

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

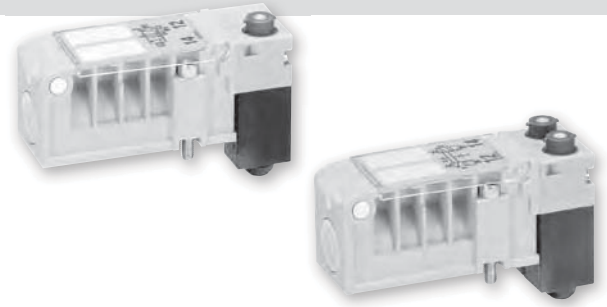
Material specifications

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



Operating information

Operating pressure: Vacuum to 145 PSIG (Vacuum to 10 bar)

Pilot pressure requirements:

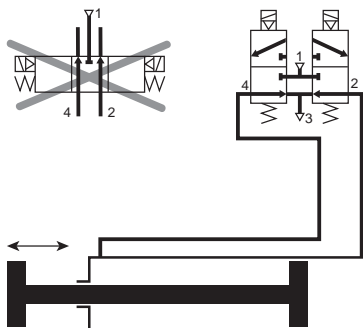
Valve number	Minimum pilot pressure	Maximum pilot pressure
HMEVX2049A	40 PSI	120 PSI
HM2VX2049A	25 PSI	120 PSI
HM5VX2049A	45 PSI	120 PSI
HMN VX2049A	40 PSI	120 PSI
HMPVX2049A	40 PSI	120 PSI
HMQVX2049A	40 PSI	120 PSI

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

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

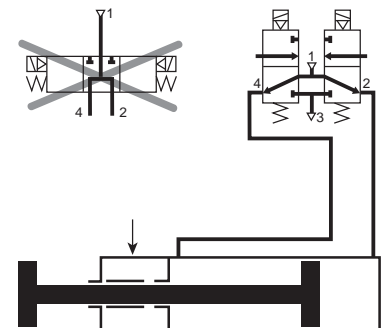
3-position center exhaust

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.



Most popular.

Modulflex Series

Isys Micro Series

Isys ISO Series

Fieldbus

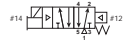
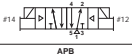
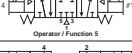
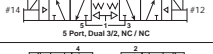
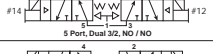



DX ISOMAX Series

Valvair II Series

D

Subbase & Manifold Valve Products

Isys Micro Valves









	Symbol	Type	Cv	Operator	Part number
Modulflex Series		4-way, 2-position	0.35	Single solenoid	HMEVX2049A
		4-way, 2-position	0.35	Double solenoid	HM2VX2049A
		4-way, 3-position, all ports blocked	0.3	Double solenoid	HM5VX2049A
Isys Micro Series		3-way, 2-position, dual valve, NC/NC	0.35	Double solenoid	HMNVX2049A
		3-way, 2-position, dual valve, NO/NO	0.35	Double solenoid	HMPVX2049A
		3-way, 2-position, dual valve, NO/NC	0.35	Double solenoid	HMQVX2049A
Isys ISO Series		Blanking plate	N/A	N/A	HMBVX00XXA
Isys ISO Series		Intermediate air supply	N/A	N/A	HMCVX00XXA

Manifold Bases

	Part numbers
Plug-in valve manifolds	
Single solenoid outputs only	PSM21JAP
Double or single solenoid outputs	PSM21MAP

