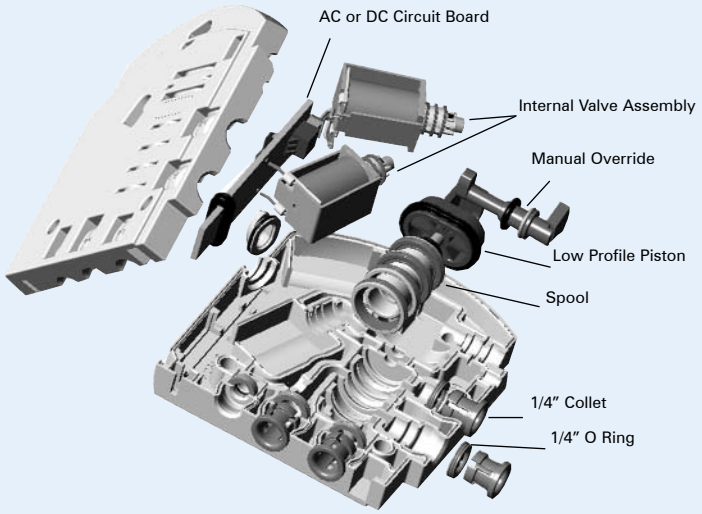
Isonic® MOD 3+

With an innovative concept and a pioneering approach to valve design, Mead's new technology has directly challenged the conventions of traditional valve manufacturers. In doing so, Mead has overcome many of the restrictions and limitations of conventional valve manufacturing, resulting in a unique design that minimizes valve size, reduces air turbulence and lowers valve costs.

Features & Benefits

- Fast Response
- Simultaneous Electrical / Pneumatic Connection to Manifold
- Thermoplastic - Non Metallic
- Compact & Lightweight
- Low Power Consumption
- High Resistance to Chemicals
- Aerodynamic Flow Passages
- Quick-Change Valve System
- 1/4" or 6mm Integral Push-In Fittings
- Pre-Wired Serial (15 or 25 Pin) Manifold Socket
- No Tools or Lubrication Needed
- Optional Separate Main & Air Pilot Air Feed
- Mount Free Standing, DIN Rail or Panel
- Field Bus Controllable

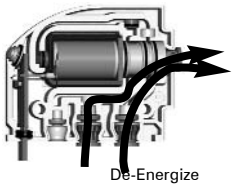


"Half Shell" Design

The heart of the ***Isonic***® concept is its patented "Half Shell", design. Composed of two mirror image halves, ***Isonic***® allows its flow channels and internal component compartments to be designed directly into these molded body sections. Assembly is achieved by simply inserting the various valve elements into their corresponding "half-shell" pockets. Internal components are easily positioned to make optimal use of space. The valve is completed by ultrasonically welding the two valve segments, creating a strong bond and hermetic seal. This design totally eliminates the need for fasteners, adhesives, gaskets and inserts.

Maximum Air Flow

Instead of the angular passages of most conventional valves, ***Isonic***® internal channels are aerodynamically shaped for maximum air flow and minimal internal friction. Eliminating sharp corners and abrupt changes in direction reduces air turbulence and energy loss. Normally round air passages are replaced by thin, deep, tape-like channels that conserve space and optimize air flow.



Resistant to Harsh Conditions

Molded from a high performance thermoplastic, ***Isonic***® achieves superior heat, impact and chemical resistance. It is listed with both UL and CSA, making this system suitable for many environments.

c UL® us (Pending)

CE

The 2 Second Push-On Manifold and Valve System

The ***Isonic***® MOD 3 manifold system has been designed to virtually eliminate downtime, eliminating all end plates, screws, o-rings and gaskets customarily found in manifold systems. With this "plug-in" design, replacing an individual valve can be accomplished in seconds - simultaneously making an electrical and pneumatic connection, without the aid of any tools!

The ***Isonic***® valve series can naturally be implemented as either part of a manifold system or stand alone and have option of either internal or external pilot pressure.

