Operating information

Operating pressure:

Valve number

HMEVX2049A

HM2VX2049A

HM5VX2049A

HMNVX2049A

HMPVX2049A

HMQVX2049A

3-position

pressure center

center valve is now

A traditional 5/3 pressure

replaced by a double 3/2

NO+NO valve module.

The function is identical.

Temperature range:

Pilot pressure requirements:

Isys Micro Series

The Isys 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

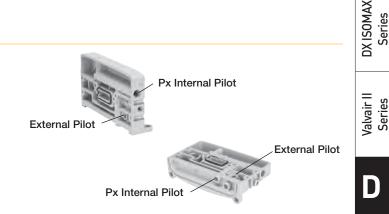
Material specifications

| Polyamide reinforced fiberglass | |
|---------------------------------|--|
| Aluminum | |
| Zinc plated steel | |
| Aluminum | |
| Brass and nitrile rubber | |
| Brass | |
| | |

Pilot configuration

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 inside of the right hand end plate and replacing it with a fitting allows an external pilot to be used.

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 inside of the right hand end plate and replacing it with a fitting allows an external pilot to be used.



Minimum pilot

pressure

40 PSI

25 PSI

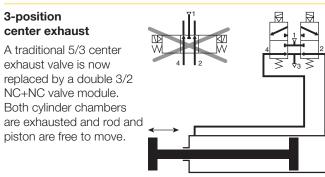
45 PSI

40 PSI

40 PSI

40 PSI

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



Most popular.



Parker Hannifin Corporation Pneumatic Division Richland, Michigan www.parker.com/pneumatics

| Moduflex Series |
|--------------------|
|--------------------|

Fieldbus

pressure

120 PSI

120 PSI

120 PSI

120 PSI

120 PSI

120 PSI

5°F to 120°F (-15°C to 49°C)

Subbase & Manifold Valve Products

Valve Products Isys Micro Series

Isys Micro Valves

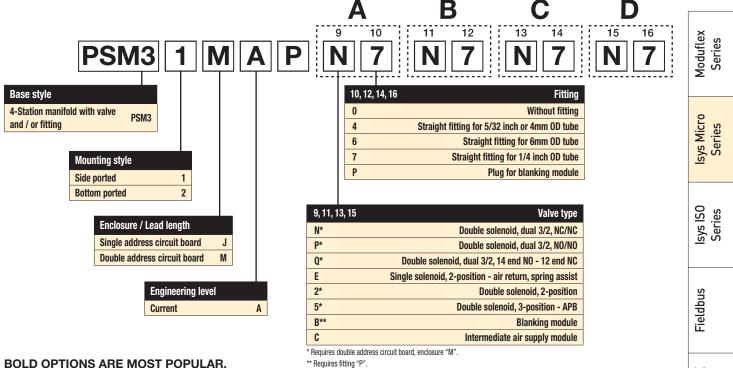
| | | Symbol | Туре | | Cv | Operator | Part number |
|--------------------------------------|---|--|----------------|------------------------|------|-----------------|----------------------|
|] | | | 4-way, 2-posit | ion | 0.35 | Single solenoid | HMEVX2049A |
| ې Mo | | | 4-way, 2-posit | ion | 0.35 | Double solenoid | HM2VX2049A |
| Moduflex Series | | | 4-way, 3-posit | ion, all ports blocked | 0.3 | Double solenoid | HM5VX2049A |
| × | **** | | 3-way, 2-posit | ion, dual valve, NC/NC | 0.35 | Double solenoid | HMNVX2049A |
| (sl | | | 3-way, 2-posit | ion, dual valve, NO/NO | 0.35 | Double solenoid | HMPVX2049A |
| Isys Micro Series | | | 3-way, 2-posit | ion, dual valve, NO/NC | 0.35 | Double solenoid | HMQVX2049A |
| 10 | | | Blanking plate | | N/A | N/A | HMBVX00XXA |
| Isys ISO Series | (Fr. | | Intermediate a | ir supply | N/A | N/A | HMCVX00XXA |
| s SO | Manifold Bases | | | | | | |
| | | | | Part numbers | | | |
| Fiel | Plug-in valve manifolds Single solenoid outputs only | V | and l | Side port PSM21JAP | | | Bottom port PSM22JAP |
| Fieldbus | | | July - | | _ | | |
| 0, | Double or single solenoid or | utputs | 100 | PSM21MAP | _ | 40 | PSM22MAP |
| | Internal Pilot End | Plate Kits | | | | | |
| DX ISOMAX Series | | Electrical option | | Porting | | Side port | Bottom port |
| IAX s | | 25-pin, D-sub | | NPT | | PSML25AP | PSML26AP |
| | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 20-pin, D-300 | | BSPP | | PSML21AP | PSML22AP |
| Valvair II Series | | Turck fieldbus with valve | driver module | | | PSMT15AP | PSMT16AP |
| ir II | | 16 outputs | | BSPP | | PSMT11AP | PSMT12AP |
| | and the second se | Turck fieldbus with valve | driver module | NPT | | PSMT25AP | PSMT26AP |
| D | | 32 outputs | | BSPP | | PSMT21AP | PSMT22AP |
| | | Moduflex 16 outputs | | NPT | | PSMM45AP | PSMM46AP |
| Subba Valve | · · | | | BSPP | | PSMM41AP | PSMM42AP |
| Subbase & Mar Valve Products | | Isysnet with valve driver r | module | NPT | | PSML65AP | PSML66AP |
| Subbase & Manifold Valve Products | a set | | | BSPP | | PSML61AP | PSML62AP |
| ifold | | Isysnet with valve driver r | | NPT | | PSMM55AP | PSMM56AP |
| | and the | bus extension connector | - | BSPP | | PSMM51AP | PSMM52AP |
| | | Isysnet with valve driver r | module and | NPT | | PSMM65AP | PSMM66AP |
| | and the | 24VDC connector | | BSPP | | PSMM61AP | PSMM62AP |
| | | lsysnet with valve driver r bus extension connector | | NPT | | PSMM75AP | PSMM76AP |
| | see the | 24VDC connector | | BSPP | | PSMM71AP | PSMM72AP |