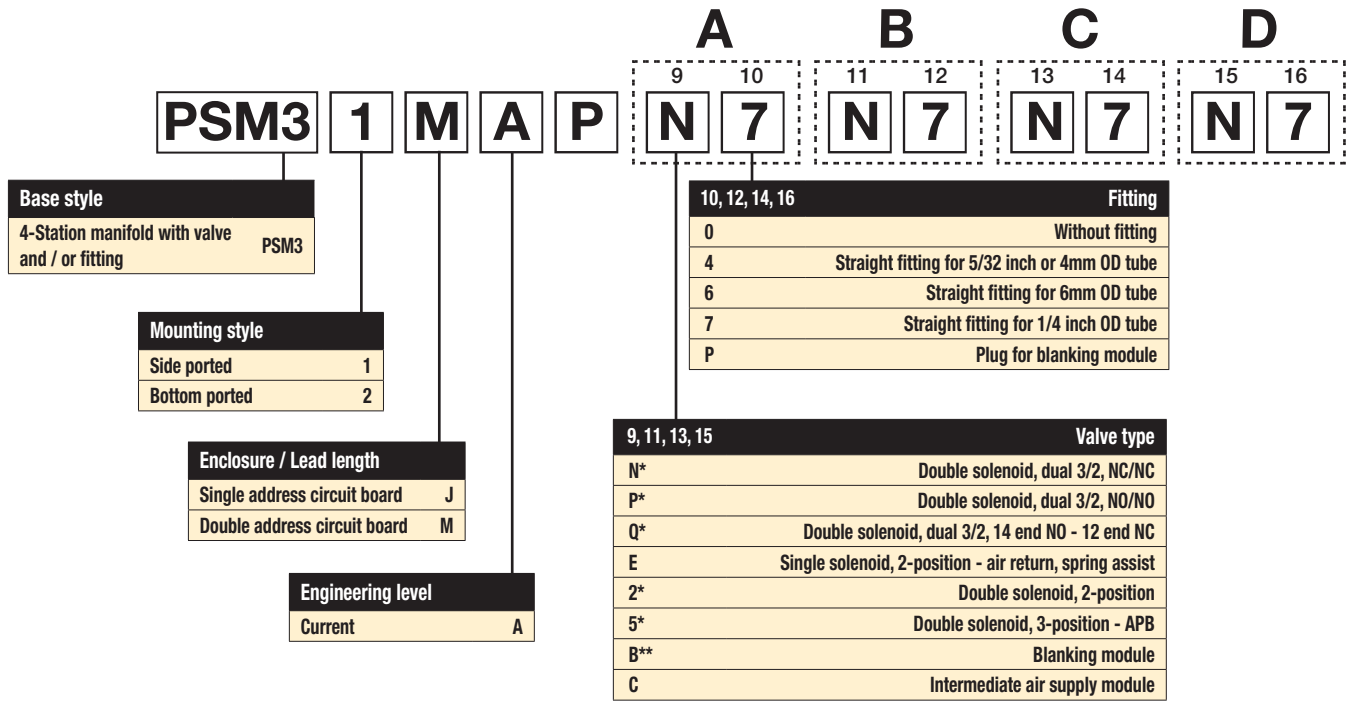


Internal Pilot End Plate Kits

	Electrical option	Porting	Side port	Bottom port
	25-pin, D-sub	NPT	PSML25AP	PSML26AP
		BSPP	PSML21AP	PSML22AP
	Turck fieldbus with valve driver module - 16 outputs	NPT	PSMT15AP	PSMT16AP
		BSPP	PSMT11AP	PSMT12AP
	Turck fieldbus with valve driver module - 32 outputs	NPT	PSMT25AP	PSMT26AP
		BSPP	PSMT21AP	PSMT22AP
	Modulflex 16 outputs	NPT	PSMM45AP	PSMM46AP
		BSPP	PSMM41AP	PSMM42AP
	Isysnet with valve driver module	NPT	PSML65AP	PSML66AP
		BSPP	PSML61AP	PSML62AP
	Isysnet with valve driver module and bus extension connector	NPT	PSMM55AP	PSMM56AP
		BSPP	PSMM51AP	PSMM52AP
	Isysnet with valve driver module and 24VDC connector	NPT	PSMM65AP	PSMM66AP
		BSPP	PSMM61AP	PSMM62AP
	Isysnet with valve driver module, bus extension connector and 24VDC connector	NPT	PSMM75AP	PSMM76AP
		BSPP	PSMM71AP	PSMM72AP

