

MPC-4

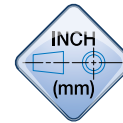
Electro-Pneumatic Converters

**Montalvo MPC-4 Electro-Pneumatic Converters**

The Montalvo MPC-4 electro-pneumatic converter provides accurate, dependable conversion of a controller signal into a proportional pneumatic output. Operating on an electrical input, no additional AC or DC power is required. The MPC-4 has a high flow rate, providing the rapid response required for accurate control of a dancer or load cell tension control system. To simplify installation, “quick disconnect” fittings are used for the pneumatic piping. Electrical connections are made to a standard DIN connector. The MPC-4 is supplied with brackets for wall, panel or DIN rail mounting.

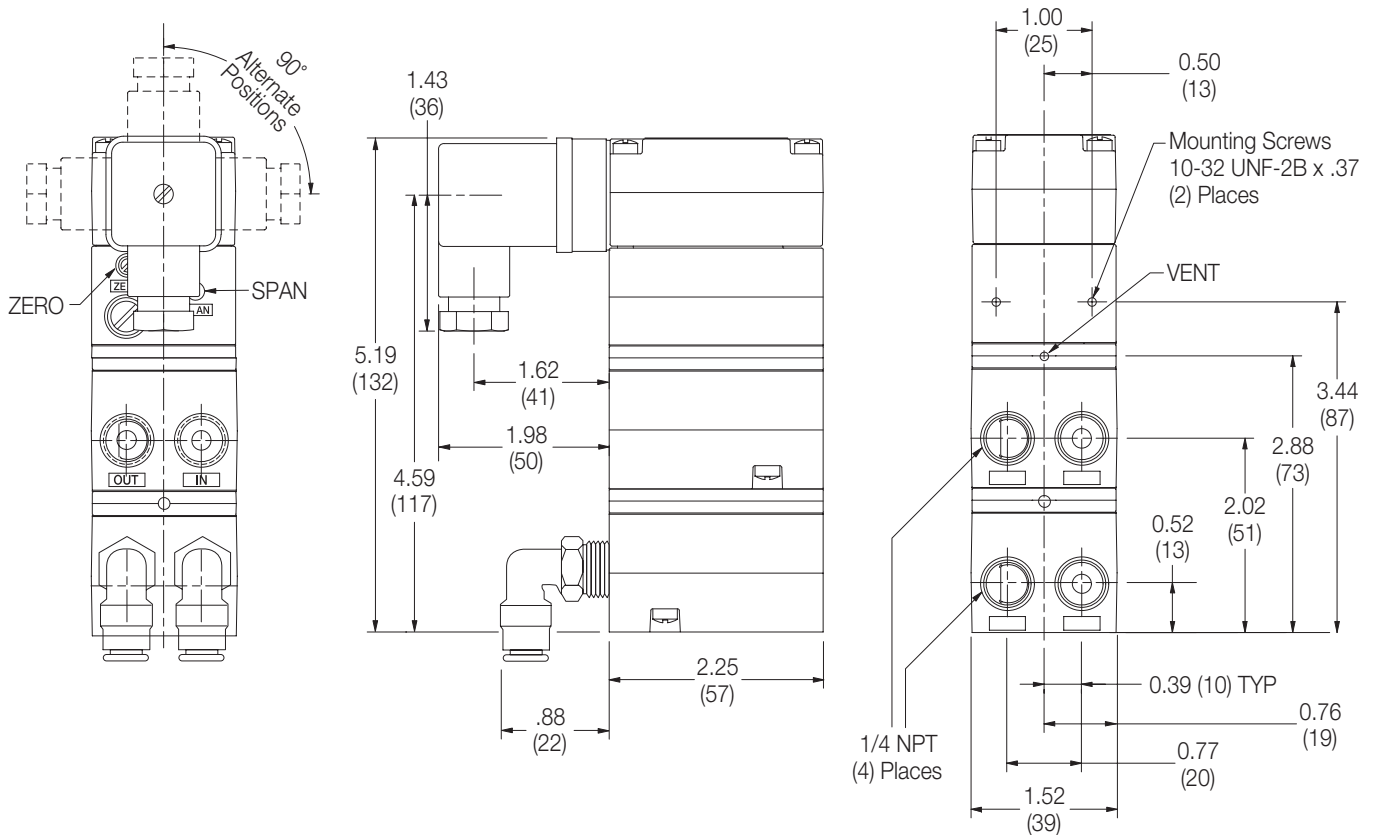
Features & Benefits

- ▶ Available in either 4-20mA (Current-I/P) or 0-10V (Voltage-E/P) signal input
- ▶ 0-75 psi (0-5.2 bar) pneumatic output
- ▶ Optional Montalvo MAF-3 air filter/oil separator
- ▶ Dependable electrical to pneumatic conversion
- ▶ Optional plumbing configurations
- ▶ Compact, convenient size
- ▶ Simple installation
- ▶ Includes all necessary mounting brackets and hardware

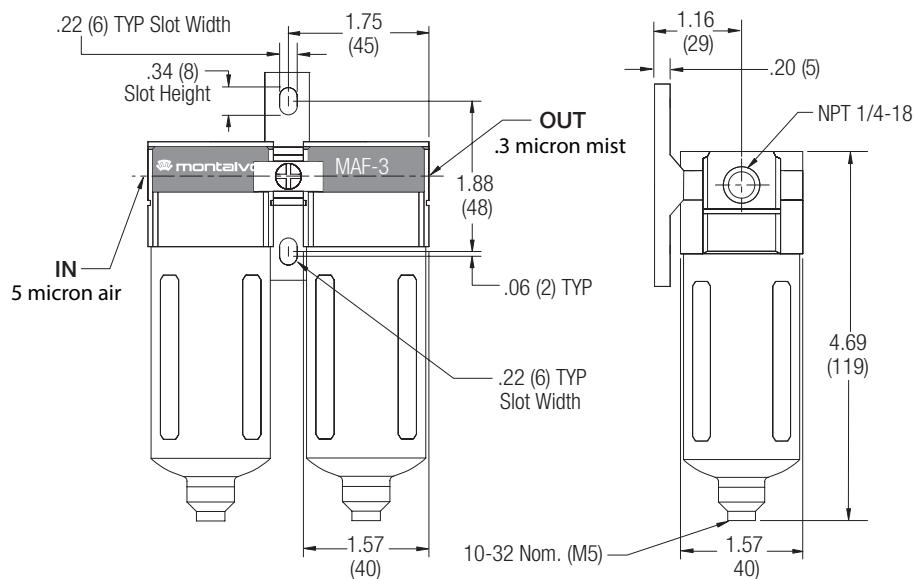


Dimensions

MPC-4



MAF-3



Installation Notes

MPC-4

Air Output

Connect to the output with 1/4" O.D. nylon or polyethylene tubing. For maximum performance, mount the MPC-4 as close as possible to the brake or clutch. Restrictions such as valves or fittings or large volume requirements may increase the response time of the system.

