

Isonic® Control Valves

While only 20 mm in width, these 2 position spool valves provide a surprisingly high flow ($C_v=0.8$). With its thin, aerodynamic flow passages, Isonic® maintains a higher flow in a smaller area. The pilot piston features an innovative oval design to further facilitate a compact, low-profile power valve.

Versatile Mounting

With a hole and a slot molded into its body, Isonic® valves may be mounted flush to any flat surface. Mounting brackets are also available for individual surface or DIN rail mounting.

Solenoid Data

Voltage	Amps	Resistance	Initial Power	Continuous On
12DC	0.133	92	1.6	1.3
24DC	0.058	406	1.4	1.2
24AC	0.058	406	1.4	1.2
120AC	0.014	8350	1.7	1.5

Specifications	
Design:	Spool (2-Position)
Ports :	1/4" OD tube collet or 6mm OD tube collet
Pilot Ports :	3/32" (4mm) OD tube collet
Media:	Air or Inert Gas
Lubrication:	None Required
Filtration:	40 micron
Cycle Life:	20,000,000 (minimum)
Orifice Size:	0.2" (5.0mm)
Flow:	0.8 C_v
Vacuum:	Air pilot models can be used in vacuum applications with external air signal to pilot ports
Minimum Pressure:	30 PSI (2 Bar)
Maximum Pressure:	120 PSI (8.3 Bar)
Temperature Range:	0° - 120°F (-18°C - 49°C)
Mounting Holes:	0.177" (4.5mm) diameter (1 hole, 1 slot)
Weight:	Solenoid models 3.1 oz each Air Pilot models 2.1 oz each

Materials

Body GE thermoplastic
Seals Fluorocarbon and Nitrile

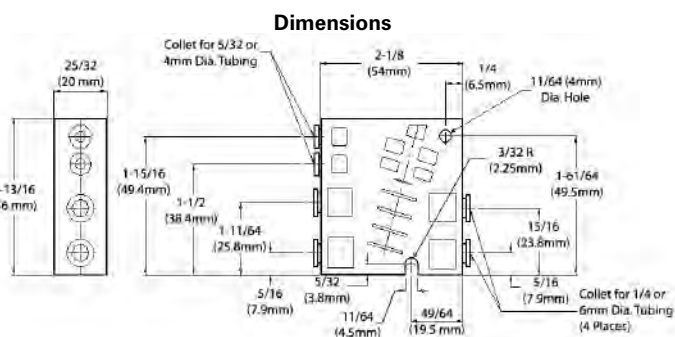
Electrical

Voltagess DC: 12, 24
. AC: 24, 110/120
Leads 18" standard - 24 AWG wire
Duty Cycle Continuous duty
Response Time 16 milliseconds @ 100 PSI
Serial Interface 10-pin flat cable connector
Manual Override Standard (solenoid models)

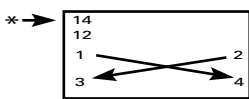


Din Connector: Protection Class- IP 65 according to DIN 40 050
Insulation Class- Group C according to VDE 0110
Conform to DIN 43650 Form C Specifications

Pressure Piloted Models

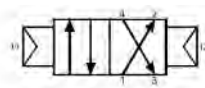


Function

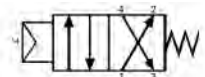
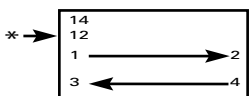


4/2 Double Air Pilot

Symbol

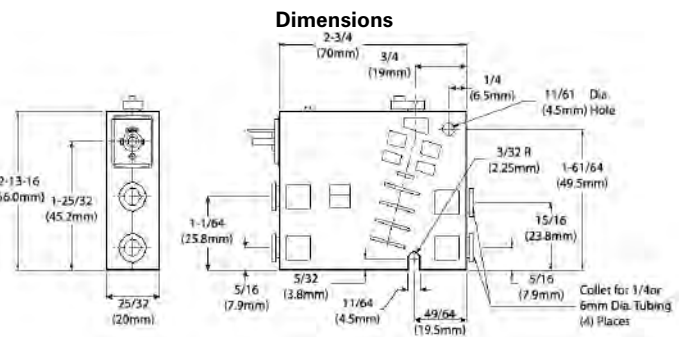


4/2 Single Air Pilot



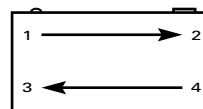
* Arrow Indicates Pressure applied to Pilot Port
1.....Air Supply 2.....Cylinder
3.....Common Exhaust 4.....Cylinder