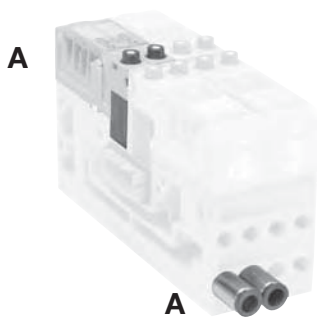
Simple Manifold Assemblies

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

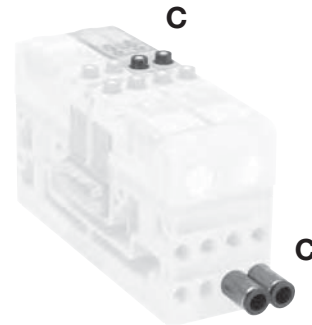


BOLD OPTIONS ARE MOST POPULAR.

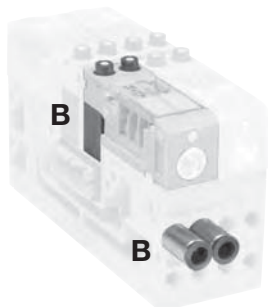
* Requires double address circuit board, enclosure "M".
 ** Requires fitting "P".



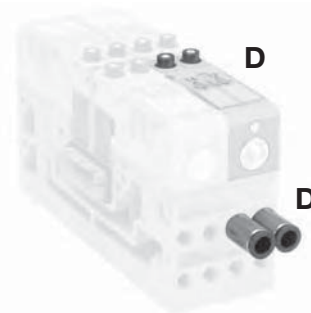
Valve Position A - Character 9
 Fitting Position A - Character 10



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

Modulflex Series
Isys Micro Series
Isys ISO Series
Fieldbus
DX ISOMAX Series
Valvair II Series
D
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)

24VDC	25-pin D-sub	Moduflex	Isysnet*	Turck	
				16 Outputs	32 Outputs
	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

AAHM D 3 24 0 0 0 0

Valve series	
Isys 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
Isysnet with valve drive module - 32 outputs	Y
Isysnet with valve drive module and bus extension connector - 32 outputs	W
Isysnet with valve drive module and 24VDC connector - 32 outputs	X
Isysnet with valve drive module and bus extension and 24VDC connector - 32 outputs	Z
Moduflex - 16 outputs	T

Isysnet and Moduflex communication modules must be ordered separately.

End plate type		
BSPP Threads	BSPP side port, internal pilot	1
	BSPP bottom port, internal pilot	2
	BSPP side port, external pilot	3
	BSPP bottom port, external pilot	4
NPT Threads	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 stations must have a corresponding electrical connection at the end plate. See Maximum Number of Solenoids chart.

Pilot exhaust on end plate		
0	Without fitting	
M	Muffler	
4	Straight fitting for 4mm OD tube	BSPP Threads
6	Straight fitting for 6mm OD tube	
4	Straight fitting for 5/32 inch OD tube	NPT Threads
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	BSPP Threads
6	Straight fitting for 6mm OD tube	
4	Straight fitting for 5/32 inch OD tube	NPT Threads
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	BSPP Threads
A	Straight fitting for 10mm OD tube	
7	Straight fitting for 1/4 inch OD tube	NPT Threads
9	Straight fitting for 3/8 inch OD tube	

