

# I/PAC

## Integrated Process Air Control

*Field rugged, quick mount I/P - airset assemblies*

Explosion-proof field mounted I/P transducers from ControlAir are now offered as an integrated package that comes pre-assembled with a filter regulator and pressure gauge. Users can choose from different versions of either the Type-950XP or Type-595XP I/P combined with the Type-330 filter regulator. The package is bracketed to mount on a 2" pipe as well as directly onto valve yokes or other devices that utilize 2.25" bolt spacing. Integrated units carry all agency hazardous area approvals from FM, CSA and ATEX.

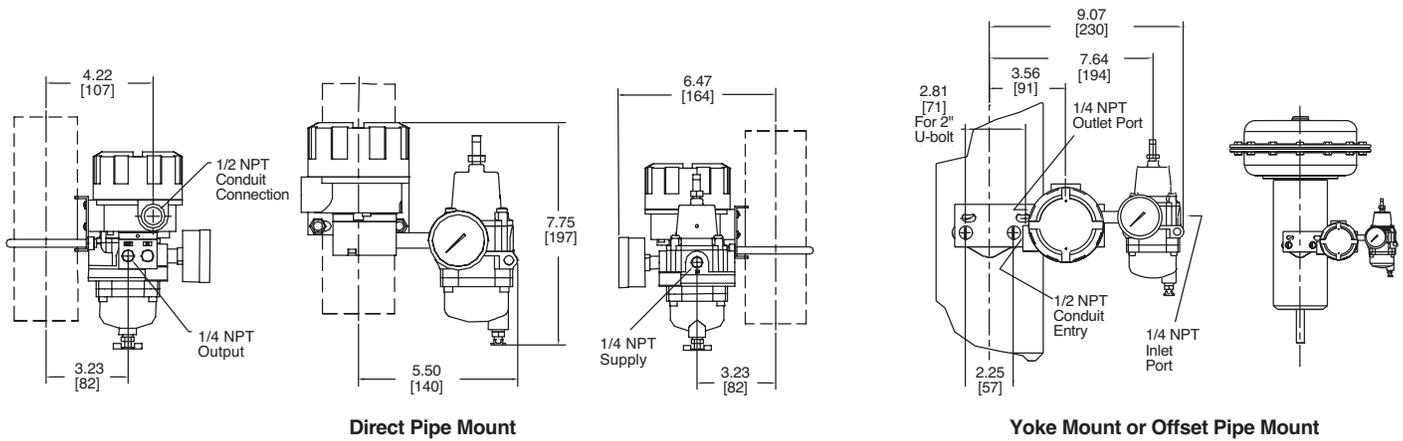
### Features

- **Seamless Replacements**  
For existing automated control valves in the field
- **Convenient Bracketing**  
Allows direct or 2" pipe mounting
- **Preassembled**  
Units come preassembled with filter regulator and pressure gauge
- **Explosion-proof and Intrinsically Safe**  
Approvals from FM, CSA and ATEX
- **Vibration and Position Insensitive**
- **Compact Design**  
Installs where others won't