To Remove Valve Press Manifold Release

To Install simply Push Valve onto Manifold

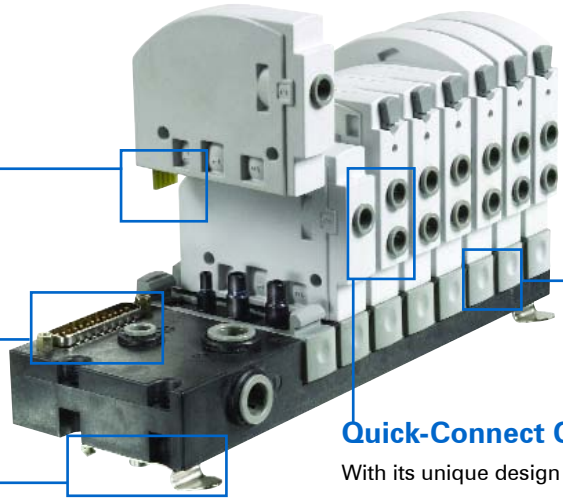
Edge connector requires no wiring and the Valve Ports need no fittings, the MOD 3 modular system is engineered to Push-On, saving time and money on traditional installation.

Versatile

Available in four or eight station segments, the ***Isonic***® MOD 3 manifold's unique modular design creates a versatile, expandable control base. The ***Isonic***® MOD 3 manifold will accept any combination of different function valves. For larger manifolds, two or more segments can be easily combined to fulfill any needs. The manifold has separate mains and pilot air feed and also allows easy isolation of segments for applications with differential pressures.

Edge Connector

The Slot-In electrical Edge Connector reduces the time and expense needed for wiring and connectors.



Manifold Release

Press to Release valve from manifold.

Quick-Connect Collets - No Fittings Needed

With its unique design ***Isonic***® MOD 3 eliminates the need for tube fittings. Built-in, push-to-connect collets allow for fast and easy tube and manifold connections.

Panel or DIN Rail Mounting

Panel Mounted with front or rear screws and can also be DIN rail mounted with clips.

Simplify Wiring Tasks With Field Bus System

DeviceNet InterBus PROFIBUS

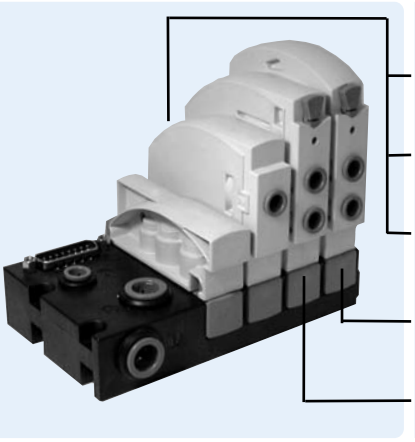
To further reduce set-up time and installation costs, the ***Isonic***® MOD 3 manifold is prewired to accept a single connection. An integrated P.C.B. connects each of the manifold's valve stations. Simply plug in a standard cable to the Sub D connector for quick, clean wiring. A single connector can supply wiring for up to 8 (single or double pilot) valves. The manifold can then be controlled by a standard Field Bus System eg. ***DeviceNet***, ***ProfiBus***, ***Interbus***. A second cable connector is necessary for manifolds of more than 8 valves.

Valve Data

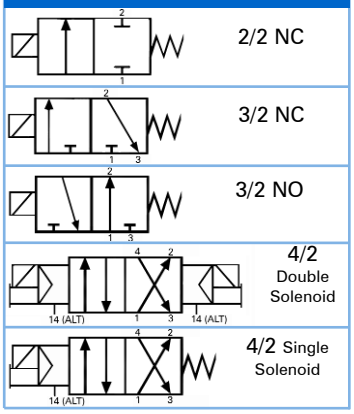
Product / Function	Flow (C_V)	Pressure Range	Vacuum	Orifice Size	Tubing
2/2 Direct Acting or 3/2 Direct Acting	A: 0.03 B: 0.06 C: 0.11	0-120 PSI (0-8.3 Bar) 0-100 PSI (0-6.9 Bar) 0-90 PSI (0-6.2 Bar)	Full Full Full	A: 0.04 (1.0 mm) B: 0.06 (1.5 mm) C: 0.08 (2.0 mm)	ALL MODELS 1/4" (6mm) O.D.
4/2 Single Solenoid Pilot Operated	0.80	30-120 PSI (2.0-8.3 Bar)	Full with External Pilot	0.21" (5.3 mm)	Ports 1, 2, 3, 4 5/32" (4mm) Port 14 Optional
4/2 Double Solenoid Pilot Operated	0.80	15-120 PSI (1.0-8.3 Bar)	Full with External Pilot	0.21" (5.3 mm)	