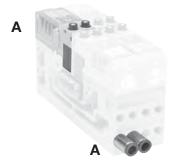
Parker Hannifin Corporation Pneumatic Division Richland, Michigan www.parker.com/pneumatics

Simple Manifold Assemblies

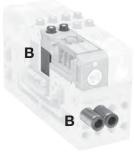
Includes a valve manifold with 4 valves and fittings installed. End Plates must be ordered separately.



BOLD OPTIONS ARE MOST POPULAR.



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



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

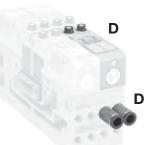




D115



С



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

> Parker Hannifin Corporation Pneumatic Division Richland, Michigan www.parker.com/pneumatics

Subbase & Manifold Valve Products

D

DX ISOMAX Series

Valvair II Series

Moduflex Series

Isys Micro Series

Isys ISO Series

Fieldbus

DX ISOMAX

Series

Valvair I Series

Subbase & Manifold Valve Products

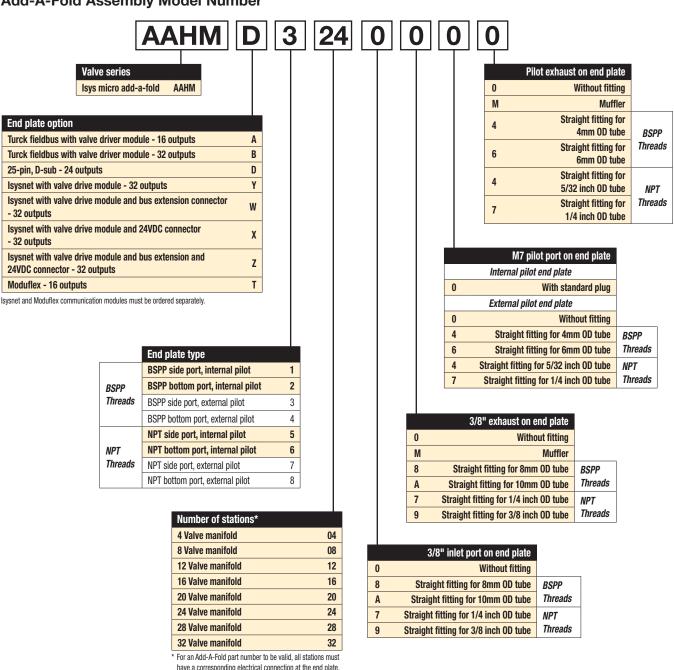
How To Order Plug-in Add-A-Fold Assemblies

- 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)

| | | | | Turck | |
|-------|-----------------|----------|----------|---------------|---------------|
| | 25-pin D-sub | Moduflex | lsysnet* | 16 Outputs | 32 Outputs |
| 24VDC | 24 (24) | 16 (16) | 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

Note:

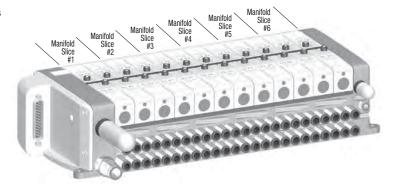
BSPP fittings can only be used with BSPP Manifolds. NPT fittings can only be used with NPT Manifolds.