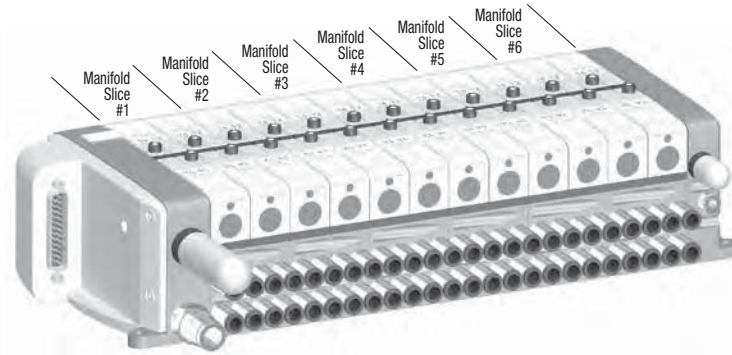
3/8" inlet port on end plate		
0	Without fitting	
8	Straight fitting for 8mm OD tube	BSPP Threads
A	Straight fitting for 10mm OD tube	
7	Straight fitting for 1/4 inch OD tube	NPT Threads
9	Straight fitting for 3/8 inch OD tube	

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



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 muffer	P6M-PAB3
07	1	1/8" Exhaust muffer	P6M-PAB1

Sandwich Regulator


Description	Kit number
 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
 M7 bottom port pilot exhaust (must be ordered in multiples of 10)	PS568800




Flow Controls

Description	Kit number
 4mm to 4mm or 5/32" to 5/32" OD tube	FC800-5/32
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

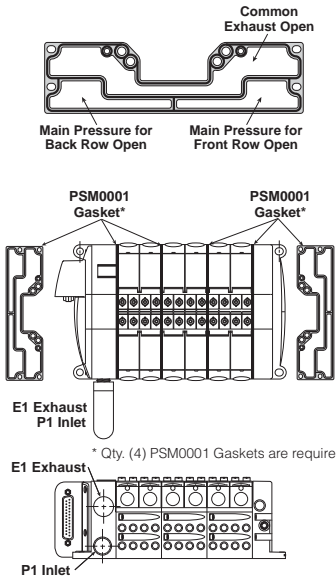
Fittings – Must be ordered in multiples of 10

Thread	Tube O.D.	Part number
Manifold or pilot supply ports – straight		
 M7	4mm or 5/32"	PS567904
M7	6mm	PS567906
M7	1/4"	PS567925
Main inlet or exhaust ports		
 3/8" NPT	1/4"	PS568325
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
1/8" NPT	1/4"	PS568225
1/8" BSPP	4mm	PS568204
1/8" BSPP	6mm	PS568206