General

Temperature Range :	0°- 120° F (-18° C to + 50° C)
Media:	Air or Inert Gas
Lubrication:	Not Recommended
Filtration:	3 micron
Duty:	100%
Manual Override:	Standard (Pilot Models)
Collets:	1/4" (6 mm) and 5/32" (4mm)
Voltages:	DC: 12 V and 24 V AC: 24 V, 110 V @ 50 / 60 Hz
Seals:	Viton® and Nitrile
Body:	GE Thermoplastic
Response Time:	10 ms On; 35 ms Off



Valve Symbols



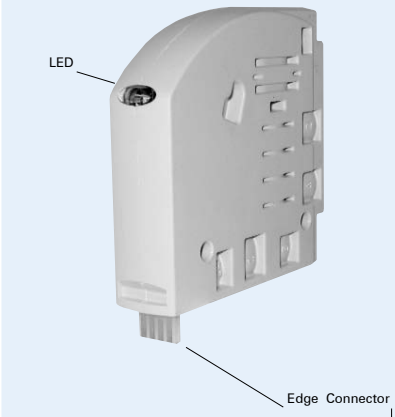
Solenoid Data

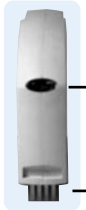
Direct Acting

Voltage	Amps	Resistance	Initial Power	100% Duty
12DC	0.169	71 Ω	2.00 W	1.50 W
24DC	0.071	305 Ω	1.70 W	1.28 W
24AC	0.071	305 Ω	1.70 W	1.28 W
110AC	0.016	7143 Ω	1.75 W	1.31 W

Pilot Operated

Amps	Resistance	Initial Power	100% Duty
0.133	92 Ω	1.60 W	1.30 W
0.058	406 Ω	1.60 W	1.20 W
0.058	406 Ω	1.40 W	1.20 W
0.001	8350 Ω	1.70 W	1.50 W





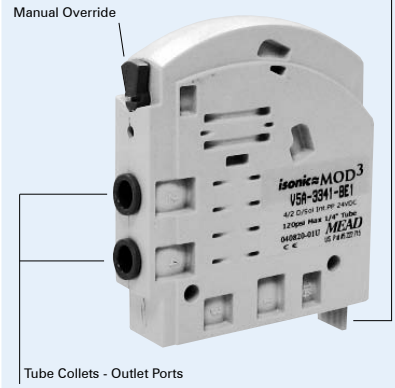
Valve P. C. B. Edge Connector

Pin (View from track side)	Single and Direct Acting Solenoid	Double Solenoid	Signal LED Color
Right	Not Used	+VE Signal Port 1 > 2	Green
Left	+VE Signal	+VE Signal Port 1 > 4	Yellow
Center Right	Ground (0V)	Ground (0V)	-
Center Left	Ground (0V)	Ground (0V)	-

DIN Connector - IP 65

Pin No.	Single and Direct Acting Solenoid	Double Solenoid
1	Ground (0V)	+VE Signal Port 1 > 2
2	+ VE Signal	+VE Signal Port 1 > 4
3	Not Used	Ground (0V)
Earth	Not Used	Not Used

NOTE (DIN Style): Connector P5D1 is shown with valve above. The connector is not included with valve.



Valve Mini-Quick Connector

Pin (View connector side)	Single and Direct Acting Solenoid	Double Solenoid	Wire Color
Right	Ground (0V)	+VE Signal Port 1 > 2	Black
Left	+VE Signal	+VE Signal Port 1 > 4	Red
Center	Ground (0V)	Ground (0V)	White

NOTE (All): Consult Mead for reversed polarity models.

2/2 & 3/2 Valves

V 3 A - B 1 3 1 - B E 1

Product Category
V = Valve

Family
3 = Isonic Mod 3 3000 (2-way; 3-way)

Tube Size
A = 1/4" O.D. Tube Collet
B = 6mm O.D. Tube Collet

Orifice Size
A = 0.040" (1.0mm) Vacuum to 120 PSI (8.3 bar)
B = 0.060" (1.5mm) Vacuum to 100 PSI (6.9 bar)
C = 0.080" (2.0mm) Vacuum to 90 PSI (6.2 bar)

Actuation Type
1 = Normally Closed
2 = Normally Open

LED (Standard)

Connector
E = Edge Connector (Manifold)
W = Mini Quick Connect
X = 8mm micro DIN Connector (type C)