See Maximum Number of Solenoids chart.

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 | AAHMD5249M0M |
| 02 | 6 | 4 valve simple manifold slices #1-6 | PSM31JAPE7E7E7E7 |

Component Level

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

Sandwich Regulator

| | Description | Kit number |
|-----|---|------------|
| E C | Common port regulator, 5 to 125 PSI with gauge | PSMRAX6AP |

Note: 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.

Note: The sandwich regulator passes full pilot pressure from the manifold, allowing the regulated pressure to adjusted down to 5 PSI without affecting valve functionality.

Mufflers

| | Description | Part number |
|---|---|-------------|
| | 1/8" pilot exhaust – BSPP or NPT | P6M-PAB1 |
| | 3/8" main exhaust – BSPP or NPT | P6M-PAB3 |
| ļ | M7 bottom port pilot exhaust (must be ordered in multiples of 10) | PS568800 |

Flow Controls

| | Description | Kit number |
|--------------|---|------------|
| 805- | 4mm to 4mm or 5/32" to 5/32" OD tube | FC800-5/32 |
| and a second | 1/4" to 1/4" O.D. tube | FC800-4 |

25-pin, D-Sub Cable (Female)

| Description | Length | Part number |
|---------------------------|----------|-------------|
| 25-pin, D-sub cable, IP20 | 3 meters | P8LMH25M3A |
| 25-pin, D-sub cable, IP20 | 9 meters | SCD259D |
| 25-pin, D-sub cable, IP65 | 3 meters | SCD253W |
| 25-pin, D-sub cable, IP65 | 9 meters | SCD259WE |

Fittings – Must be ordered in mu

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



Pneumatic Division Richland, Michigan www.parker.com/pneumatics

| 0 11101010 | |
|-------------|----|
| ultiples of | 10 |
| 0.D. | Ра |

Moduflex Series

Isys Micro Series

lsys ISO Series

Fieldbus

DX ISOMAX Series

Valvair II Series

D



Multiple Pressure Zones

PSM0001 -

Moduflex Series

Isys Micro Series

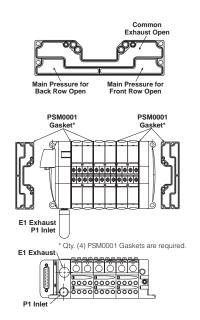
Isys ISO Series

Fieldbus

DX ISOMAX Series

All ports open. Common pressure for front and rear manifold. Common exhausts.

Standard gasket included with each manifold and end plate.



PSM0003 -

Rear manifold blocked for separate pressure supply. Exhaust blocked also.

Flip gasket to block front of manifold.

Pressure

PSM0003 Intermediate

Air Supply

P2 Inlet

000

P2 Inlet

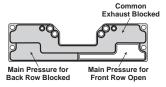
* Qty. (1) PSM0003 and Qty. (1) PSM0002 Gaskets are required. Remainder are PSM0001 Gaskets (Not shown)

ÖÖÖÖ 000 000

0000

P2 Zor

If used with bottom ported end plates, second exhaust must be piped from the side of the right end plate.



Internal Pilot Pressure from P1 Inlet

PSM0002

E1 Exhaust

E2 Exhaust

P1 Inlet

G

Exhaust

F2 Zon

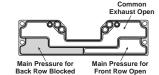
PSM0002

Gasket

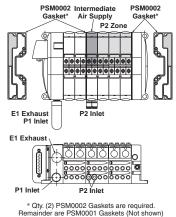
PSM0003 Gasket*

PSM0002 -

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



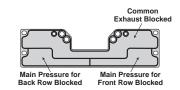
Internal Pilot Pressure from P1 Inlet



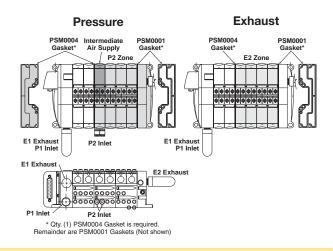
PSM0004 -

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.



