

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.

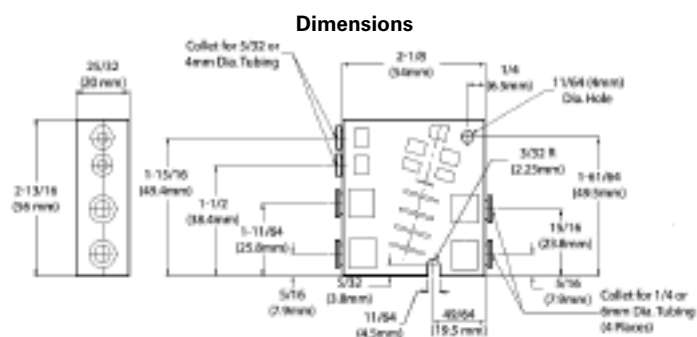
Versatile Mounting

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.

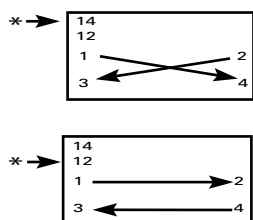
Solenoid Data

| 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 |

Pressure Piloted Models

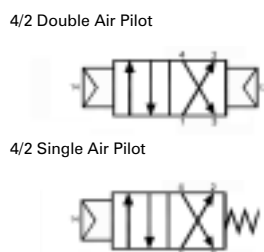


Function



* Arrow Indicates Pressure applied to Pilot Port

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

Symbol

Specifications

| | |
|---------------------------|---|
| Design: | Spool (2-Position) |
| Ports : | 1/4" OD tube collet or 6mm OD tube collet |
| Pilot Ports : | 5/32" (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

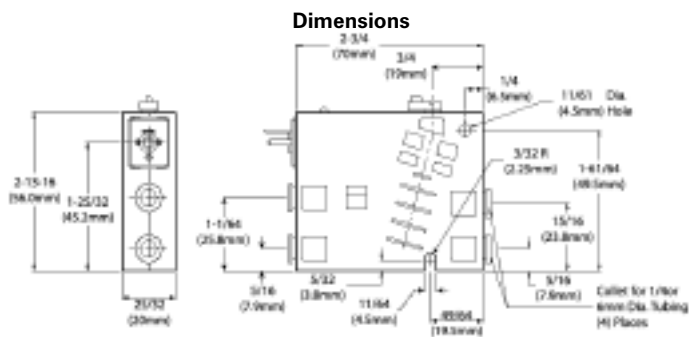
Electrical

| | |
|----------------------------|-----------------------------|
| Voltages | 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) |

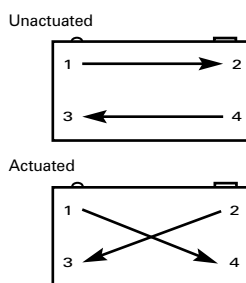


Din Connector: Protection Class- IP 65 according to DIN 40 050
Insulation Class- Group C according to VDE 0110
Conform to DIN 43650 Form C Specifications

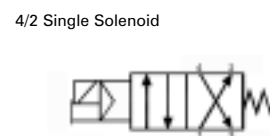
Solenoid Models



Function



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.

