT port         | BSPP port        |
|---|------------------|------------------|
| Right hand end plate only, low profile          | <b>PSHU4000P</b> |                  |
| Right hand end plate only, high flow 1/2" ports | <b>PSHU4100P</b> | <b>PSHU4101P</b> |
| Right hand end plate only, high flow 3/4" ports | <b>PSHU4200P</b> | <b>PSHU4201P</b> |

**H3 Transition Kit**



| Description   | NPT port        | BSPP port        |
|---|-----------------|------------------|
| H3 transition, H3 right hand end plate, 1" ports (includes gaskets & bolts) | <b>PSU7300P</b> | <b>PSHU7301P</b> |

**Manifold / Subbase Kit - Non Plug-in, 5599-1, Size 3 (H3)**

**PS421159 0 C P**

| Mounting Base Style / Port Size      |           |
|--------------------------------------|-----------|
| Subbase: 3/4 NPT side ports          | PS421119  |
| Subbase: 3/4 BSPP side port          | PS421110* |
| Manifold: 3/4 NPT End port           | PS421159  |
| Manifold: 3/4 BSPP end port          | PS421150* |
| Manifold: 3/4 NPT bottom / end port  | PS421169  |
| Manifold: 3/4 BSPP bottom / end port | PS421160* |

\* BSPP conforms to ISO 1179-1 w 228-1 threads.

| Engineering Level |    |
|-------------------|----|
| C                 | H3 |

| Enclosures / Lead Length |                                   |
|--------------------------|-----------------------------------|
| 0                        | None, No Electrical Plug - 5599-1 |



H3 Subbase shown

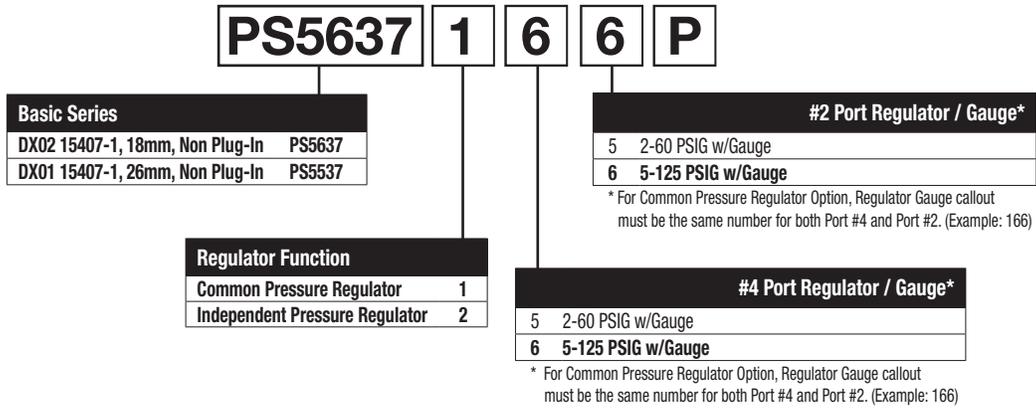


H3 Manifold shown

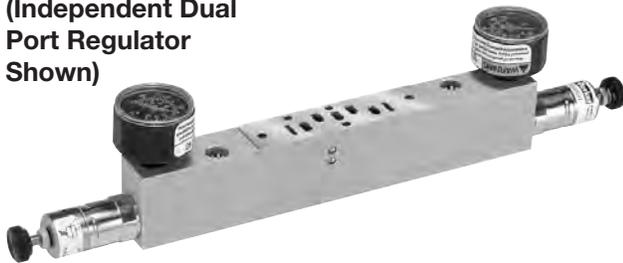


**Sandwich Regulators Features**

- Remote Air Pilot Operated for hard-to-reach pressure control.
- Unregulated Pilot Pressure to valve for consistent valve shifting regardless of pressure adjustment.



**DX02**  
 (Independent Dual Port Regulator Shown)



**DX01**  
 (Common Port Regulator Shown)

**Ordering Components**

- Manifold or Subbase Kit required.
- Sandwich Regulator Kit configured for Internal Pilot as standard.
- Order valve as External Pilot.

**How to Configure Sandwich Regulator / Valve Combinations**

**Internal Pilot Configuration of Sandwich Regulator HA, HB**

Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

| Accessories   | Description                                    | Part number |
|---|--|-------------|
|  Gauge adapter kit | Includes 1/8" coupling, long nipple, and gauge | PS5651160P  |

**Sandwich Regulator Cv Flow Chart\***

|           | Common Pressure Code 166 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>HB</b> | 0.20                     | 0.20 | 0.41 | 0.34 | 0.23                   | 0.19 | 0.28 | 0.27 |
| <b>HA</b> | 0.41                     | 0.43 | 0.87 | 0.89 | 0.42                   | 0.45 | 0.68 | 0.66 |

\* Regulator Port exhaust through Base Port 3.  
 Note: All Cv's calculated with regulator adjusted full open.

**Remote Pilot Access Plate Kit**

| Size      | Port size | Part number |           |
|-----------|-----------|-------------|-----------|
|           |           | NPT         | BSPP      |
| 26mm DX01 | 1/8"      | PS551500P   | PS551501P |



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

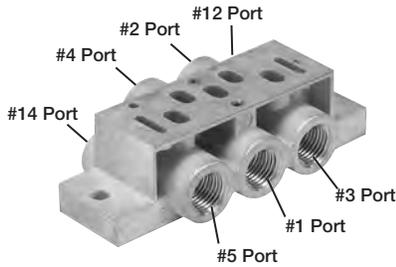
Network Connectivity

DX ISOMAX Series

Valvair II Series

**DX02 Series Subbase & Manifolds**

**Single Subbase**

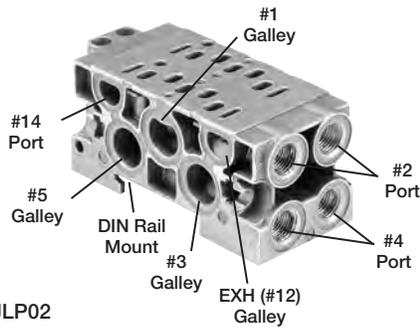


Side Ported Base  
 18mm DX02

| 1/8" NPT          | 1/8" BSPP         |
|-------------------|-------------------|
| <b>PL02-01-80</b> | <b>PL02-01-70</b> |

**Note:** Can be used for external, single, or double remote pilot.

**2 Station Manifold Bases**



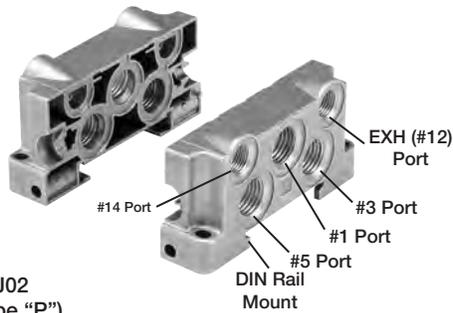
End Ported Bases  
 18mm DX02

| 1/8" NPT             | 1/8" BSPP            |
|----------------------|----------------------|
| <b>PJLP02-201-80</b> | <b>PJLP02-201-70</b> |

**Note:** Can be used for external pilot, not remote pilot. Gaskets and assembly hardware included.

PJLP02

**End Plate Kit**



Side Ported Two Station  
 Manifold Base  
 18mm DX02

| 1/4" NPT Port       | 1/4" BSPP Port     |
|---------------------|--------------------|
| <b>PEJ02-02-80*</b> | <b>PEJ02-02-70</b> |

**\*Note:** Put a vent or muffler in "EXH" port when capturing pilot exhaust pressure with a solenoid valve. (See gasket selector page for details.) Gaskets and assembly hardware included.  
 Torque Specifications: 25 to 35 in-lbs (2.82 to 3.95 Nm)

PEJ02  
 (Type "P")

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Most popular.



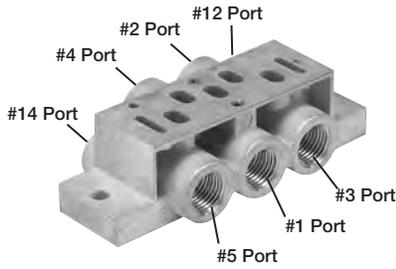
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**DX01 Series Subbase & Manifolds**

**Single Subbase**



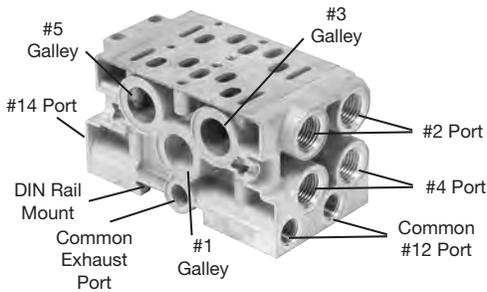
Side ported base  
 26mm DX01

Part number

|                   |                   |
|-------------------|-------------------|
| 1/4" NPT          | 1/4" BSPP         |
| <b>PL01-02-80</b> | <b>PL01-02-70</b> |

Note: Can be used for external, single, or double remote pilot.

**2 Station Manifold Bases**

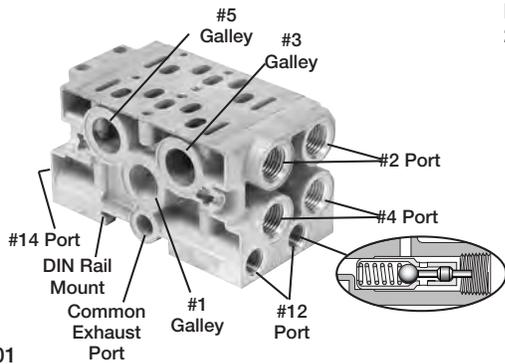


End ported bases  
 26mm DX01

|                      |                      |
|----------------------|----------------------|
| 1/4" NPT             | 1/4" BSPP            |
| <b>PJLP01-202-80</b> | <b>PJLP01-202-70</b> |

Note: Can be used for single remote pilot using the #14 Port and external pilot. Gaskets and assembly hardware included.

PJLP01



End ported bases  
 26mm DX01

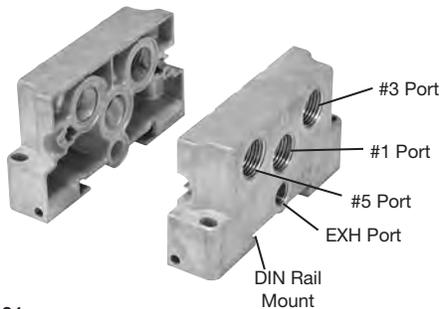
|                     |                     |
|---------------------|---------------------|
| 1/4" NPT            | 1/4" BSPP           |
| <b>PJL01-202-80</b> | <b>PJL01-202-70</b> |

Notes: #12 ports work independently when plunger is not depressed by a plug. When a plug is inserted in #12 Port along with the captured pilot exhaust gasket selector option, pilot exhaust is sent to the Common Exhaust Port. Do Not plug exhaust, insert a vent of muffler.

Gaskets and assembly hardware included. Can be used for external, single or double remote pilot.

PJL01

**End Plate Kit**



Side ported two station manifold base  
 26mm DX01

|                     |                    |
|---------------------|--------------------|
| 3/8 NPT port        | 3/8 BSPP port      |
| <b>PEJ01-03-80*</b> | <b>PEJ01-03-70</b> |

\* Use with PJLP01 or PJL01

Notes: Put a vent or muffler in "EXH" port when capturing pilot exhaust pressure with a solenoid valve. (See gasket selector page for details.) Gaskets and assembly hardware included. Torque Specifications: 25 to 35 in-lbs (2.82 to 3.95 Nm)

PEJ01

Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Accessories**

**Intermediate Air Supply Base**



| Size      | Port size | Part number       |
|-----------|-----------|-------------------|
| 18mm DX02 | 1/8" NPT  | <b>D02P-01-80</b> |
| 26mm DX01 | 1/4" NPT  | <b>D01P-02-80</b> |

**Notes:** Gasket & Mounting Bolts included.  
Torque Specifications  
Size 02: 15 to 25 in-lbs (1.69 to 2.82 Nm)  
Size 01: 20 to 30 in-lbs (2.26 to 3.39 Nm)

**Manifold Port Isolation Disc**



| Size      |                 | Part number   |
|-----------|-----------------|---------------|
| 18mm DX02 | Common Pressure | <b>D02BD0</b> |
| 26mm DX01 |                 | <b>D01BD0</b> |

**Notes:** 3 Discs per Kit.  
Used on PJJ Manifolds.

**Blanking Plate**



| Size      |                 | Part number    |
|-----------|-----------------|----------------|
| 18mm DX02 | Common Pressure | <b>PS5634P</b> |
| 26mm DX01 |                 | <b>PS5534P</b> |

**Notes:** Gasket & Mounting Bolts included.  
Torque Specifications  
Size 02: 15 to 25 in-lbs (1.69 to 2.82 Nm)  
Size 01: 20 to 30 in-lbs (2.26 to 3.39 Nm)

**Sandwich Flow Control Features**



**DX02  
18mm Shown**

| Size      | Part number    |
|-----------|----------------|
| 18mm DX02 | <b>PS5642P</b> |
| 26mm DX01 | <b>PS5542P</b> |

- Both adjustment screws are located on the 12 end of the unit.
- Sandwich Flow Control mounts with its own studs, which means the valve uses standard bolts for mounting.
- Sandwich Flow Control is not to be used as a shut off device and is not bubble tight when needles are fully turned down.
- Do not use with Independent Port Sandwich Regulators.

**Manifold to Manifold Gasket Kits**



**DX02M2MGSKT (PJLP02)**



**DX01M2MGSKT (PJLP01)**

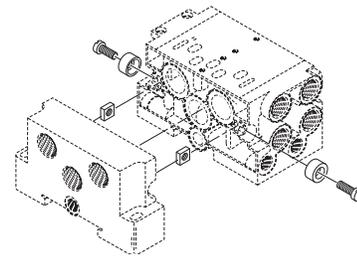
| Size  | Standard       | Blocked #1 Port | Blocked #1, 3, 5 Ports | Blocked #3, 5 Ports |
|-------|----------------|-----------------|------------------------|---------------------|
| DX02* | <b>PS561AP</b> | <b>PS561BP</b>  | <b>PS561CP</b>         | <b>PS561DP</b>      |
| DX01* |                |                 |                        |                     |

**DX02** **DX02M2MGSKT (PJLP02)**

**DX01** **DX01M2MGSKT (PJLP01)**

\* Gaskets used with PS5611 & PS5511 Manifolds.

**Manifold Hardware Kits**



| Description                            | Part number       |
|--|-------------------|
| Bolt, Washer & Nut*                    | <b>DX02M2MB**</b> |
| Tie Rods for PS5611 Manifold (Qty. 12) | <b>PS5612P</b>    |
| Tie Rods for PS5511 Manifold (Qty. 12) | <b>PS5512P</b>    |

\* Includes 10 Bolts, 10 Washers, 10 Nuts

\*\* Use this number for both sizes, PJLP02 & PJLP01.

Torque Specifications: 25 to 35 in-lbs (2.82 to 3.95 Nm)

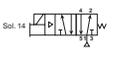
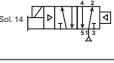
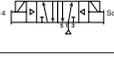
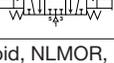
**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

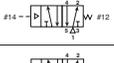
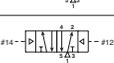
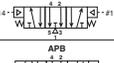
**Common Part Numbers**

**DX1 ISO Solenoid Valves**

| Symbol  | Type                                 | Cv   | Operator        | Pilot    | Override    | 24 VDC              | 120 VAC             |
|---|--------------------------------------|------|-----------------|----------|-------------|---------------------|---------------------|
|  | 4-way, 2-position, spring return     | 1.15 | Single solenoid | Internal | Non-locking | <b>DX1-621-BL49</b> | <b>DX1-621-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX1-621-CL49</b> | <b>DX1-621-CL53</b> |
|  | 4-way, 2-position, air return        | 1.15 | Single solenoid | Internal | Non-locking | <b>DX1-651-BL49</b> | <b>DX1-651-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX1-651-CL49</b> | <b>DX1-651-CL53</b> |
|  | 4-way, 2-position                    | 1.15 | Double solenoid | Internal | Non-locking | <b>DX1-606-BL49</b> | <b>DX1-606-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX1-606-CL49</b> | <b>DX1-606-CL53</b> |
|  | 4-way, 3-position, center exhaust    | 0.75 | Double solenoid | Internal | Non-locking | <b>DX1-611-BL49</b> | <b>DX1-611-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX1-611-CL49</b> | <b>DX1-611-CL53</b> |
|  | 4-way, 3-position, all ports blocked | 0.75 | Double solenoid | Internal | Non-locking | <b>DX1-616-BL49</b> | <b>DX1-616-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX1-616-CL49</b> | <b>DX1-616-CL53</b> |

30mm 3-Pin Solenoid, NLMOR, Unlighted, Internal Pilot, Valve Less Base

**DX1 ISO Remote Pilot Valves**

| Symbol  | Type                              | Cv   | Operator            | Pilot  | Part Number       |
|---|-----------------------------------|------|---------------------|--------|-------------------|
|  | 4-way, 2-position, spring return  | 1.15 | Single remote pilot | Remote | <b>DX1-421-60</b> |
|   |                                   |      |                     |        | <b>DX1-451-60</b> |
|  | 4-way, 2-position, air return     | 1.15 | Single remote pilot | Remote | <b>DX1-406-60</b> |
|   |                                   |      |                     |        | <b>DX1-411-60</b> |
|  | 4-way, 3-position, center exhaust | 0.75 | Double remote pilot | Remote | <b>DX1-416-60</b> |
|   |                                   |      |                     |        | <b>DX1-416-60</b> |

**Base / End Plate - 5599-1, Non Plug-in, Size 1 DX1**

|   | Description            | NPT                | BSPP               |
|---|------------------------|--------------------|--------------------|
|  Single subbase          | Side ported, 3/8" port | <b>PS4011150DP</b> | <b>PS4011160DP</b> |
|  Universal manifold base | End ported             | <b>PSHU115501P</b> | <b>PSHU115601P</b> |
|  Universal end plate     | Non-collective wiring  | <b>PSHU31L000P</b> | <b>PSHU31L001P</b> |

**Accessories - 5599-1, Non Plug-in, Size 1 DX1**

| Accessory   | Description          | Part number                               |
|---|----------------------|---|
|  Sandwich regulator    | Common pressure      | 5-125 PSIG w/ gauge<br><b>PS4037166CP</b> |
|   | Independent pressure | 5-125 PSIG w/ gauge<br><b>PS4037266CP</b> |
|  Blanking plate kit    |                      | <b>PS4034CP</b>                           |
|  Sandwich flow control |                      | <b>PS4042CP</b>                           |

Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators.

 Most popular.



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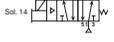
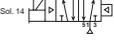
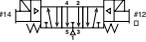
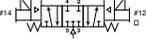
D243

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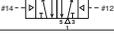
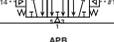
**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**Common Part Numbers**

**DX2 ISO Valves**

| Symbol  | Type                                 | Cv  | Operator        | Pilot    | Override    | 24 VDC              | 120 VAC             |
|---|--------------------------------------|-----|-----------------|----------|-------------|---------------------|---------------------|
|  | 4-way, 2-position, spring return     | 2.5 | Single solenoid | Internal | Non-locking | <b>DX2-621-BL49</b> | <b>DX2-621-BL53</b> |
|   |                                      |     |                 |          | Locking     | <b>DX2-621-CL49</b> | <b>DX2-621-CL53</b> |
|  | 4-way, 2-position, air return        | 2.5 | Single solenoid | Internal | Non-locking | <b>DX2-651-BL49</b> | <b>DX2-651-BL53</b> |
|   |                                      |     |                 |          | Locking     | <b>DX2-651-CL49</b> | <b>DX2-651-CL53</b> |
|  | 4-way, 2-position                    | 2.5 | Double solenoid | Internal | Non-locking | <b>DX2-606-BL49</b> | <b>DX2-606-BL53</b> |
|   |                                      |     |                 |          | Locking     | <b>DX2-606-CL49</b> | <b>DX2-606-CL53</b> |
|  | 4-way, 3-position, center exhaust    | 2.4 | Double solenoid | Internal | Non-locking | <b>DX2-611-BL49</b> | <b>DX2-611-BL53</b> |
|   |                                      |     |                 |          | Locking     | <b>DX2-611-CL49</b> | <b>DX2-611-CL53</b> |
|  | 4-way, 3-position, all ports blocked | 2.4 | Double solenoid | Internal | Non-locking | <b>DX2-616-BL49</b> | <b>DX2-616-BL53</b> |
|   |                                      |     |                 |          | Locking     | <b>DX2-616-CL49</b> | <b>DX2-616-CL53</b> |

**DX2 ISO Remote Pilot Valves**

| Symbol  | Type                                 | Cv  | Operator            | Pilot  | Part Number       |
|---|--------------------------------------|-----|---------------------|--------|-------------------|
|  | 4-way, 2-position, spring return     | 2.5 | Single remote pilot | Remote | <b>DX2-421-60</b> |
|   |                                      |     |                     |        | <b>DX2-451-60</b> |
|  | 4-way, 2-position, air return        | 2.5 | Single remote pilot | Remote | <b>DX2-406-60</b> |
|   |                                      |     |                     |        | <b>DX2-411-60</b> |
|  | 4-way, 3-position, center exhaust    | 2.4 | Double remote pilot | Remote | <b>DX2-416-60</b> |
|   |                                      |     |                     |        | <b>DX2-421-60</b> |
|  | 4-way, 3-position, all ports blocked | 2.4 | Double remote pilot | Remote | <b>DX2-416-60</b> |
|   |                                      |     |                     |        | <b>DX2-421-60</b> |

**Base / End Plate - 5599-1, Non Plug-in, Size 2 DX2**

|   | Description             | 1/2" NPT               | 1/2" BSPP          |                    |
|---|-------------------------|------------------------|--------------------|--------------------|
|  | Single subbase          | Side ported, 1/2" port | <b>PS4111170CP</b> | <b>PS4111180CP</b> |
|  | Universal manifold base | End ported             | <b>PSHU115701P</b> | <b>PSHU115801P</b> |
|  | Universal end plate     | Non-collective wiring  | <b>PSHU31L000P</b> | <b>PSHU31L001P</b> |

**Accessories - 5599-1, Non Plug-in, Size 2 DX2**

| Accessory  | Description           | Part number         |                    |
|--|-----------------------|---------------------|--------------------|
|   | Common pressure       | 5-125 PSIG w/ gauge | <b>PS4137166CP</b> |
|  | Independent pressure  | 5-125 PSIG w/ gauge | <b>PS4137266CP</b> |
|   | Blanking plate kit    | <b>PS4134CP</b>     |                    |
|   | Sandwich flow control | <b>PS4142CP</b>     |                    |
| Sandwich Flow Control and Common Port Sandwich Regulator may be sandwiched together on a manifold or subbase. The Sandwich Flow Control MUST be located between the manifold/subbase and the Common Port Sandwich Regulator. Do not use with Independent Port Sandwich Regulators. |                       |                     |                    |

 Most popular.

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



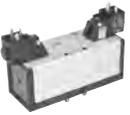
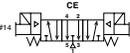
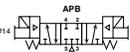
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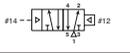
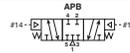
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**Common Part Numbers**

**DX3 ISO Valves**

| Symbol  | Type                                 | Cv   | Operator        | Pilot    | Override    | 24 VDC              | 120 VAC             |
|---|--------------------------------------|------|-----------------|----------|-------------|---------------------|---------------------|
|  Sol. 14 | 4-way, 2-position, spring return     | 4.15 | Single solenoid | Internal | Non-locking | <b>DX3-621-BL49</b> | <b>DX3-621-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX3-621-CL49</b> | <b>DX3-621-CL53</b> |
|  Sol. 14 | 4-way, 2-position, air return        | 4.15 | Single solenoid | Internal | Non-locking | <b>DX3-651-BL49</b> | <b>DX3-651-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX3-651-CL49</b> | <b>DX3-651-CL53</b> |
|  Sol. 14 | 4-way, 2-position                    | 4.15 | Double solenoid | Internal | Non-locking | <b>DX3-606-BL49</b> | <b>DX3-606-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX3-606-CL49</b> | <b>DX3-606-CL53</b> |
|  CE      | 4-way, 3-position, center exhaust    | 4.0  | Double solenoid | Internal | Non-locking | <b>DX3-611-BL49</b> | <b>DX3-611-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX3-611-CL49</b> | <b>DX3-611-CL53</b> |
|  APB     | 4-way, 3-position, all ports blocked | 4.0  | Double solenoid | Internal | Non-locking | <b>DX3-616-BL49</b> | <b>DX3-616-BL53</b> |
|   |                                      |      |                 |          | Locking     | <b>DX3-616-CL49</b> | <b>DX3-616-CL53</b> |

**DX3 ISO Remote Pilot Valves**

| Symbol  | Type                                 | Cv   | Operator            | Pilot  | Part Number       |
|---|--------------------------------------|------|---------------------|--------|-------------------|
|  #14 | 4-way, 2-position, spring return     | 4.15 | Single remote pilot | Remote | <b>DX3-421-60</b> |
|   |                                      |      |                     |        | <b>DX3-451-60</b> |
|  #14 | 4-way, 2-position, air return        | 4.15 | Single remote pilot | Remote | <b>DX3-406-60</b> |
|   |                                      |      |                     |        | <b>DX3-411-60</b> |
|  #14 | 4-way, 3-position, center exhaust    | 4.0  | Double remote pilot | Remote | <b>DX3-416-60</b> |
|   |                                      |      |                     |        | <b>DX3-421-60</b> |
|  #14 | 4-way, 3-position, all ports blocked | 4.0  | Double remote pilot | Remote | <b>DX3-416-60</b> |
|   |                                      |      |                     |        | <b>DX3-421-60</b> |

**DX3 Series Subbase & Manifolds**

| Single subbase  | Description  | 3/4" NPT           | 3/4" BSPP          |
|---|--|--------------------|--------------------|
|  | Side ported base   | <b>PS4211190CP</b> | <b>PS4211100CP</b> |
| Manifold bases  | Description  | 3/4" NPT           | 3/4" BSPP          |
|  | Bottom / End ported bases<br><b>Note:</b> Manifolds include 2 pipe plugs | <b>PS4211690CP</b> | <b>PS4211600CP</b> |
| End plate kits  | Description  | NPT port           | BSPP port          |
|  | H3 Non-collective wiring end plates                                      | <b>PS4231010DP</b> | <b>PS4231011DP</b> |

**5599-1, DX3 Accessories**

| Accessories  | Description                              | Part Number        |
|--|--|--------------------|
| Sandwich regulator  | Common pressure 5-125 PSIG w/ gauge      | <b>PS4237166CP</b> |
|  | Independent pressure 5-125 PSIG w/ gauge | <b>PS4237266CP</b> |
| Manifold to manifold gasket kit  |  | <b>PS4213P</b>     |

 Most popular.



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**DX1**

**6 21**

**B L 53**

| Basic Series |              |
|--------------|--------------|
| ISO 5599-1   | DX1 - Size 1 |
| ISO 5599-1   | DX2 - Size 2 |
| ISO 5599-1   | DX3 - Size 3 |

| Pilot                     |   |
|---------------------------|---|
| Air Operated Remote Pilot | 4 |
| Solenoid Operated         | 6 |

| Voltage & Frequency |                                 |      |    |
|---------------------|---------------------------------|------|----|
|                     | AC                              |      | DC |
|                     | 60Hz                            | 50Hz |    |
| 19*                 |                                 |      | 24 |
| 49                  |                                 |      | 24 |
| 53                  | 120                             | 110  |    |
| Blank               | Remote Pilot or Valve Less Coil |      |    |

\* LED & Surge Suppression.  
 Only Available with Enclosure "6".

| Function                              |     |
|---------------------------------------|-----|
| Internal Pilot Supply                 |     |
| 2-Position, Spring Return, Air Assist | 21  |
| 2-Position, Diff Return               | 51  |
| 2-Position                            | 06  |
| 3-Position, CE                        | 11  |
| 3-Position, APB                       | 16  |
| 3-Position, PC                        | 13* |
| External Pilot Supply†                |     |
| 2-Position, Spring Return, Air Assist | 22  |
| 2-Position, Diff Return               | 53  |
| 2-Position                            | 08  |
| 3-Position, CE                        | 12  |
| 3-Position, APB                       | 18  |
| 3-Position, PC                        | 24* |

\* Not offered with DX3 Valves.  
 † Must be specified when using Sandwich Regulators.

| 5599-1 Enclosure / Lead Length / Light |   |
|--|---|
| 0**                                    | None, Remote Pilot Valve                              |
| 6*                                     | 2-Pin, M12 EURO Connector with CNOMO Operator, Light  |
| L                                      | 3-Pin, 30mm DIN 43650A with CNOMO Connector, No Light |
| P                                      | 3-Pin, 22mm Industrial with CNOMO Connector, No Light |
| N†                                     | None, Valve Less Coil, No Light                       |

\* Only available with Voltage & Frequency "19".  
 \*\*Must use Overrides Option "6".  
 † Must use Overrides Option "B" or "C".

| 5599-1 Overrides |                                 |
|------------------|---------------------------------|
| 6                | Remote Pilot / Without Solenoid |
| B                | Non-Locking, Flush, Push        |
| C                | Locking, Flush, Push / Turn     |

**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

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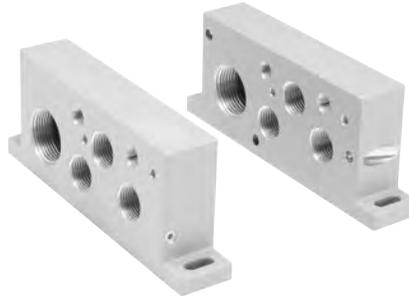
**Non-Plug-in, 5599-1, End Plate Kits**

**PS423101 0 C P**

| Basic Series     |          |
|------------------|----------|
| ISO 5599, Size 3 | PS423101 |

| Thread Type |          |
|-------------|----------|
| 0           | NPT      |
| 1*          | BSPP "G" |

\* BSPP Conforms to ISO 1179-1 w 228-1 Threads.



