



The Award-Winning "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. Valve bodies are molded of high-strength, glass-impregnated Ultem thermoplastic.

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.

Revolutionary Valve Production

Isonic® technology eliminates all machining operations associated with valve manufacturing. Requiring only simple assembly, Isonic® can be produced quickly and easily with significant cost reduction.

Design Optimizes Valve Performance

Isonic® 2, 3 and 4-way valves feature a unique, multi-patented design that significantly shrinks valve size while boosting flow capacity. With its design and a state-of-the-art manufacturing process, Isonic® breaks through the restriction and limitations of conventional valve manufacturing.

Loaded with Standard Features

Along with its size and price advantages, Isonic® offers numerous user features, many of them standard. Most models feature an integral electronic board with surge suppression and LED. A variety of voltages and wiring options are available. This combination of price and versatility make Isonic® the perfect control choice for pneumatic systems.

New Patents

Patent #	Patented Property
5,222,715	"Half-Shell" Valve Construction
5,341,846	Plug-In Valve Stack Assembly

Additional Patents Pending

Faster Manifold Connections

The Isonic® manifold system has been designed to virtually eliminate downtime, eliminating all end plates, screws, o-rings and gaskets customarily found in manifold systems. 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 can be accomplished in seconds, without the aid of any tools!

Available in two, three, four or five station segments, the Isonic® manifold's unique modular design creates a versatile, expandable control base. For larger manifolds, two or more segments can be easily combined to fulfill any needs. Further, manifold segments are easily isolated for applications with differential pressures.

Quick-Connect Collets - No Fittings Needed

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

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.

Maximum Air Flow

Instead of the angular passages of most conventional valves, Isonic's 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.

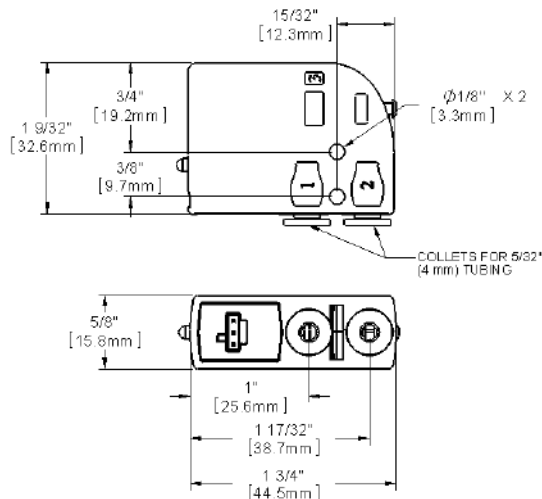
Isonic® V1 and V4 have earned UL recognition and have been tested to the standards of CSA and conforms to the applicable directives of the European Union.



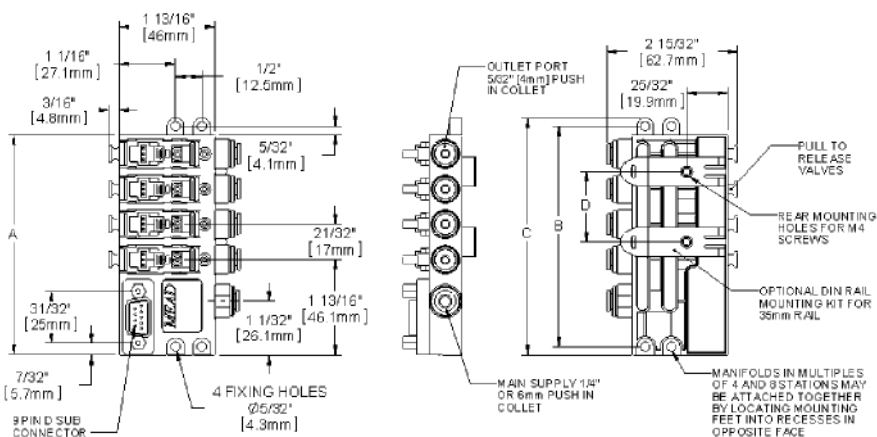
NEW!

Dimensions

Valves



Manifolds

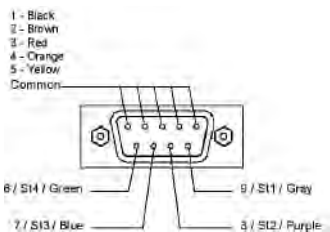


Manifold	A	B	C	D
4	4-3/16	4-3/16	4-1/2	1-11/32
Station	[106.3]	[106.3]	[114.3]	[34]
8	6-7/8	6-7/8	7-13/32	4-1/32
Station	[174.3]	[174.3]	[188.3]	[102]

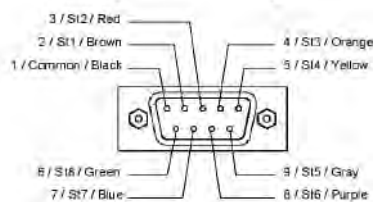
Note: Dimensions in inches [mm]

First numbers are the pin numbers. Center information refers to station. Colors are the wire color of Mead accessories