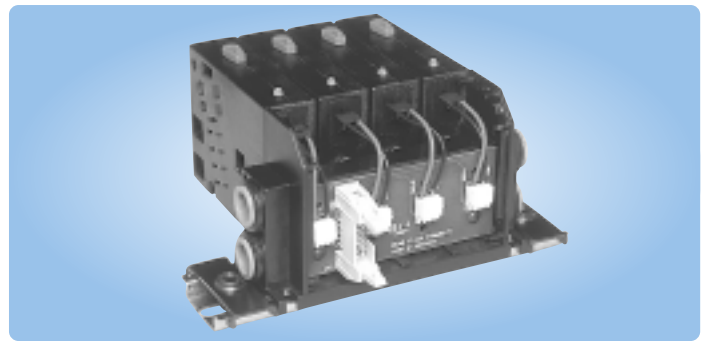
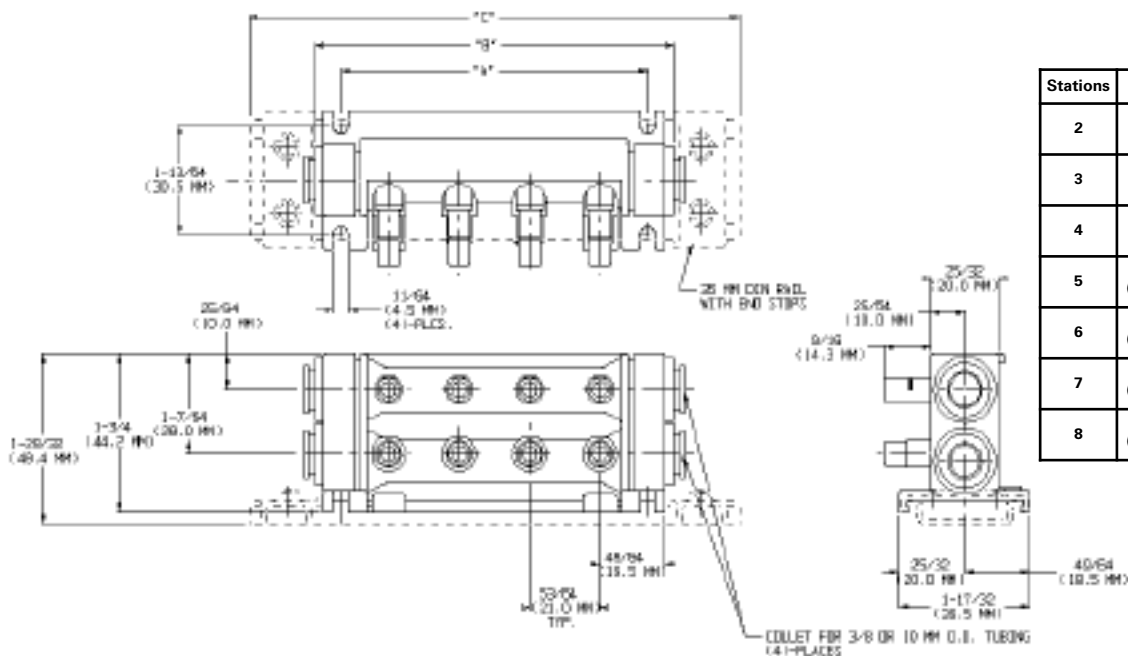
Manifold Specifications

Common Air Inlet Both ends: built in collets for
 $\frac{3}{8}$ " OD (or 10mm) tubing
 Foot Mounting. 0.177 (4.5 mm) diameter
 DIN Rail Mounting. . . . Attaches to 35 mm DIN rail

DeviceNet®

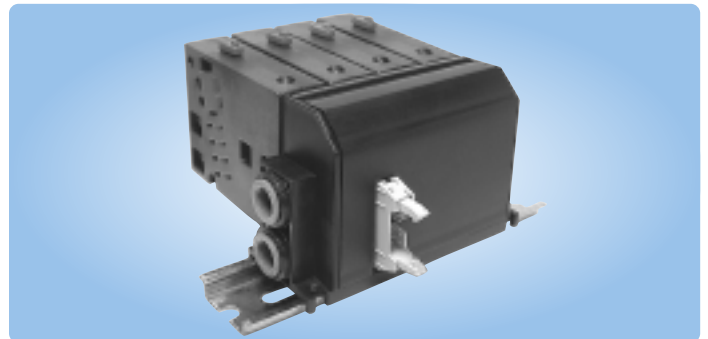
Head end and slave units for DeviceNet® interface are available for use with Isonic® valve manifolds. Please consult factory.

V4 Manifold Dimensions



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.

| 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

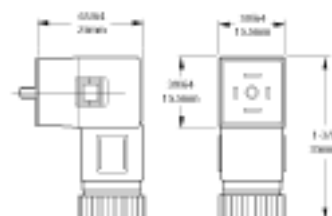
| | |
|-------------------------|---------|
| For 1/4" Port | MMP-250 |
| For 6mm Port | MMP-006 |
| For 3/8" Port | MMP-375 |
| For 10mm Port | MMP-010 |

Wiring Connector Dimensions

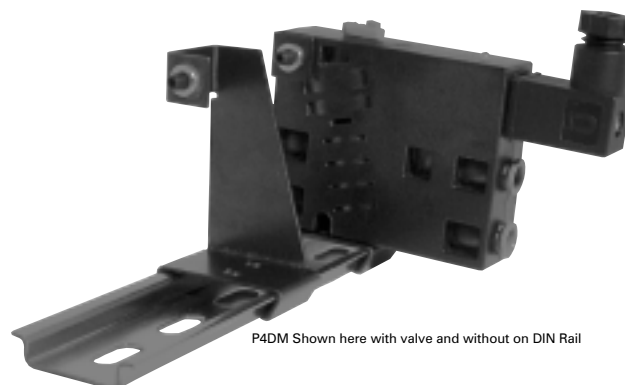
Mini Quick-Connect - 24 AWG wires



8mm DIN Connector

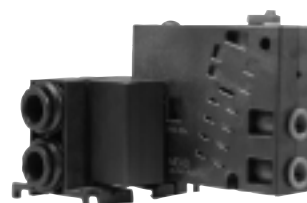


Mounting Bracket (P4DM)



P4DM Shown here with valve and without on DIN Rail

Manifold Accessories



P4B1

Collets



P4C1 & P4CA



P4LC-4

Valve Identifiers (P4ID)