**H1 Non-Collective Wiring End Plates**

**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



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**Ordering Information**

**Sandwich Regulators Features**

- Remote Air Pilot Operated for hard-to-reach pressure control.
- Unregulated Pilot Pressure to valve for consistent valve shifting regardless of pressure adjustment.

**PS4037 1 6 6 C P**

| Basic Series           |        |
|------------------------|--------|
| H1 5599-1, Non Plug-in | PS4037 |
| H2 5599-1, Non Plug-in | PS4137 |

| Regulator Function             |   |
|--------------------------------|---|
| Common Pressure Regulator      | 1 |
| Independent Pressure Regulator | 2 |

| #2 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For common pressure regulator option, regulator gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line by-pass option can only be used with independent pressure regulators.

| #4 Port Regulator / Gauge* |                             |
|----------------------------|-----------------------------|
| 0**                        | Line By-Pass Plate          |
| 4                          | 1-30 PSIG w/Gauge           |
| 5                          | 2-60 PSIG w/Gauge           |
| 6                          | 5-125 PSIG w/Gauge          |
| D                          | Remote Pilot ISO 2 & 3 only |

\* For common pressure regulator option, regulator gauge callout must be the same number for both Port #4 and Port #2. (Example: 166)

\*\* Pressure Line by-pass option can only be used with independent pressure regulators.

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

**DX1 - Size 1**  
 (Independent Dual Port Regulator Shown)



**DX2 - Size 2**  
 (Independent Dual Port Regulator Shown)



**Ordering Components**

- Manifold or Subbase Kit required.
- Sandwich Regulator Kit configured for Internal Pilot as standard.
- Order valve as External Pilot.

**How to Configure Sandwich Regulator / Valve Combinations**

**Internal Pilot Configuration -**

Pressure in Base Port 1 feeds regulator configured for Internal Pilot which feeds valve configured for External Pilot.

**External Pilot Configuration - DX1, DX2, DX3**

An External Pilot pressure in Port 12 or 14 of the base feeds thru the Sandwich Regulator 12 or 14 galley directly to the 12/14 pilot of the valve. This configuration takes an External Pilot from the 12 port of the base and passes it thru the regulator to feed the 12 galley of the valve.

**Note: Do not use Independent Port Sandwich Regulators with Sandwich Flow Controls.**

Independent Port Sandwich Port Regulators combine the #3 and #5 valve exhaust ports into the #5 exhaust at the manifold/subbase interface. The #3 port flow control will control both #3 and #5 exhaust. #5 port flow control is ineffective.

**Sandwich Regulator Cv Flow Chart\***

|           | Common Pressure Code 166 |      |      |      | Single Pressure 2 Code 206 |      |      |      | Single Pressure 4 Code 260 |      |      |      | Dual Pressure Code 266 |      |      |      |
|-----------|--------------------------|------|------|------|----------------------------|------|------|------|----------------------------|------|------|------|------------------------|------|------|------|
|           | 1-2                      | 1-4  | 2-3  | 4-5  | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                        | 1-4  | 2-3  | 4-5* | 1-2                    | 1-4  | 2-3  | 4-5* |
| <b>H1</b> | 0.62                     | 0.61 | 1.28 | 1.18 | 0.73                       | 0.96 | 0.96 | 0.93 | 0.34                       | 0.70 | 0.94 | 0.98 | 0.52                   | 0.48 | 0.86 | 0.88 |
| <b>H2</b> | 1.47                     | 1.60 | 2.41 | 2.33 | 1.71                       | 1.90 | 1.52 | 1.75 | 1.74                       | 1.67 | 1.73 | 1.79 | 1.61                   | 1.62 | 1.50 | 1.67 |

\* Regulator Port exhaust through Base Port 3.

Note: All Cv's calculated with regulator adjusted full open.

Most popular.



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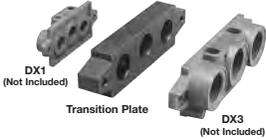
**5599-1 Compact Manifolds, Subbases & Accessories**

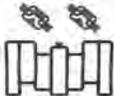
| Manifold VDMA – Form C  |                    |             | Part Number        |
|---|--------------------|-------------|--------------------|
|  | <b>Bottom Port</b> | <b>Size</b> | <b>Port size</b>   |
|   |                    | DX1         | 1/4"               |
|   |                    | DX2         | 3/8"               |
|   |                    | DX3         | 1/2"               |
|   |                    |             | BSPP G             |
|   |                    |             | <b>P2N-VM512MB</b> |
|   |                    |             | <b>P2N-WM513MB</b> |
|   |                    |             | <b>P2N-YM514MB</b> |

| VDMA End Plates – Form D  |             |                  | Part Number        |
|---|-------------|------------------|--------------------|
|  | <b>Size</b> | <b>Port size</b> | <b>BSPP G</b>      |
|   | DX1         | 3/8"             | <b>P2N-VM513ES</b> |
|   | DX2         | 1/2"             | <b>P2N-WM514ES</b> |
|   | DX3         | 1"               | <b>P2N-YM518ES</b> |

| Subbase – Side Ports<br>(5599-1 & VDMA)   | Size | Port Size | 5599-1 Part Number |                   | VDMA Part Number   |
|---|------|-----------|--------------------|-------------------|--------------------|
|   |      |           | NPT                | BSPP “G”          | BSPP “G”           |
|  | DX1  | 1/4"      | <b>PL1-1/4-80</b>  | <b>PL1-1/4-70</b> | <b>P2N-VS512SD</b> |
|   | DX2  | 3/8"      | <b>PL2-3/8-80</b>  | <b>PL2-3/8-70</b> | <b>P2N-WS513SD</b> |
|   | DX3  | 1/2"      | <b>PL3-1/2-80</b>  | <b>PL3-1/2-70</b> | <b>P2N-YS514SD</b> |

| Subbase – Bottom Ports   | Size | Port size | 5599-1 Part Number |                   |
|--|------|-----------|--------------------|-------------------|
|  |      |           | NPT                | BSPP “G”          |
|  | DX1  | 1/4"      | <b>PD1-1/4-80</b>  | <b>PD1-1/4-70</b> |
|  | DX2  | 3/8"      | <b>PD2-3/8-80</b>  | <b>PD2-3/8-70</b> |

| VDMA Transition Plate  | Part Number  |
|--|--|
| <br><small>DX1 (Not Included)      Transition Plate      DX3 (Not Included)</small> | <b>P2N-VM500AK</b>   |
|  | Kit includes: <u>Transition Plate Only</u> . Order P2N-VM513ES and P2N-YM518ES Separately to Assemble Add-A-Fold |

| External Seal Kit   | Size | Part Number     |
|---|------|-----------------|
|  | DX1  | <b>JJDX10-A</b> |
|   | DX2  | <b>JJDX20-A</b> |
|   | DX3  | <b>JJDX30-A</b> |

| Complete Seal Kit   | Size | Part Number     |
|---|------|-----------------|
|  | DX1  | <b>JJDX15-A</b> |
|   | DX2  | <b>JJDX25-A</b> |
|   | DX3  | <b>JJDX35-A</b> |

D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



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**Accessories**

**Blanking Plate Kits**



| Size | Part Number     |
|------|-----------------|
| DX1  | <b>PS4034CP</b> |
| DX2  | <b>PS4134CP</b> |
| DX3  | <b>PS4234CP</b> |

Kit includes:  
Blanking Plate, Gasket, and Mounting Bolts.

**Remote Pilot Access Plate Kits**

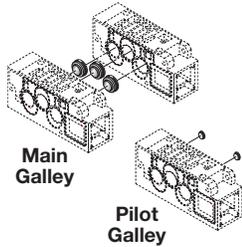


| Size | Port Size | BSPP "G"          |
|------|-----------|-------------------|
| DX1  | 1/8"      | <b>PS401501CP</b> |
| DX2  | 1/8"      | <b>PS411501CP</b> |
| DX3  | 1/8"      | <b>PS421501CP</b> |

Kit includes: Pilot Port Access Plate, Gasket and Mounting Studs.

**Manifold Port Isolation Kits**

Main Galley (1, 3, 5)



| Size | P2N Manifolds   |
|------|-----------------|
| DX1  | <b>P2N-VK0P</b> |
| DX2  | <b>P2N-WK0P</b> |
| DX3  | <b>P2N-YK0P</b> |

Kit includes: Plugs with O-rings.

**Pilot Galley**

| Size | Part Number     |
|------|-----------------|
| DX3  | <b>PS4033CP</b> |

Kit includes: Plugs with O-rings.  
For use with PS4 Series Manifolds.

**Sandwich Flow Controls Features**

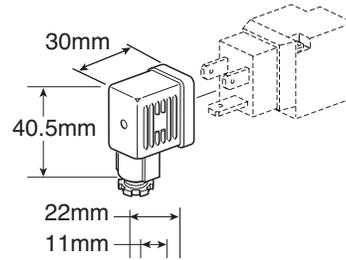


| Size | Part Number     |
|------|-----------------|
| DX1  | <b>PS4042CP</b> |
| DX2  | <b>PS4142CP</b> |
| DX3  | <b>PS4242CP</b> |

- Both adjustment screws are located on the 12 end of the unit.
- Sandwich Flow Control mounts with its own studs, which means the valve uses standard bolts for mounting.
- Sandwich Flow Control is not to be used as a shut off device and is not bubble tight when needles are fully turned down.
- Do not use with Independent Port Sandwich Regulators.

**22mm Rectangular 3-Pin – Type B Industrial**

(Use with Enclosure "B")



| Description             | Connector         | Connector with 6' (2m) Cord |
|-------------------------|-------------------|-----------------------------|
| Unlighted               | <b>PS2429BP</b>   | <b>PS2429JBP</b>            |
| Light – 24V/60Hz, 24VDC | <b>PS243079BP</b> | <b>PS2430J79BP*</b>         |
| Light – 120V/60Hz       | <b>PS243083BP</b> | <b>PS2430J83BP*</b>         |
| Light – 240V/60Hz       | <b>PS243087BP</b> | N/A                         |

\* LED with surge suppression.

**Note:** Max  $\phi$ 6.5mm cable size required for connector w/o 6' (2m) cord. IP65 rated when properly installed.

**Engineering Data:**

Conductors: 2 Poles Plus Ground; Cable Range (Connector Only): 6 to 8mm (0.24 to 0.31 Inch); Contact Spacing: 11mm

**CNOMO Operator Adapter**



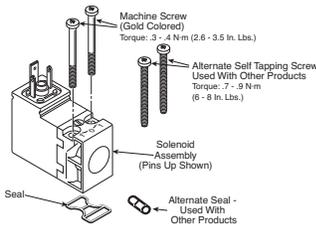
| Size          | Part Number    |
|---------------|----------------|
| DX1, DX2, DX3 | <b>PS2855P</b> |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



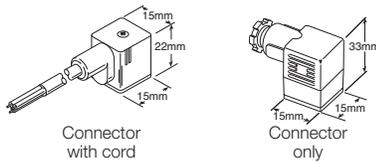
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**15mm 3-Pin DIN 43650C Replacement Solenoid Kits**



| Voltage        | Non-Locking       | Locking           |
|----------------|-------------------|-------------------|
| 24VDC          | <b>PS2982B49P</b> | <b>PS2982C49P</b> |
| 110/50, 120/60 | <b>PS2982B53P</b> | <b>PS2982C53P</b> |

**15mm 3-Pin DIN 43650C Connectors**



| Description        | Connector with 6' (2m) Cord | Connector         |
|--------------------|-----------------------------|-------------------|
| No circuit board   | <b>PS2932JBP</b>            | <b>PS2932BP</b>   |
| Light - 24DC       | <b>PS2946J79BP*</b>         | <b>PS294679BP</b> |
| Light - 110/120VAC | <b>PS2946J83BP*</b>         | <b>PS294683BP</b> |

\* LED with surge suppression.

**Note:** Max. ø6.5mm cable size required for connector without 6' (2m) cord. IP65 rated when properly installed.

**Engineering Data:**

Conductors: 2 poles plus ground  
 Cable range (Connector only): 4 to 6mm (0.16 to 0.24 Inch)  
 Contact spacing: 8mm

**Female Electrical Connectors (IP65 Rated) 30mm, 3-Pin ISO 4400, (DIN 43650A)**



| Description                     | Connector with 6' (2m) cord | Connector         |
|---------------------------------|-----------------------------|-------------------|
| Unlighted                       | <b>PS2028JCP</b>            | <b>PS2028BP</b>   |
| Light - 6-48V, 50/60Hz; 6-48VDC | <b>PS2032J79CP*</b>         | <b>PS203279BP</b> |
| Light - 120V/60Hz               | <b>PS2032J83CP*</b>         | <b>PS203283BP</b> |
| Light - 240V/60Hz               | N/A                         | <b>PS203283BP</b> |

\* With surge suppression.

**Engineering data:**

Conductors: 2 poles plus ground; cable range (connector only): 8 to 10mm (0.31 To 0.39 inch); Contact spacing: 18mm

**5599-1 CNOMO Solenoid Kits**

| Voltage Code | 3-pin, 30mm 'L' Coil Kit | 2-pin, M12 Euro '6' coil Kit |
|--------------|--------------------------|------------------------------|
| 19           | —                        | <b>PS2828619P</b>            |
| 42           | <b>P2FCA442</b>          | —                            |
| 45           | <b>P2FCA445</b>          | —                            |
| 49           | <b>P2FCA449</b>          | —                            |
| 53           | <b>P2FCA453</b>          | —                            |
| 57           | <b>P2FCA457</b>          | —                            |

Quantity 1

**Pilot Operator - CNOMO**

| Valve size     | Kit Number                  |
|----------------|-----------------------------|
| DX1, DX2 & DX3 | Locking <b>PS4052CP</b>     |
|                | Non-locking <b>PS4053CP</b> |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D251

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Ceramic Technology / Valve Specifications**

- Subbase Mounted Valves Conforming to ISO Standard 5599/1
- High Flow: DX1 (1.15 Cv), DX2 (2.50 Cv), DX3 (4.15 Cv)
- Air or Solenoid Operation Using CNOMO Solenoids
- Can Be Vacuum Operated

**Air Condition:**

Filtered to 40µ

**Dual Pressure Supply from Exhaust Ports:**

Yes - Without additional pressure at 12 and 14

**Dust and Water Protection:**

IP65 (According to EN 60529)

**Mechanical Life:**

> 100 million operations (Dry air filtered 40 µ, 2 Hz, 6 bar, 20°C)

**Media:**

Air or inert gas, filtered 40 µ (Class 5 according to ISO 8573-1), lubricated or non-lubricated

**Operating Temperature Range:**

-10°C to 60°C (14°F to 140°F)

**Flow Rating (Cv)**

| Size | Port Size  | Mounting Style | Flow Rating (Cv) |            |
|------|------------|----------------|------------------|------------|
|      |            |                | 2-Position       | 3-Position |
| DX1  | 1/4" Ports | Subbase        | 1.15             | 0.75       |
|      | 1/4" Ports | Manifold       | 0.80             | 0.60       |
| DX2  | 3/8" Ports | Subbase        | 2.50             | 2.40       |
|      | 3/8" Ports | Manifold       | 2.05             | 1.95       |
| DX3  | 1/2" Ports | Subbase        | 4.15             | 4.00       |
|      | 1/2" Ports | Manifold       | 4.10             | 3.65       |

Cv tested per ANSI / (NFPA) T3.21.3

**Flow Rating (Cv) with Sandwich Regulator**

| Size | Common Pressure |      |      |      | Dual Pressure |      |      |      |
|------|-----------------|------|------|------|---------------|------|------|------|
|      | 1-2             | 1-4  | 2-3  | 4-5  | 1-2           | 1-4  | 2-3  | 4-5  |
| DX1  | 0.55            | 0.49 | 1.06 | 1.02 | 0.32          | 0.42 | 0.25 | 0.38 |
| DX2  | 1.06            | 1.05 | 2.33 | 2.17 | 0.93          | 0.66 | 0.77 | 1.15 |

Note: All Cv's calculated with regulator adjusted full open.

**Response Time\*\***

Single Solenoid 2-Position -  
 Air Return / Spring Assist

| Size | Port Size | 0 Cu. In. Chamber |         | # Cu. In. Chamber |         |
|------|-----------|-------------------|---------|-------------------|---------|
|      |           | Fill              | Exhaust | Fill              | Exhaust |
| DX1  | 1/4"      | .025              | .030    | .160              | .235    |
| DX2  | 3/8"      | .040              | .045    | .170              | .235    |
| DX3  | 1/2"      | .060              | .065    | .245              | .330    |

## DX1 (50), DX2 (100), DX3 (200)

\*\* With 100 PSIG supply, time required to fill from 0 to 90 PSIG and Exhaust from 100 PSIG to 10 PSIG measured from the instant of energizing or de-energizing 24VDC solenoid.

Tested per ANSI / (NFPA) T3.21.8

**Solenoid Information**

| Code | Voltage |      |    | Power (W / VA) |
|------|---------|------|----|----------------|
|      | AC      |      |    |                |
|      | 60Hz    | 50Hz | DC |                |
| 19   | —       | —    | 24 | 2.8W           |
| 49   | —       | —    | 24 | 2.7W           |
| 53   | 120     | 115  | —  | 3.7VA          |

Data tested with LED and Surge Suppression.

**Operating Pressure**

Vacuum to 145 PSIG (10 bar)

| Function                     | M.O.P. (PSIG) |     |     |
|------------------------------|---------------|-----|-----|
|                              | DX1           | DX2 | DX3 |
| <b>Internal Pilot</b>        |               |     |     |
| 21 2-Position, Spring Return | 36            | 30  | 30  |
| 51 2-Position, Air Return    | 30            | 30  | 30  |
| 06 2-Position                | 15            | 15  | 15  |
| 11 3-Position, CE            | 45            | 36  | 36  |
| 16 3-Position, APB           | 45            | 36  | 36  |
| 13 3-Position, PC            | 45            | 36  | —   |
| <b>External Pilot</b>        |               |     |     |
| 22 2-Position, Spring Return | 36            | 30  | 30  |
| 53 2-Position, Air Return    | 30            | 30  | 30  |
| 08 2-Position                | 15            | 15  | 15  |
| 12 3-Position, CE            | 45            | 36  | 36  |
| 18 3-Position, APB           | 45            | 36  | 36  |
| 24 3-Position, PC            | 45            | 36  | —   |

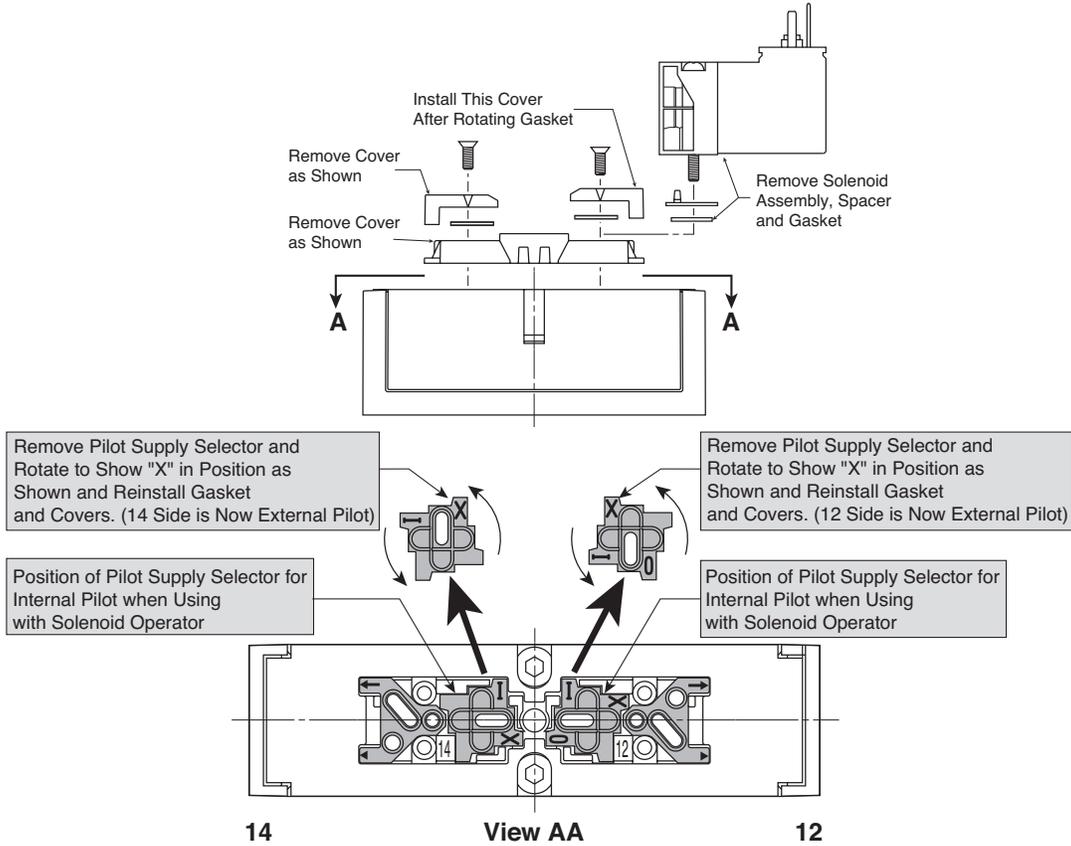
**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



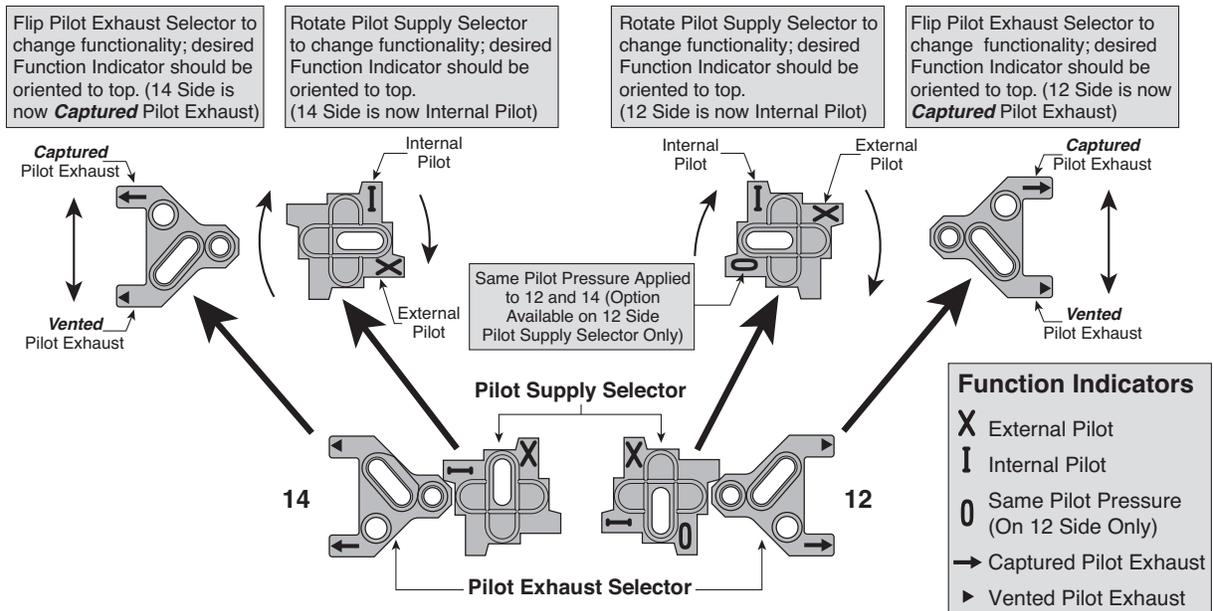
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

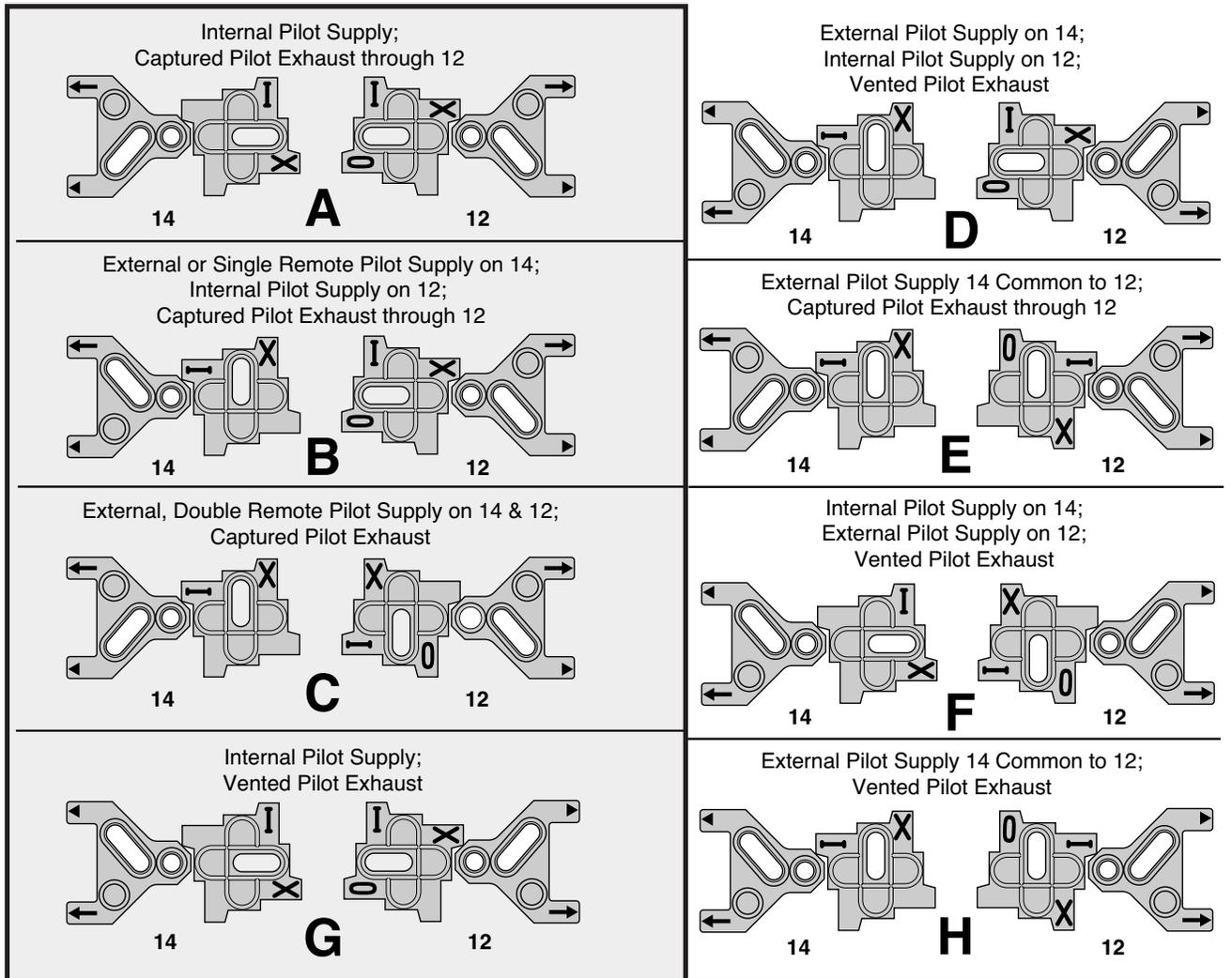
**DX ISOMAX Selector Gasket Conversion Instructions**

**Changing from Internal to External Pilot Supply**



**Changing from External Pilot Supply, Vented Pilot Exhaust to Internal Pilot Supply, Captured Pilot Exhaust**





| Base Pilot Port Used                       | None                  | 14                                     | 14 and 12                                   | None                  | 14   | 14   | 12                                     |
|--|-----------------------|--|---|-----------------------|--|--|--|
| Pilot Air Supply                           | Internal Pilot Supply | 14 External Pilot<br>12 Internal Pilot | External, Double Remote Pilot for 14 and 12 | Internal Pilot Supply | 14 External Pilot<br>12 Internal Pilot                                       | One Common External Pilot Pressure for 14 and 12 | 14 Internal Pilot<br>12 External Pilot |
| Pilot Exhaust                              | Captured              | Captured                               | Captured                                    | Vented                | Vented   | Captured   | Vented                                 |
| 5/2 Double Solenoid                        | 606<br>A              | —                                      | 406<br>C                                    | 604<br>G              | D  | E  | F                                      |
| 5/2 Single Solenoid                        | 621                   | 421                                    | C   | 620                   | D  | E  | F                                      |
| 5/2 Double Solenoid, on Sandwich Regulator | —                     | —                                      | —   | —                     | External Pilot Supply 14 Common to 12 Vented Pilot Exhaust – See Diagram 'H' |  |  |
| Spring Return                              | A                     | B                                      | —   | G                     | —  | —  | —                                      |
| 5/2 Single Solenoid, Differential Return   | 651<br>A              | 451<br>B                               | C   | 65<br>G               | D  | E  | F                                      |
| 5/3 Pressure Center Exhaust                | 611<br>A              | —                                      | 411<br>C                                    | 627<br>G              | D  | E  | F                                      |
| 5/3 Pressure All Ports Blocked             | 616<br>A              | —                                      | 416<br>C                                    | 625<br>G              | D  | E  | F                                      |
| <b>Part Numbers Available From Factory</b> |                       |  |   |                       | <b>See Gasket Configurations Above for These Special Adaptations</b>         |  |  |

Insert a muffler or vent in the EXH Port of the PEJ02 & PEJ01 Manifold End Plates or #12 of PL02 & PL01 Subbases when using solenoids with a **Captured** Exhaust.

