



Type 590X

I/P Transducer

Compact size. Manifold mount.

The Type-590X Manifold Mount I/P Transducer converts a variable electrical signal to a low flow proportional pneumatic output. Its compact size, light weight and immunity to shock and vibration make it ideal for use in process control valve positioner applications. Conversion technology utilizing open loop control and a low mass magnet produces accurate pressure control at an economical cost. The Type-590X can mount in any position and is impervious to RFI/EMI interference.

Features

- **Small Size** Allows for dense mounting in panels
- **Vibration and Position Insensitive** Unit can mount in any plane and is stable in high vibration environments
- **Worldwide Safety Approvals** Factory Mutual (FM), Canadian Standards Association (CSA), ATEX and UKCA certifications
- **Manifold Mounting** Inlet and outlet ports on a common surface
- **Wide Operating Temperature Limits**

Hazardous Area Classification

Factory Mutual (FM) & Canadian Standards (CSA) Approvals

Intrinsically Safe Entity Parameters

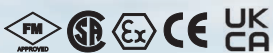
Class I, Division 1, Groups A, B, C, D	Ui (Vmax) = 40 VDC
Suitable for	li (Imax) = 150 mA
Class I, Division 2, Groups A, B, C, D	Ci = 0
Temp. Code T4 Ta = 75° C	Li = 0
	Pi = 0.7 watts max.

ATEX & UKC Approvals

Intrinsic Safety	II 1 G Ex ia IIC T* Ga Ta=-55°C to Ta max.
Intrinsic Safety	II 3 G Ex ic IIC T* Gc Ta=-55°C to Ta max
Increased Safety	II 3 G Ex ec ic IIC T6** Gc Ta=-55°C to +85°C

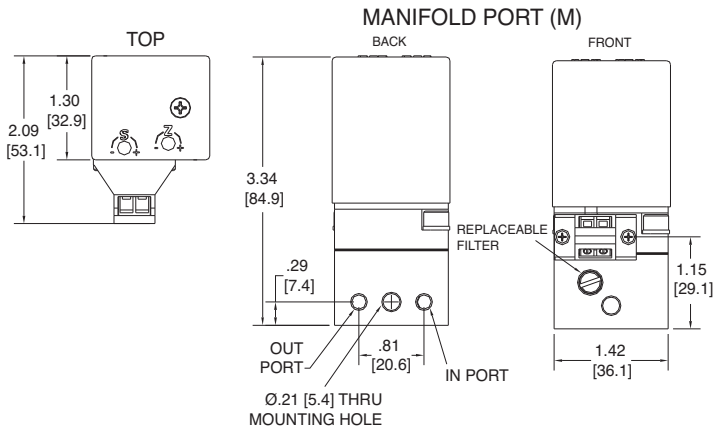
*See Energy Limiting Parameters Table in IOM 441622089

**Ui = 40 V ; li = 20 mA

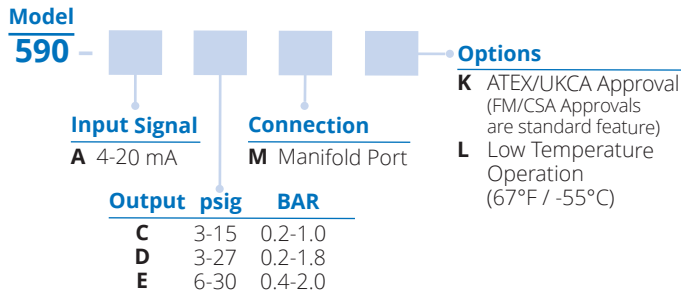


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Dimensions



Ordering Use this coding system to order



Accessories

Replacement Filter: P/N 449-871-096

Warranty ControlAir LLC products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir LLC recommended usages. ControlAir LLC's liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir LLC's sole option, of any products proved defective. ControlAir LLC reserves the right to discontinue manufacture of any products or change products materials, designs or specifications without notice. Note: ControlAir does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for the proper selection, use, and maintenance of any ControlAir product remains solely with the purchaser and end user. Drawing downloads available at www.controlair.com

Functional Specifications

M Connection (Manifold)	
Input	4-20 mA
Outputs	3-15 psig 0.20-1.0 BAR 3-27 psig 0.20-1.8 BAR 6-30 psig 0.40-2.0 BAR
Air Consumption	2.00 scfh @ 20 psig supply 4.94 scfh @ 85 psig supply 8.36 scfh @ 150 psig supply
Supply Pressure	150 psig (10.0 BAR) max. Note: Supply pressure must be a minimum of 5 psig (0.3 BAR) above maximum output
Flow Capacity	Same as Air Consumption
Temperature Limit	-40°F to 185°F (-40°C to 85°C) Low Temperature Option (L): -67°F to 158°F (-55°C to 70°C)
Relative Humidity	75% average - 95% short time non-condensing
Impedance	260 Ohms @ 70°F (21°C)
Loop Load	5.2 volts @ 70°F (26°C)

Performance Specifications

Linearity (Independent)	<±0.5% of span
Hysteresis	<±0.3% of span
Deadband	<±0.1% of span
Repeatability	<±0.3% of span; <±0.15% of span typical
Mounting Orientation	<±0.5% / 90 degree change
Air Supply Sensitivity	<±0.3% / 25 psi
Vibration Effect	<±1% up to 10g and 20-80 Hz
Temperature Effect	<±0.75% / 10°F change

Physical Specifications

Housing	NEMA 1 (IP 20)
Port Sizes	3/16" (M-Connection)
Media	Clean, dry, oil-free, instrument air, filtered to 40 micron
Electrical Connections	Terminal block
Mounting	Manifold
Materials	Housing: Chromate-treated aluminum, plastic Elastomers: Buna-N Trim: Stainless steel; brass; zinc-plated steel Cover: Polypropylene
Weight	0.75 lbs (0.34 kg)



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