Internal Pilot Pressure from P2 Inlet





E1 Exhaust P1 Inlet

E1 Exhaust

P1 Inlet

Valve Products Subbase & Manifold (Revised 01-05-16)

Manifold to Manifold Gaskets*

| Description | |
|--|---------|
| All galleys passing | PSM0001 |
| Main pressure to rear or front valves blocked, exhaust passing | PSM0002 |
| Main pressure to rear or front valves blocked, exhaust blocked | PSM0003 |
| All galleys blocked | PSM0004 |

* Includes 1 Gasket

Solenoid Kit

| | Description | Part number |
|----|-----------------------------------|-------------|
| | 24VDC solenoid kit with screws | PSM0010 |
| 03 | | |

Valve Products **Isys Micro Series**

Valve Labels*

| Description | Part number |
|---|-------------|
| Single solenoid diagram | PSM002E |
| Double solenoid diagram | PSM0022 |
| Double solenoid diagram – APB | PSM0025 |
| Double solenoid diagram – Dual 3/2 NC/NC | PSM002N |
| Double solenoid diagram – Dual 3/2 NO/NO | PSM002P |
| Double solenoid diagram – Dual 3/2, 14 end NO, 12 end NC | PSM002Q |
| *Includes 10 Labels. | |

Regulator Gauge

| | Description | Part number |
|--|--------------------|-------------|
| and the second s | 5 to 125 PSI Gauge | P0566202 |

Protective Cover

| | Description | Part number |
|----|-------------------------------|-------------|
| 20 | Protective Polyester Cover | PS5706 |
| | Set of 10 | |

Override Caps

| Description | Part number |
|-----------------------------------|-------------|
| Set of 10 manual override caps | PSM0011 |

Gaskets and Valve Screws

| Description | Part number |
|--|-------------|
| Set of 5 valve to manifold gaskets and 10 screws | PSM0012 |

Plugs

| | Description | Part number |
|---|--|-------------|
| • | Set of 10 M7 plugs (Part No. PS567900) for auxiliary and pilot pressure ports | PSM0013 |

Screws

| | Description | Part number |
|-------|--|-------------|
| やんんんん | Set of 10 manifold to manifold M3 screws | PSM0014 |

Valve power supply connector (As seen on module)



M12 Male (A coding) Pin 1 - 24 VDC valve 1 Pin 2 - Not connected

- Pin 3 0 VDC valve
- Pin 4 Not connected
- Pin 5 Protective Earth (PE)

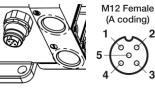
Local bus connector (As seen on module)

2

3

Ð

2



Pin 1 - CAN SHLD Pin 2 - CAN V+ (24 VDC) Pin 3 - CAN GND Pin 4 - CAN H Pin 5 - CAN L

Moduflex Series

lsys Micro Series



Parker Hannifin Corporation Pneumatic Division Richland, Michigan www.parker.com/pneumatics

Operating pressure:

Change-over time:

Single solenoid

Double solenoid

Single solenoid

Double solenoid

Flow (acc. to ISO 6358):

Operating pressure:

Change-over time:

Flow (acc. to ISO 6358):

Flow Characteristics

Dual 3/2

Moduflex Series

Isys Micro Series

Isys ISO Series

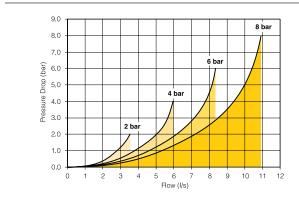
Fieldbus

DX ISOMAX

Series

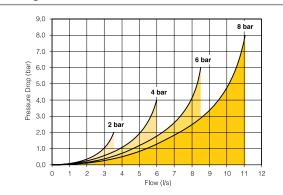
Valvair I Series

Subbase & Manifold Valve Products

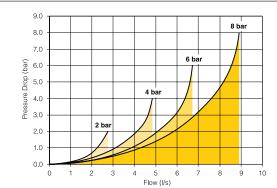


| Operating pressure: | 39 to 120.3 PSI (2.7 to 8.3 bar) |
|-----------------------------|--|
| Change-over time (side 14): | Actua. 15 ms Return 20 ms P = 6b |
| Change-over time (side 12): | 15 ms / 25 ms P = 6b |
| Flow (acc. to ISO 6358): | c = 1.2 NI/s x bar b = 0.13 Qn = 4.6 NI/s Qmax = 8.4 NI/s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