A plug may be inserted in the EXH Port of the PEJ02 & PEJ01 Manifold End Plates #14 or #12 of PL02 & PL01 Subbases when using a **Vented** Exhaust.

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 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



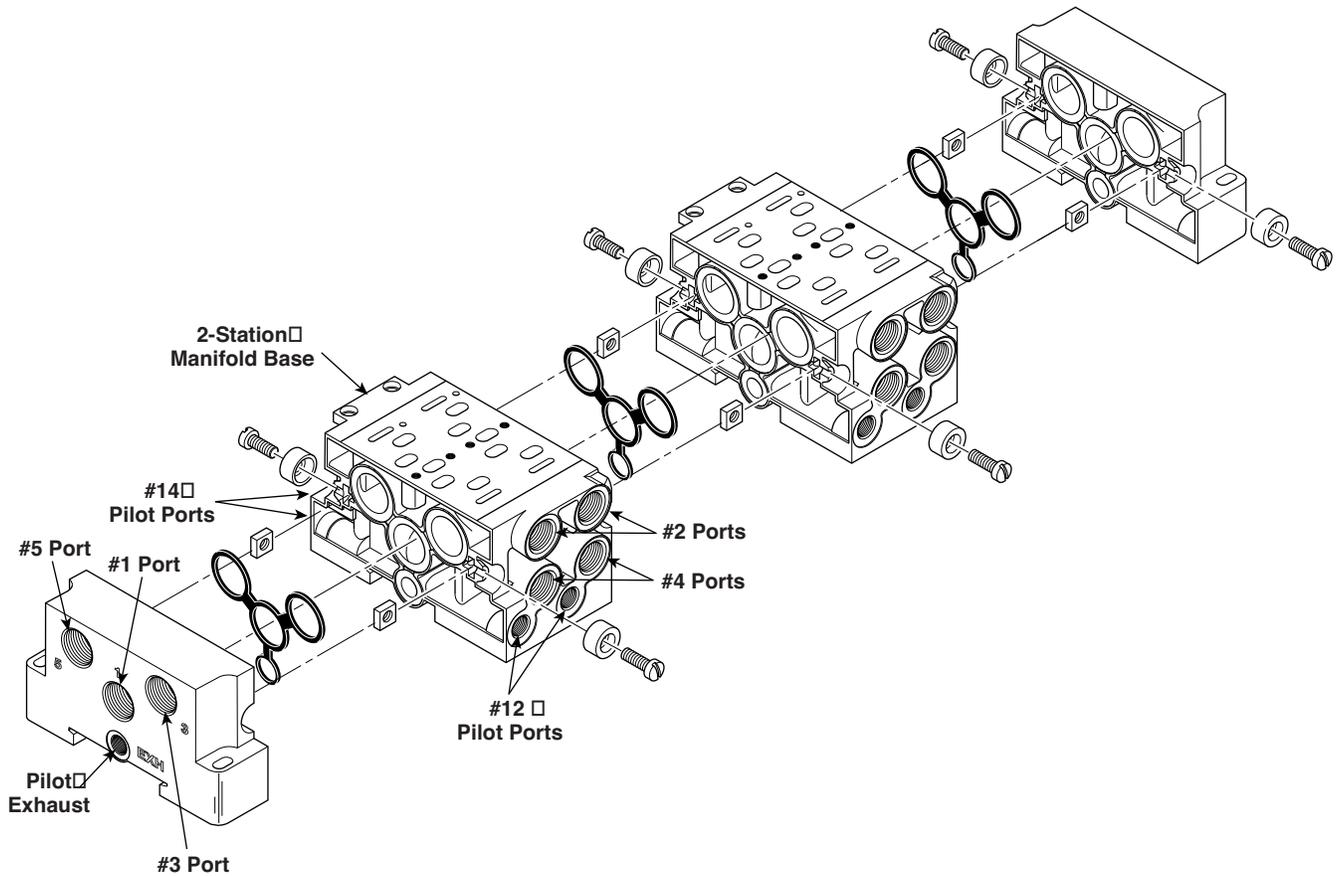
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

**DX01 Manifold Assembly**

**Ports**

- 1 ..... Pressure
- 2 ..... #2 Cylinder Port, 1 to 2 Flow Path
- 3 ..... Cylinder Exhaust Port, 2 to 3 Flow Path
- 4 ..... #4 Cylinder Port, 1 to 4 Flow Path
- 5 ..... Cylinder Exhaust Port, 4 to 5 Flow Path
- 14 ..... #14 Pilot Port
- 12 ..... #12 Pilot Port

Torque Specifications: 25 to 35 in-lbs (2.82 to 3.95 Nm)



**DX01 Shown**

|                         |
|-------------------------|
| D                       |
| Subbase & Manual Valves |
| H Series Micro          |
| Modulflex Series        |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D255

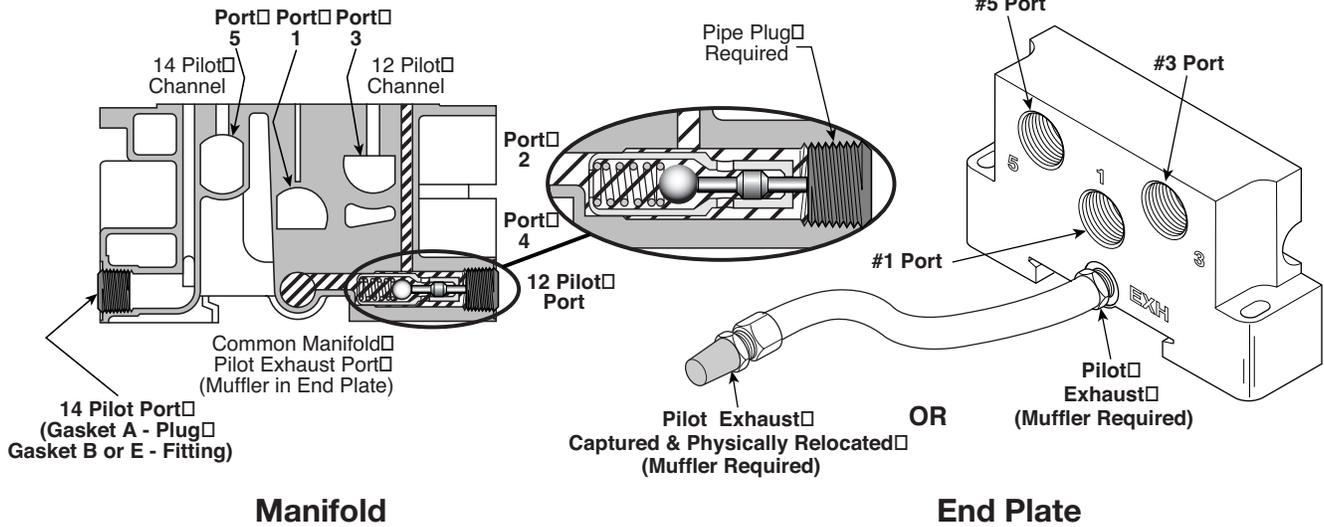
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**DX 15407-1 Size 01, Manifold Conversion Instructions**

**Captured Pilot Exhaust**

**PJL01, Size 01**

A Built-in 2-Position Selector converts the External Pilot Channel (12) into a Common Solenoid Pilot Exhaust Channel.



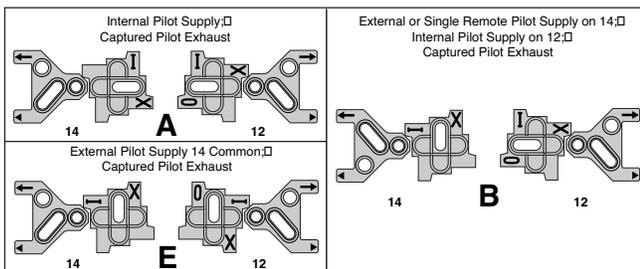
**Built-in Selector**

When using A, B or E **Captured** Selector Gasket Positions, the 12 Pilot Port is plugged. The 14 Pilot Port has a plug when using Gasket A or a fitting when using Gasket B or E. When in place, the Plug in the 12 Pilot Port depresses the Selector to connect the Valve Solenoid Pilot Exhaust to a Common Manifold Exhaust Port. The Plug must make contact with the Pin of the Internal Check Valve.

Insert a Muffler in the EXH Port of the End Plate.

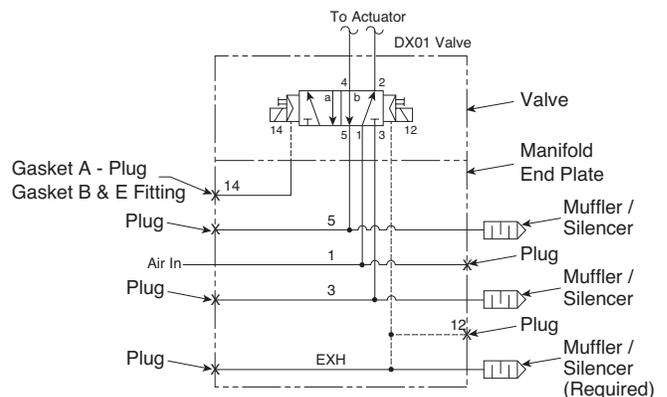
**Captured Selector Gasket Positions**

When using A, B or E Selector Gasket Positions as shown in the schematic at right.



Insert a muffler or vent in the EXH Port of the PEJ02 & PEJ01 Manifold End Plates or #12 of PL02 & PL01 Subbases when using solenoids with **Captured** Pilot Exhaust.

**DX01 Manifold Assembly Schematic for Captured Selector Gasket Positions A, B and E**



**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair-II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

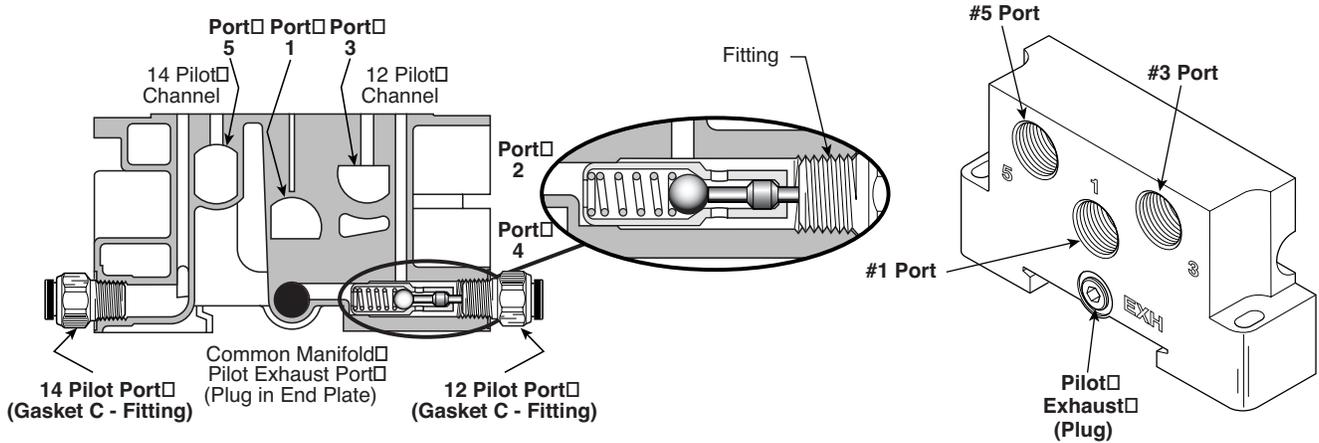
D256

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**DX 15407-1 Size 01, Manifold Conversion Instructions**

**External Double Remote Pilot**

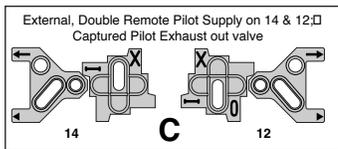


**Built-in Selector**

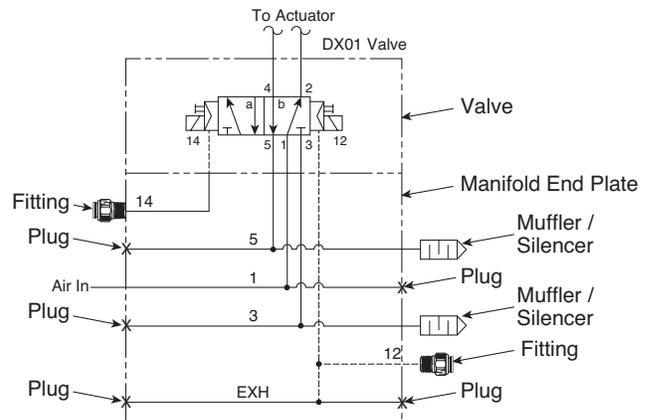
When using C **External Double Remote Pilot** Selector Gasket Position, a fitting is used in Pilot Port 14 & 12. Free flow between Port 14 & 12 and the valve allows Remote Pilot Pressure and an exhaust path for the captured pilot exhaust.

**External Double Remote Pilot Selector Gasket Position**

When using C Selector Gasket Position.



**DX01 Manifold Assembly Schematic for External Double Remote Pilot Selector Gasket Position C**



**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D258

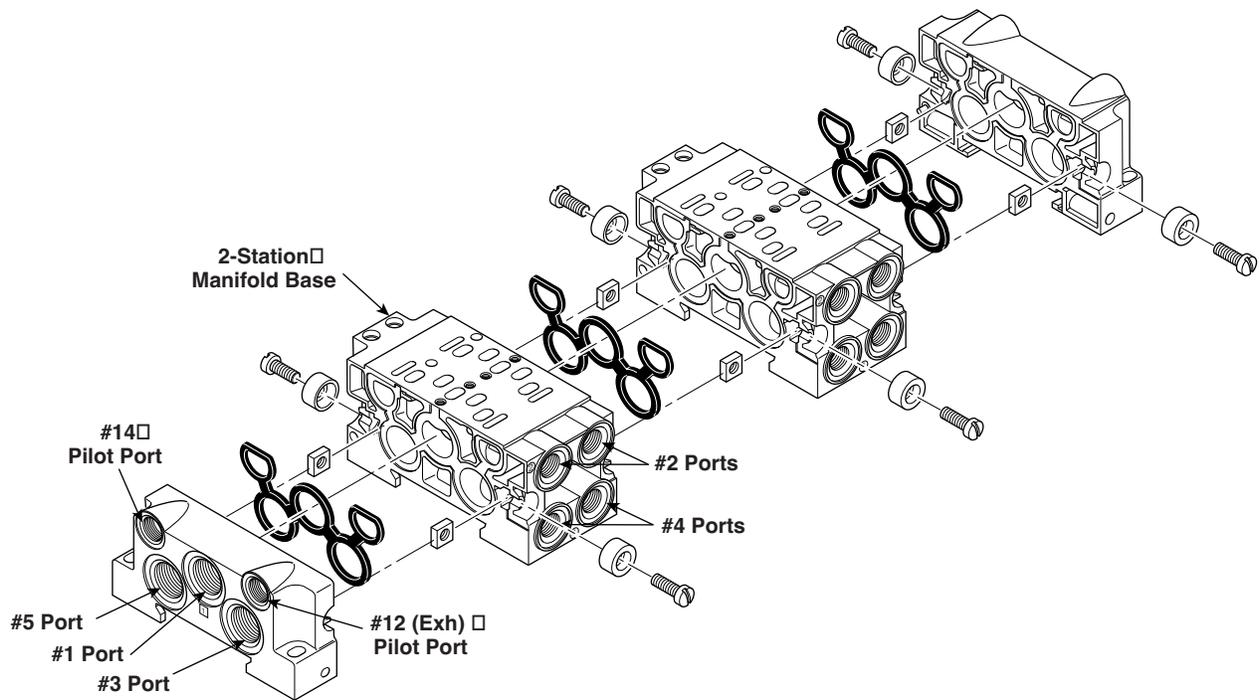
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**DX02 Manifold Assembly**

**Ports**

- 1.....Pressure
- 2.....#2 Cylinder Port, 1 to 2 Flow Path
- 3.....Cylinder Exhaust Port, 2 to 3 Flow Path
- 4.....#4 Cylinder Port, 1 to 4 Flow Path
- 5.....Cylinder Exhaust Port, 4 to 5 Flow Path
- 14.....#14 Pilot Port
- 12.....#12 Pilot Port

Torque Specifications: 25 to 35 in-lbs (2.82 to 3.95 Nm)



**DX02 Shown**

|                         |
|-------------------------|
| D                       |
| Subbase & Manual Valves |
| H Series Micro          |
| Moduflex Series         |
| H Series ISO            |
| Network Connectivity    |
| DX ISOMAX Series        |
| Valvair II Series       |



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D259

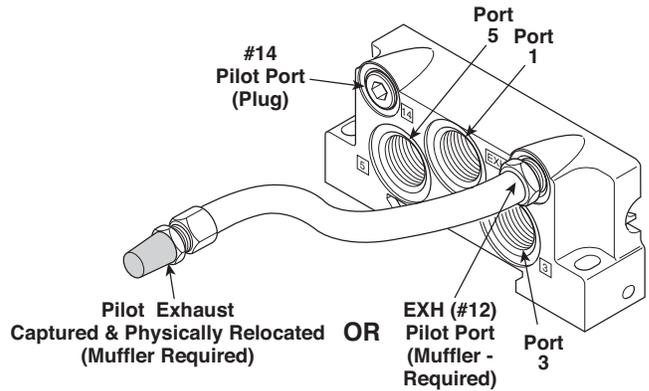
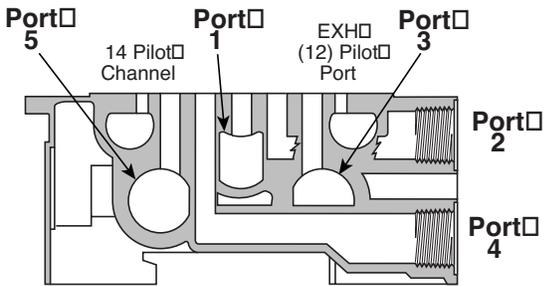
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**DX 15407-1 Size 02, Manifold Conversion Instructions**

***Captured  
Pilot Exhaust***

**PJLP02, Size 02\***

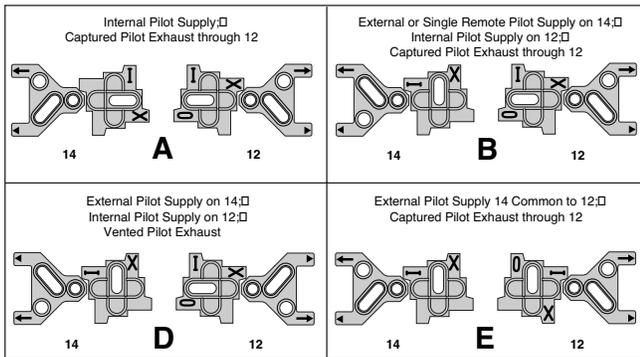
As shown in the illustrations below, the EXH (12) & 14 Pilot Ports are exhausted internally in the valve body into a single chamber labeled EXH on the end plate. When using A, B, D or E Selector Gasket Positions, the EXH (12) Pilot Port is vented with a muffler or micron screen. The 14 Pilot Port is plugged.



**D**  
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Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

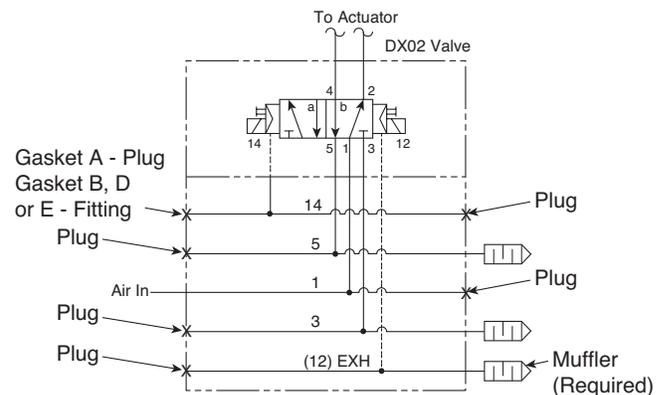
**Captured Selector Gasket Positions**

When using A, B, D or E, Selector Gasket Positions, the ports must be either plugged or vented with a muffler or micron screen as shown in the schematic at right.



\* PJLP02 Manifolds can be used for External Pilot, **NOT** Remote Pilot

**DX02 Manifold Assembly Schematic for Captured Selector Gasket Positions A, B, D and E**



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D260

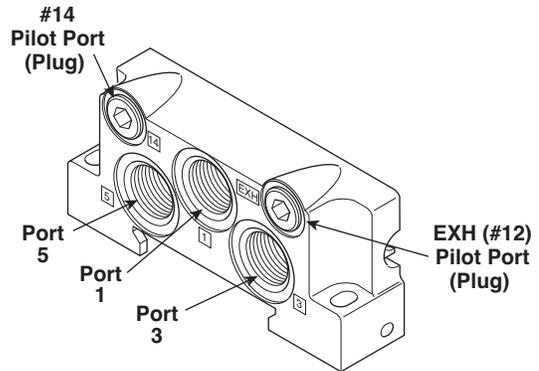
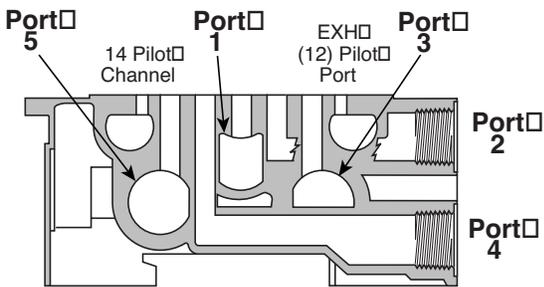
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**DX 15407-1 Size 02, Manifold Conversion Instructions**

**Vented  
 Pilot Exhaust**

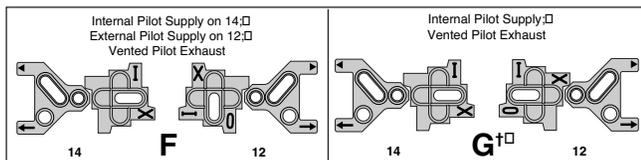
**PJLP02, Size 02**

When using F or G Selector Gasket Positions, the EXH (12) Pilot Port and the 14 Pilot Port are plugged and the Pilot Exhaust is vented through the Pilot Adapter.



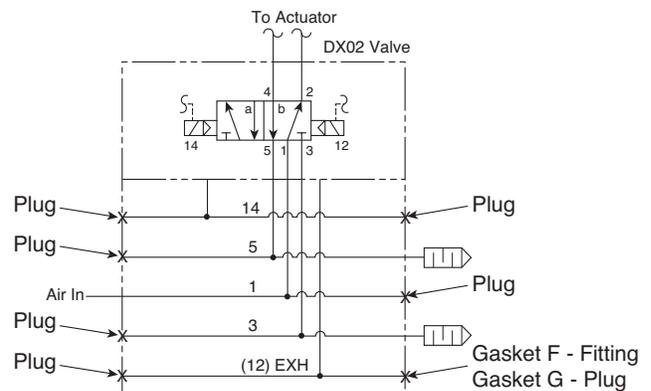
**Vented Selector Gasket Positions**

When using F or G, Selector Gasket Positions, the ports must be either plugged or vented with a muffler or micron screen as shown in the schematic at right.



† A plug may be inserted in the EXH Port of the PEJ02 & PEJ01 Manifold End Plates or #12 of PL02 & PL01 Subbases.

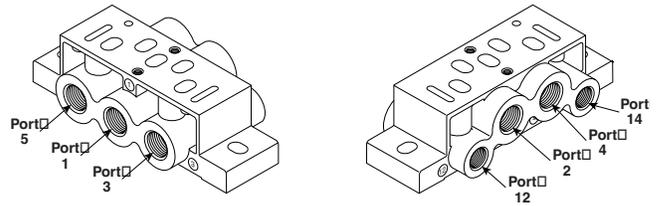
**DX02 Manifold Assembly  
 Schematic for Vented Selector Gasket  
 Positions F and G**



**Subbase Assembly**

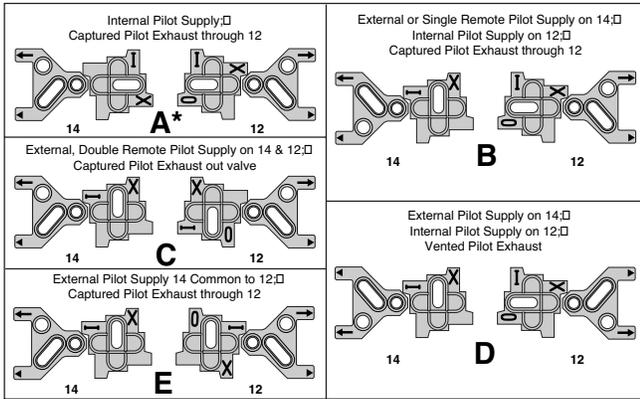
**Ports**

- 1..... Pressure
- 2..... #2 Cylinder Port. 1 to 2 Flow Path.
- 3..... Cylinder Exhaust Port. 2 to 3 Flow Path.
- 4..... #4 Cylinder Port. 1 to 4 Flow Path.
- 5..... #4 Cylinder Port. 1 to 5 Flow Path.
- 14..... #14 Pilot Port
- 12..... #12 Pilot Port

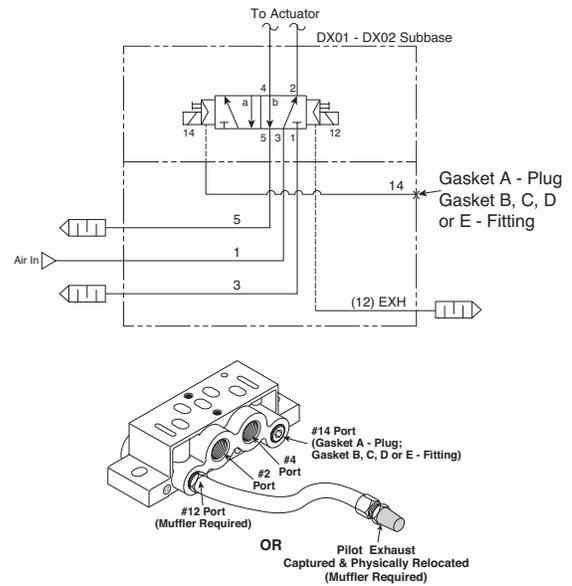


**Captured Selector Gasket Positions**

When using A, B, C, D or E, Selector Gasket Positions, the ports must be either plugged or vented with a muffler or micron screen as shown in the schematic at right.

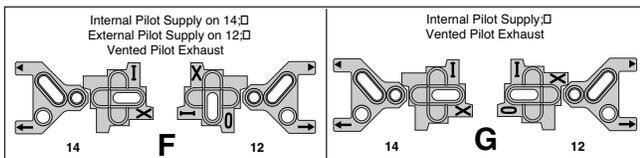


**DX02 & DX01 Subbase Assembly Schematic for Captured Selector Gasket Positions A, B, C, D and E**

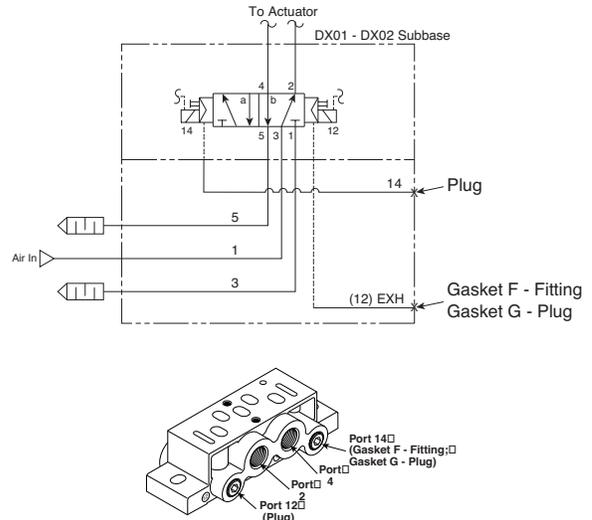


**Vented Selector Gasket Positions**

When using F or G, Selector Gasket Positions, the ports must be either plugged or vented with a muffler or micron screen as shown in the schematic at right.