Mounting

The MPC-4 is supplied with both wall and DIN rail mounting brackets. The wall mounting bracket can be mounted either vertically or horizontally. Breakaway tabs on the mounting plate may be removed to reduce the overall size. The universal DIN rail mounting bracket allows the MPC-4 to be mounted on a user-supplied DIN rail EN-50022, EN-50035 or EN-50045.

Calibration

The MPC-4 is calibrated at the factory for a 0 to 75 psi output when the converter is mounted vertically.

IMPORTANT - For other mounting positions or different output ranges, use the following procedure:

- 1 Apply the minimum input signal and adjust the zero screw for an output of 0 psi. Turn the screw clockwise to increase pressure and counterclockwise to decrease pressure.
- 2 Apply the maximum input signal and adjust the span screw for 75 psi or the required output pressure. Turn the screw clockwise to increase pressure and counterclockwise to decrease pressure.
- 3 Repeat steps 1 and 2 until the desired output range is obtained.

MAF-3

Mounting

- 1 The mist separator should be installed vertically.
- 2 Flush piping before installation.
- 3 If a dryer is used, install the mist separator downstream of the dryer.
- 4 Polycarbonate bowls may be damaged and possibly fail if exposed to synthetic oils, thinner solvents, trichlorethylene kerosene and other aromatic hydrocarbons. If used in above atmosphere a metal bowl is recommended.