Solenoid Models

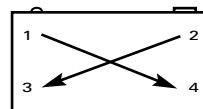


Function

Unactuated



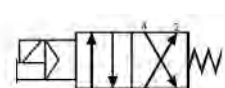
Actuated



1.....Air Supply 2.....Cylinder
3.....Common Exhaust 4.....Cylinder

Symbol

4/2 Single Solenoid



The Quick-Change Manifold

The Isonic® manifold system has been designed to virtually eliminate downtime. Connecting any valve to the manifold base is as easy as plugging in an electrical cord. With this patented "plug-in" design, replacing an individual valve on the manifold can be accomplished in a matter of seconds!

Isonic® Manifold Expands With Your Needs

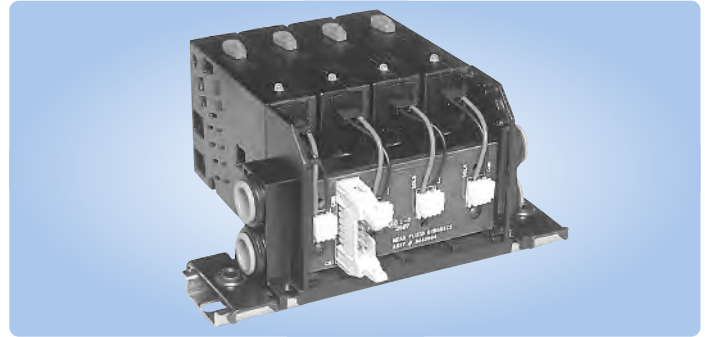
Available in two, three or four station segments, the manifold's unique modular design creates a versatile, expandable control base. For manifolds larger than four stations, two or more segments can be easily combined to create any size manifold (multiple segments are assembled on DIN rail and secured with end stops). Manifold segments are easily isolated for applications with differential pressures.

Mounting Options

The Isonic® manifold can be either foot mounted or DIN rail mounted. 35mm DIN rail can be ordered from Mead.

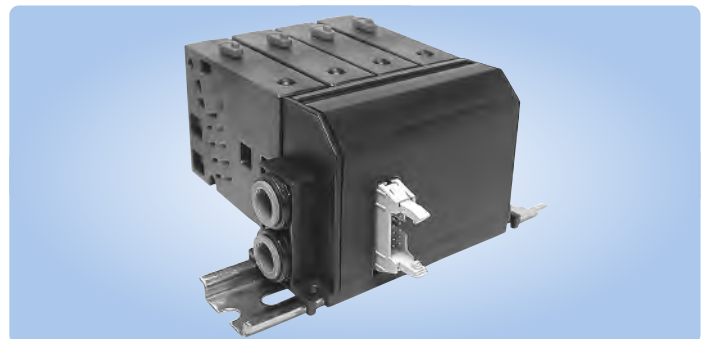
Manifold Specifications

- Common Air Inlet Both ends: built in collets for 3/8" OD (or 10mm) tubing
- Foot Mounting 0.177 (4.5 mm) diameter
- DIN Rail Mounting Attaches to 35 mm DIN rail