**DX02 & DX01 Subbase Assembly Schematic for Vented Selector Gasket Positions F and G**



**D**  
 Subbase & Manual  
 Valves

H Series  
 Micro

Modulflex  
 Series

H Series  
 ISO

Network  
 Connectivity

DX ISOMAX  
 Series

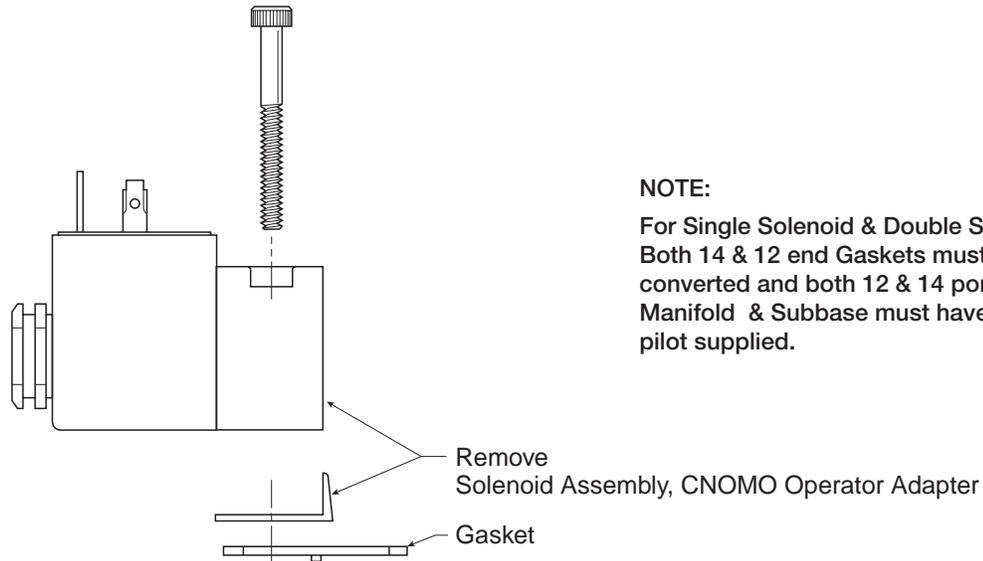
Valvair II  
 Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

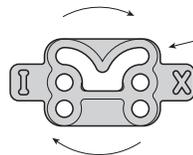
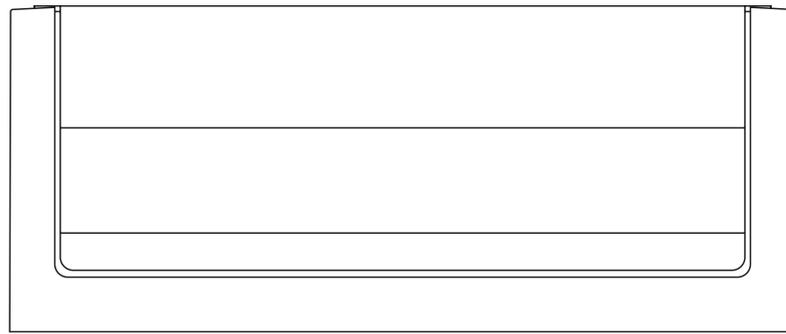
**DX1 / DX2 / DX3**

**Internal / External Pilot Conversion Instructions**



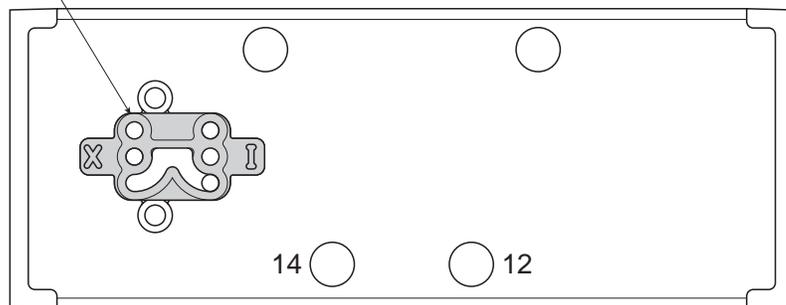
**NOTE:**

For Single Solenoid & Double Solenoid – Both 14 & 12 end Gaskets must be converted and both 12 & 14 ports in the Manifold & Subbase must have external pilot supplied.



Remove Gasket and Rotate to Show "I" in Position as Shown and Reinstall Gasket and Covers. (Valve is Now External Pilot)

Position of Gasket for Internal Pilot when Using with Solenoid Operator



**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

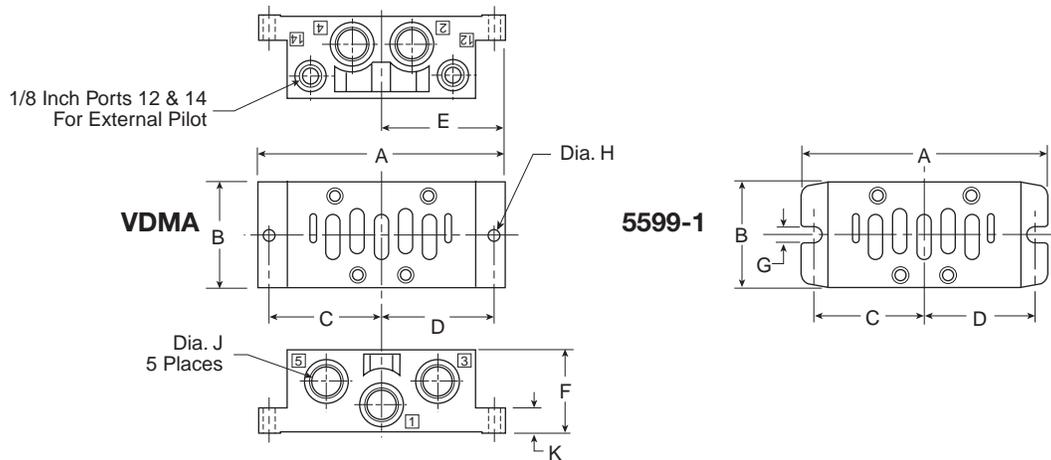
H Series ISO

Network Connectivity

**DX ISOMAX Series**

Valvair II Series

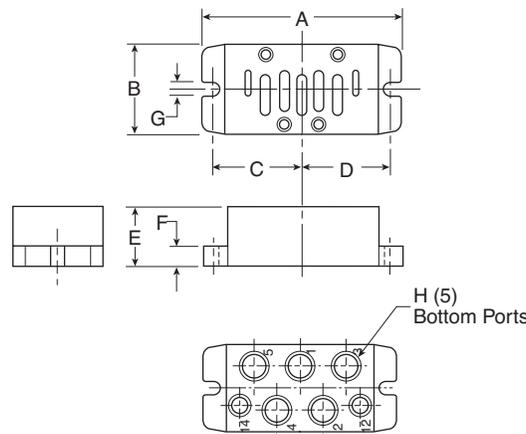
**DX1, DX2, DX3 VDMA & 5599-1 Side Ported Subbase**



| Series | Part Number | J                  | A            | B             | C            | D            | E            | F              | G            | H             | K             |               |
|--------|-------------|--------------------|--------------|---------------|--------------|--------------|--------------|----------------|--------------|---------------|---------------|---------------|
| VDMA   | DX1         | <b>P2N-VS512SD</b> | BSPP<br>G1/4 | 4.33<br>(110) | 1.89<br>(48) | 1.93<br>(49) | 1.93<br>(49) | 2.17<br>(55)   | 1.26<br>(32) | —             | 0.22<br>(5.5) | 0.39<br>(9.9) |
|        | DX2         | <b>P2N-WS513SD</b> | BSPP<br>G3/8 | 4.88<br>(124) | 2.21<br>(56) | 2.21<br>(56) | 2.21<br>(56) | 2.44<br>(62)   | 1.57<br>(40) | —             | 0.26<br>(6.6) | 0.51<br>(13)  |
|        | DX3         | <b>P2N-YS514SD</b> | BSPP<br>G1/2 | 5.87<br>(149) | 2.80<br>(71) | 2.68<br>(68) | 2.68<br>(68) | 2.93<br>(74.5) | 2.05<br>(52) | —             | 0.26<br>(6.6) | 0.71<br>(18)  |
| 5599-1 | DX1         | <b>PL1-1/4-70</b>  | BSPP G1/4    | 4.33<br>(110) | 1.81<br>(46) | 1.93<br>(49) | 1.93<br>(49) | 2.17<br>(55)   | 1.14<br>(29) | 0.22<br>(5.5) | —             | 0.24<br>(6)   |
|        |             | <b>PL1-1/4-80</b>  | NPT 1/4      |               |              |              |              |                |              |               |               |               |
|        | DX2         | <b>PL2-3/8-70</b>  | BSPP G3/8    | 4.88<br>(124) | 2.21<br>(56) | 2.17<br>(55) | 2.17<br>(55) | 2.44<br>(62)   | 1.46<br>(37) | 0.22<br>(5.5) | —             | 0.24<br>(6)   |
|        |             | <b>PL2-3/8-80</b>  | NPT 3/8      |               |              |              |              |                |              |               |               |               |
|        | DX3         | <b>PL3-1/2-70</b>  | BSPP G1/2    | 5.87<br>(149) | 2.80<br>(71) | 2.68<br>(68) | 2.68<br>(68) | 2.93<br>(74.5) | 2.36<br>(60) | 0.26<br>(6.6) | —             | 0.71<br>(18)  |
|        |             | <b>PL3-1/2-80</b>  | NPT 1/2      |               |              |              |              |                |              |               |               |               |

Inches (mm)

**DX1, DX2 5599-1 Bottom Ported Subbase**



**Bottom Ported Subbase**

| Series | Part Number       | H          | A             | B            | C            | D            | E            | F           | G             |
|--------|-------------------|------------|---------------|--------------|--------------|--------------|--------------|-------------|---------------|
| DX1    | <b>PD1-1/4-70</b> | BSPP G1/4  | 4.33<br>(110) | 1.81<br>(46) | 1.93<br>(49) | 1.93<br>(49) | 1.14<br>(29) | 0.24<br>(6) | 0.22<br>(5.5) |
|        | <b>PD1-1/4-80</b> | NPT 1/4    |               |              |              |              |              |             |               |
| DX2    | <b>PD2-3/8-70</b> | BSPP G13/8 | 4.88<br>(124) | 2.20<br>(56) | 2.17<br>(55) | 2.17<br>(55) | 1.46<br>(37) | 0.24<br>(6) | 0.22<br>(5.5) |
|        | <b>PD2-3/8-80</b> | NPT 3/8    |               |              |              |              |              |             |               |

Inches (mm)

**D** Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

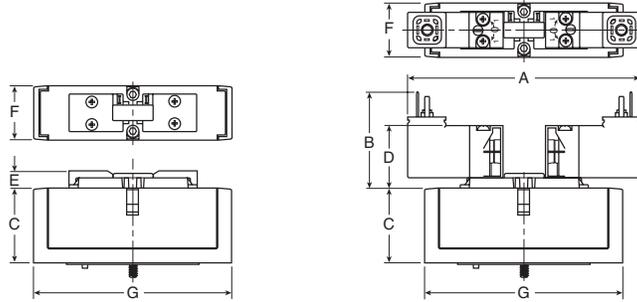


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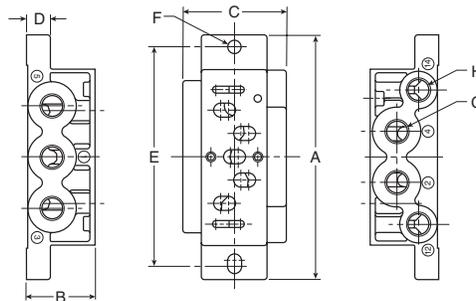
**DX01 & DX02 Valve**



| Series | A             | B            | C            | D            | E          | F            | G             |
|--------|---------------|--------------|--------------|--------------|------------|--------------|---------------|
| DX02   | 4.06<br>(103) | 1.61<br>(41) | 1.41<br>(36) | 1.06<br>(27) | .31<br>(8) | .71<br>(18)  | 3.15<br>(80)  |
| DX01   | 4.06<br>(103) | 1.61<br>(41) | 1.41<br>(36) | 1.06<br>(27) | .31<br>(8) | 1.02<br>(26) | 3.94<br>(100) |

Inches (mm)

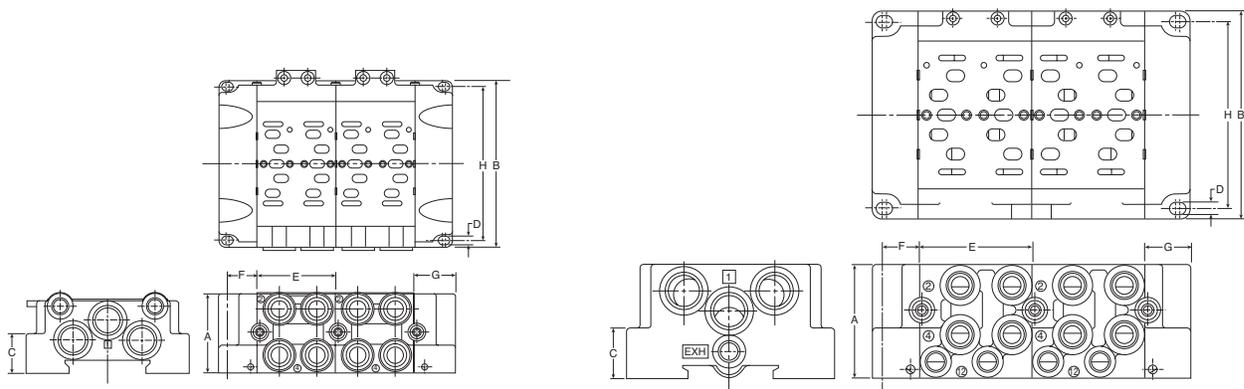
**DX01 & DX02 Individual Subbase**



| Series | Part Number | A             | B            | C            | D           | E            | F                    | G   | H   |
|--------|-------------|---------------|--------------|--------------|-------------|--------------|----------------------|-----|-----|
| DX02   | <b>PL02</b> | 3.15<br>(80)  | .87<br>(22)  | 1.06<br>(27) | .31<br>(8)  | 2.76<br>(70) | .216 Dia.<br>(Ø 5.5) | 1/8 | M5  |
| DX01   | <b>PL01</b> | 3.94<br>(100) | 1.10<br>(28) | 1.65<br>(42) | .39<br>(10) | 3.54<br>(90) | .216 Dia.<br>(Ø 5.5) | 1/4 | 1/8 |

Inches (mm)

**DX01 & DX02 2-Station Manifold Base**



| Series | Part Number                   | A              | B             | C           | D                    | E            | F           | G           | H            |
|--------|-------------------------------|----------------|---------------|-------------|----------------------|--------------|-------------|-------------|--------------|
| DX02   | <b>PJLP02 / PEJ02</b>         | 1.52<br>(38.5) | 3.15<br>(80)  | .47<br>(12) | .165 Dia.<br>(Ø 4.2) | 1.50<br>(38) | .55<br>(14) | .71<br>(18) | 2.83<br>(72) |
| DX01   | <b>PJL01 / PJLP01 / PEJ01</b> | 2.17<br>(55)   | 3.94<br>(100) | .94<br>(24) | .216 Dia.<br>(Ø 5.5) | 2.13<br>(54) | .67<br>(17) | .87<br>(22) | 3.54<br>(90) |

Inches (mm)



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

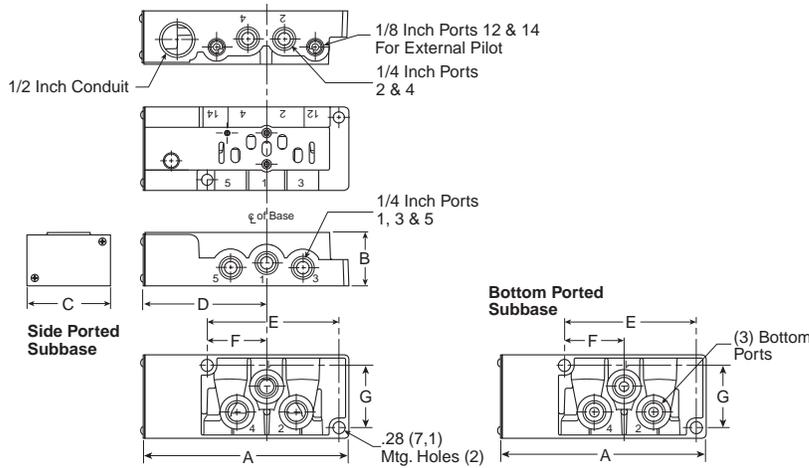
H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**DX01 15407-1, PS5511 Subbases**

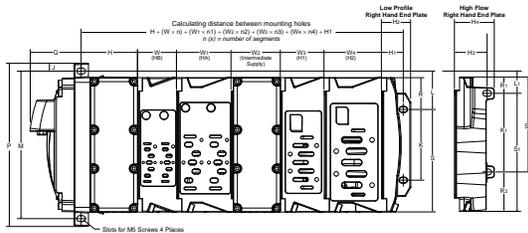


**PS5511 Subbase**

| A              | B              | C              | D            |
|----------------|----------------|----------------|--------------|
| 4.88<br>(124)  | 1.28<br>(32.5) | 2.00<br>(50.8) | 2.91<br>(74) |
| E              | F              | G              |              |
| 1.43<br>(36.2) | 3.16<br>(80.2) | 1.49<br>(37.9) |              |

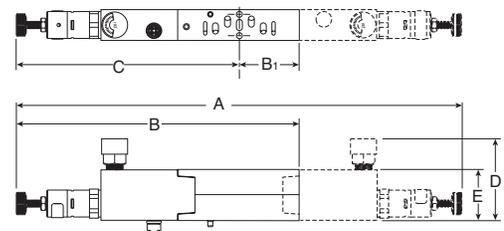
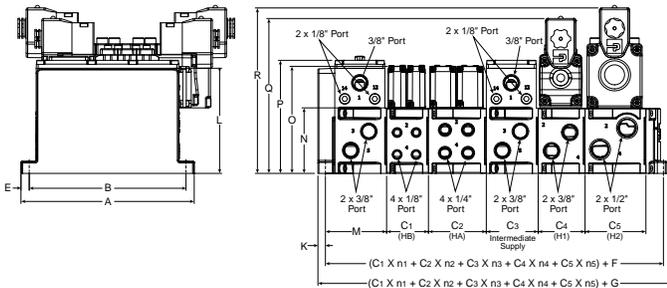
Inches (mm)

**DX02 & DX01 15407-1, PS5611 & PS5511 Manifolds**



| A                | B               | C1               | C2               | C3               | C4              | C5               |
|------------------|-----------------|------------------|------------------|------------------|-----------------|------------------|
| 6.81<br>(172.95) | 6.16<br>(156.5) | 1.65<br>(41.79)  | 2.28<br>(57.79)  | 2.04<br>(51.79)  | 1.84<br>(46.79) | 2.39<br>(60.79)  |
| D1               | D2              | D3               | D4               | E                | F               | G                |
| 1.60<br>(40.71)  | 1.60<br>(40.71) | 0.96<br>(24.3)   | 1.92<br>(48.8)   | 0.32<br>(8.0)    | 3.09<br>(78.58) | 4.39<br>(111.58) |
| J1               | J2              | J3               | K                | L                | M               | N                |
| 0.44<br>(11.2)   | 1.92<br>(48.7)  | 1.31<br>(33.3)   | 0.30<br>(7.5)    | 4.14<br>(105.08) | 2.40<br>(61.08) | 1.92<br>(48.7)   |
| O                | P               | Q                | R                |                  |                 |                  |
| 4.21<br>(107)    | 4.45<br>(113)   | 6.09<br>(154.77) | 6.51<br>(165.32) |                  |                 |                  |

Inches (mm)



| Series | Part Number | A              | B             | B1           | C             | D            | E            |
|--------|-------------|----------------|---------------|--------------|---------------|--------------|--------------|
| DX02   | PS5637      | 10.28<br>(261) | 6.14<br>(156) | 1.02<br>(26) | 5.13<br>(130) | 2.60<br>(66) | 1.18<br>(30) |
| DX01   | PS5537      | 10.00<br>(254) | 6.42<br>(163) | 1.42<br>(36) | 5.00<br>(127) | 2.72<br>(69) | 1.18<br>(30) |

Inches (mm)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series

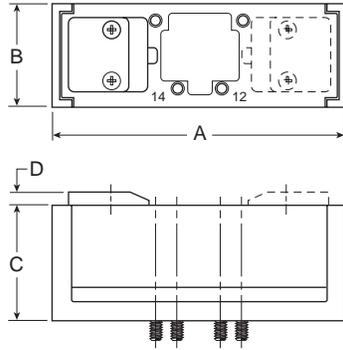


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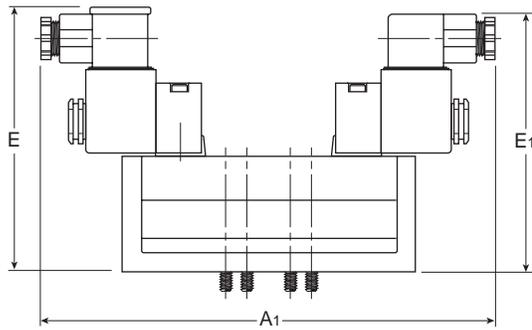
**DX1, DX2 & DX3 Air Operated Valve**



| Series     | A             | B            | C              | D          |
|------------|---------------|--------------|----------------|------------|
| <b>DX1</b> | 4.72<br>(120) | 1.65<br>(42) | 1.85<br>(47)   | .20<br>(5) |
| <b>DX2</b> | 5.51<br>(140) | 2.13<br>(54) | 2.30<br>(58.5) | .20<br>(5) |
| <b>DX3</b> | 6.69<br>(170) | 2.68<br>(68) | 2.80<br>(71)   | .20<br>(5) |

Inches (mm)

**DX1, DX2 & DX3 Solenoid Operated Valve**



| Series     | A1              | E               | E1              | E2              |
|------------|-----------------|-----------------|-----------------|-----------------|
| <b>DX1</b> | 7.97<br>(202.5) | 4.43<br>(112.5) | 4.69<br>(119)   | 4.53<br>(115)   |
| <b>DX2</b> | 8.58<br>(218)   | 4.86<br>(123.5) | 5.12<br>(130)   | 4.98<br>(126.5) |
| <b>DX3</b> | 9.27<br>(235.5) | 5.35<br>(136)   | 5.61<br>(142.5) | 5.47<br>(139)   |

Inches (mm)

**D**

Subbase & Manual  
Valves

H Series  
Micro

Moduflex  
Series

H Series  
ISO

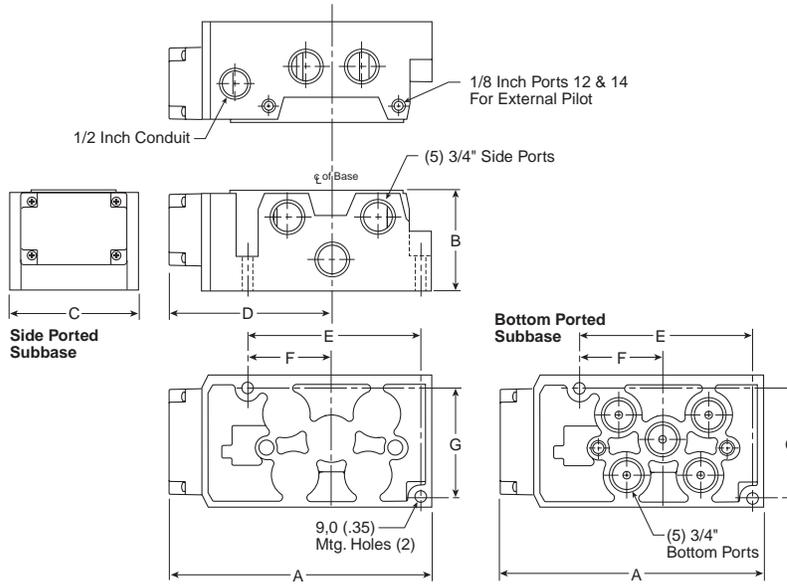
Network  
Connectivity

**DX ISOMAX  
Series**

Valvair II  
Series



**DX3 Subbase**



**PS4211 Subbase**

| A             | B            | C             | D             |
|---------------|--------------|---------------|---------------|
| 7.90<br>(201) | 2.96<br>(75) | 3.90<br>(990) | 4.92<br>(125) |
| E             | F            | G             |               |
| 5.14<br>(131) | 2.50<br>(64) | 3.24<br>(82)  |               |

Inches (mm)

**D**

Subbase & Manual  
 Valves

H Series  
 Micro

Modulflex  
 Series

H Series  
 ISO

Network  
 Connectivity

DX ISOMAX  
 Series

Valvair II  
 Series

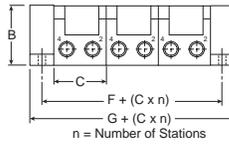
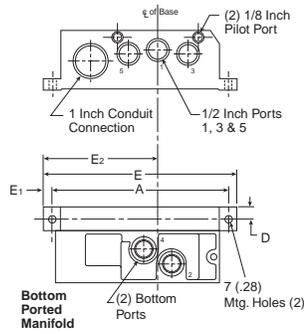


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**DX1 Manifold**

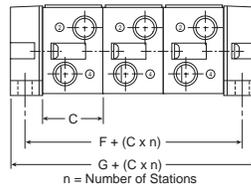
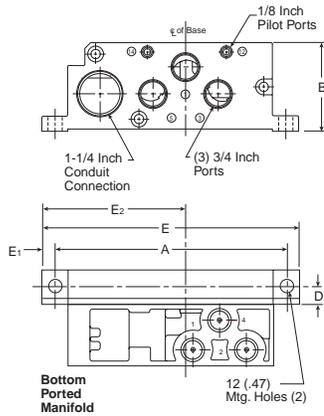


**PS4011 Manifold**

| A             | B             | C            | D            | E             |
|---------------|---------------|--------------|--------------|---------------|
| 6.50<br>(165) | 2.20<br>(56)  | 1.93<br>(49) | .44<br>(11)  | 7.15<br>(182) |
| E1            | E2            | F            | G            |               |
| .33<br>(8)    | 4.25<br>(108) | .87<br>(22)  | 1.80<br>(46) |               |

Inches (mm)

**DX2 Manifold**

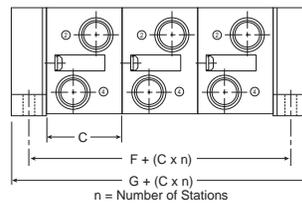
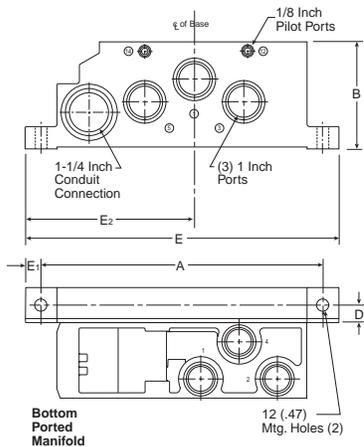


**PS4111 Manifold**

| A             | B             | C            | D            | E             |
|---------------|---------------|--------------|--------------|---------------|
| 8.46<br>(215) | 3.35<br>(85)  | 2.20<br>(56) | .59<br>(15)  | 9.41<br>(239) |
| E1            | E2            | F            | G            |               |
| .47<br>(12)   | 5.28<br>(134) | 1.18<br>(30) | 2.36<br>(60) |               |

Inches (mm)

**DX3 Manifold**



**PS4211 Manifold**

| A              | B             | C            | D            | E              |
|----------------|---------------|--------------|--------------|----------------|
| 10.41<br>(265) | 4.13<br>(105) | 2.80<br>(71) | .65<br>(175) | 11.61<br>(295) |
| E1             | E2            | F            | G            |                |
| .59<br>(15)    | 6.26<br>(159) | 1.30<br>(33) | 2.60<br>(63) |                |

Inches (mm)