Solenoid Voltage
A = 12 DC
B = 24 DC
D = 24 50/60 Hz AC
F = 110 50/60 Hz AC

Supply Connections
1 = Main Supply (Port 1)
2 = Alternate Supply (Port 14)

Flow Pattern
2 = 2-Way
3 = 3-Way
V = Vacuum

4/2 Valves

V 5 A - 37 4 1 - B E 1

Product Category
V = Valve

Family
5 = Isonic Mod 3 5000 (4 way)

Tube Size
A = 1/4" O.D. Tube Collet
B = 6mm O.D. Tube Collet

Actuation Type
37 = Solenoid spring
33 = Double solenoid

LED (Standard)

Connector
E = Edge Connector (Manifold)
W = Mini Quick Connect
X = 8mm micro DIN Connector (Type C)

Solenoid Voltage
A = 12 DC
B = 24 DC
D = 24 50/60 Hz AC
F = 110 50/60 Hz AC

Pilot Connections
1 = Internal Pilot Feed (Port 1)
2 = External Pilot Feed (Port 14)

Flow Pattern
4 = 4/2
V = Vacuum

Manifolds

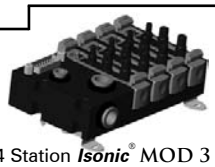
M 5 A - 08 0 8 - 1 1

Product Category
M = Manifold

Family
5 = Isonic Mod 3 3000/5000

Tube Size
A = 3/8" O.D. Tube Collets (Common Air Inlet / Exhaust)
1/4" O.D. Tube Collets (Common Air Pilot Feed)
B = 10 mm O.D. Tube Collets (Common Air Inlet / Exhaust)
6 mm O.D. Tube Collets (Common Air Pilot Feed)

Number of Stations
04 = 4 Stations
08 = 8 Stations
(modular segments are combined for manifolds over 8 stations)



4 Station *Isonic*® MOD 3
Valve Manifold

8 Station *Isonic*® MOD 3
Valve Manifold

Accessories
0 = None
1 = 3/8" Exhaust Muffler
2 = 10mm Exhaust Muffler

Connector Cable
0 = No cable & Connector
1 = With 1.0m cable Connector
3 = With 3.0m cable & Connector
5 = With 5.0m cable & Connector

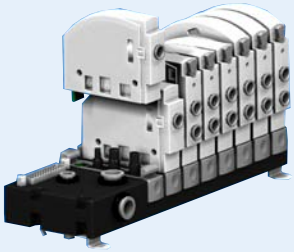
Connector
4 = 4 station / 15 pin (Sub D)
8 = 8 station / 25 pin (Sub D)
0 = Grommet (Mini Quick and DIN)

Manifold Accessories
0 = Manifold only
1 = DIN rail clips mounted on manifold
2 = Manifold mounted on DIN rail

Note: Valves will be pre-assembled on the manifold. Contact Mead with specific locations of mixed valve manifolds. An additional charge above the cost of the valves, manifolds and accessories may apply.

General Information

Flow Connections 120 PSI (8.3 Bar)			Electrical Connections	Mounting Options
Supply (Port 1)	Exhaust (Port 3)	Pilot (Port 14)	Sub-D Type	Panel Foot Mounting
A=3/8"	A=3/8"	A=1/4"	15 Pin = 4 Valve Station	Panel Rear Mounting
B= 10mm	B= 10mm	B= 6mm	25 Pin = 8 Valve Station	35mm DIN Rail w/ Optional Kit



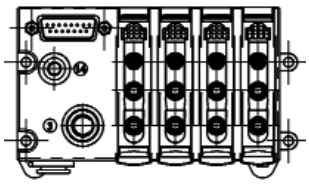
Manifold Sub-D Connections

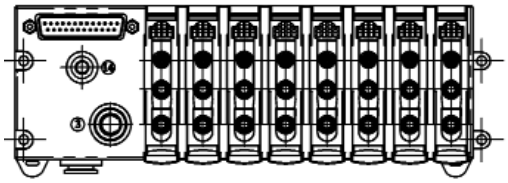
15 Pin +VE Signal

Valve Station No.	1	2	3	4
Valve Type	Pin Connection No.			
Direct Acting Sol.	15	13	11	9
Single and Double Sol. Pilot 1 > 4	15	13	11	9
Double Sol. Pilot Port 1 >2	8	14	12	10