Multiple Pressure Zones

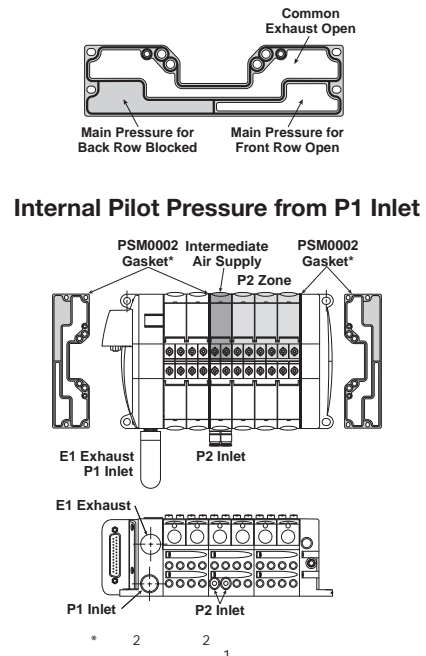
PSM0001 –

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



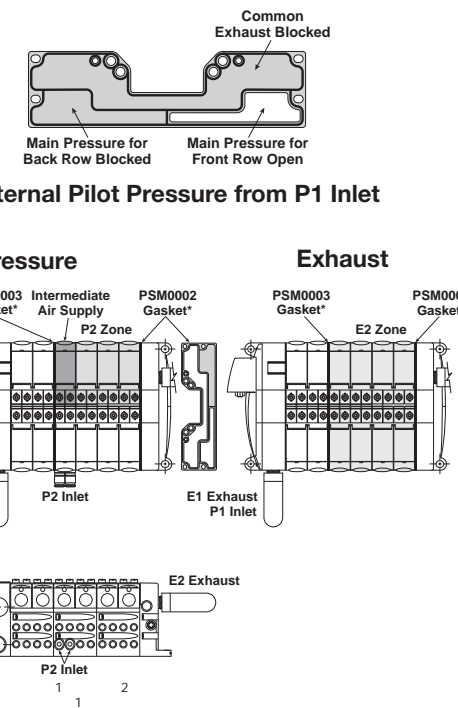
PSM0002 –

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



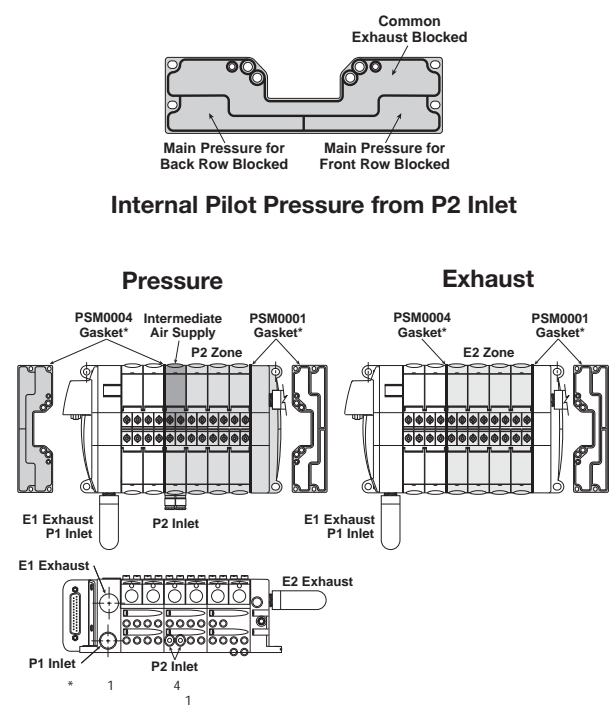
PSM0003 –

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 –



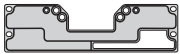

All galleys blocked.
 Two pressure zones and two exhaust zones.
 If used with bottom ported end plates, second exhaust must be piped from the side of the right end plate.



Modulflex Series
 Isys Micro Series
 Isys ISO Series
 Fieldbus Series
 DX ISOMAX Series
 Valvair II Series
 Subbase & Manifold




Manifold to Manifold Gaskets*


	Description	Part number
	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


Replacement Solenoid Kit

	Description	Part number
	24VDC solenoid kit with screws	PSM0010


Replacement Override Caps

	Description	Part number
	Set of 10 manual override caps	PSM0011

Replacement Gaskets and Valve Screws

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

Replacement Plugs


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

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.