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**D**

**Subbase & Manual Valves**

**H Series Micro**

**Moduflex Series**

**H Series ISO**

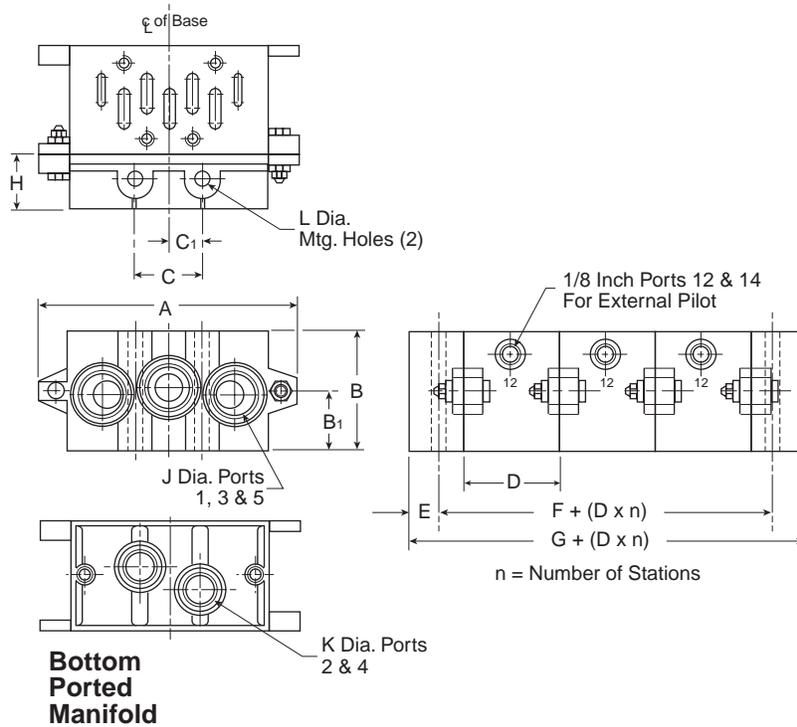
**Network Connectivity**

**DX ISOMAX Series**

**Valvair II Series**

**DX1, DX2, DX3 5599-1 VDMA**

Form C Manifold &  
 Form D End Plates



**VDMA Form C Manifold**

| Series | Part Number        | A             | B            | B1           | D            | E            | F            | G            | J         | K         |
|--------|--------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|-----------|
| DX1    | <b>P2N-VM512MB</b> | 4.33<br>(110) | 1.81<br>(46) | 0.94<br>(24) | 1.69<br>(55) | 0.43<br>(22) | 0.87<br>(22) | 1.73<br>(44) | BSPP G3/8 | BSPP G1/4 |
| DX2    | <b>P2N-WM513MB</b> | 5.31<br>(135) | 1.85<br>(47) | 0.94<br>(24) | 2.20<br>(56) | 0.51<br>(13) | 1.02<br>(26) | 2.05<br>(52) | BSPP G1/2 | BSPP G3/8 |
| DX3    | <b>P2N-YM514MB</b> | 7.48<br>(190) | 2.20<br>(56) | 1.34<br>(34) | 2.80<br>(71) | 0.59<br>(15) | 1.18<br>(30) | 2.36<br>(60) | BSPP G1/2 | BSPP G1/2 |

**VDMA Form D End Plate**

| Series | Part Number        | A             | B            | B1           | C            | C1           | H            | L            |
|--------|--------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| DX1    | <b>P2N-VM513ES</b> | 4.33<br>(110) | 1.81<br>(46) | 0.94<br>(24) | 1.10<br>(28) | 0.55<br>(14) | 0.87<br>(22) | 0.28<br>(7)  |
| DX2    | <b>P2N-WM514ES</b> | 5.31<br>(135) | 1.85<br>(47) | 0.94<br>(24) | 1.38<br>(35) | 0.69<br>(18) | 1.02<br>(26) | 0.34<br>(9)  |
| DX3    | <b>P2N-YM518ES</b> | 7.48<br>(190) | 2.20<br>(56) | 1.34<br>(34) | 2.05<br>(52) | 1.03<br>(26) | 1.18<br>(30) | 0.47<br>(12) |

Inches (mm)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



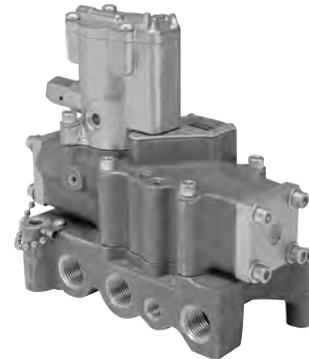
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## Valvair II Series

- Full air operation for fastest response
- “Plug-in” option simplifies maintenance and installation  
Reduces downtime. No wiring or plumbing to disturb
- “Direct pipe” design for economy and performance
- Variety of operators available; direct conduit, (JIC) junction box, NEMA 4, hazardous duty, (UL, CSA), and remote air pilot
- Field convertible to external pilot supply for vacuum or other services
- Synthetic rubber o-ring seals are specially compounded for minimum compression and friction for superior wear and abrasion resistance
- Precision ground spool “floats” on o-ring seals. Closed center cross-over design saves air
- General Purpose Approvals
  - CSA - Canadian Standards Association  
File number 42024
- Hazardous Duty Approvals
  - UL - Underwriters Laboratories, Inc.  
File number E42542 Category Y107
  - CSA - Canadian Standards Association  
File number 24349



### Material specifications

|                                |   |                         |
|--------------------------------|---|-------------------------|
| Manifolds & subbases           | Aluminum alloy  |                         |
| Other seals                    | Nitrile   |                         |
| Resilient seals: in valve body |   |                         |
| Dynamic                        | Polyurethane base on 3/8" basic valves*   |                         |
| Static / dynamic               | Nitrile base w / 12% Molybdenum Disulphide on 1/4" & 1/2" basic valves  |                         |
| Shock pads                     | Polyurethane  |                         |
| Solenoid bodies                | Plated zinc alloy   |                         |
| Internal components            | Corrosion resistant steel   |                         |
| Resilient seals                | Standard service  | Nitrile                 |
|                                | Special service (continuous duty)   | Fluorocarbon & Silicone |
| Other seals                    | Nitrile   |                         |
| Coil                           | Class “B” epoxy encapsulated (Class “H” also available on some models, consult supplier)  |                         |
| Valve bodies                   | Aluminum alloy  |                         |
| Valve spacers                  | Brass   |                         |
| Valve spool                    | Aluminum alloy with special coating on 3/8" basic valves*.<br><br>Hard chrome plated AISI type 416 stainless steel on 1/4" & 1/2" basic valves. |                         |

\* These materials are specially designed for valves used on non-lubricated service

  Most popular.

### Operating information

#### Pressure range for solenoid operated valves

| Media  | Internal pilot supply |      |      | External pilot supply |                        |      |    |
|--------|-----------------------|------|------|-----------------------|------------------------|------|----|
|        | 1/4"                  | 3/8" | 1/2" | 1/4"                  | 3/8"                   | 1/2" | 1" |
| Air    | 35-140* PSIG          |      |      | N.A. Main             | 0-250 PSIG             |      |    |
|        |                       |      |      | Pilot                 | 35-140* PSIG           |      |    |
| Vacuum | do not use            |      |      | N.A. Main             | within 1 Hg of perfect |      |    |
|        |                       |      |      | Pilot                 | 35-140* PSIG           |      |    |

Other Consult supplier

\* 200 PSIG solenoid is optional (consult supplier).

#### Pressure range for remote pilot operated valves

| Media  |                  | Valve type  |                         |
|--------|------------------|-------------|-------------------------|
|        |                  | Single      | Double & 3-position     |
| Air    | Main             | 35-250 PSIG | 0-250 PSIG              |
|        | Pilot            | 35-200 PSIG | 35-200 PSIG             |
| Vacuum | Main             | Do not use  | Within 1" Hg of perfect |
|        | Pilot            | Do not use  | 35-200 PSIG             |
| Other  | Consult supplier |             |                         |

#### Ambient temperature – standard service solenoid operator

| Minimum   | Maximum           |                 |
|---|-------------------|-----------------|
|   | Intermittent duty | Continuous duty |
| 0°F   | 125°F             | 100°F           |
| Special service (continuous duty) solenoid operator |                   |                 |
| 0°F   | 125°F             | 125°F           |

#### Ambient temperature – remote pilot operated valves

|     |       |
|-----|-------|
| 0°F | 200°F |
|-----|-------|

As the above chart indicates, Standard Duty Solenoids may be used on continuous duty but ambient temperature is de-rated.

In some cases, Special Service Solenoids may be rated for higher ambient temperatures (consult supplier).



#### CAUTION:

If it is possible that the ambient temperature may fall below freezing, the medium must be moisture free to prevent internal damage and unpredictable behavior.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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D

Subbase & Manual Valves

H Series Micro

Modulflex Series

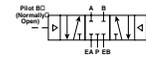
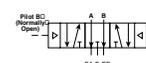
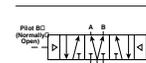
H Series ISO

Network Connectivity

DX ISOMAX Series

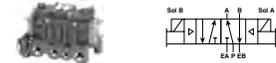
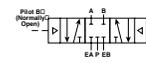
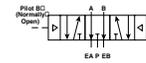
Valvair II Series

**3/8" Basic plug-in solenoid valve only with light**

| Symbol  | Type                                 | Cv  | Operator        | Voltage           | Non-Locking        | Locking            |
|---|--------------------------------------|-----|-----------------|-------------------|--------------------|--------------------|
|  | 4-way, 2-position, spring return     | 4.8 | Single solenoid | 24 VDC<br>110 VAC | <b>L6753810249</b> | <b>L6753910249</b> |
|  | 4-way, 2-position                    | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6553810249</b> | <b>L6553910249</b> |
|  | 4-way, 3-position, all ports blocked | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6653821149</b> | <b>L6653921149</b> |
|  | 4-way, 3-position, center exhaust    | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6653822149</b> | <b>L6653922149</b> |
|  | 4-way, 3-position, pressure center   | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6653823149</b> | <b>L6653923149</b> |

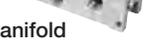
\* Order subbase or manifold separately.

**3/8" Basic plug-in remote pilot valve only**

| Symbol  | Type                                 | Cv  | Operator      | Part Number      |
|---|--------------------------------------|-----|---------------|------------------|
|    | 4-way, 2-position, spring return     | 4.8 | Single remote | <b>L67431102</b> |
|   | 4-way, 2-position                    | 4.8 | Double remote | <b>L65431102</b> |
|  | 4-way, 3-position, all ports blocked | 4.8 | Double remote | <b>L66431211</b> |
|  | 4-way, 3-position, center exhaust    | 4.8 | Double remote | <b>L66431221</b> |
|  | 4-way, 3-position, pressure center   | 4.8 | Double remote | <b>L66431231</b> |

\* Order subbase or manifold separately.

**3/8" Valve Subbase and Manifolds**

|  | Cv  | Port | Subbase † (side ports) | Manifolds † (end & bottom ports) |
|--|-----|------|------------------------|----------------------------------|
|  Subbase  | 4.8 | 3/8" | <b>K022090</b>         | <b>K142230</b>                   |
|  | 4.8 | 1/2" | <b>K022091</b>         | <b>K142231</b>                   |
|  Manifold | 4.8 | 3/4" | <b>K022101</b>         | <b>K142270</b>                   |

† Manifolds include mounting hardware, except for port adapters. Subbase includes valve mounting hardware.

**Plug-in Subbase, 3/8" Basic**

|         |                                       |
|---------|---------------------------------------|
| K022090 | .....Inlet & Cylinder Ports 3/8" NPTF |
|         | Exhaust ports ..... 1/2" NPTF         |
| K022091 | .....Inlet & Cylinder Ports 1/2" NPTF |
|         | Exhaust ports ..... 1/2" NPTF         |
| K022101 | .....Inlet & Cylinder Ports 3/4" NPTF |
|         | Exhaust port ..... 3/4" NPTF          |
|         | Conduit port ..... 1/2" NPTF          |

**Note:** Subbase assemblies include mounting hardware.

**Plug-in Manifold, 3/8" Basic**

|         |                               |
|---------|-------------------------------|
| K142230 | .....Cylinder ports 3/8" NPTF |
| K142231 | .....Cylinder ports 1/2" NPTF |
| K142270 | .....Cylinder ports 3/4" NPTF |
|         | Exhaust port..... 1" NPTF     |
|         | Inlet port..... 1" NPTF       |
|         | Conduit port..... 1-1/4" NPTF |

**Note:** Manifold assemblies include mounting hardware.

 Most popular.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

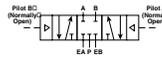
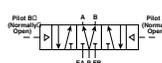
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**D**  
Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

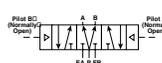
**Common Part Numbers**

**1" Basic plug-in solenoid valve only with light**

| Symbol  | Type                                 | Cv   | Operator        | Voltage           | Non-Locking                              | Locking                                  |
|---|--------------------------------------|------|-----------------|-------------------|--|--|
|  | 4-way, 2-position, spring return     | 11.3 | Single solenoid | 24 VDC<br>110 VAC | <b>L6758810249</b><br><b>L6758810253</b> | <b>L6758910249</b><br><b>L6758910253</b> |
|  | 4-way, 2-position                    | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6558810249</b><br><b>L6558810253</b> | <b>L6558910249</b><br><b>L6558910253</b> |
|  | 4-way, 3-position, all ports blocked | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6658821149</b><br><b>L6658821153</b> | <b>L6658921149</b><br><b>L6658921153</b> |
|  | 4-way, 3-position, center exhaust    | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6658822149</b><br><b>L6658822153</b> | <b>L6658922149</b><br><b>L6658922153</b> |
|  | 4-way, 3-position, pressure center   | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6658823149</b><br><b>L6658823153</b> | <b>L6658923149</b><br><b>L6658923153</b> |

\* Order subbase separately.

**1" Basic plug-in valve remote pilot valve only**

| Symbol  | Type                                 | Cv   | Operator      | Part Number      |
|---|--------------------------------------|------|---------------|------------------|
|    | 4-way, 2-position, spring return     | 11.3 | Single remote | <b>L67481102</b> |
|   | 4-way, 2-position                    | 11.3 | Double remote | <b>L65481102</b> |
|  | 4-way, 3-position, all ports blocked | 11.3 | Double remote | <b>L66481211</b> |
|  | 4-way, 3-position, center exhaust    | 11.3 | Double remote | <b>L66481221</b> |
|  | 4-way, 3-position, pressure center   | 11.3 | Double remote | <b>L66481231</b> |

\* Order subbase separately.

**1" Valve Subbase**

|   | Cv   | Port | Subbase † (side ports) |
|---|------|------|------------------------|
|  | 11.3 | 1"   | <b>K022095</b>         |

Subbase

† Subbase includes valve mounting hardware.

**Plug-in Subbase, 1" Basic**

K022095 ..... Inlet & Cylinder Ports 1" NPTF  
 Exhaust ports ..... 1-1/4" NPTF  
 Conduit port ..... 1/2" NPTF

**Note:** Subbase assemblies include mounting hardware.



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

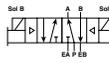
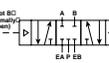
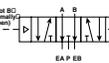
H Series ISO

Network Connectivity

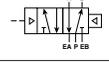
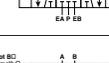
DX ISOMAX Series

Valvair II Series

**3/8" Basic direct pipe ported valve only. Solenoid junction box with light, 1/2" NPT ports**

| Symbol  | Type                                 | Cv  | Operator        | Voltage           | Non-Locking        | Locking            |
|---|--------------------------------------|-----|-----------------|-------------------|--------------------|--------------------|
|  | 4-way, 2-position, spring return     | 4.8 | Single solenoid | 24 VDC<br>110 VAC | <b>L7054810249</b> | <b>L7054910249</b> |
|  | 4-way, 2-position                    | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6854810249</b> | <b>L6854910249</b> |
|  | 4-way, 3-position, all ports blocked | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6954821149</b> | <b>L6954921149</b> |
|  | 4-way, 3-position, center exhaust    | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6954822149</b> | <b>L6954922149</b> |
|  | 4-way, 3-position, pressure center   | 4.8 | Double solenoid | 24 VDC<br>110 VAC | <b>L6954823149</b> | <b>L6954923149</b> |

**3/8" Basic direct pipe ported remote pilot valve only, 1/2" NPT ports**

| Symbol  | Type                                 | Cv  | Operator      | Part Number      |
|---|--------------------------------------|-----|---------------|------------------|
|    | 4-way, 2-position, spring return     | 4.8 | Single remote | <b>L70441102</b> |
|    | 4-way, 2-position                    | 4.8 | Double remote | <b>L68441102</b> |
|  | 4-way, 3-position, all ports blocked | 4.8 | Double remote | <b>L69441211</b> |
|  | 4-way, 3-position, center exhaust    | 4.8 | Double remote | <b>L69441221</b> |
|  | 4-way, 3-position, pressure center   | 4.8 | Double remote | <b>L69441231</b> |

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Subbase & Manual Valves  
H Series Micro  
Modulflex Series  
H Series ISO  
Network Connectivity  
DX ISOMAX Series  
Valvair II Series

 Most popular.



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Common Part Numbers

1" Basic direct pipe ported valve only. Solenoid junction box with light, 1" NPT ports

| Symbol | Type                                 | Cv   | Operator        | Voltage           | Non-Locking                              | Locking                                  |
|--------|--------------------------------------|------|-----------------|-------------------|--|--|
|        | 4-way, 2-position, spring return     | 11.3 | Single solenoid | 24 VDC<br>110 VAC | <b>L7058810249</b><br><b>L7058810253</b> | <b>L7058910249</b><br><b>L7058910253</b> |
|        | 4-way, 2-position                    | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6858810249</b><br><b>L6858810253</b> | <b>L6858910249</b><br><b>L6858910253</b> |
|        | 4-way, 3-position, all ports blocked | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6958821149</b><br><b>L6958821153</b> | <b>L6958921149</b><br><b>L6958921153</b> |
|        | 4-way, 3-position, center exhaust    | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6958822149</b><br><b>L6958822153</b> | <b>L6958922149</b><br><b>L6958922153</b> |
|        | 4-way, 3-position, pressure center   | 11.3 | Double solenoid | 24 VDC<br>110 VAC | <b>L6958823149</b><br><b>L6958823153</b> | <b>L6958923149</b><br><b>L6958923153</b> |

1" Basic direct pipe ported remote pilot valve only. 1" NPT ports

| Symbol | Type                                 | Cv   | Operator      | Part Number      |
|--------|--------------------------------------|------|---------------|------------------|
|        | 4-way, 2-position, spring return     | 11.3 | Single remote | <b>L70481102</b> |
|        | 4-way, 2-position                    | 11.3 | Double remote | <b>L68481102</b> |
|        | 4-way, 3-position, all ports blocked | 11.3 | Double remote | <b>L69481211</b> |
|        | 4-way, 3-position, center exhaust    | 11.3 | Double remote | <b>L69481221</b> |
|        | 4-way, 3-position, pressure center   | 11.3 | Double remote | <b>L69481231</b> |



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D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Lubricated Non-Lubricated Service**  
**2-position, Plug-In, 3/8" & 1" Basic Size**

**L 67 5 3 9 10 2 53**

| Type   |    |
|--------|----|
| Double | 65 |
| Single | 67 |

| Operator |   |
|----------|---|
| Remote   | 4 |
| Solenoid | 5 |

| Size       |   |
|------------|---|
| 3/8" Basic | 3 |
| 1" Basic   | 8 |

| Operator options  |   |
|---|---|
| Solenoid (basic) or Remote                              | 1 |
| Solenoid with Locking Override                          | 3 |
| Solenoid w/Light (120VAC, 24VDC) & Non-Locking Override | 8 |
| Solenoid w/Light (120VAC, 24VDC) & Locking Override     | 9 |

|       | Voltage & Frequency |      |    |
|-------|---------------------|------|----|
|       | 60Hz                | 50Hz | DC |
| 45    |                     |      | 12 |
| 49    |                     |      | 24 |
| 53    | 120                 | 110  |    |
| 57    | 240                 | 220  |    |
| Blank | Remote              |      |    |

| Duty Cycle |                                      |
|------------|--------------------------------------|
| 2          | Standard Service, Solenoid or Remote |
| 4          | Continuous Service Solenoid          |

| Enclosure "Class" |                                  |
|-------------------|----------------------------------|
| 10                | Standard (NEMA 1 & 12) or Remote |

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 Subbase & Manual Valves  
 H Series Micro  
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 DX ISOMAX Series  
 Valvair II Series

**Lubricated or Non-Lubricated Service**  
**3-position, Plug-In, 3/8" & 1" Basic Size**

**L 66 5 3 9 21 1 53**

| Type   |    |
|--------|----|
| Double | 66 |

| Operator |   |
|----------|---|
| Remote   | 4 |
| Solenoid | 5 |

| Size       |   |
|------------|---|
| 3/8" Basic | 3 |
| 1" Basic   | 8 |

| Operator options  |   |
|---|---|
| Solenoid (basic) or Remote                              | 1 |
| Solenoid with Locking Override                          | 3 |
| Solenoid w/Light (120VAC, 24VDC) & Non-Locking Override | 8 |
| Solenoid w/Light (120VAC, 24VDC) & Locking Override     | 9 |

|       | Voltage & Frequency |      |    |
|-------|---------------------|------|----|
|       | 60Hz                | 50Hz | DC |
| 45    |                     |      | 12 |
| 49    |                     |      | 24 |
| 53    | 120                 | 110  |    |
| 57    | 240                 | 220  |    |
| Blank | Remote              |      |    |

| Duty Cycle |                                      |
|------------|--------------------------------------|
| 1          | Standard Service, Solenoid or Remote |
| 5          | Continuous Service Solenoid          |

| Enclosure "Class" |   |
|-------------------|---|
| 21                | All Ports Blocked In Neutral (NEMA 1 & 12 enclosure) or Remote          |
| 22                | Cyl. Ports Open to Exhaust in Neutral (NEMA 1 & 12 enclosure) or Remote |
| 23                | Cyl. Ports Open to Inlet in Neutral (NEMA 1 & 12 enclosure) or Remote   |

Most popular.



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Ordering Information

Lubricated or Non-Lubricated Service  
2-position, Direct Pipe Ported, 3/8" & 1" Basic Size

L 70 5 3 9 10 2 53 —

| Type   |    |
|--------|----|
| Double | 68 |
| Single | 70 |

| Operator |   |
|----------|---|
| Remote   | 4 |
| Solenoid | 5 |

| Size                                       |    |
|--|----|
| 3/8" NPT Inlet & Cylinder 1/2" NPT Exhaust | 3  |
| 1/2" NPT Inlet, Cylinder & Exhaust         | 4  |
| 1" NPT Inlet & Cylinder 1-1/4" NPT Exhaust | 8  |
| 1-1/4" NPT Inlet Cylinder & Exhaust        | 9* |

\* Not available operator option 4 - Remote pilot.

| Voltage & Frequency |        |      |    |
|---------------------|--------|------|----|
|                     | 60Hz   | 50Hz | DC |
| 45                  |        |      | 12 |
| 49                  |        |      | 24 |
| 53                  | 120    | 110  |    |
| 57                  | 240    | 220  |    |
| Blank               | Remote |      |    |

| Lead Length |                |
|-------------|----------------|
| Blank       | 19" (Standard) |

| Duty Cycle |                                      |
|------------|--------------------------------------|
| 2          | Standard Service, Solenoid or Remote |
| 4          | Continuous Service Solenoid          |

| Enclosure "Class" |                                  |
|-------------------|----------------------------------|
| 10                | Standard (NEMA 1 & 12) or Remote |
| 60*†              | Hazardous Duty (NEMA 7 & 9)      |
| 80†               | NEMA 4                           |

\* Voltage 49 / 53 only.  
† Use with operator options 1 & 3 only.

| Operator options  |   |
|---|---|
| Solenoid (basic) or remote  | 1 |
| Solenoid with locking override  | 3 |
| Solenoid w/ junction box & locking override                             | 6 |
| Solenoid w/ junction box & light (120VAC, 24VDC) & non-locking override | 8 |
| Solenoid w/ junction box & light (120VAC, 24VDC) & locking override     | 9 |

Lubricated or Non-Lubricated Service  
3-position, Direct Pipe Ported, 3/8" & 1" Basic Size

L 69 5 3 9 21 1 53 —

| Type   |    |
|--------|----|
| Double | 69 |

| Operator |   |
|----------|---|
| Remote   | 4 |
| Solenoid | 5 |

| Size                                       |    |
|--|----|
| 3/8" NPT Inlet & Cylinder 1/2" NPT Exhaust | 3  |
| 1/2" NPT Inlet, Cylinder & Exhaust         | 4  |
| 1" NPT Inlet & Cylinder 1-1/4" NPT Exhaust | 8  |
| 1-1/4" NPT Inlet Cylinder & Exhaust        | 9* |

\* Not available operator option 4 - Remote pilot.

| Voltage & Frequency |        |      |    |
|---------------------|--------|------|----|
|                     | 60Hz   | 50Hz | DC |
| 45                  |        |      | 12 |
| 49                  |        |      | 24 |
| 53                  | 120    | 110  |    |
| 57                  | 240    | 220  |    |
| Blank               | Remote |      |    |

| Lead Length |                |
|-------------|----------------|
| Blank       | 19" (Standard) |

| Duty Cycle |                                      |
|------------|--------------------------------------|
| 1          | Standard Service, Solenoid or Remote |
| 5          | Continuous Service Solenoid          |

| Enclosure "Class"                                |                                  |
|--|----------------------------------|
| <b>All Ports Blocked in Neutral</b>              |                                  |
| 21   | Standard (NEMA 1 & 12) or Remote |
| 71*†   | Hazardous Duty (NEMA 7 & 9)      |
| 91†  | NEMA 4                           |
| <b>Cylinder Ports Open to Exhaust in Neutral</b> |                                  |
| 22   | Standard (NEMA 1 & 12) or Remote |
| 72*†   | Hazardous Duty (NEMA 7 & 9)      |
| 92†  | NEMA 4                           |
| <b>Cylinder Ports Open to Inlet in Neutral</b>   |                                  |
| 23   | Standard (NEMA 1 & 12) or Remote |
| 73*†   | Hazardous Duty (NEMA 7 & 9)      |
| 93†  | NEMA 4                           |

\* Voltage 49 / 53 only.  
† Use with operator options 1 & 3 only.

  Most popular.



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D

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Modular Pneumatic Controls Plug-In Sandwich Block Design for Modular Port Regulation**

These modular regulators assemble to any 3/8" basic valve interface pattern.

**Port Regulation Made Easy**

Place the sandwich on the manifold or subbase, tighten the four securing screws, then plug the valve into the sandwich and tighten its securing screws to complete the assembly.

Within minutes, these modular components can be installed in new, or used to improve existing manifold systems, without disturbing wiring or air connections.

**3-Configurations**

1. **Common Port Regulation** - A common regulated pressure is selected to both cylinder ports.
2. **Single Port Regulation** - Line pressure is available to one cylinder port, while a single regulated pressure is selected to the other cylinder port.
3. **Independent Port Regulation** - Two independently regulated pressures selected to the cylinder ports.

**NOTE:** When using single or independent port sandwich regulators, be aware that:

1. Cylinder port outlets are reversed.
2. 3-Position, cylinder ports open to exhaust and cylinder ports open to inlet functions are reversed. To produce a cylinder ports open to exhaust function, order valve with cylinder ports open to inlet. To produce a cylinder ports open to inlet function, order valve with cylinder ports open to exhaust.

**Manual or Remote** secondary pressure adjustment.

**Three Pressure Ranges** are standard for manual units:

- 1-30 PSIG
- 1-60 PSIG
- 2-125 PSIG

**Range for Remote:** 0-140 PSIG

**Gauges** are furnished standard; liquid filled gauges are optional.



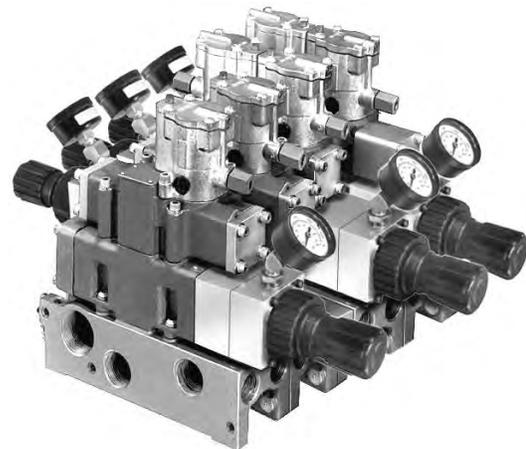
**Solenoid Valve Assembly**



**Regulator Assembly**



**Manifold**



**Typical Assembly**

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



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**Function - Single Port Regulation**

This modular air pressure regulator assembly, when installed between a 3/8" basic, 4-Way valve and subbase or modular manifold, supplies one or more regulated pressures to one of the valve cylinder ports and supply pressure to the other cylinder port.

On Single Port Cylinder Port Regulation Units controlled by a single solenoid valve, cylinder port "B" is the normally open cylinder port. The solenoid is energized to open cylinder Port "A". On double solenoid operated valves, energizing solenoid "B" opens cylinder port "A" and energizing solenoid "A" opens cylinder port "B".

**Valve must be converted to external pilot supply.**

**Features**

Regulated pressure output from the valve is adjusted by knob on the manually set model or by air pressure signal applied to the regulator pilot port on the remotely set model.

For reduced pressure at "A" cylinder port, the regulator is mounted per assembly "A" on end opposite the electrical junction box. For reduced pressure at "B" cylinder port the regulator is mounted per Assembly "B" which places the regulator over the electrical junction box.

Furnished with pressure gauge as standard.