25 Pin +VE Signal

Valve Station No.	1	2	3	4	5	6	7	8
Valve Type	Pin Connection No.							
Direct Acting Sol.	11	13	24	22	20	18	16	14
Single and Double Sol. Pilot 1 > 4	11	13	24	22	20	18	16	14
Double Sol. Pilot Port 1 >2	10	12	25	23	21	19	17	15





Valve Station No.	All	Valve Station No.	All
Common	1, 2, 3, 4	Common	1, 2, 3, 4, 5, 6, 7, 8

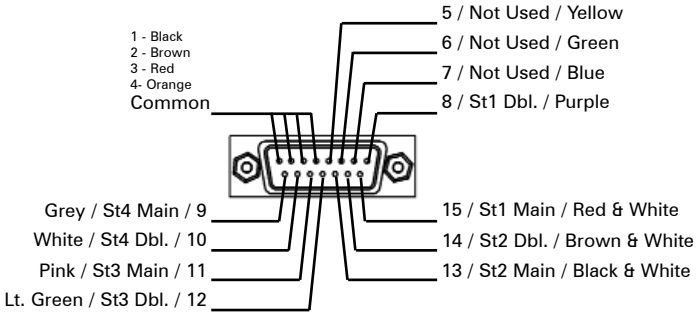
NOTE: Valve 1 is located nearest to Serial Connector, Common Pins are connected internally.

Wiring / 15 & 25 PIN Detail - Cable End (Colors Indicated apply to Mead accessories P(*)-15SDC and P(*)-25SDC)

Numbers near pin lines are the pin numbers. Center information refers to usage (see detailed explanation). Colors indicated on the outside are the wire color of the Mead accessories.

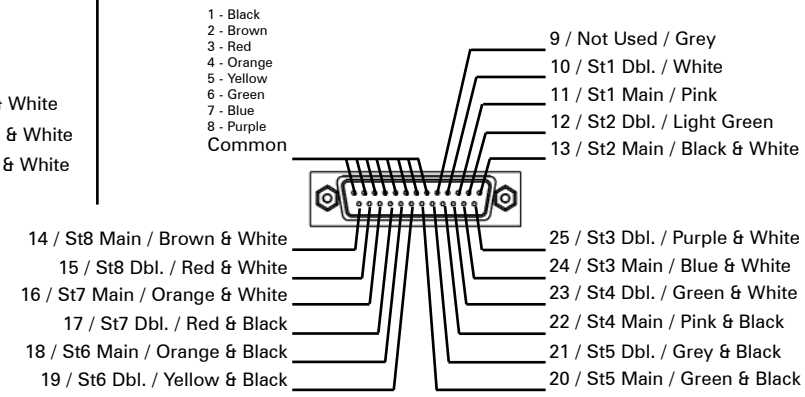
Detailed Explanation: St1 Main = Station 1, Main connection (Used for all valves installed here). St1 Dbl. = Station 1, Double Solenoid Connection (The second connection for a double solenoid type valve - This is only used for the double solenoid type. Remember double solenoids have two connections.)

15 Pin Sub-D Connector
(4 Station Manifold Only)



NOTE: All Commons are connected internally on both the 4 and 8 Station Manifolds.

25 Pin Sub -D Connector
(8 Station Manifold Only)

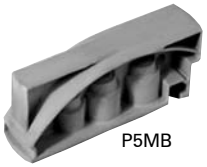


Accessories

Electrical Connectors	Model No.
8 mm DIN Connector	P5D1
8 mm DIN w/ 39" Leads	P5D2
Quick-Connect Leads	P5Q1
Sub-D Connector 15 Pin	P5-15SD
Sub-D Connector 25 Pin	P5-25SD

Blocking Plugs	
Manifold Blocking Plug	P5MB
1/4" Port Plug	P1P1
6 mm Port Plug	P1P2

P1P1



P5MB

P1-15SD

P1-15SDC

Sub-D Connector & Cable (for M4 Manifolds)	Model No.
1.0M (15 pin Sub D Connector Included)	P1-15SDC
3.0M (15 pin Sub D Connector Included)	P3-15SDC
5.0M (15 pin Sub D Connector Included)	P5-15SDC
1.0M (25 pin Sub D Connector Included)	P1-25SDC
3.0M (25 pin Sub D Connector Included)	P3-25SDC
5.0M (25 pin Sub D Connector Included)	P5-25SDC

