



Type 590X

I/P Transducer

Compact size. Vibration Insensitive.

The Type-590X I/P (current to pressure) transducer converts a variable electrical signal to a linearly proportional pneumatic output. The small size, light weight and immunity to shock and vibration make it ideal for use in process control 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
- **Din Rail Mounting** Ported version comes standard with din rail adapter
- **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

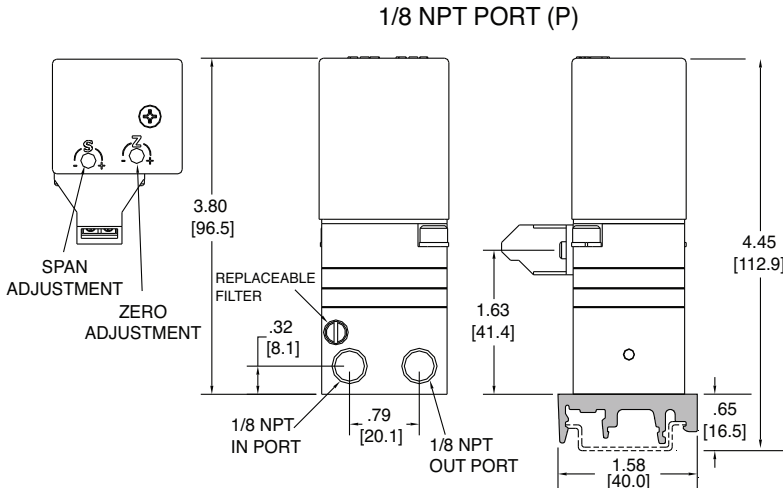
*See Energy Limiting Parameters Table in IOM 441622089

**Ui = 40 V ; li = 20 mA



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Dimensions

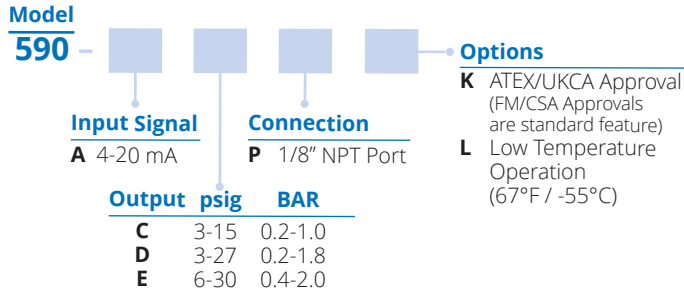


Shown with standard DIN Rail Mounting Kit: P/N 445-766-024

Functional Specifications

P Connection (1/8" NPT)	
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	6 scfh (170 NI/hr)
Supply Pressure	3-15: 22 psig (1.5 BAR) max. 3-27, 6-30: 42 psig (2.8 BAR) max. <small>Note: Supply pressure must be a minimum of 5 psig (0.3 BAR) above maximum output</small>
Flow Capacity	2.4 scfm max
Temperature Limit	-40°F to 158°F (-40°C to 70°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)

Ordering Use this coding system to order



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 (metric)
Air Supply Sensitivity	< .3% per 1.5 psig change
Vibration Effect	<±1% up to 10g and 20-80 Hz
Temperature Effect	<±0.75% / 10°F change (metric)

Accessories

Replacement Filter: P/N 449-871-096

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Physical Specifications

Housing	NEMA 1 (IP 20)
Port Sizes	1/8" NPT (P-Connection)
Media	Clean, dry, oil-free, instrument air, filtered to 40 micron
Electrical Connections	Terminal block
Mounting	Pipe or DIN rail
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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