**Pressure Range Options**

|                               |              |
|-------------------------------|--------------|
| Maximum Supply Pressure ..... | 140 PSIG     |
| Output Pressure Range .....   | 1 - 30 PSIG  |
|                               | 1 - 60 PSIG  |
|                               | 2 - 125 PSIG |

**Operating Temperature Range**

32°F (0°C) to 175°F (79°C)

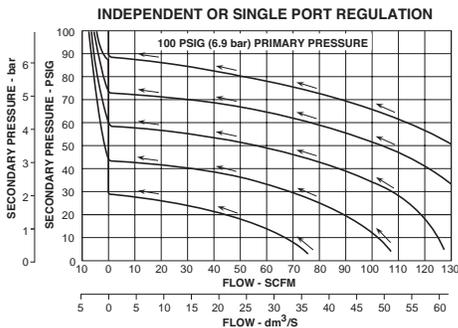
**How To Order**

1. Select type of adjustment.
2. Select pressure range.
3. Select assembly style.

**Example:** Manual adjustment.  
 5-60 PSIG, Port A reduced.

Model No. L55405307C

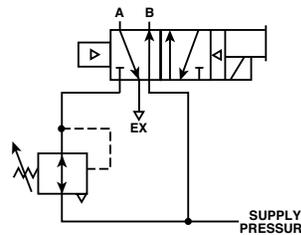
**Relief and Flow Characteristics**



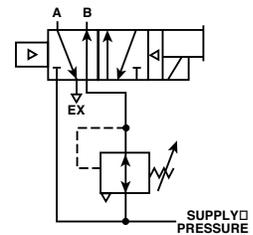
The above curves illustrate flow characteristics through an assembled valve, air regulator, and base (or modular manifold) unit.



Assembly "A"



Supply Pressure at "B" & Regulated at "A"



Supply Pressure at "A" & Regulated at "B"

| Pressure Adjustment | Pressure Range PSIG | Model Number                   |               |
|---------------------|---------------------|--------------------------------|---------------|
|                     |                     | Reduced Pressure Cyl. Port "A" | Cyl. Port "B" |
| Manual              | 1 - 60              | L55405307C                     | L55407305C    |
|                     | 2 - 125             | L55406307C                     | L55407306C    |
| Remote              | 0 - 140             | L55414307C                     | L55407314C    |

**Note:** When using single or independent port sandwich regulators, be aware that:

1. Cylinder port outlets are reversed.
2. 3-Position, cylinder ports open to exhaust and cylinder ports open to inlet functions are reversed. To produce a cylinder ports open to exhaust function, order valve with cylinder ports open to inlet. To produce a cylinder ports open to inlet function, order valve with cylinder ports open to exhaust.

See parts and accessories for gauges.

D

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

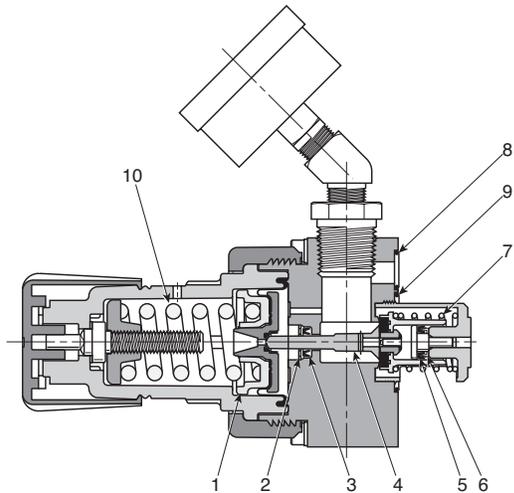
Valvair II Series



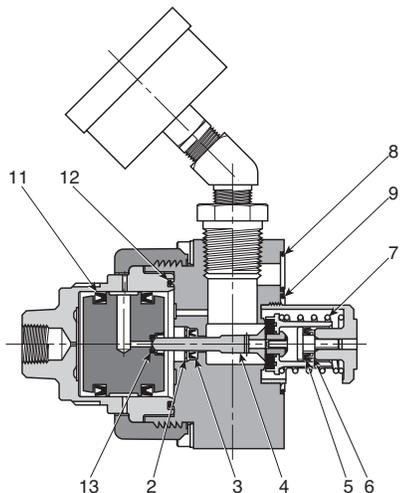
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)



**Manual Adjusting**



**Remote Operated**



**Replacement Parts**

| Item no. | Part Number   | Description              |
|----------|---------------|--------------------------|
| 1        | ○             | Diaphragm Assembly       |
| 2        | ○ ●           | Retaining Ring           |
| 3        | ○ ●           | Vee Packing              |
| 4        | ○ ●           | Poppet Assembly          |
| 5        | ○ ●           | Vee Packing              |
| 6        | ○ ●           | Backflow Retainer        |
| 7        | ○ ●           | Poppet Spring            |
| 8        | ○ ●           | .989 ID x .070 W O-Ring  |
| 9        | ○ ●           | 1.301 ID x .070 W O-Ring |
|          | <b>P01698</b> | 1-30 PSI Spring          |
| 10       | <b>P04062</b> | 1-60 PSI Spring (Blue)   |
|          | <b>P04063</b> | 2-125 PSI Spring         |
| 11       | ●             | Vee Packing              |
| 12       | ●             | 1.674 ID x .103 W O-Ring |
| 13       | ●             | Vent Seal                |

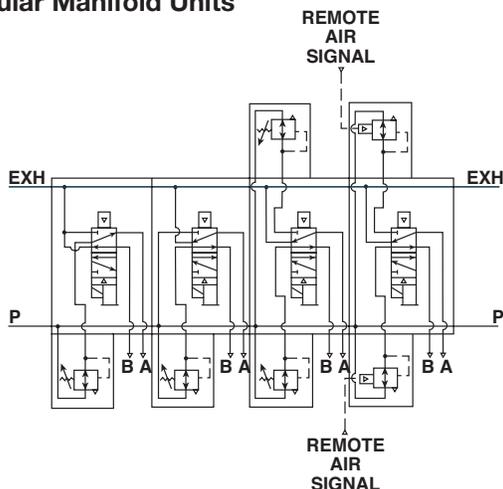
○ Parts included in K352409 service kit for manual operated modular regulators.

● Parts included in K352411 service kit for remote operated modular regulators.

**Replacement Gauges**

| PSIG  | Standard           |
|-------|--------------------|
| 0-60  | <b>K4520N14060</b> |
| 0-160 | <b>K4520N14160</b> |
| 0-300 | <b>K4520N14300</b> |

**Suggested Schematic of Assembled Valve, Air Regulation and Modular Manifold Units**



**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

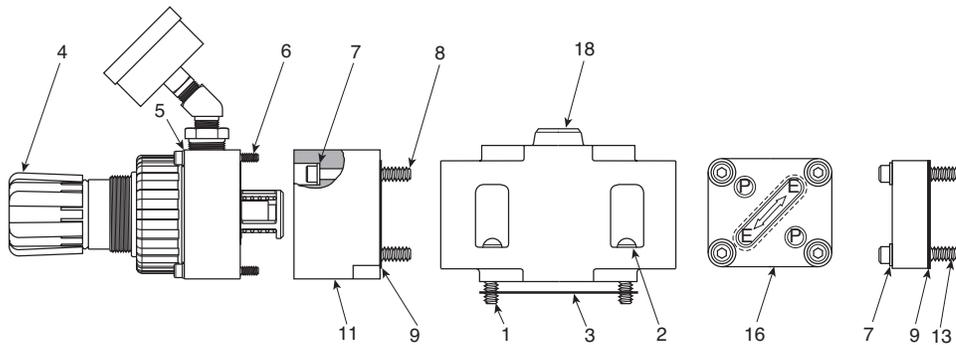
DX ISOMAX Series

Valvair II Series

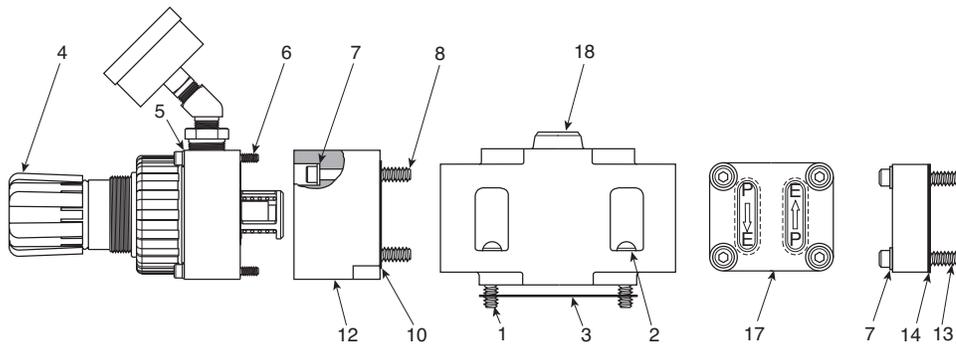


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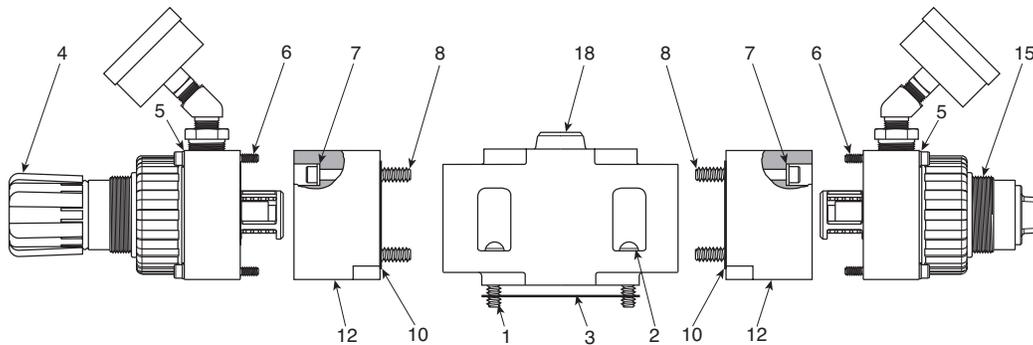
**Common Port Regulation**



**Single Port Regulation**



**Independent Port Regulation**



**Table "E": Parts**

| Item No. | Part Number     | Description                 |
|----------|-----------------|-----------------------------|
| 1        | <b>H09815</b>   | Screw (4)                   |
| 2        | <b>H17512</b>   | Lockwasher (4)              |
| 3        | <b>K183077</b>  | Gasket                      |
| 4        | Standard        | Manual Reg. Assy. (w/Gauge) |
|          | <b>K472001C</b> | 1-30 PSIG                   |
|          | <b>K472002C</b> | 1-60 PSIG                   |
|          | <b>K472003C</b> | 2-125 PSIG                  |
| 5        | <b>H17509</b>   | #10 Lockwasher              |
| 6        | <b>H10032</b>   | #10-32 x 1.75" Lg. SHCS     |
| 7        | <b>H17511</b>   | 1/4" Lockwasher             |
| 8        | <b>H10069</b>   | 1/4-20 x 2.25" Lg. SHCS     |

| Item No. | Part Number     | Description                            |
|----------|-----------------|--|
| 9        | <b>K183082</b>  | Gasket                                 |
| 10       | <b>K183084</b>  | Gasket                                 |
| 11       | <b>K043012</b>  | Function Block (P to P)                |
| 12       | <b>K043011</b>  | Function Block (P to E)                |
| 13       | <b>H100107</b>  | 1/4-20 x 1-1/2" Lg. SHCS               |
| 14       | <b>K183083</b>  | Gasket                                 |
| 15       | Standard        | Remote Reg. Assy. (w/Gauge)            |
|          | <b>K472009C</b> | 0-140 PSIG                             |
| 16       | <b>K362308</b>  | Function Plate Assy. (Incl. 7, 9, 13)  |
| 17       | <b>K362307</b>  | Function Plate Assy. (Incl. 7, 13, 14) |
| 18       | <b>K032270</b>  | Body Assy. (Incl. 1, 2, 3)             |



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

Plug-in Pilot

|  | Description                       | Standard Service  |                   | Special Service   |                   |
|---|-----------------------------------|-------------------|-------------------|-------------------|-------------------|
|   | Override type                     | Locking           | Non-locking       | Locking           | Non-locking       |
| With indicator light  | With override (120VAC)            | <b>K175903553</b> | <b>K175803553</b> | <b>K185902553</b> | <b>K185802553</b> |
|   | With override (Other than 120VAC) | <b>K1753035**</b> | —                 | <b>K1853025**</b> | —                 |

\*\* Voltage code - (reference model index for availability)

NEMA 1 & 12

|  | Description   | Standard Service  |                   | Special Service   |                   |
|---|---|-------------------|-------------------|-------------------|-------------------|
|   | Override type   | Locking           | Non-locking       | Locking           | Non-locking       |
| Basic Pilot   | Basic with override   | <b>K0653035**</b> | —                 | <b>K0853025**</b> | —                 |
|   | JIC with junction box & override  | <b>K0656035**</b> | <b>K0655035**</b> | <b>K0856025**</b> | <b>K0855025**</b> |
|  | JIC pilot with junction box & override & indicator lights (120VAC Only) | <b>K0659035**</b> | <b>K0658035**</b> | <b>K0859025**</b> | <b>K0858025**</b> |

\*\* Voltage code - (reference model index for availability)

NEMA 4, 7 & 9

|   | Description                     | Standard Service   |                    | Special Service    |                    |
|---|---------------------------------|--------------------|--------------------|--------------------|--------------------|
|   | Override type                   | Locking            | Non-locking        | Locking            | Non-locking        |
| Hazardous Duty  | Hazardous duty pilot - UL & CSA | <b>K0251035***</b> |                    | <b>K0451025***</b> |                    |
|   | NEMA 4 pilot                    | <b>K2351035***</b> |                    | —                  |                    |
|  | Hazardous duty with override    | <b>K0253035***</b> | <b>K0252035***</b> | <b>K0453025***</b> | <b>K0452025***</b> |
|   | NEMA 4 with override            | —                  | <b>K2353035***</b> | <b>K2352035***</b> | —                  |

† 49 / 53 only    \*\* Voltage code - (reference model index for availability)

Replacement Solenoid Coil



| Voltage Code | Voltage          |       |                 | Coil Number                                  |                     |
|--------------|------------------|-------|-----------------|--|---------------------|
|              | 60 Hz            | 50 Hz | DC              | Plug-In                                      | Flying lead (19") * |
| **           |                  |       |                 |  |                     |
| 49           | —                | —     | 24 <sup>†</sup> | <b>K593060</b><br><b>K593274<sup>‡</sup></b> | <b>K593014</b>      |
| 53           | 120 <sup>†</sup> | 110   | —               | <b>K593071</b><br><b>K593125<sup>‡</sup></b> | <b>K593025</b>      |
| 57           | 240 <sup>†</sup> | 220   | —               | <b>K593081</b>                               | <b>K593035</b>      |

Notes: **Bold Face** type indicated primary coil rating.  
 † Indicates voltages approved for solenoid operators designed for use in hazardous locations.  
 \* 19" Coil lead length is standard. Other lead lengths may be available, consult supplier.  
 ‡ Assembly includes indicator light socket, less light.

Solenoid Characteristics Chart  
Voltage Range +10/-15% of Nominal

3/8" & 3/4" Basic - L-Pilot

| Voltage/Cycles | Amps Inrush | Amps Holding | Resistance Ohms | Watts | Insulation Class |
|----------------|-------------|--------------|-----------------|-------|------------------|
| 120/60VAC      | .29         | .18          | 122             | 12    | B                |
| 110/50VAC      | .21         | .14          | 122             | 12    | B                |
| 240/60VAC      | .18         | .12          | 610             | 12    | B                |
| 24/60VAC       | 1.6         | 1.0          | 4.5             | 9.5   | B                |
| 24/50VAC       | 1.2         | .75          | 6.4             | 9.5   | B                |
| 6VDC           | —           | 1.4          | 4.5             | 7.6   | B                |
| 12VDC          | —           | .66          | 17.7            | 9     | B                |
| 24VDC          | —           | .32          | 71              | 9     | B                |
| 48VDC          | —           | .22          | 216             | 11    | B                |

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modutefx Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



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**Service Kits**

To use this chart you must know the basic valve series, quantity, and type of operators, or the first three characters of the valve model number.

| Basic Valve | Solenoid Operated * |                                      |                       |                                      |                       |                       |                       |
|-------------|---------------------|--------------------------------------|-----------------------|--------------------------------------|-----------------------|-----------------------|-----------------------|
|             | Series (prefix)     | Standard Service (intermittent duty) |                       | Special Service ** (continuous duty) |                       | Remote Pilot Operated |                       |
| Size        |                     | Single                               | Double 2 & 3-Position | Single                               | Double 2 & 3-Position | Single                | Double 2 & 3-Position |
| 3/8"        | L65                 | —                                    | <b>K352126</b>        | —                                    | <b>K352127</b>        | —                     | <b>K352355</b>        |
|             | L66                 | —                                    | <b>K352126</b>        | —                                    | <b>K352127</b>        | —                     | <b>K352355</b>        |
|             | L67                 | <b>K352124</b>                       | —                     | <b>K352125</b>                       | —                     | <b>K352362</b>        | —                     |
|             | L68                 | —                                    | <b>K352126</b>        | —                                    | <b>K352127</b>        | —                     | <b>K352355</b>        |
|             | L69                 | —                                    | <b>K352126</b>        | —                                    | <b>K352127</b>        | —                     | <b>K352355</b>        |
|             | L70                 | <b>K352124</b>                       | —                     | <b>K352125</b>                       | —                     | <b>K352362</b>        | —                     |
|             | L70                 | <b>K352128</b>                       | —                     | <b>K352129</b>                       | —                     | <b>K352359</b>        | —                     |
| 1"          | L65                 | —                                    | <b>K352130</b>        | —                                    | <b>K352131</b>        | —                     | <b>K352360</b>        |
|             | L66                 | —                                    | <b>K352130</b>        | —                                    | <b>K352131</b>        | —                     | <b>K352360</b>        |
|             | L67                 | <b>K352128</b>                       | —                     | <b>K352129</b>                       | —                     | <b>K352359</b>        | —                     |
|             | L68                 | —                                    | <b>K352130</b>        | —                                    | <b>K352131</b>        | —                     | <b>K352360</b>        |
|             | L69                 | —                                    | <b>K352130</b>        | —                                    | <b>K352131</b>        | —                     | <b>K352360</b>        |
|             | L70                 | <b>K352128</b>                       | —                     | <b>K352129</b>                       | —                     | <b>K352359</b>        | —                     |
|             | L70                 | <b>K352128</b>                       | —                     | <b>K352129</b>                       | —                     | <b>K352359</b>        | —                     |

**Notes:**

\* Kits for solenoid operated valves include solenoid service kits.

\*\* Special service (continuous duty) solenoids may be identified as having gold colored solenoid tops.

**Blank Plate Kit - 3/8" Basic**

| Manifold Assembly | Port size | Part Number      |
|-------------------|-----------|------------------|
| <b>K142230</b>    | 3/8"      | <b>K06020003</b> |
| <b>K142231</b>    | 1/2"      |                  |
| <b>K142270</b>    | 3/4"      |                  |

Kit includes: Blank plate, gasket, mounting screws.

**Conversion Kits: Lubricated to Non-Lubricated Operation**

| Basic Size | Operators (solenoid or remote pilot) |                     |
|------------|--------------------------------------|---------------------|
|            | Single                               | Double (2-position) |
| 3/8"       | <b>K322012</b>                       | <b>K322013</b>      |

**Flush Type Hex Drive Pipe Plugs for Port Isolation**

| Size (NPTF) | Part Number       |
|-------------|-------------------|
| 1/8"        | <b>K21R02012L</b> |
| 1/4"        | <b>K21R02025L</b> |
| 3/8"        | <b>K21R02037L</b> |
| 1/2"        | <b>K21R02050L</b> |
| 3/4"        | <b>K21R02075L</b> |

**Electrical Connectors Single or Double Solenoid Valves**

| Basic Size | Valve Body      |                 | Subbase / Manifold |               |
|------------|-----------------|-----------------|--------------------|---------------|
|            | Single Solenoid | Double Solenoid | 10" Leads          | 72" Leads     |
| 3/8"       | <b>H02723</b>   | <b>H02722</b>   | <b>H02713</b>      | <b>H02789</b> |
| 1"         |                 |                 |                    |               |

**Interchangeable Manual Override Assemblies for Solenoid Operators**



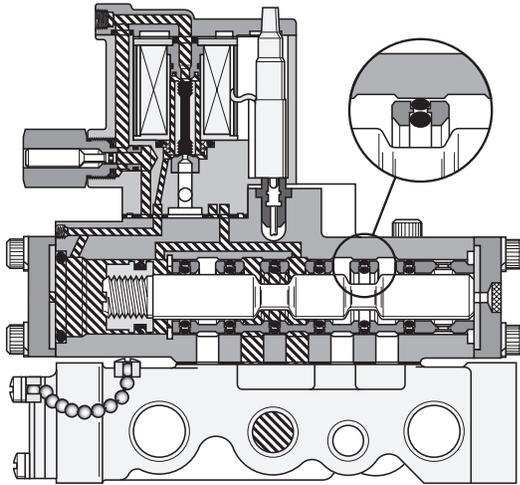
| Non-Locking Type | Locking Type   |
|------------------|----------------|
| <b>K162001</b>   | <b>K152003</b> |

To override valve, use a flat head screwdriver to press in and rotate plunger 90° until plunger locks in place. For proper valve operation, override should be in the out position.

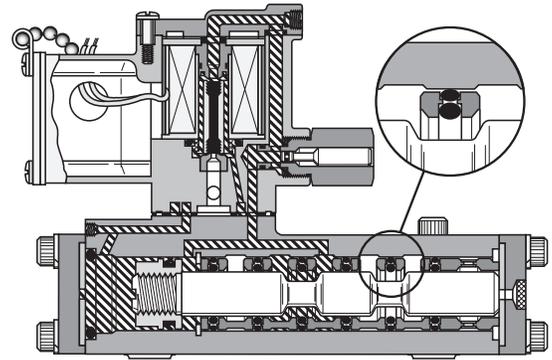


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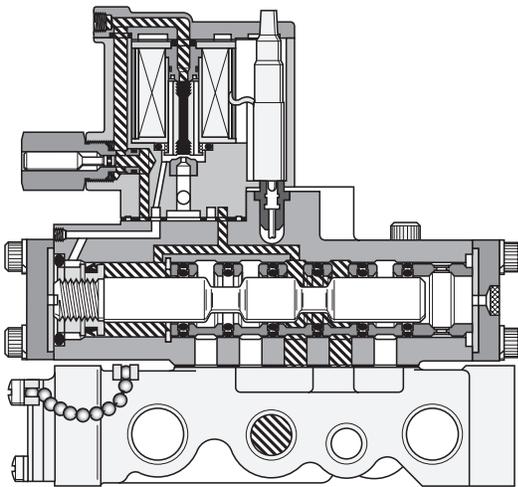
**Plug-In**  
 De-Energized



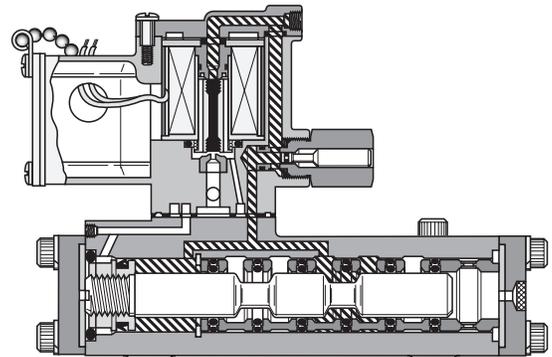
**Direct Pipe Ported**  
 De-Energized



**Energized**



**Energized**



 **Pressure**     **Exhaust**

|   |                            |                   |                     |                 |                         |                     |                      |
|---|----------------------------|-------------------|---------------------|-----------------|-------------------------|---------------------|----------------------|
| D | Subbase & Manual<br>Valves | H Series<br>Micro | Modulflex<br>Series | H Series<br>ISO | Network<br>Connectivity | DX ISOMAX<br>Series | Valvair II<br>Series |
|---|----------------------------|-------------------|---------------------|-----------------|-------------------------|---------------------|----------------------|



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**Flow Capacities**

| Valve Type             | Cylinder Port Size (NPTF) | Mounting Style | Cv Flow Rating Inlet to Cylinder "A" |
|------------------------|---------------------------|----------------|--------------------------------------|
| 3/8" Single            | 3/8"                      | Direct Pipe    | 4.7                                  |
|                        | 1/2"                      | Direct Pipe    | 5.3                                  |
| 3/8" Double            | 3/8"                      | Direct Pipe    | 4.5                                  |
|                        | 1/2"                      | Direct Pipe    | 5.5                                  |
|                        | 3/4"                      | Subbase        | 5.0                                  |
|                        | 3/4"                      | Manifold       | 4.9                                  |
| 3/8" Double 3-Position | 3/8"                      | Direct Pipe    | 4.1                                  |
|                        | 1/2"                      | Direct Pipe    | 4.5                                  |
|                        | 3/4"                      | Subbase        | 4.5                                  |
|                        | 3/4"                      | Manifold       | 4.1                                  |
| 1" Single & Double     | 1"                        | Direct Pipe    | 12.0                                 |
|                        |                           | Subbase        | 11.3                                 |

**Recommended Filtration**

Maintained 40 Micron Filtration

**Life Expectancy**

Valves designed for non-lubricated service as well as those designed for lubricated service will provide millions of maintenance free cycles. Under laboratory conditions service life exceeds 25,000,000 cycles.

**Factory Pre-Lubrication**

Valves are lubricated at assembly with Sunaplex 781 or equivalent. Valves specified for vacuum service are lubricated with Dow Corning Valve Seal A.

**Valves for Non-Lubricated Service**

3/8" basic valve sizes are designed to operate in applications where in-service lubrication is not desirable. Valves are factory pre-lubed as noted above. These valves may be used for lubricated service as well.

**Lubrication**

Air Line Lubricant (compatible with Nitrile & Polyurethane seals) must readily atomize and be of the medium aniline type. Aniline point range must be between 180° and 220°F. Viscosity @ 100°F: 140-170 SUS.

**Recommended Lubricant**

If in-service lubrication is required, use F442 oil, or equivalent. F442 is specially formulated to provide peak performance and maximum service life for air operated equipment.

**Subbase & Manifold Valve Products  
 Valvair II Series**

**Listing Agencies**

**General Purpose Approvals**

CSA - Canadian Standards Association  
 File Number 42024

**Hazardous Duty Approvals**

UL - Underwriters Laboratories, Inc.  
 File Number E42542  
 Category Y107

CSA - Canadian Standards Association  
 File Number 24349

**Solenoid Enclosure Ratings**

| Type                     | Listing Agency | NEMA Rating | Description                            |
|--------------------------|----------------|-------------|--|
| Plug-In                  | CSA            | 1 & 12      | General purpose indoor only dust tight |
| Conduit / flying lead    | CSA            | 1 & 12      | General purpose indoor only dust tight |
| * Conduit (as specified) | UL & CSA       | 7 & 9       | Hazardous location see chart below)    |
| * Conduit (as specified) | CSA            | 4           | General purpose indoor / outdoor       |

\* See ordering information on specific valve type. (Direct Pipe Ported Valves Only.)

**Hazardous Duty Solenoid Listing**

Valves with solenoid operators designated for hazardous locations are UL & CSA Approved as follows:

| National Electric Code  | Ambient Conditions   | NEMA Classification |
|-------------------------|--|---------------------|
| Class I Div. 1 Group C  | Ethyl, Ether, Etc., Gases & Vapors   | VII (7)             |
| Class I Div. 1 Group D  | Gasoline, Etc., Gases & Vapors   | VII (7)             |
| Class I Div. 2 Group B  | Butadiene, Etc., Liquid, Fluid or Vapor Normally Contained, or Atmosphere Ventilated | VII (7)             |
| Class II Div. 1 Group E | Metal Dust   | IX (9)              |
| Class II Div. 1 Group F | Coal, Coke, Carbon Black Dust  | IX (9)              |
| Class II Div. 1 Group G | Flour, Starch, Grain Dust  | IX (9)              |

See Article 500 - Hazardous (Classified) Locations, National Electric Code.



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series

**Installation**

Valves should be installed with reasonable accessibility for service. Exercise care in keeping piping lengths to a minimum. Piping should be free of dirt, chips & scale. Pipe joint compound should be used sparingly applied only to the thread, never to the valve body. Avoid undue strain at piping joints. Protect the valve from exposure to extreme temperatures, dirt and moisture to maximize life.

**Note:** Valves equipped with locking manual overrides. Override(s) must be in the fully extended position for proper valve operation.

**Double Solenoid / Remote Caution**

**Note:** It is recommended that double solenoid and double remote 2-Position valves be mounted with the main spool in the horizontal plane.

**Wiring Instructions for Base Mounted Valves**

**Single Solenoid:**

Use wires marked "2" & "3" for connection. Units with DC Solenoids and indicator lights are polarity sensitive. Wire marked "3" is positive (+).

**Double Solenoid:**

Use wires marked "1" & "2" for Solenoid "A". Use wires marked "3" & "4" for Solenoid "B". Units with DC Solenoids and indicator lights are polarity sensitive. Wires marked "1" and "3" are positive.

**CAUTION:**  
 DC Solenoids are polarity sensitive.  
 Observe polarities indicated above.

**Units with Flying Leads**

Wires are not polarity sensitive.