P4M1-x

P4S1

Manifold Accessories	Model No.
DIN Rail Mounting Clip Kit	P5MC
35 mm DIN Rail	P4M1-x*
35 mm DIN Rail End Stop	P4S1
* x = # of feet required	

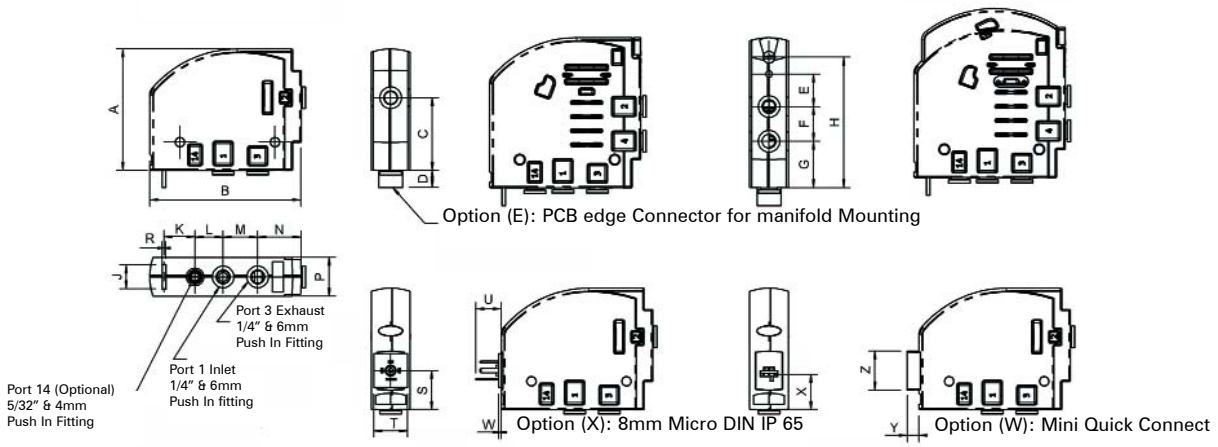
MMP-375 MMP-250

Exhaust Muffler	
1/4" Port (Push-In)	MMP-250
6 mm Port (Push-In)	MMP-006
3/8" Port (Push-In)	MMP-375
10 mm Port (Push-In)	MMP-010

Replacement Collets	
1/4" Tube Collet	P4C1
6 mm Tube Collet	P4C2
5/32" (4 mm) Tube Collet	P1C1
3/8" Tube Collet	P4CA
10 mm Tube Collet	P4CB

Valve Dimensions

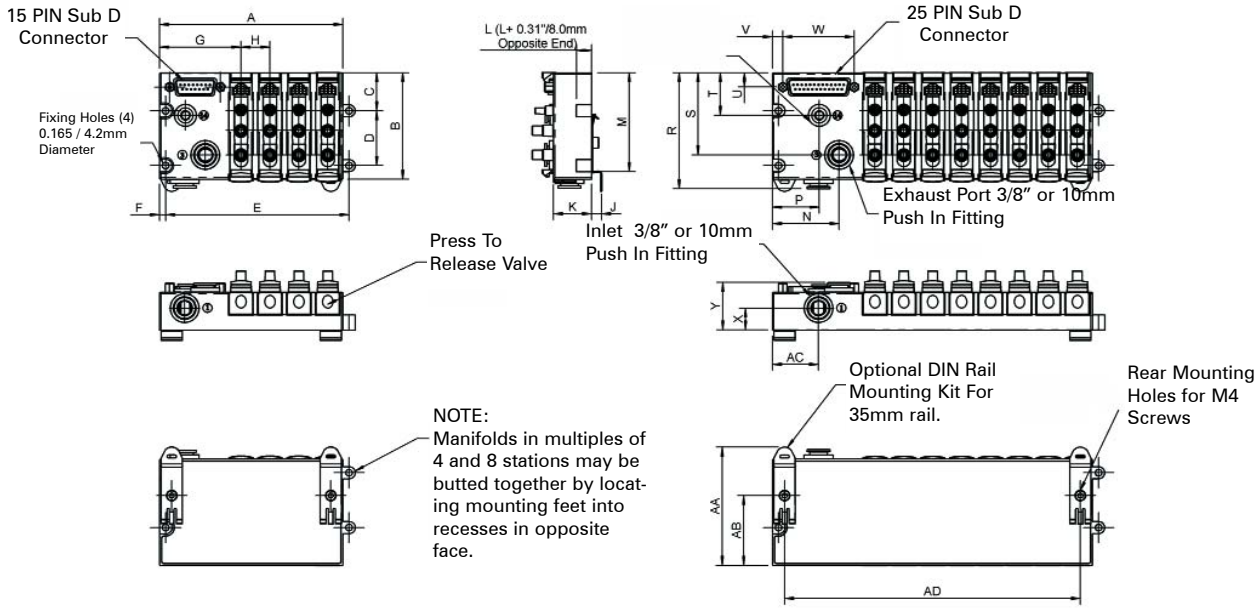
Direct Acting Models | Single Solenoid Models | Double Solenoid Models