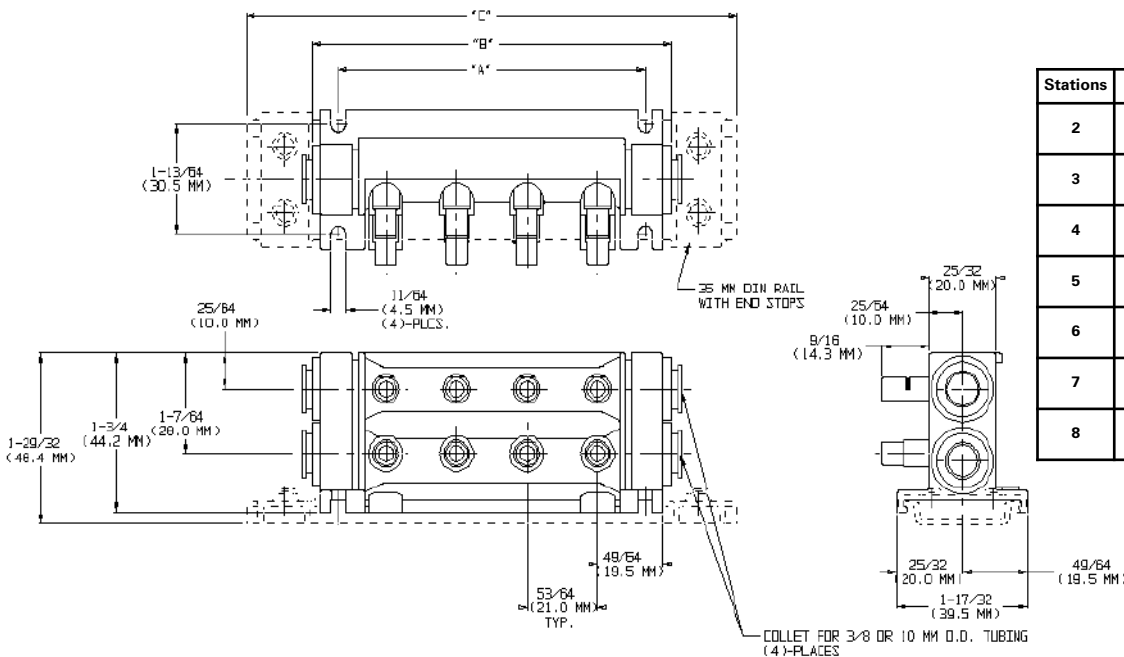
Simplify Wiring Tasks With Cable Connector

To further reduce set-up time and installation costs, the Isonic® manifold can be prewired to accept a single connection. With this option, a printed circuit board connects each of the manifold's valve stations. Simply plug in a standard flat-cable ribbon to the 10-pin connector for quick, clean wiring. A single connector can supply wiring for up to 8 valves. A second cable connector is necessary for manifolds of more than 8 valves.



Pre-wired manifolds are supplied with a protective cover. The cover snaps easily into place to protect the wiring and circuit board. It is easily removed for servicing or replacing a valve.

V4 Manifold Dimensions



Stations	"A"	"B"	"C"
2	1-61/64 (49.5 mm)	2-35/64 (64.7 mm)	4-9/64 (105 mm)
3	2-25/32 (70.5 mm)	3-3/8 (85.6 mm)	4-15/16 (125 mm)
4	3-39/64 (91.5 mm)	4-13/64 (106.7 mm)	5-49/64 (146 mm)
5	5-9/64 (130.5 mm)	5-57/64 (145.6 mm)	7-19/64 (185 mm)
6	5-31/32 (151.5 mm)	6-9/16 (166.7 mm)	8-1/8 (206 mm)
7	6-51/64 (172.5 mm)	7-25/64 (187.7 mm)	8-61/64 (227 mm)
8	7-5/8 (193.5 mm)	8-7/32 (208.7 mm)	9-25/32 (248 mm)

How To Order

Valves:

V 4 A 0307 - A W 1 - ()****Product Category**

V = Valve

Family

4 = Isonic 4000 (4-way)

Collet Size

A = 1/4" O.D. Tube Collet

B = 6mm O.D. Tube Collet

Actuator Type

0507 = Single Air Pilot, Spring Return

0505 = Double Air Pilot

0307 = Single Solenoid, Spring Return

Options

V = Pilot Breather Vent Filter

LED

0 = (only available with connector Z)

1 = LED(not available with connector Z)

Connector

0 = None (pressure models)

W = Mini Quick Connect (w/board)

X = 8mm micro DIN Connector (w/board)

Y = Flying Lead (with board)

Z = Flying Lead (no board - DC only)

Solenoid Voltage

0 = None (pressure models)

A = 12 DC

B = 24 DC

D = 24 50/60 Hz AC

F = 110 / 120 50/60 Hz AC

Manifold:

M 4 A 03 - 2 Y**Product Category**

M = Manifold

Family

4 = ISONIC 4000 (4-way)

Collet Size

A = 3/8" O.D Tube Collets (Common Air Inlet)

B = 10mm O.D. Tube Collets (Common Air Inlet)

Number of Stations

02 = 2 Stations

03 = 3 Stations

04 = 4 Stations

N = N Stations

(modular segments are combined for manifolds over 4 stations)

Wiring Options

N = None

Y = Pre-wired 10-pin ribbon connector*
(wiring cover included)