5/2 single and double solenoid



5/3 all ports blocked



Characteristics

Fluid:

Storage temperature: Working temperature: Vibration:

Shock:

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 104°F to 158°F (-40°C to 70°C) 5°F to 122°F (-15°C to 50°C) according to IEC 68-2-6 2G to 150 Hz according to IEC 68-2-27 15G 11 ms

Operating pressure:

Piloting pressure: Exhaust collection: Rated coil voltage: Electrical connection: Coil insulation: Power consumption: Duty factor:

-13 to 120.3 PSI (-0.9 to 8,3 bar) with external pressure 87 PSI (6 bar) 37 to 120.3 PSI (2.7 to 8.3 bar) Independant exhaust collection 24 VDC -15 % / +10 % Not polarized Class B 1 W (42 mA) with LED 100 % at 68°F (20°C)

39 to 120.3 PSI (2.7 to 8.3 bar)

39 to 120.3 PSI (2.7 to 8.3 bar)

Actua. 15 ms

Return 20 ms P = 6b

13 ms / 13 ms P = 6b

c = 1.2 NI/s x barb = 0.13

Qmax = 8.5 Nl/s

Qn = 4.7 Nl/s

Actua. 20 ms

c = 1 NI/s x bar

Qn = 3.8 Nl/s

Qmax = 6.7 Nl/s

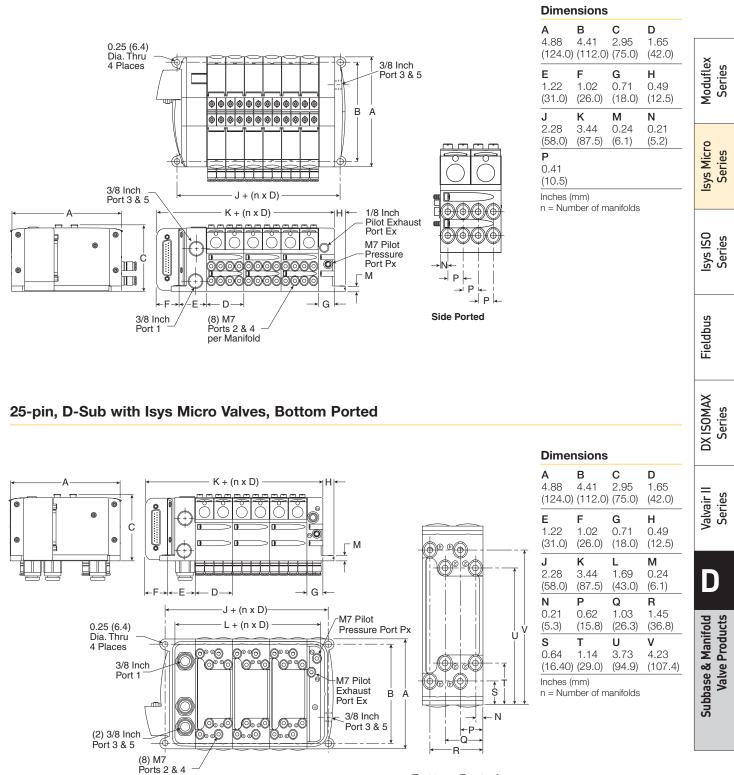
b = 0.14

Return 20 ms P = 6b

24.6 to 120.3 PSI (1.7 to 8.3 bar)