Maintenance

- 1 Filter element should be changed after 1 year or when a pressure drop of 15 psi (1kgf/cm²) is reached.
Replacement filter elements are sold separately through Montalvo:
Montalvo part # 20000328 (5 micron air filter)
Montalvo part # 20000343 (.3 micron mist filter)

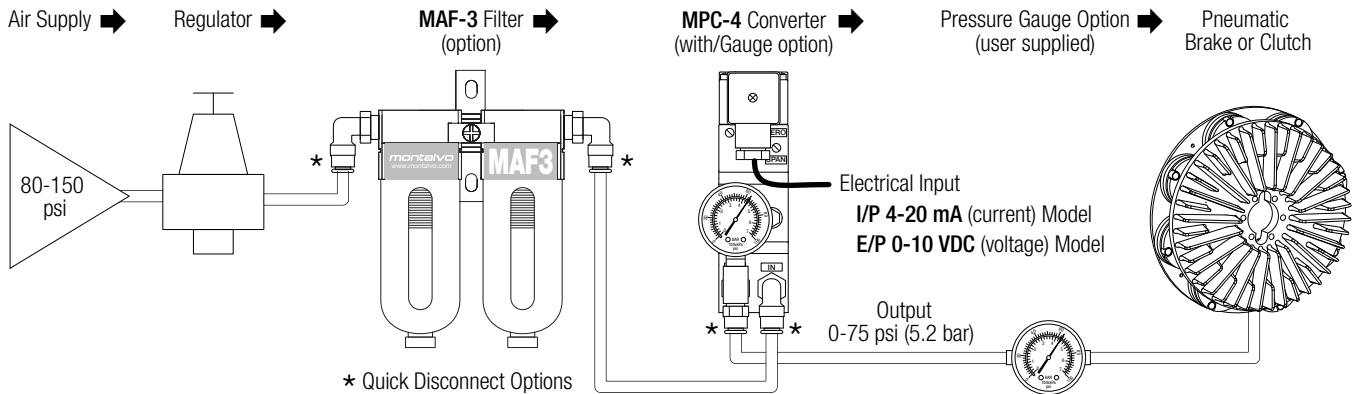
Auto Drain

- 1 Drain line should be a soft nylon tube with a 5/16" (8mm) O.D. or more and should be less than 16.5 feet (5m) long. Be sure not to have any upward turns in the drain line which could prevent drainage.
- 2 Not suitable for flow below 3.5 SCFM (100 NI/min).
- 3 Operating pressure is more than 15 psi (1 kgf/cm²).

Air Supply

The air supply must be clean, dry and free of oil. For reliable operation, instrument quality air per ISA Standards D7.3-1981, is required. Use a 5 micron (maximum) filter to remove dirt and liquid in the air line ahead of the converter. The use of an optional Montalvo MAF-3 (5 micron air and 0.3 micron oil separating) filter system is recommended. Failure to do so may degrade the performance and service life of the converter and will void the warranty. Regulate the maximum input air pressure from 80 to 150 psi. Connect to the input with 1/4" O.D. nylon or polyethylene tubing.

How It Works



Specifications

MPC-4*	I/P Model	E/P Model
Input Signal	4-20 mA (current)	0-10 VDC (voltage)
Input Impedance	270 Ω	890 Ω
Linearity	±1% full scale	
Hysteresis and Repeatability	<1% full scale	
Output Range (factory setting)	0-75 psi (5.2 bar)	
Supply Pressure	80-150 psi (5.5-10.3 bar)	
Flow Rate	11 SCFM @ 9 psi output	
Temperature Range	+20°F to +150°F (-30°C to +65°C)	
Port Size	1/4" NPT	
MAF-3(option)		
Maximum Pressure	150 psi (10.3 bar)	
Thread Type	1/4" NPT	
Bowl Capacity	0.9 oz. (26.6 ml)	
Temperature (amb/med)	+40°F to +140°F (+5°C to +60°C)	
Air Filter Size	5 micron	
Oil Mist separator Filter Size	0.3 micron	
Oil Mist Separator Flow Capacity	7 SCFM (200NI/min.)	
Oil Mist Removal Rate	>99.9%	
Other Options		
Pressure Gauge	0-100 psi (0-7 bar)	
Disconnects	Multiple sizes and configurations available - Contact Montalvo for more information	

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