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.

F E A T U R E S

- **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) and ATEX Intrinsically Safe and Non-Incendive certifications
- **Din Rail Mounting**
  Ported version comes standard with din rail adapter
- **Wide Operating Temperature Limits**

Hazardous Area Classifications

Factory Mutual (FM) & Canadian Standards (CSA) Approvals
Hazardous Location Units: FM & CSA

Intrinsically Safe
Class I, Division 1, Groups A, B, C, D
Suitable for
Class I, Division 2, Groups A, B, C, D
Temp. Code T4 Ta = 75° C

Entity Parameters
Ui (Vmax) = 30 VDC
Ii (Imax) = 125 mA
Ci = 0
Li = 0
Pi = 0.7 watts max.

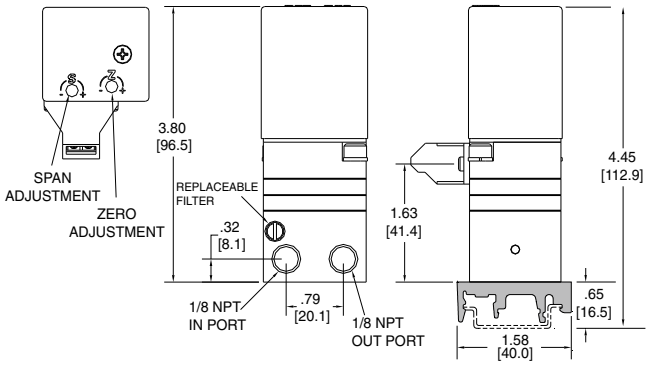
ATEX Approvals
Hazardous Location Units: ATEX (FM)
FM 06ATEX3942X

Intrinsically Safe
EEx ia IIC T4 -40°C ≤ Ta ≤ 75°C

Entity Parameters
Ui (Vmax) = 30 VDC
Ii (Imax) = 125 mA
Ci = 0
Li = 0
Pi = 0.7 watts max.

Type 590X Dimensions

1/8 NPT PORT (P)



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

Ordering Information

Use this coding system to order

590 — **Model**

Input Signal

A 4-20mA

Connection

P 1/8" NPT Port

Options

K ATEX Approval (FM/CSA Approvals are standard feature)

Output	psig	BAR
C	3-15	0.2-1.0
D	3-27	0.2-1.8
E	6-30	0.4-2.0

Accessories

Replacement Filter: P/N 449-871-096

Warranty

ControlAir, Inc. 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, Inc. recommended usages. ControlAir, Inc.'s liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir, Inc.'s sole option, of any products proved defective. ControlAir, Inc. 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.

Type 590X Specifications

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
Supply Pressure Note: Supply pressure must be a minimum of 5 psig (0.3 BAR) above maximum output	3-15: 22 psig (1.5 BAR) max. 3-27, 6-30: 42 psig (2.8 BAR) max.
Flow Capacity	2.4 scfm max.
Temperature Limit	-40°F to 158°F (-40°F to 70°C)
Relative Humidity	75% average - 95% short time non-condensing
Impedance	260 Ohms @ 70°F
Loop Load	5.2 volts @ 70°F

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	< .3% per 1.5 psig change
Vibration Effect	<±1% up to 10g and 20-80 Hz
Temperature Effect	<±0.75% / 100F change

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)

ControlAir Inc.
8 Columbia Drive / Amherst, NH 03031 USA
Website: www.controlair.com
Email: sales@controlair.com
603-886-9400 FAX 603-889-1844

FM Approvals ISO-9001

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