25-pin, D-Sub with Isys Micro Valves, Side Ported



Bottom Ported Detail

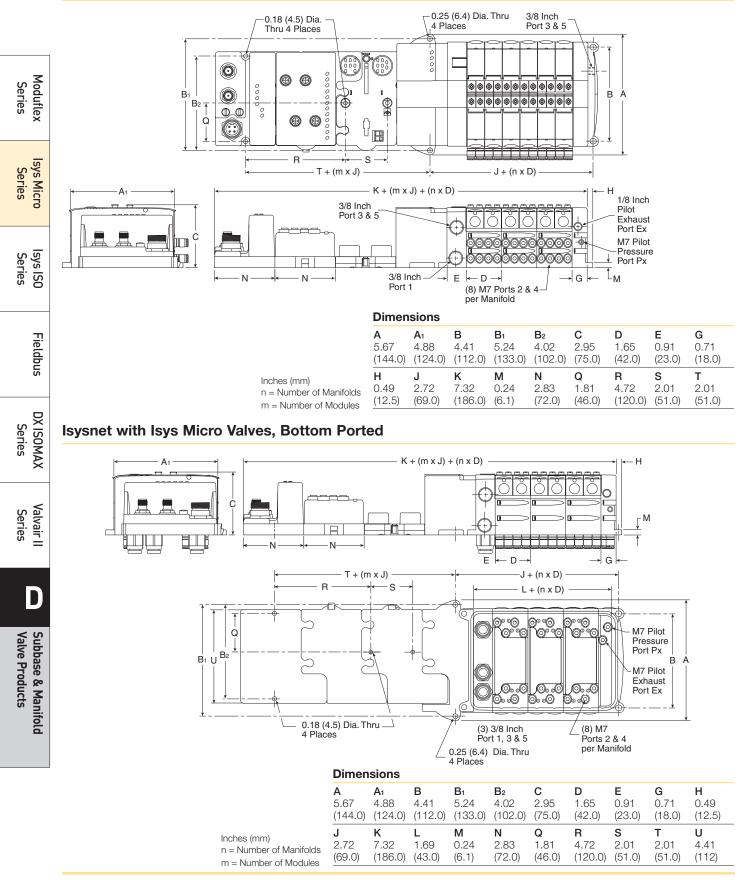
Note:

See Fieldbus Section for the dimensions of manifolds utilizing the Isysnet, Turck, or Moduflex end plate type.

per Manifold



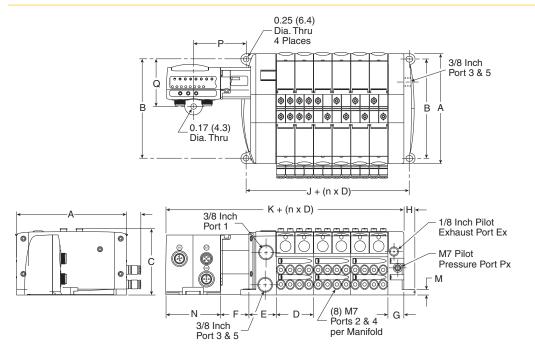
Isysnet with Isys Micro Valves, Side Ported





Parker Hannifin Corporation Pneumatic Division Richland, Michigan www.parker.com/pneumatics

Moduflex with Isys Micro Valves, Side Ported



| | B 4.41 (112.0) | | |
|----------------------------|-----------------------------|----------|--|
| | F 1.28 (32.5) | | |
| | K 6.10 (155.0) | | |
| P 2.36 (60.0) | Q 2.07 (52.55) | | |
| Inches (r n = Num | nm) Iber of mi | anifolds | |

Moduflex Series

lsys Micro Series

lsys ISO Series

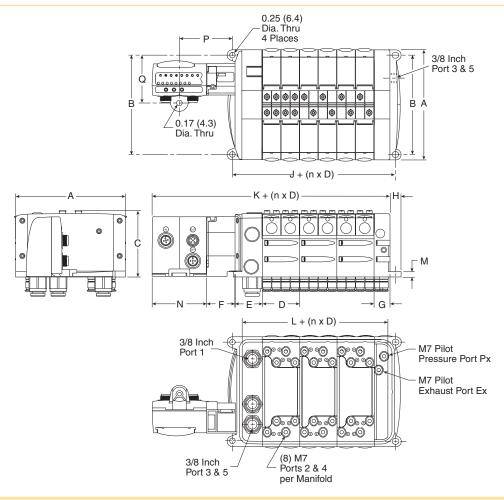
Fieldbus

DX ISOMAX Series

Valvair II Series

D

Moduflex with Isys Micro Valves, Bottom Ported



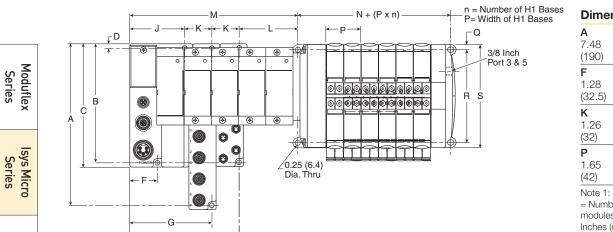
Dimensions

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



Turck with Isys Micro Valves, Side Ported

н



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

Note 1: M =J+L+n₂xK, where n₂ = Number of Turck input / output modules Inches (mm)

Isys ISO Series

Fieldbus

DX ISOMAX Series

Valvair II Series