Replacement Screws

	Description	Part number
	Set of 10 manifold to manifold M3 screws	PSM0014

Replacement Regulator Gauge

	Description	Part number
	5 to 125 PSI Gauge	P0566202

Replacement Protective Cover

	Description	Part number
	Protective Polyester Cover Set of 10	PS5706

Modulflex Series

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Isys ISO Series

Fieldbus

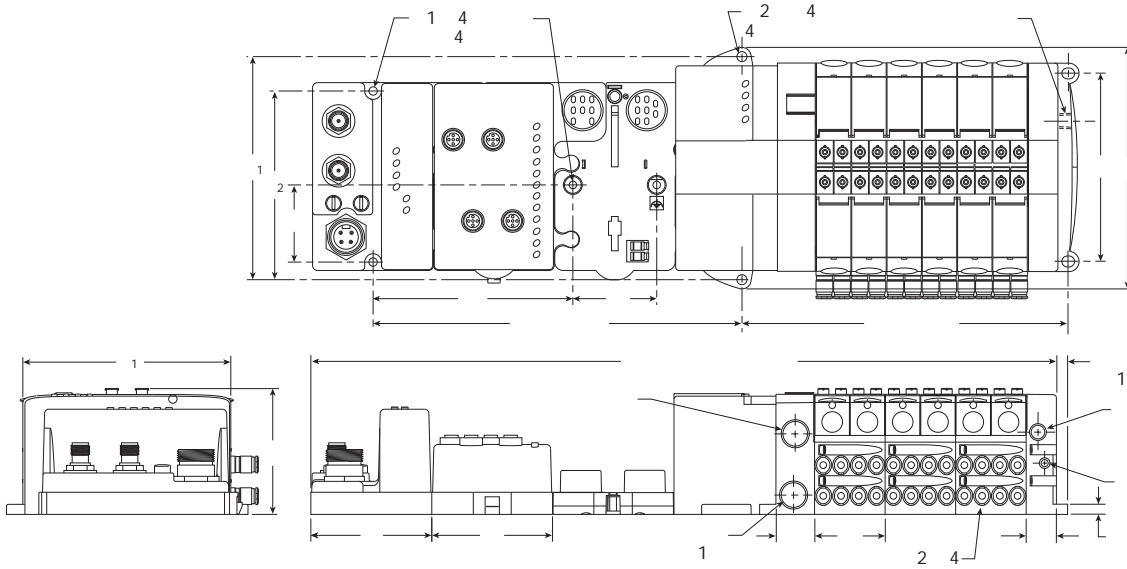
DX ISOMAX Series

Valvair II Series

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Isysnet with Isys Micro Valves, Side Ported

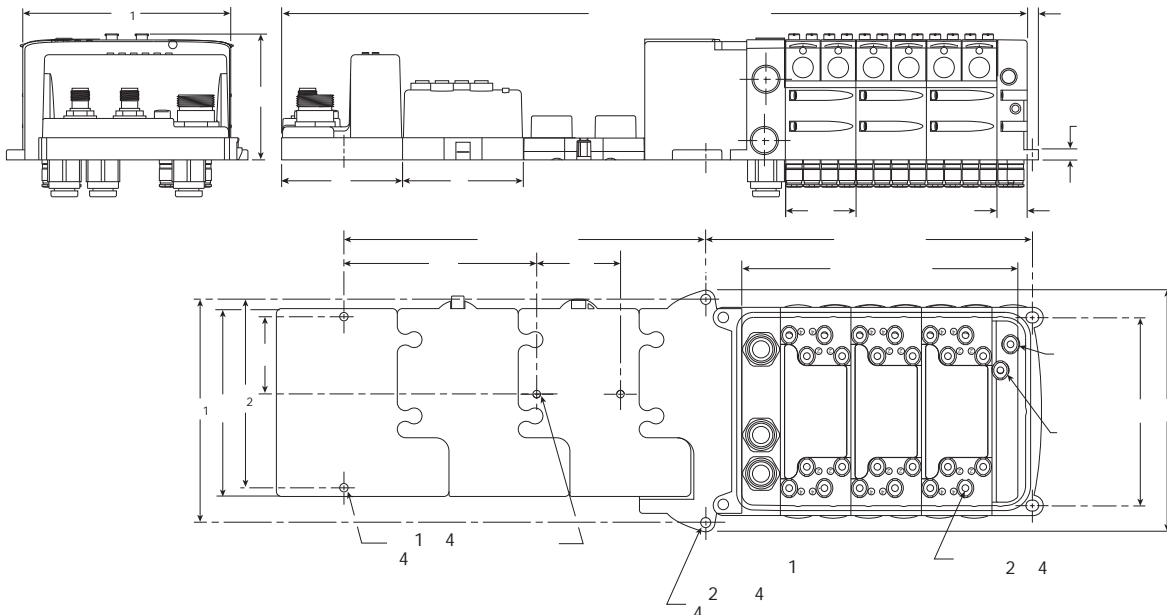


Dimensions

A	A₁	B	B₁	B₂	C	D	E	G
5.67 (144.0)	4.88 (124.0)	4.41 (112.0)	5.24 (133.0)	4.02 (102.0)	2.95 (75.0)	1.65 (42.0)	0.91 (23.0)	0.71 (18.0)
H	J	K	M	N	Q	R	S	T
0.49 (12.5)	2.72 (69.0)	7.32 (186.0)	0.24 (6.1)	2.83 (72.0)	1.81 (46.0)	4.72 (120.0)	2.01 (51.0)	2.01 (51.0)