**CAUTION:**  
 DC solenoids with indicator lights and / or arc suppression coils are polarity sensitive. Use red wire as positive.

**"Special Service" Solenoid (Continuous Duty)**

Special Service Solenoids are designed for use when the solenoid duty cycle is greater than 70% or when energization times are for 10 minutes or longer.

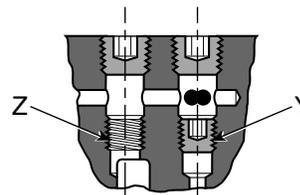
These solenoids should be used when valves are to be held energized for hours, days or weeks... or when extended ambient temperature operation is required. Apply the duty cycle formula to determine if this type of solenoid is required.

**Duty Cycle Formula**

$$\frac{\text{Time Energized}}{\text{Time Energized} + \text{Time Off}} \times 100 = \% \text{ Duty Cycle}$$

If Duty Cycle is 70% or greater, then Special Service (Continuous Duty) Solenoid should be used.

**Pilot Supply Conversion**



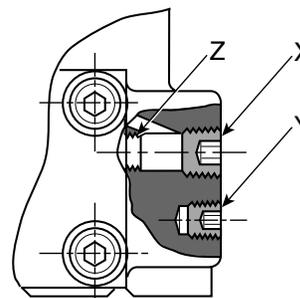
**Base Mounted**

For field conversion to external pilot supply, remove two 1/8" NPTF plugs from top of valve body and move bottom plug from "Y" to "Z".

Replace 1/8" NPTF plugs and connect pilot pressure to the 1/4" NPTF external pilot supply port "X" in subbase.

**Direct Pipe Ported**

For field conversion to external pilot supply, remove and discard 1/4" NPTF plug in external pilot supply port "X". Move stored plug "Y" to location "Z" in bottom of pilot supply port "X". Then connect pilot pressure to port "X" in valve body.

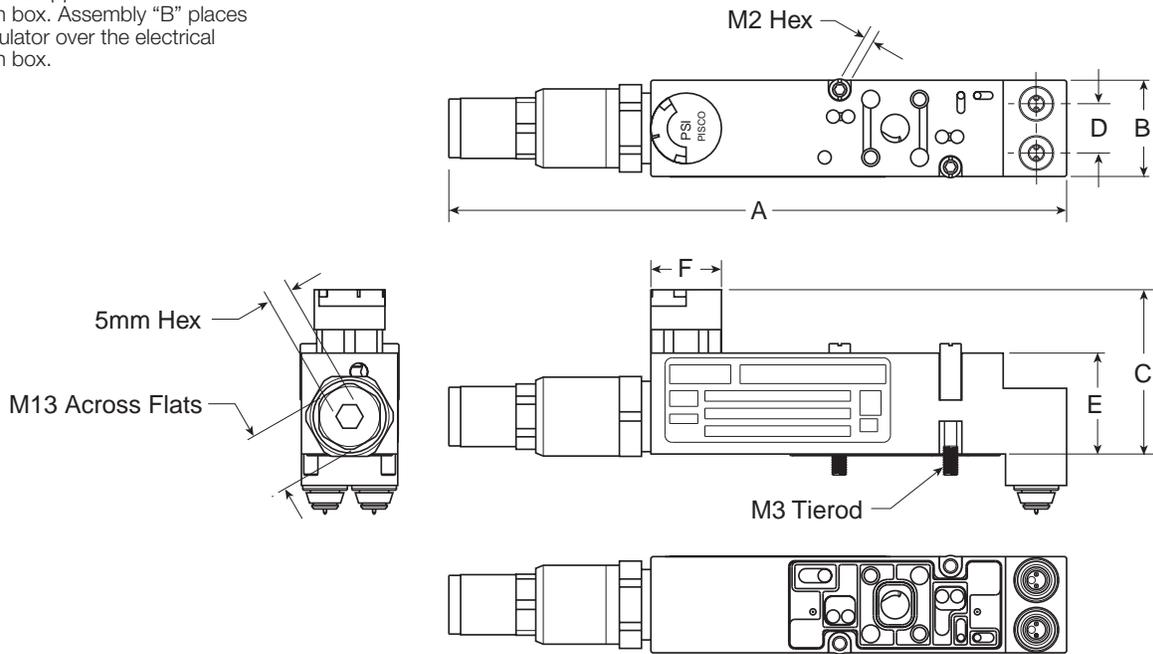


|                      |                         |
|----------------------|-------------------------|
| D                    | Subbase & Manual Valves |
|                      | H Series Micro          |
| H Series             | Modulflex Series        |
|                      | ISO                     |
| Network Connectivity | DX ISOMAX Series        |
|                      | Valvair II Series       |



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

\* Assembly "A" places the regulator on the end opposite the electrical junction box. Assembly "B" places the regulator over the electrical junction box.



**Dimensions - 3/8" Basic Valve**

|                |                |                 |                 |                  |                 |                  |                            |                 |                 |                 |                 |                |                |
|----------------|----------------|-----------------|-----------------|------------------|-----------------|------------------|----------------------------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|
| <b>A</b>       | <b>B</b>       | <b>C</b>        | <b>D</b>        | <b>E</b>         | <b>F</b>        | <b>G</b>         | <b>H</b>                   | <b>J</b>        | <b>K</b>        | <b>L</b>        | <b>M</b>        | <b>N</b>       | <b>O</b>       |
| 2.56<br>(65.0) | .75<br>(19.1)  | 1.50<br>(38.1)  | 2.09<br>(53.1)  | 11.28<br>(286.5) | 2.06<br>(52.3)  | 1.41<br>(35.8)   | .75<br>(19.1)              | .34<br>(8.64)   | 5.00<br>(127.0) | 8.44<br>(214.4) | 9.09<br>(230.9) | 3.19<br>(81.0) | .61<br>(15.5)  |
| <b>P</b>       | <b>Q</b>       | <b>R</b>        | <b>S</b>        | <b>T</b>         | <b>U</b>        | <b>V</b>         | <b>W</b>                   | <b>X</b>        | <b>Y</b>        | <b>Z</b>        | <b>AA</b>       | <b>BB</b>      | <b>CC</b>      |
| 1.19<br>(30.2) | 1.91<br>(48.5) | 1.09<br>(27.7)  | 1.81<br>(46.0)  | 3.32<br>(84.3)   | 6.64<br>(168.7) | 7.56<br>(192.0)  | 3/8", 1/2" or<br>3/4" NPTF |                 | .39<br>(9.9)    | 1"<br>NPTF      | 1"<br>NPTF      | 1-1/4"<br>NPTF | 3.00<br>(76.2) |
| <b>DD</b>      | <b>EE</b>      | <b>FF</b>       | <b>GG</b>       | <b>HH</b>        | <b>JJ</b>       | <b>KK</b>        | <b>LL</b>                  | <b>MM</b>       |                 |                 |                 |                |                |
| 1.50<br>(38.1) | 1.24<br>(31.5) | 7.97<br>(202.4) | 4.34<br>(110.2) | .40<br>(10.2)    | 8.53<br>(216.6) | 10.15<br>(257.8) | 5.46<br>(138.6)            | 8.80<br>(223.5) |                 |                 |                 |                |                |

Inches (mm)



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

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**D**

Subbase & Manual Valves

H Series Micro

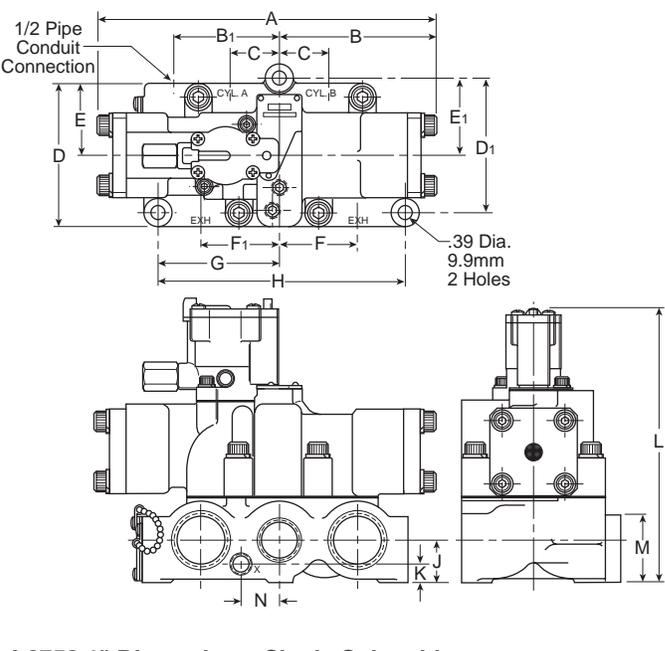
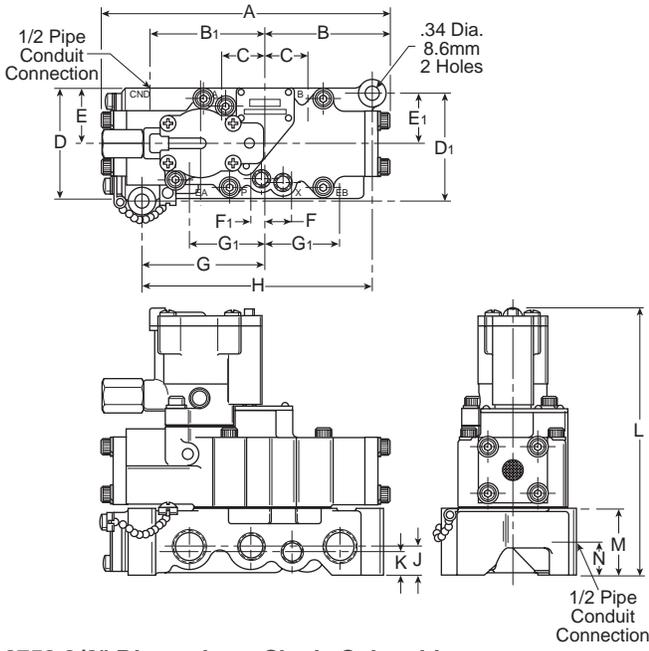
Moduflex Series

H Series ISO

Network Connectivity

DX ISOMAX Series

Valvair II Series



**L6753 3/8" Dimensions, Single Solenoid**

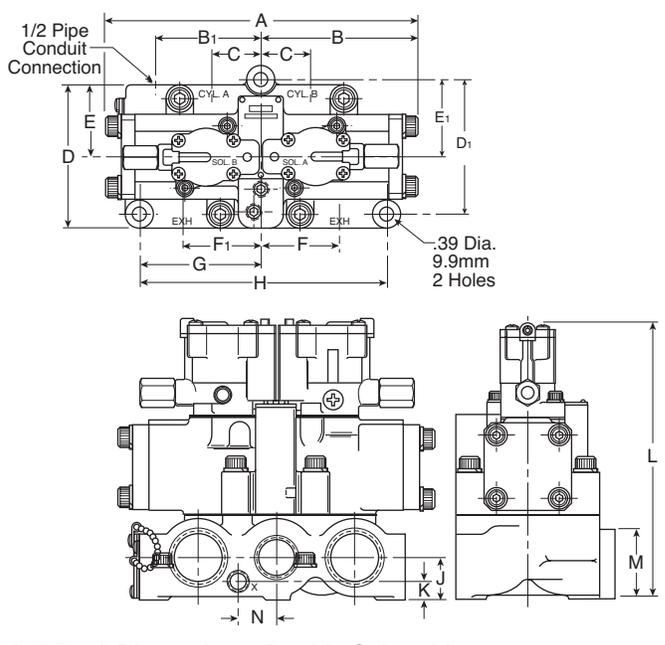
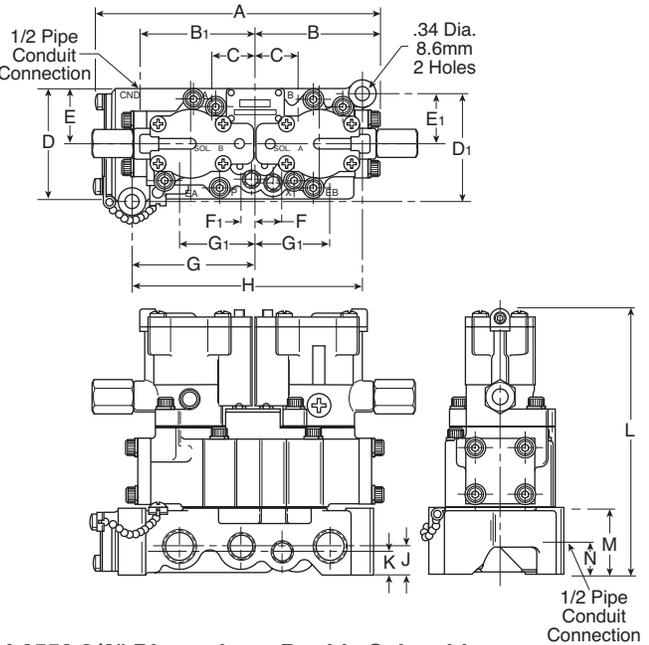
| A              | B              | B <sub>1</sub> | C               | D              | D <sub>1</sub> | E              | E <sub>1</sub> | F              |
|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| 7.56<br>(192)  | 3.32<br>(84.3) | 2.94<br>(74.7) | 1.12<br>(28.4)  | 2.88<br>(73.2) | 2.84<br>(72.1) | 1.44<br>(36.6) | 1.34<br>(34)   | .75<br>(19.1)  |
| F <sub>1</sub> | G              | G <sub>1</sub> | H               | J              | K              | L              | M              | N              |
| .38<br>(9.7)   | 3.16<br>(80.3) | 2.00<br>(50.8) | 6.03<br>(153.2) | .75<br>(19.1)  | .62<br>(15.7)  | 6.93<br>(176)  | 1.75<br>(44.5) | 1.00<br>(25.4) |

Inches (mm)

**L6758 1" Dimensions, Single Solenoid**

| A                | B               | B <sub>1</sub>  | C              | D               | D <sub>1</sub>  | E              | E <sub>1</sub> | F              |
|------------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| 10.46<br>(265.7) | 4.75<br>(120.6) | 2.94<br>(74.7)  | 3.38<br>(85.8) | 4.56<br>(115.8) | 4.28<br>(108.7) | 2.28<br>(57.9) | 2.44<br>(62)   | 2.45<br>(62.2) |
| F <sub>1</sub>   | G               | H               | J              | K               | L               | M              | N              |                |
| 2.46<br>(62.5)   | 3.81<br>(96.8)  | 7.62<br>(193.5) | 1.31<br>(33.3) | .59<br>(15)     | 8.74<br>(222)   | 2.09<br>(53.1) | 1.22<br>(31)   |                |

Inches (mm)



**L6553 3/8" Dimensions, Double Solenoid**

| A               | B              | B <sub>1</sub> | C               | D              | D <sub>1</sub> | E              | E <sub>1</sub> | F              |
|-----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|
| 7.38<br>(187.5) | 3.32<br>(84.3) | 2.94<br>(74.7) | 1.12<br>(28.4)  | 2.88<br>(73.2) | 2.84<br>(72.1) | 1.44<br>(36.6) | 1.34<br>(34)   | .75<br>(19.1)  |
| F <sub>1</sub>  | G              | G <sub>1</sub> | H               | J              | K              | L              | M              | N              |
| .38<br>(9.7)    | 3.16<br>(80.3) | 2.00<br>(50.8) | 6.03<br>(153.2) | .75<br>(19.1)  | .62<br>(15.7)  | 6.93<br>(176)  | 1.75<br>(44.5) | 1.00<br>(25.4) |

Inches (mm)

**L6558 1" Dimensions, Double Solenoid**

| A               | B               | B <sub>1</sub>  | C              | D               | D <sub>1</sub>  | E              | E <sub>1</sub> | F              |
|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| 9.50<br>(241.3) | 4.75<br>(120.6) | 3.38<br>(85.8)  | 1.53<br>(38.9) | 4.56<br>(115.8) | 4.28<br>(108.7) | 2.28<br>(57.9) | 2.44<br>(62)   | 2.45<br>(62.2) |
| F <sub>1</sub>  | G               | H               | J              | K               | L               | M              | N              |                |
| 2.46<br>(62.5)  | 3.81<br>(96.8)  | 7.62<br>(193.5) | 1.31<br>(33.3) | .59<br>(15)     | 8.74<br>(222)   | 2.09<br>(53.1) | 1.22<br>(31)   |                |

Inches (mm)

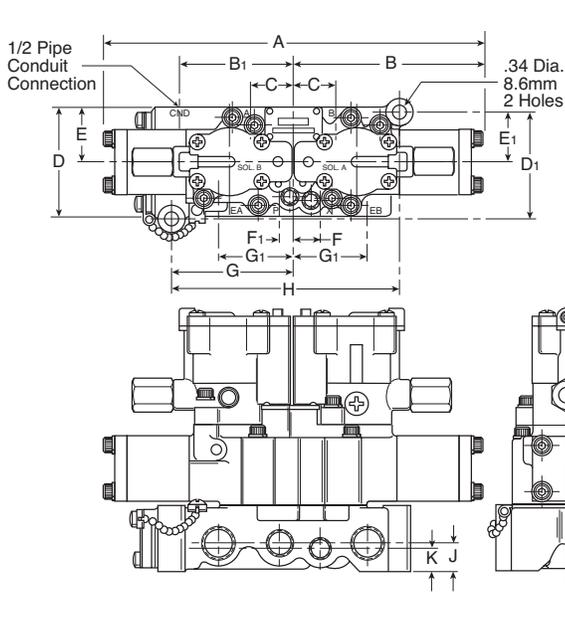
**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Moduteflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)

D290

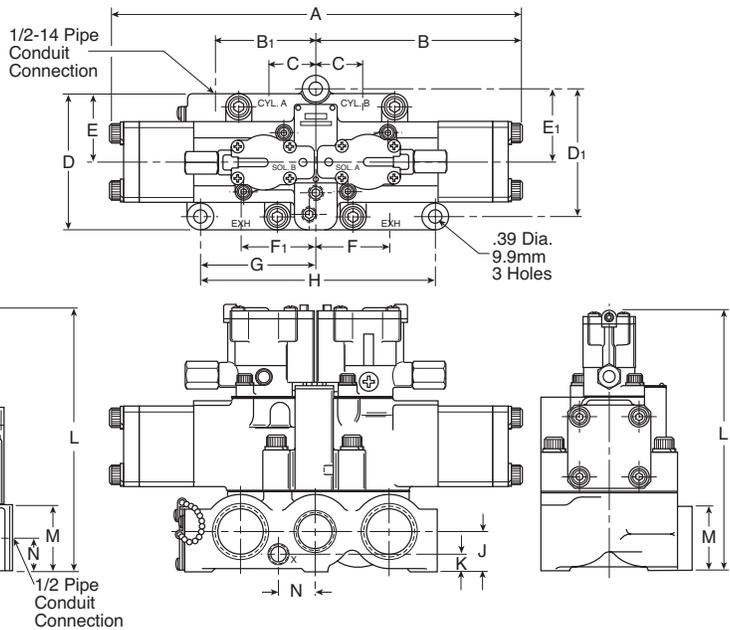
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 Richland, Michigan  
[www.parker.com/pneumatics](http://www.parker.com/pneumatics)



**L6653 3/8" Dimensions, 3-Position, Double Solenoid**

| A               | B               | B <sub>1</sub> | C               | D              | D <sub>1</sub> | E              | E <sub>1</sub> | F             |
|-----------------|-----------------|----------------|-----------------|----------------|----------------|----------------|----------------|---------------|
| 9.64<br>(244.8) | 4.82<br>(122.4) | 2.94<br>(74.7) | 1.12<br>(28.4)  | 2.88<br>(73.2) | 2.84<br>(72.1) | 1.44<br>(36.6) | 1.34<br>(34)   | .75<br>(19.1) |
| F <sub>1</sub>  | G               | G <sub>1</sub> | H               | J              | K              | L              | M              |               |
| .38<br>(9.7)    | 3.16<br>(80.3)  | 2.00<br>(50.8) | 6.03<br>(153.2) | .75<br>(19.1)  | .62<br>(15.7)  | 6.93<br>(176)  | 1.00<br>(25.4) |               |

Inches (mm)



**L6658 1" Dimensions, 3-Position, Double Solenoid**

| A                | B              | B <sub>1</sub>  | C              | D               | D <sub>1</sub>  | E              | E <sub>1</sub> | F              |
|------------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| 13.62<br>(345.9) | 6.81<br>(173)  | 3.38<br>(85.8)  | 1.53<br>(38.9) | 4.56<br>(115.8) | 4.28<br>(108.7) | 2.28<br>(57.9) | 2.44<br>(62)   | 2.45<br>(62.2) |
| F <sub>1</sub>   | G              | H               | J              | K               | L               | M              | N              |                |
| 2.46<br>(62.5)   | 3.81<br>(96.8) | 7.62<br>(193.5) | 1.31<br>(33.3) | .59<br>(15)     | 8.74<br>(222)   | 2.09<br>(53.1) | 1.22<br>(31)   |                |

Inches (mm)

**D**

**Subbase & Manual Valves**

**H Series Micro**

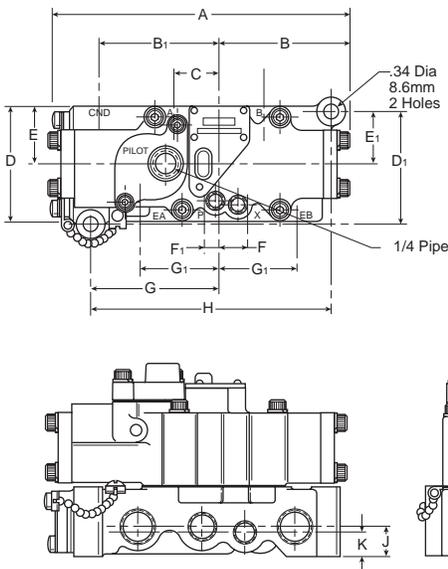
**Moduflex Series**

**H Series ISO**

**Network Connectivity**

**DX ISOMAX Series**

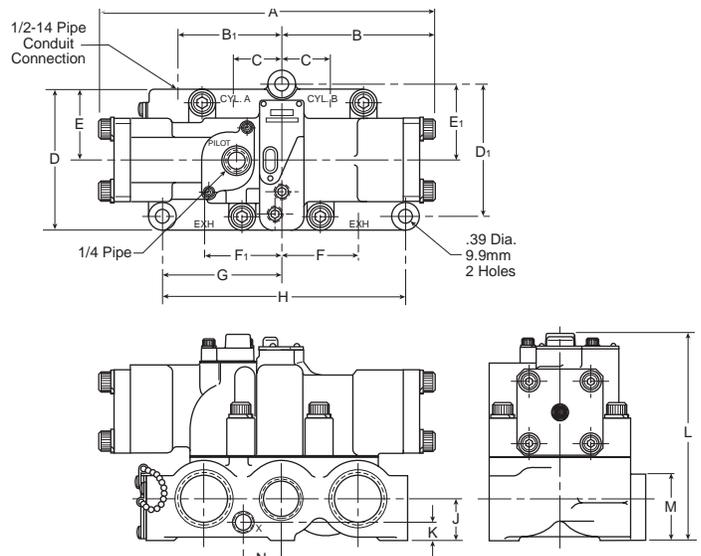
**Valvair II Series**



**L6743 3/8" Dimensions, Single Remote Pilot**

| A              | B              | B <sub>1</sub> | C               | D              | D <sub>1</sub> | E               | E <sub>1</sub> | F             |
|----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|---------------|
| 7.56<br>(192)  | 3.32<br>(84.3) | 2.94<br>(74.7) | 1.12<br>(28.4)  | 2.88<br>(73.2) | 2.84<br>(72.1) | 1.44<br>(36.6)  | 1.34<br>(34)   | .75<br>(19.1) |
| F <sub>1</sub> | G              | G <sub>1</sub> | H               | J              | K              | L               | M              |               |
| .38<br>(9.7)   | 3.16<br>(80.3) | 2.00<br>(50.8) | 6.03<br>(153.2) | .75<br>(19.1)  | .62<br>(15.7)  | 4.76<br>(120.9) | 1.75<br>(44.5) |               |

Inches (mm)



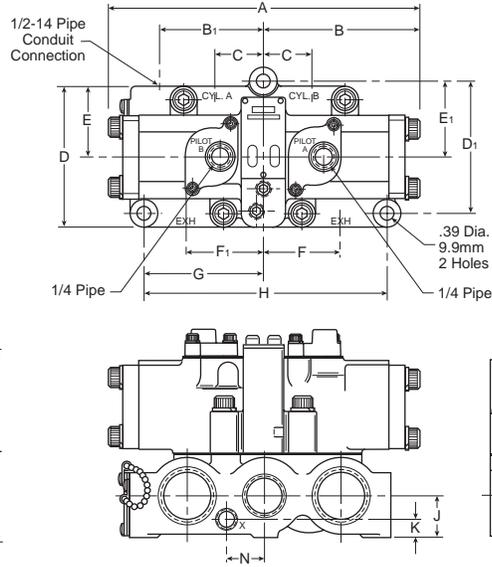
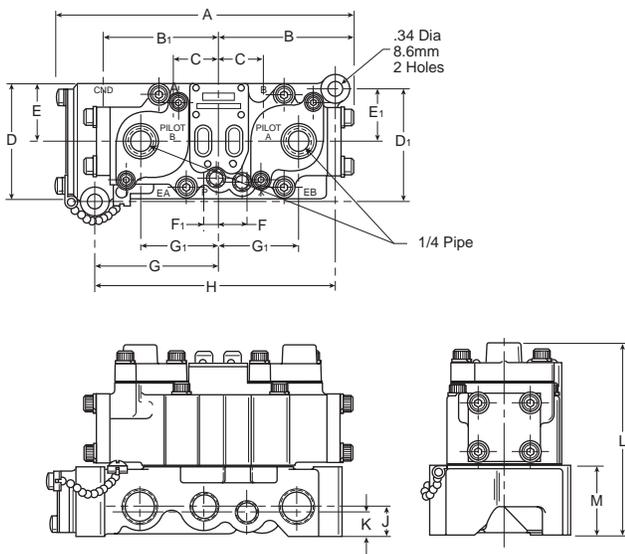
**L6748 1" Dimensions, Single Remote Pilot**

| A                | B               | B <sub>1</sub>  | C              | D               | D <sub>1</sub>  | E              | E <sub>1</sub> | F              |
|------------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| 10.46<br>(265.7) | 4.75<br>(120.6) | 3.38<br>(85.8)  | 1.53<br>(38.9) | 4.56<br>(115.8) | 4.28<br>(108.7) | 2.28<br>(57.9) | 2.44<br>(62)   | 2.45<br>(62.2) |
| F <sub>1</sub>   | G               | H               | J              | K               | L               | M              | N              |                |
| 2.46<br>(62.5)   | 3.81<br>(96.8)  | 7.62<br>(193.5) | 1.31<br>(33.3) | .59<br>(15)     | 6.57<br>(166.9) | 2.09<br>(53.1) | 1.22<br>(31)   |                |

Inches (mm)



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**L6543 3/8" Dimensions, Double Remote Pilot**

| A              | B              | B <sub>1</sub> | C               | D              | D <sub>1</sub> | E               | E <sub>1</sub> | F             |
|----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|---------------|
| 7.56<br>(192)  | 3.32<br>(84.3) | 2.94<br>(74.7) | 1.12<br>(28.4)  | 2.88<br>(73.2) | 2.84<br>(72.1) | 1.44<br>(36.6)  | 1.34<br>(34)   | .75<br>(19.1) |
| F <sub>1</sub> | G              | G <sub>1</sub> | H               | J              | K              | L               | M              |               |
| .38<br>(9.7)   | 3.16<br>(80.3) | 2.00<br>(50.8) | 6.03<br>(153.2) | .75<br>(19.1)  | .62<br>(15.7)  | 4.76<br>(120.9) | 1.75<br>(44.5) |               |