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



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



Specifications—Normally Closed Version

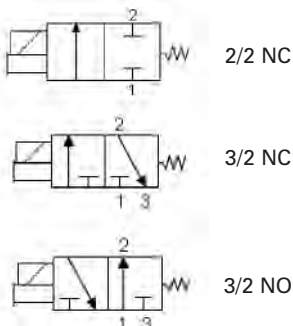
Design :	Poppet
Media:	Air or Inert Gas
Lubrication:	None Required
Filtration:	40 micron
Cycle Life*:	50,000,000 cycles
Orifice Size:	A: 0.025" / .65mm B: 0.035" / .90mm C: 0.055" / 1.40mm
Flow:	A: 0.01 C _v B: 0.02 C _v C: 0.05 C _v
Maximum Pressure:	A: 120 PSI / 8.3 Bar B: 120 PSI / 8.3 Bar C: 30 PSI / 2.1 Bar
Vacuum:	To 28 in Hg
Temperature Range:	0°F to 120°F / -18°C to +49°C
Tubing:	5/32" or 4mm
Mounting Holes:	0.156" diameter (2 holes)
Seals:	Viton® and Nitrile
Weight:	1.5 oz. (per valve)

Specifications—Normally Open Version

Design :	Poppet
Media:	Air or Inert Gas
Lubrication:	None Required
Filtration:	40 micron
Cycle Life*:	10,000,000 cycles
Orifice Size:	B: 0.035" / 0.90mm C: 0.055" / 1.40mm
Flow:	B: 0.02 C _v C: 0.05 C _v
Maximum Pressure:	B: 90 PSI / 6.2 Bar C: 25 PSI / 1.6 Bar
Vacuum:	To 28 in Hg
Temperature Range:	0°F to 120°F / -18°C to +49°C
Tubing:	5/32" or 4mm
Mounting Holes:	0.156" diameter (2 holes)
Seals:	Viton® and Nitrile
Weight:	1.5 oz. (per valve)

* Tested under typical industrial operating conditions; for extended operation at environmental extremes (temperature, etc.) consult Mead.

Valve Symbols



Solenoid Data

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

Response Time: 10 milliseconds

Molex Connector: UL and CSA Listed

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

Manifold

Common Air Inlet: Built-in, push-in fittings for 1/4" OD or 6mm tubing

Rear Mounting: 2 Holes for M4 screws

DIN Rail Mounting: Attaches to 35mm DIN Rail

Accessories



P2B1



P4M1-x



P5-09SCD



P1SA1



P1SA2



P1Q1

NOTE: (1) pc. is included with each "W" type valve. 24 AWG wire



P4S1

How To Order

Valves:

V 2 B 04 - B Z 0 - T1

Product Category

V = Valve

Family

2 = Isonic® 2000

Orifice Size

A = 0.025" (0.6mm) (only available on NC)

B = 0.035" (0.9mm)

C = 0.055" (1.4mm)

Flow Pattern

02 = 2-Way Normally Closed

03 = 3-Way Normally Open

04 = 3-Way Normally Closed

05 = Vacuum (3-Way) Normally Closed

06 = Vacuum (2-Way) Normally Closed

07 = Vacuum (3-Way) Normally Open

Options

T1 = Tapped Exhaust (10-32)

T2 = Tapped Exhaust (M5x0.80)

LED

0 = No LED (only available with connector Z)

1 = LED standard (not available with connector Z)

Connector

W = Mini Quick Connect (with electronic board) Required for Manifold

X = 8mm Micro DIN (with board)

Connector not included

Y = Flying Lead (with board)

Z = Flying Lead (no board - DC only)

Solenoid Voltage

A = 12 DC

B = 24 DC

D = 24 50/60 Hz AC

F = 120 50/60 Hz AC

Manifolds:

M 2 B 08 1 5

Product Category

M = Manifold

Family

2 = Isonic® 2000

Inlet Tube Size

A = 1/4" OD Tube Collets

B = 6mm OD Tube Collets

Options

0 = No cable or connector

5 = With 5.0m cable and connector

Manifold Accessories

0 = Manifold only

1 = DIN Rail clips mounted on Manifold

2 = Manifold mounted on DIN Rail

Number of Stations

04 = 4 Station

08 = 8 Station

Note: Outlet tube size is 5/32" (4mm) OD Tube Collet

Accessories:

Electrical Connectors

8mm Micro DIN Connector P1D1

8mm Micro DIN Connector (molded, pre-wired) . . P1D2

Mini Quick-Connect P1Q1

(includes 39"/ 1m leads)

(includes 18"/ 45cm leads; contact factory for longer lengths)

Manifold Accessories

35mm DIN Mounting Rail P4M1-x (where x = desired number of feet of DIN Rail)

35mm DIN Rail End Stops P4S1 (note: two required per Manifold)

Manifold Blocking Plug P2B1 (for blocking empty Manifold stations)

5.0m Cable and 9 Pin Connector P5-09SDC

Miscellaneous

10-32 Muffler MM-019 (to silence exhaust in 10-32 exhaust port)

Port Adapter P1SA1 (converts 5/32" port to 1/4" barb OD tube)

Port Adapter P1SA2 (converts 5/32" port to 1/4" push-to-connect OD tube)