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

Isysnet with Isys Micro Valves, Bottom Ported



Dimensions

A	A₁	B	B₁	B₂	C	D	E	G	H
5.67 (144.0)	4.88 (124.0)	4.41 (112.0)	5.24 (133.0)	4.02 (102.0)	2.95 (75.0)	1.65 (42.0)	0.91 (23.0)	0.71 (18.0)	0.49 (12.5)
J	K	L	M	N	Q	R	S	T	U
2.72 (69.0)	7.32 (186.0)	1.69 (43.0)	0.24 (6.1)	2.83 (72.0)	1.81 (46.0)	4.72 (120.0)	2.01 (51.0)	2.01 (51.0)	4.41 (112)

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

Modulflex
Series

Isys Micro
Series

Isys ISO
Series

Fieldbus

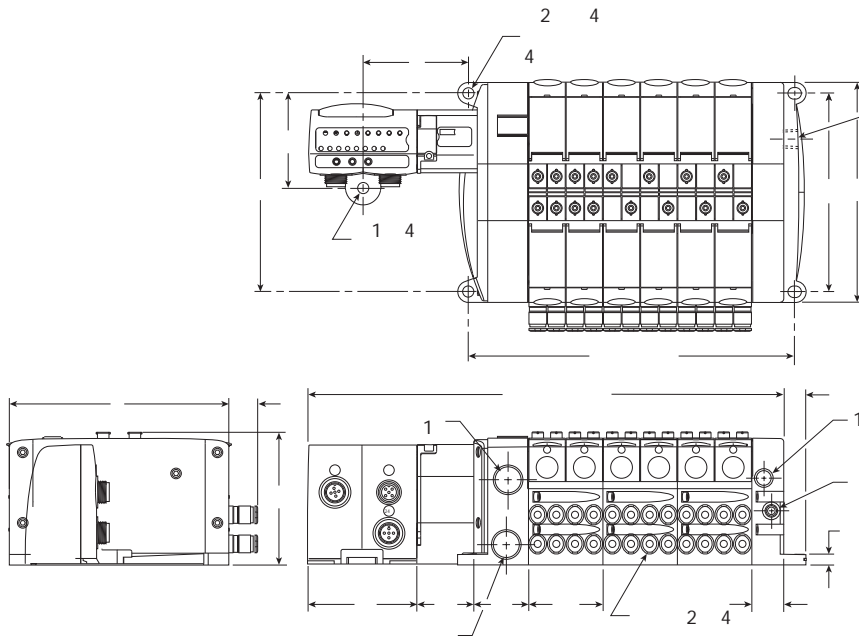
DX ISOMAX
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Series

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Moduflex with Isys Micro Valves, Side Ported