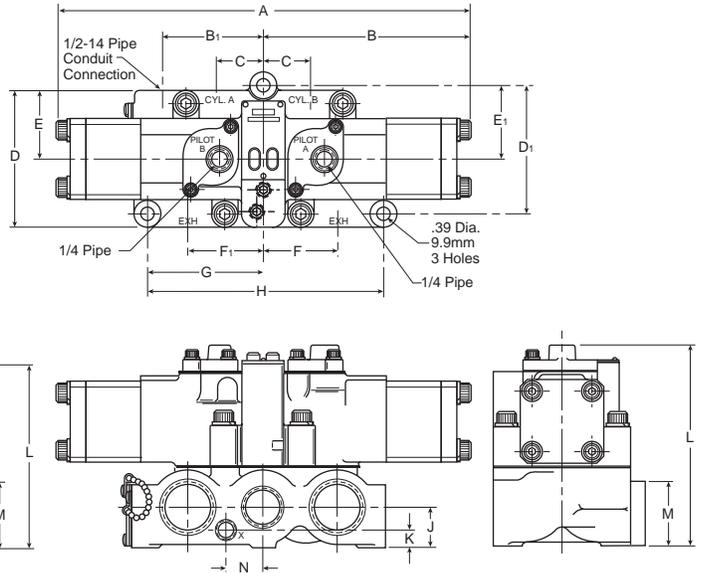
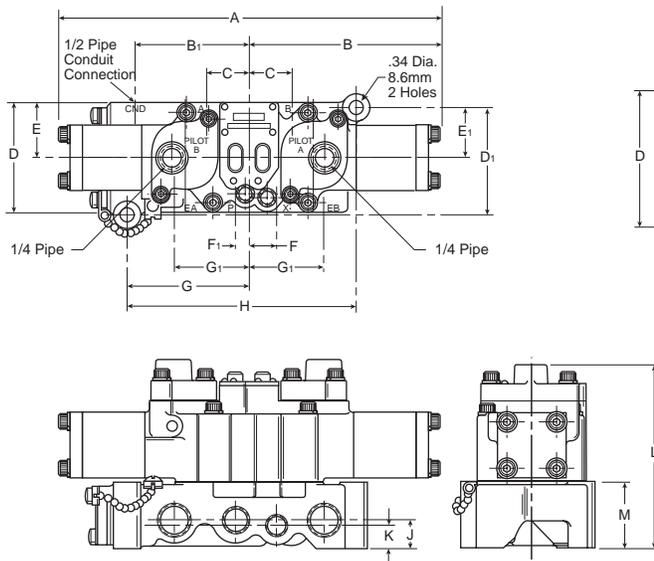
Inches (mm)

**L6548 1" Dimensions, Double Remote Pilot**

| A               | B               | B <sub>1</sub>  | C              | D               | D <sub>1</sub>  | E              | E <sub>1</sub> | F              |
|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| 9.50<br>(241.3) | 4.75<br>(120.6) | 3.38<br>(85.8)  | 1.53<br>(38.9) | 4.56<br>(115.8) | 4.28<br>(108.7) | 2.28<br>(57.9) | 2.44<br>(62)   | 2.45<br>(62.2) |
| F <sub>1</sub>  | G               | H               | J              | K               | L               | M              | N              |                |
| 2.46<br>(62.5)  | 3.81<br>(96.8)  | 7.62<br>(193.5) | 1.31<br>(33.3) | .59<br>(15)     | 6.57<br>(166.9) | 2.09<br>(53.1) | 1.22<br>(31)   |                |

Inches (mm)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



**L6643 3/8" Dimensions, 3-Position, Remote Pilot**

| A               | B               | B <sub>1</sub> | C               | D              | D <sub>1</sub> | E               | E <sub>1</sub> | F             |
|-----------------|-----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|---------------|
| 9.64<br>(244.8) | 4.82<br>(122.4) | 2.94<br>(74.7) | 1.12<br>(28.4)  | 2.88<br>(73.2) | 2.84<br>(72.1) | 1.44<br>(36.6)  | 1.34<br>(34)   | .75<br>(19.1) |
| F <sub>1</sub>  | G               | G <sub>1</sub> | H               | J              | K              | L               | M              |               |
| .38<br>(9.7)    | 3.16<br>(80.3)  | 2.00<br>(50.8) | 6.03<br>(153.2) | .75<br>(19.1)  | .62<br>(15.7)  | 4.76<br>(120.9) | 1.75<br>(44.5) |               |

Inches (mm)

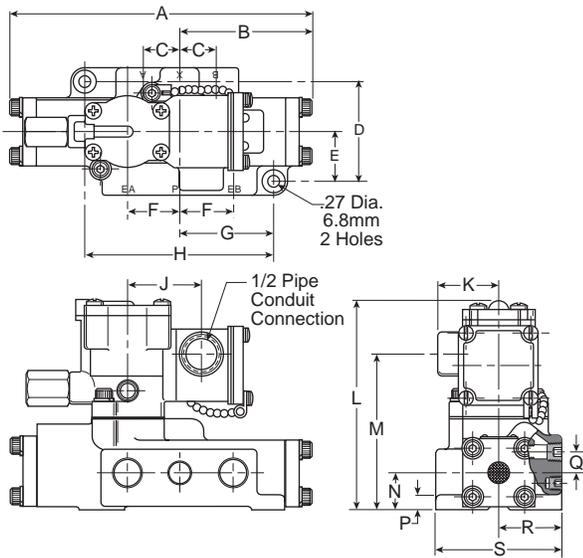
**L6648 1" Dimensions, 3-Position, Remote Pilot**

| A                | B              | B <sub>1</sub>  | C              | D               | D <sub>1</sub>  | E              | E <sub>1</sub> | F              |
|------------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|----------------|----------------|
| 13.62<br>(345.9) | 6.81<br>(173)  | 3.38<br>(85.8)  | 1.53<br>(38.9) | 4.56<br>(115.8) | 4.28<br>(108.7) | 2.28<br>(57.9) | 2.44<br>(62)   | 2.45<br>(62.2) |
| F <sub>1</sub>   | G              | H               | J              | K               | L               | M              | N              |                |
| 2.46<br>(62.5)   | 3.81<br>(96.8) | 7.62<br>(193.5) | 1.31<br>(33.3) | .59<br>(15)     | 6.57<br>(166.8) | 2.09<br>(53.1) | 1.22<br>(31)   |                |

Inches (mm)



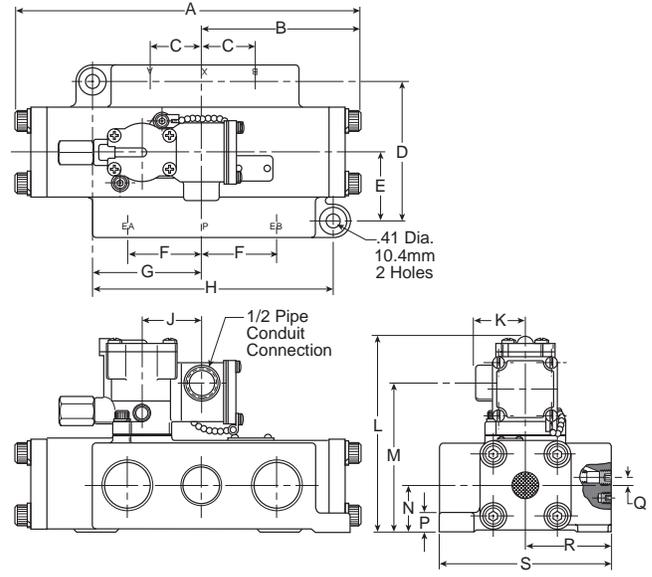
For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)



**L705 3/8" Dimensions, Single Solenoid**

| A      | B       | C      | D      | E      | F      | G      | H       | J      |
|--------|---------|--------|--------|--------|--------|--------|---------|--------|
| 7.56   | 3.32    | .90    | 2.56   | 1.28   | 1.33   | 2.34   | 4.69    | 1.82   |
| (192)  | (84.3)  | (22.9) | (65)   | (32.5) | (33.8) | (59.4) | (119.1) | (46.2) |
| K      | L       | M      | N      | P      | Q      | R      | S       |        |
| 1.50   | 5.35    | 3.91   | .94    | .38    | .53    | 1.62   | 3.25    |        |
| (38.1) | (135.9) | (99.3) | (23.9) | (9.7)  | (13.5) | (41.1) | (82.6)  |        |

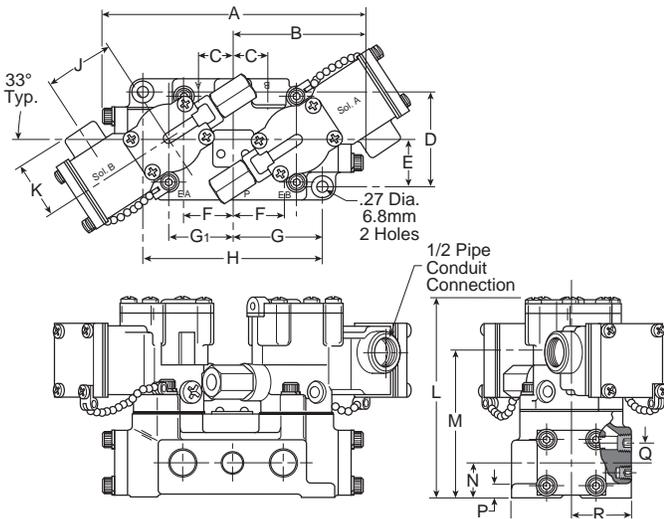
Inches (mm)



**L705 1" Dimensions, Single Solenoid**

| A       | B       | C       | D      | E      | F      | G      | H       | J      |
|---------|---------|---------|--------|--------|--------|--------|---------|--------|
| 10.46   | 4.75    | 1.62    | 4.25   | 2.12   | 2.19   | 3.44   | 7.44    | 1.82   |
| (265.7) | (120.6) | (41.1)  | (108)  | (53.8) | (55.6) | (87.4) | (189)   | (46.2) |
| K       | L       | M       | N      | P      | Q      | R      | S       |        |
| 1.50    | 6.44    | 4.95    | 1.50   | .69    | .20    | 2.62   | 5.25    |        |
| (38.1)  | (163.6) | (125.7) | (38.1) | (17.5) | (5.1)  | (66.5) | (133.4) |        |

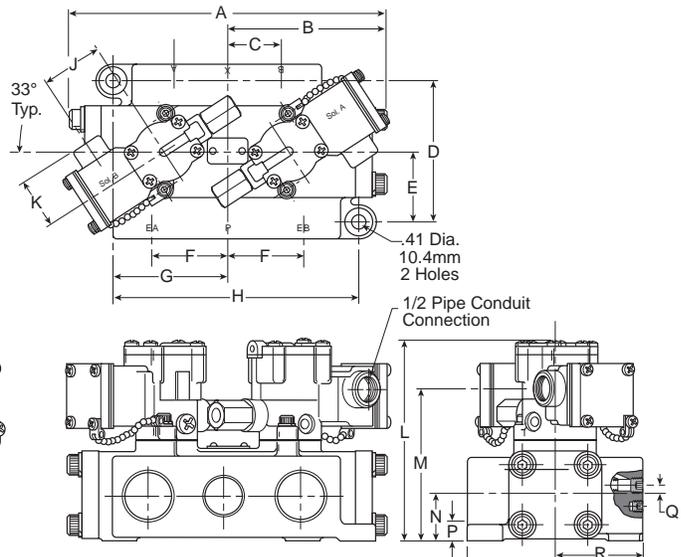
Inches (mm)



**L685 3/8" Dimensions, Double Solenoid**

| A      | B      | C       | D      | E      | F      | G      | G <sub>1</sub> | H       |
|--------|--------|---------|--------|--------|--------|--------|----------------|---------|
| 7.56   | 3.32   | .90     | 2.56   | 1.28   | 1.33   | 2.34   | 1.66           | 4.69    |
| (192)  | (84.3) | (22.9)  | (65)   | (32.5) | (33.8) | (59.4) | (42.4)         | (119.1) |
| J      | K      | L       | M      | N      | P      | Q      | R              | S       |
| 1.82   | 1.50   | 5.35    | 3.91   | .94    | .38    | .53    | 1.62           | 3.25    |
| (46.2) | (38.1) | (135.9) | (99.3) | (23.9) | (9.7)  | (13.5) | (41.1)         | (82.6)  |

Inches (mm)



**L685 1" Dimensions, Double Solenoid**

| A       | B       | C       | D      | E      | F      | G      | H       | J      |
|---------|---------|---------|--------|--------|--------|--------|---------|--------|
| 9.50    | 4.75    | 1.62    | 4.25   | 2.12   | 2.19   | 3.44   | 7.44    | 1.82   |
| (241.3) | (120.6) | (41.1)  | (108)  | (53.8) | (55.6) | (87.4) | (189)   | (46.2) |
| K       | L       | M       | N      | P      | Q      | R      | S       |        |
| 1.50    | 6.44    | 4.95    | 1.50   | .69    | .20    | 2.62   | 5.25    |        |
| (38.1)  | (163.6) | (125.7) | (38.1) | (17.5) | (5.1)  | (66.5) | (133.4) |        |

Inches (mm)



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**D**

**Subbase & Manual Valves**

**H Series Micro**

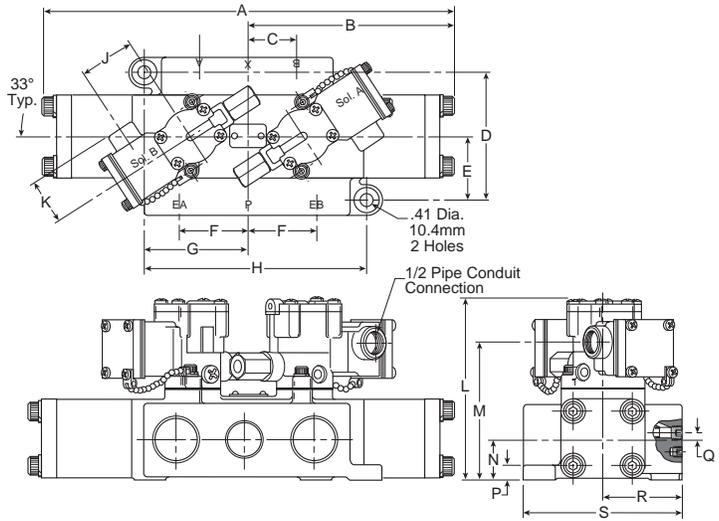
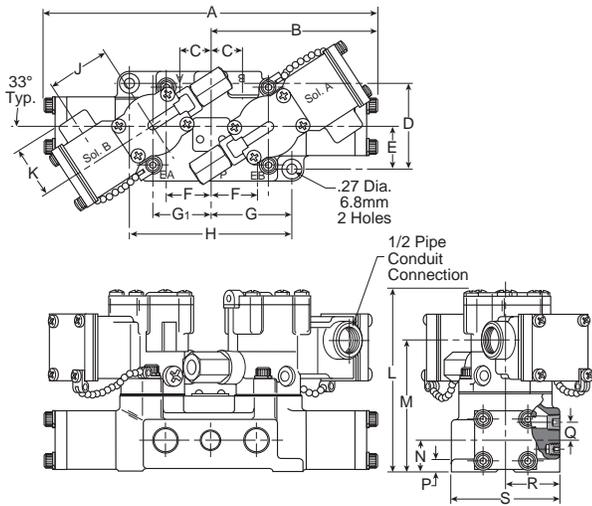
**Modulflex Series**

**H Series ISO**

**Network Connectivity**

**DX ISOMAX Series**

**Valvair II Series**



**L695 3/8" Dimensions, 3-Position Double Solenoid**

| A       | B       | C       | D      | E      | F      | G      | G <sub>1</sub> | H       |
|---------|---------|---------|--------|--------|--------|--------|----------------|---------|
| 9.64    | 4.82    | .90     | 2.56   | 1.28   | 1.33   | 2.34   | 1.66           | 4.69    |
| (244.8) | (122.4) | (22.9)  | (65)   | (32.5) | (33.8) | (59.4) | (42.4)         | (119.1) |
| J       | K       | L       | M      | N      | P      | Q      | R              | S       |
| 1.82    | 1.50    | 5.35    | 3.91   | .94    | .38    | .53    | 1.62           | 3.25    |
| (46.2)  | (38.1)  | (135.9) | (99.3) | (23.9) | (9.7)  | (13.5) | (41.1)         | (82.6)  |

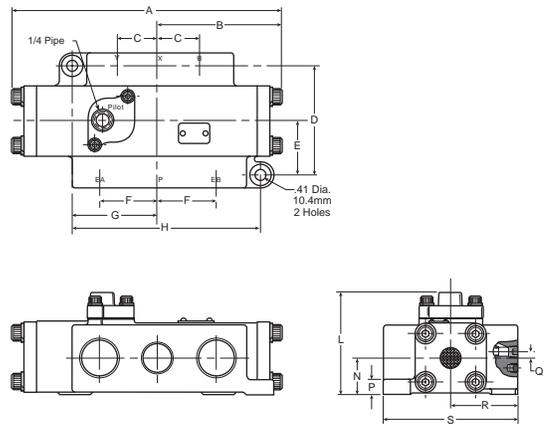
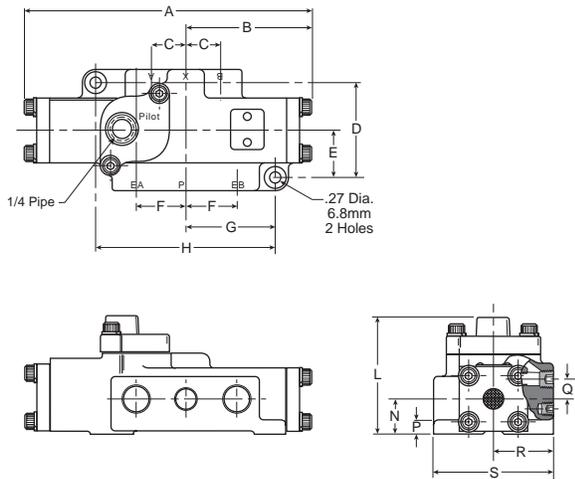
Inches (mm)

**L695 1" Dimensions, 3-Position, Double Solenoid**

| A       | B       | C       | D      | E      | F      | G      | H       | J      |
|---------|---------|---------|--------|--------|--------|--------|---------|--------|
| 13.63   | 6.81    | 1.62    | 4.25   | 2.12   | 2.19   | 3.44   | 7.44    | 1.82   |
| (346.2) | (173)   | (41.1)  | (108)  | (53.8) | (55.6) | (87.4) | (189)   | (46.2) |
| K       | L       | M       | N      | P      | Q      | R      | S       |        |
| 1.50    | 6.44    | 4.95    | 1.50   | .69    | .20    | 2.62   | 5.25    |        |
| (38.1)  | (163.6) | (125.7) | (38.1) | (17.5) | (5.1)  | (66.5) | (133.4) |        |

Inches (mm)

**D**  
 Subbase & Manual Valves  
 H Series Micro  
 Modulflex Series  
 H Series ISO  
 Network Connectivity  
 DX ISOMAX Series  
 Valvair II Series



**L704 3/8" Dimensions, Single Remote Pilot**

| A      | B      | C      | D      | E      | F      | G      | H       | L      |
|--------|--------|--------|--------|--------|--------|--------|---------|--------|
| 7.56   | 3.32   | .90    | 2.56   | 1.28   | 1.33   | 2.34   | 4.69    | 3.18   |
| (192)  | (84.3) | (22.9) | (65)   | (32.5) | (33.8) | (59.4) | (119.1) | (80.8) |
| N      | P      | Q      | R      | S      |        |        |         |        |
| .94    | .38    | .53    | 1.62   | 3.25   |        |        |         |        |
| (23.9) | (9.7)  | (13.5) | (41.1) | (82.6) |        |        |         |        |

Inches (mm)

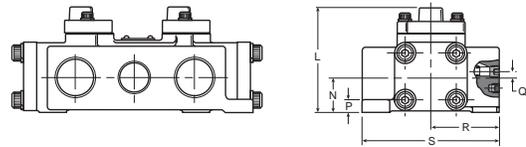
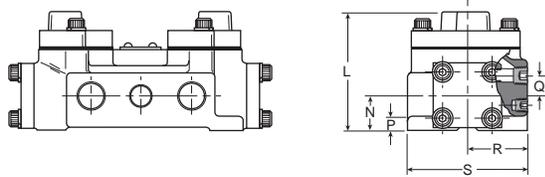
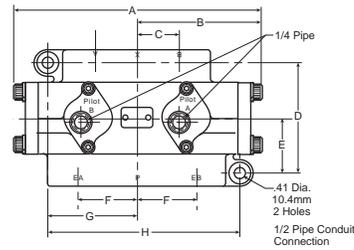
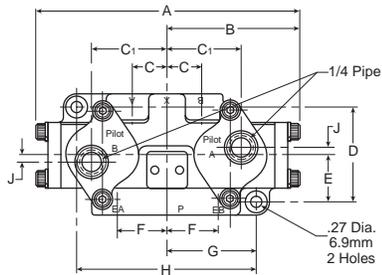
**L704 1" Dimensions, Single Remote Pilot**

| A       | B       | C      | D      | E       | F      | G      | H     | L       |
|---------|---------|--------|--------|---------|--------|--------|-------|---------|
| 10.46   | 4.75    | 1.62   | 4.25   | 2.12    | 2.19   | 3.44   | 7.44  | 4.09    |
| (265.7) | (120.6) | (41.1) | (108)  | (53.8)  | (55.6) | (87.4) | (189) | (103.9) |
| N       | P       | Q      | R      | S       |        |        |       |         |
| 1.50    | .69     | .20    | 2.62   | 5.25    |        |        |       |         |
| (38.1)  | (17.5)  | (5.1)  | (66.5) | (133.4) |        |        |       |         |

Inches (mm)



For inventory, lead times, and kit lookup, visit [www.pdnplu.com](http://www.pdnplu.com)



**L684 3/8" Dimensions, Double Remote Pilot**

| A       | B      | C      | C <sub>1</sub> | D    | E      | F      | G      | H       |
|---------|--------|--------|----------------|------|--------|--------|--------|---------|
| 6.64    | 3.32   | .90    | 1.98           | 2.56 | 1.28   | 1.33   | 2.34   | 4.69    |
| (168.7) | (84.3) | (22.9) | (50.3)         | (65) | (32.5) | (33.8) | (59.4) | (119.1) |

| J     | L      | N      | P     | Q      | R      | S      |
|-------|--------|--------|-------|--------|--------|--------|
| .22   | 3.05   | .94    | .38   | .53    | 1.62   | 3.25   |
| (5.6) | (77.5) | (23.9) | (9.7) | (13.5) | (41.1) | (82.6) |

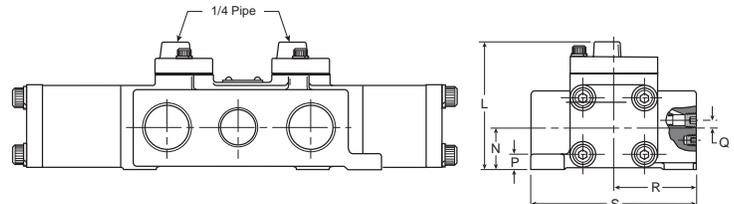
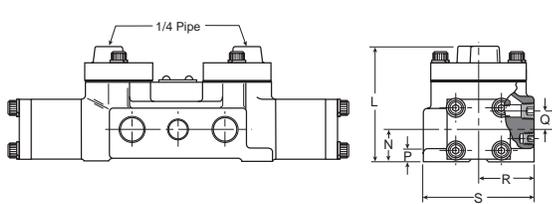
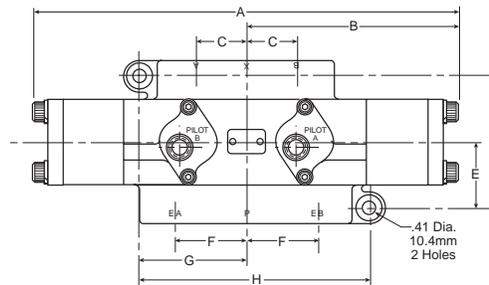
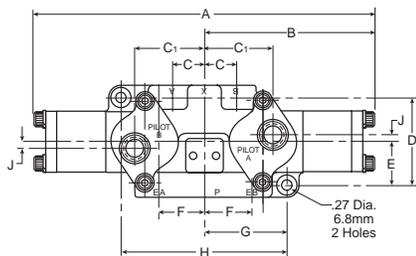
Inches (mm)

**L684 1" Dimensions, Double Remote Pilot**

| A       | B       | C      | D     | E      | F      | G      | H     | L       |
|---------|---------|--------|-------|--------|--------|--------|-------|---------|
| 9.50    | 4.75    | 1.62   | 4.25  | 2.12   | 2.19   | 3.44   | 7.44  | 4.09    |
| (241.3) | (120.6) | (41.1) | (108) | (53.8) | (55.6) | (87.4) | (189) | (103.9) |

| N      | P      | Q     | R      | S       |
|--------|--------|-------|--------|---------|
| 1.50   | .69    | .20   | 2.62   | 5.25    |
| (38.1) | (17.5) | (5.1) | (66.5) | (133.4) |

Inches (mm)



**L694 3/8" Dimensions, 3-Position, Double Remote Pilot**

| A       | B       | C      | C <sub>1</sub> | D    | E      | F      | G      | H       |
|---------|---------|--------|----------------|------|--------|--------|--------|---------|
| 9.64    | 4.82    | .90    | 1.98           | 2.56 | 1.28   | 1.33   | 2.34   | 4.69    |
| (244.8) | (122.4) | (22.9) | (50.3)         | (65) | (32.5) | (33.8) | (59.4) | (119.1) |

| J     | L      | N      | P     | Q      | R      | S      |
|-------|--------|--------|-------|--------|--------|--------|
| .22   | 3.05   | .94    | .38   | .53    | 1.62   | 3.25   |
| (5.6) | (77.5) | (23.9) | (9.7) | (13.5) | (41.1) | (82.6) |

Inches (mm)

**L694 1" Dimensions, 3-Position, Double Remote Pilot**

| A       | B     | C      | D     | E      | F      | G      | H     | L       |
|---------|-------|--------|-------|--------|--------|--------|-------|---------|
| 13.63   | 6.81  | 1.62   | 4.25  | 2.12   | 2.19   | 3.44   | 7.44  | 6.44    |
| (346.2) | (173) | (41.1) | (108) | (53.8) | (55.6) | (87.4) | (189) | (163.6) |

| N      | P      | Q     | R      | S       |
|--------|--------|-------|--------|---------|
| 1.50   | .69    | .20   | 2.62   | 5.25    |
| (38.1) | (17.5) | (5.1) | (66.5) | (133.4) |

Inches (mm)



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**D**

Subbase & Manual Valves

H Series Micro

Modulflex Series

H Series ISO

Network Connectivity

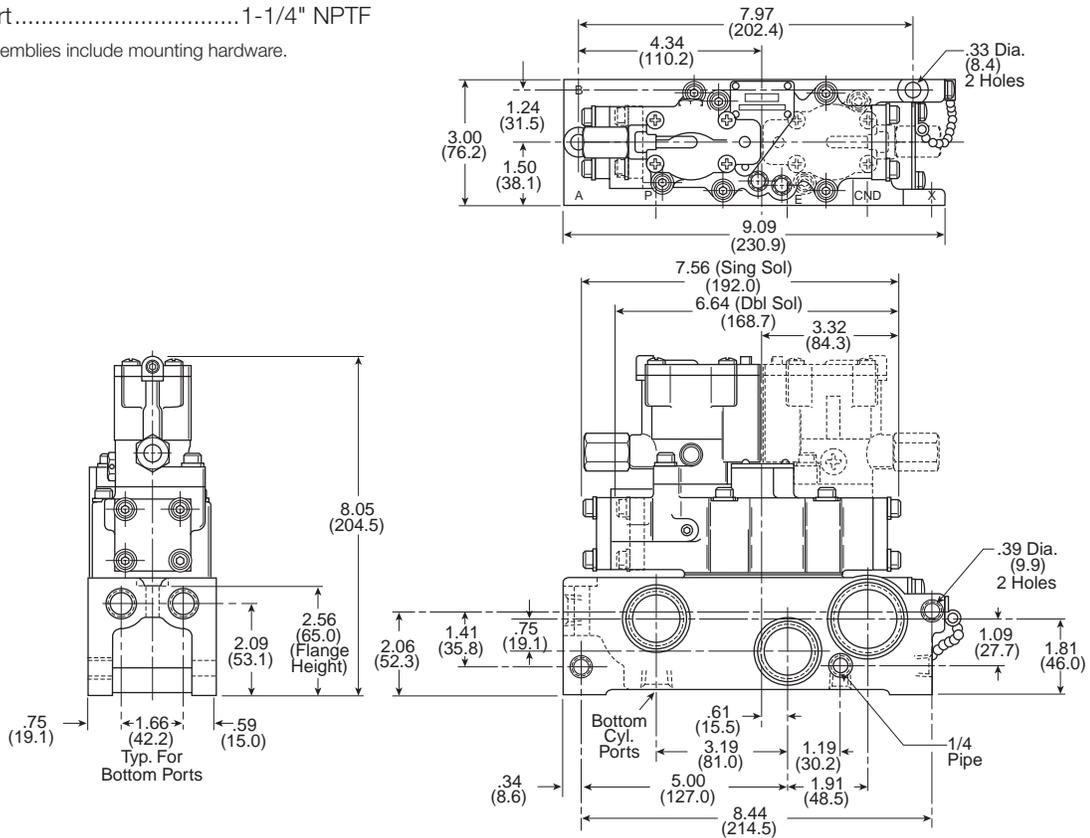
DX ISOMAX Series

Valvair II Series

**Plug-in Manifold, 3/8" Basic**

- K142230 .....Cylinder ports 3/8" NPTF
- K142231 .....Cylinder ports 1/2" NPTF
- K142270 .....Cylinder ports 3/4" NPTF
- Exhaust port..... 1" NPTF
- Inlet port..... 1" NPTF
- Conduit port..... 1-1/4" NPTF

**Note:** Manifold assemblies include mounting hardware.



|                  |                         |
|------------------|-------------------------|
| D                | Subbase & Manual Valves |
| H Series Micro   | Modulflex Series        |
| H Series ISO     | Network Connectivity    |
| DX ISOMAX Series | Valvair II Series       |



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