Valve	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	W	X	Y	Z
2/2 & 3/2	2.20	2.76	1.32	0.43	-	-	-	-	0.43	0.57	0.51	0.63	0.79	0.71	0.06	0.71	0.60	0.65	0.05	0.46	0.22	0.71
	56.0	*70.0*	*33.5*	*10.8*	-	-	-	-	*11.0*	*14.4*	*13.0*	*16.0*	*20.0*	*18.0*	*1.60*	*18.0*	*15.3*	*16.6*	*1.30*	*11.8*	*5.50*	*18.0*
4/2 Single	2.72	2.76	-	0.43	0.59	0.63	0.85	2.37	0.43	0.57	0.51	0.63	0.79	0.71	0.06	0.71	0.60	0.65	0.05	0.46	0.22	0.71
Solenoid	*69.0*	*70.0*	-	*10.8*	*15.0*	*16.0*	*21.5*	*60.3*	*11.0*	*14.4*	*13.0*	*16.0*	*20.0*	*18.0*	*1.60*	*18.0*	*15.3*	*16.6*	*1.30*	*11.8*	*5.50*	*18.0*
4/2 Double	3.07	2.76	-	0.43	0.59	0.63	0.85	2.37	0.43	0.57	0.51	0.63	0.79	0.71	0.06	0.71	0.60	0.65	0.05	0.46	0.22	0.71
Solenoid	*78.0*	*70.0*	-	*10.8*	*15.0*	*16.0*	*21.5*	*60.3*	*11.0*	*14.4*	*13.0*	*16.0*	*20.0*	*18.0*	*1.60*	*18.0*	*15.3*	*16.6*	*1.30*	*11.8*	*5.50*	*18.0*

Note: Sizes are in inches first, millimeters second (italicized).

Manifold Dimensions

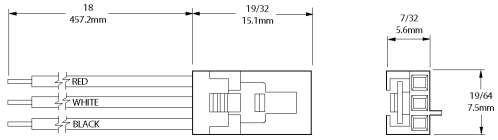


Manifold	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	X	Y	AA	AB	AC	AD
4	4.74	2.76	0.35	1.42	4.74	0.16	2.10	0.75	0.26	0.98	0.39	2.56	1.18	0.67	2.87	2.13	1.10	0.37	0.26	1.32	0.57	1.21	3.07	1.81	0.67	4.11
Station	*120.5*	*70.0*	*9.00*	*36.0*	*120.5*	*4.00*	*53.5*	*19.0*	*6.60*	*25.0*	*10.0*	*65.0*	*30.0*	*17.0*	*72.8*	*54.0*	*28.0*	*9.40*	*6.70*	*33.4*	*14.5*	*30.8*	*78.0*	*46.0*	*31.5*	*104.5*
8	8.28	2.76	0.35	1.42	8.28	0.16	2.65	0.75	0.26	0.98	0.39	2.56	1.72	1.24	2.87	2.13	1.10	0.37	0.26	1.86	1.57	1.21	3.07	1.81	1.25	7.65
Station	*210.3*	*70.0*	*9.00*	*36.0*	*210.3*	*4.00*	*67.3*	*19.0*	*19.0*	*25.0*	*10.0*	*65.0*	*43.8*	*31.5*	*72.8*	*54.0*	*28.0*	*9.40*	*6.70*	*42.1*	*14.5*	*30.8*	*78.0*	*46.0*	*31.5*	*194.3*

Note: Sizes are in inches first, millimeters second (italicized).

Connector Dimensions

Mini Quick Connect P5Q1



8mm Micro DIN P5D1