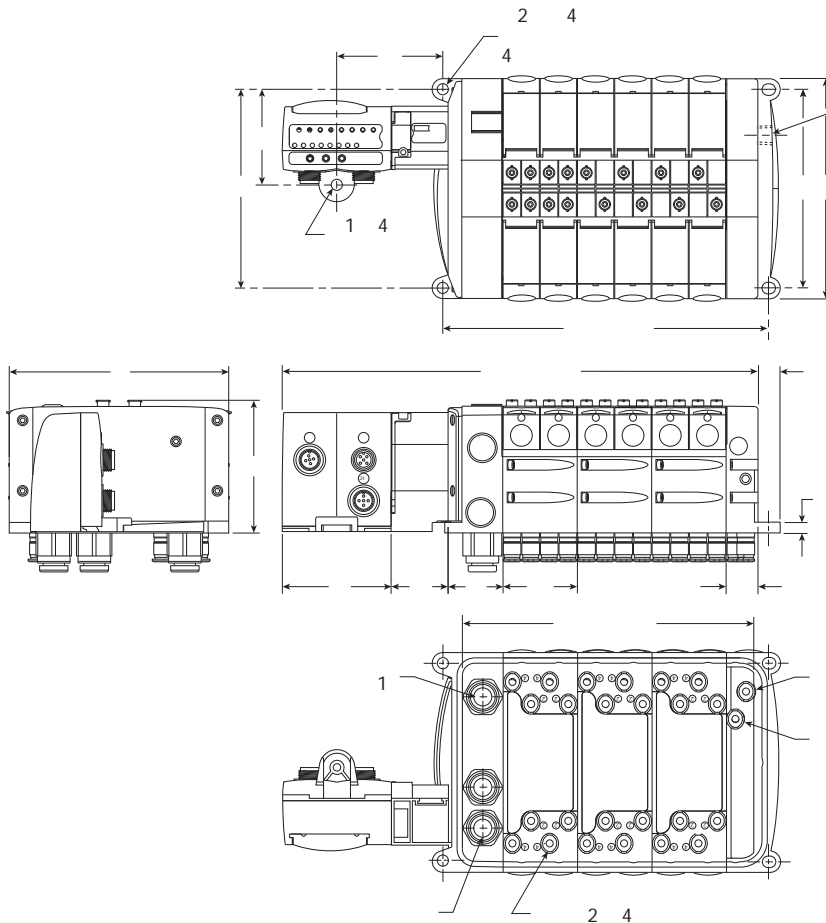


Dimensions

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	1.28	0.71	0.49
(31.0)	(32.5)	(18.0)	(12.5)
J	K	M	N
2.28	6.10	0.24	2.40
(58.0)	(155.0)	(6.1)	(61.0)
P	Q		
2.36	2.07		
(60.0)	(52.55)		

Inches (mm)
 n = Number of manifolds

Moduflex with Isys Micro Valves, Bottom Ported



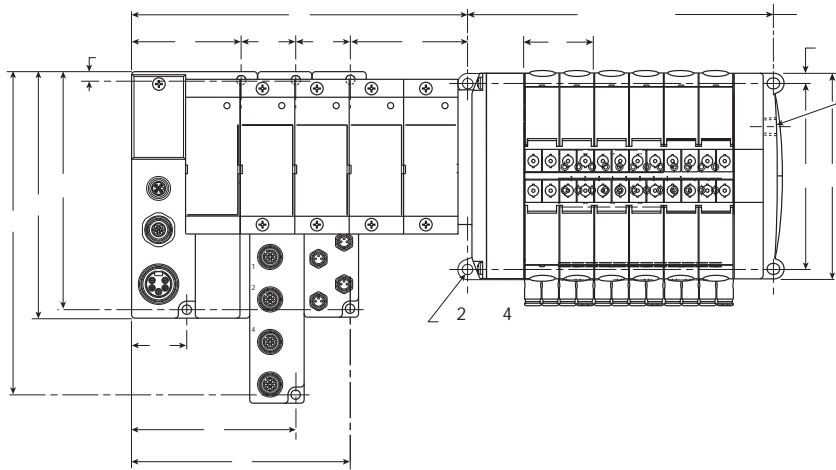
Dimensions

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

- Moduflex Series
- Isys Micro Series
- Isys ISO Series
- Fieldbus
- DX ISOMAX Series
- Valvair II Series
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Turck with Isys Micro Valves, Side Ported



1¹

Dimensions

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

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

Modulflex
Series

Isys Micro
Series

Isys ISO
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Fieldbus

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Series

Valvair II
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D

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