C = Manifold with wiring cover

* Pre-wired manifolds not available with
DIN connector valves.**Manifold Assembly**

0 = Manifold Only

2 = Manifold Mounted on DIN rail
(required for 5 or more stations)

Accessories

Electrical Connectors

- 8mm Micro DIN Connector P1D1
- 8mm Pre-wired DIN Connector (includes 39" leads) . . P1D2
- Mini Quick-Connect (includes 18" leads) P1Q1

Mounting Brackets (For 4-Way Valves Only)

- Single Valve Mounting Bracket P4SM
- Single Valve DIN Rail Mount P4DM

Port Adapter (For 5/32" Ports)

- Converts Port to Barb for 1/4" OD Tube P1SA1
- Converts Port to Push-in Fitting (1/4" OD Tube) P1SA2

DIN Rail & Manifold End Stops

- 15mm DIN Rail (x = # of feet required) P1M1-x
- 35mm DIN Rail (x = # of feet required) P4M1-x
- 15mm Rail End Stop P1S1
- 35mm Rail End Stop P4S1

10-Pin Connector & Ribbon Cable (For Pre-Wired Manifolds)

- Connector w/ 1.0 meter leads P4RC10
- Connector w/ 1.5 meter leads P4RC15
- Connector w/ 3.0 meter leads P4RC30

Manifold Station Blocking Plugs & Port Plugs

- 5/32" (4mm) Station Plug (for empty manifold stations) . P1B1
- 1/4" Station Plug (for empty manifold stations) P4B1
- 6mm Station Plug (for empty manifold stations) P4B2
- 1/4" Port Plug P1P1
- 6mm Port Plug P1P2
- 3/8" Port Plug P4P1
- 10mm Port Plug P4P2

Miscellaneous Accessories

- Valve Locking Clip (locks 2 valves in place) P4LC-2
- (locks 3 valves in place) P4LC-3
- (locks 4 valves in place) P4LC-4
- Manifold Valve ID Strip (50 #s per strip) P4ID

Tube Collets (For Replacement Only)

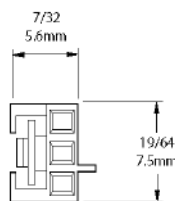
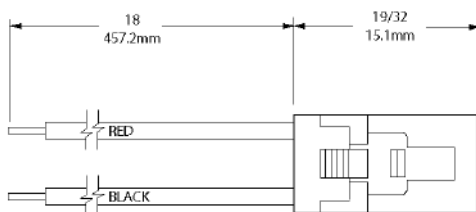
- For 1/4" Port P4C1
- For 6mm Port P4C2
- For 3/8" Port P4CA
- For 10mm Port P4CB

Push-In Exhaust Mufflers

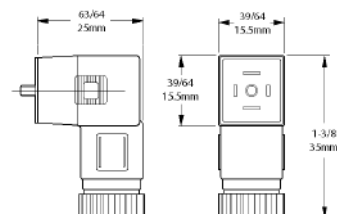
- For 1/4" Port MMP-250
- For 6mm Port MMP-006
- For 3/8" Port MMP-375
- For 10mm Port MMP-010

Wiring Connector Dimensions

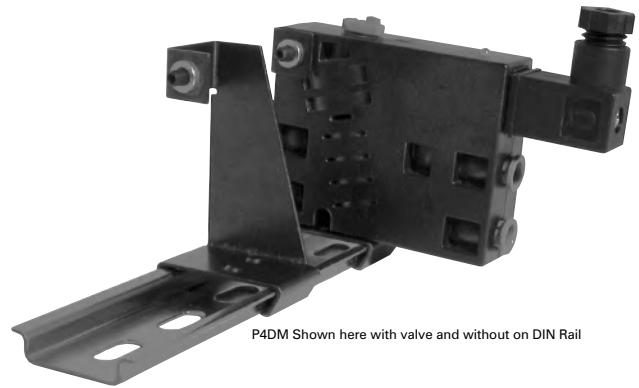
Mini Quick-Connect - 24 AWG wires



8mm DIN Connector



Mounting Bracket (P4DM)



P4DM Shown here with valve and without on DIN Rail

Manifold Accessories



P4B1

Collets



P4C1 & P4CA



P4LC-4

Valve Identifiers (P4ID)