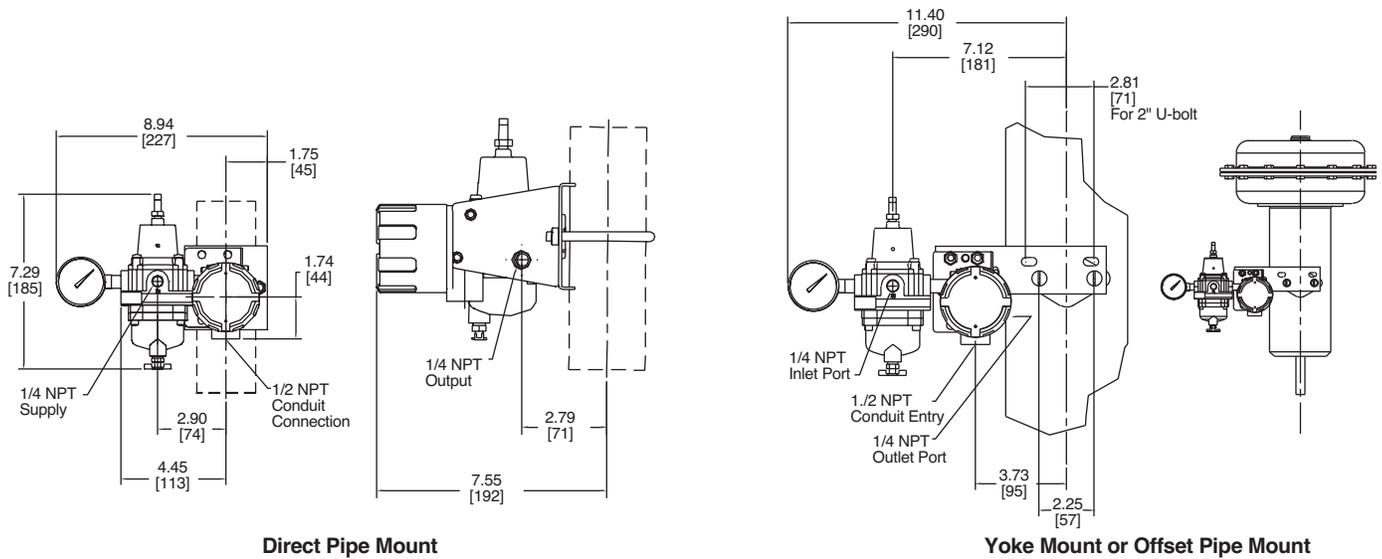


## DIMENSIONS <sup>IN</sup> [MM]

### Type 950XP/Type 330 Combination



### Type 595XP/Type 330 Combination





## FUNCTIONAL SPECIFICATIONS

### Type 950XP/Type 330 Combination

### Type 595XP/Type 330 Combination

<b>Input</b>	4-20 MA	
<b>Outputs</b>	3-15 psig 3-27 psig 6-30 psig	0.20-1.0 BAR 0.20-1.8 BAR 0.40-2.0 BAR
<b>Air Consumption</b>	3.0 scfm (0.11 m3/hr) at mid range	0.1 scfm (0.17m3/hr)
<b>Supply Pressure</b> Note: Supply pressure must be a minimum of 5 psig (0.3 BAR) above maximum output	100 psig (7.0 BAR) max	3-15: 22 psig (1.5 BAR) max 3-27, 6-30: 42 psig (2.8 BAR) max
<b>Flow Capacity</b>	4.5 scfm (7.6 m3/hr) at 25 psig (1.7 BAR) supply 12.0 scfm (20.0 m3/hr) at 100 psig (7.0 BAR) supply	2.4 scfm (4.1 m3/hr) max.
<b>Temperature Limits</b>	-40°F to +160°F (-40°C to +71°C)	-67°F to +185°F (-55°C to +85°C)
<b>Relative Humidity</b>	75% average - 95% short time non-condensing	
<b>Loop Load</b>	10 Volts @ 20mA	5.2 Volts @ 70°F

## PERFORMANCE SPECIFICATIONS

<b>Linearity (Independent)</b>	0.10 % of span ( $\pm 0.25$ with field-selectable option)	$< \pm 0.5\%$ of span
<b>Hysteresis</b>	0.10 % of span ( $\pm 0.25$ with field-selectable option)	$< \pm 0.5\%$ of span
<b>Deadband</b>	$< \pm 0.02\%$ of span	$< \pm 0.1\%$ of span
<b>Repeatability</b>	$< \pm 0.10\%$ of span ( $\pm 0.25$ with field-selectable option)	$< \pm 0.3\%$ of span; $< \pm 0.15\%$ of span typical
<b>Mounting Orientation Effect</b>	No measurable effect	$< \pm 0.5\%$ / 90 degree change
<b>Air Supply Sensitivity</b>	No measurable effect	$< .3\%$ / 1.5 (0.10 BAR) psig change
<b>Vibration Effect</b>	Less than $\pm 1.0\%$ of span under the following conditions: 5-15Hz @ 0.8 inches constant displacement; 15-500Hz @ 10g's	$< \pm 1\%$ up to 10g and 20-80 Hz
<b>Temperature Effect</b>	$\pm 0.045\%/^{\circ}\text{F}$ (0.07%/°C) of span	$< \pm 0.75\%$ / 10°F (5.6°C) change

## PHYSICAL SPECIFICATIONS

<b>Housing</b>	NEMA 4X (IP 65)	
<b>IP Port Sizes</b>	Pneumatic: 1/4" NPT Electric: 1/2" NPT, M20-1.5 (ATEX)	
<b>Media</b>	Clean, dry, oil-free, instrument air, filtered to 40 micron	
<b>Electrical Connections</b>	Terminal block	
<b>Materials</b>	Housing: Chromate-treated aluminum with epoxy paint. NEMA 4X (IP65) Elastomers: Buna-N Trim: Stainless steel; brass; zinc-plated steel	
<b>Weight</b>	3.5 lbs (1.6 kg) 4 lbs (1.8 kg) with (E) option	3.1 lbs (1.4 kg)

## Type 950XP/Type 330 Combination

### Factory Mutual (FM) & Canadian Standards Association (CSA) Approval

Zone Certification	Entity Parameters	Temperature Code	Enclosure
<b>Intrinsic Safety</b> Class I, Division 1, Groups C & D Class II, Division 1, Groups E, F, & G Class III, Division 1; Fibers	Vmax = 30 Vdc Imax = 125 mA Pi = 0.7 W Ci = 0 nF Li = 0 mH	T4 Ta=+70°C	Nema-4X
<b>Explosion-Proof</b> Class I, Divisions 1 & 2, Groups B, C & D Class II & III, Division 1, Groups E, F, & G	---	T4 Ta=+70°C	Nema-4X

Suitable for use with methane or natural gas supply pressure media when ordered with tapped exhaust and factory sealed conduit assembly (Option E).

### ATEX Approval

Zone Certification	Entity Parameters	Temperature Code	Enclosure
<b>Intrinsic Safety</b> II 1 G Ex ia II B	Vmax = 30 Vdc Imax = 125 mA Pi = 0.7 W Ci = 0 nF Li = 0 mH	T4 -40°C ≤ Ta ≤ 70°C	IP65
<b>Flameproof</b> II 2 G Ex d II B + H2		T4 -40°C ≤ Ta ≤ 70°C	IP65
<b>Limited Energy</b> II 3 G Ex nL IIC		T4 -40°C ≤ Ta ≤ 70°C	IP65

## Type 595XP/Type 330 Combination

### Factory Mutual (FM) & Canadian Standards Association (CSA) Approval

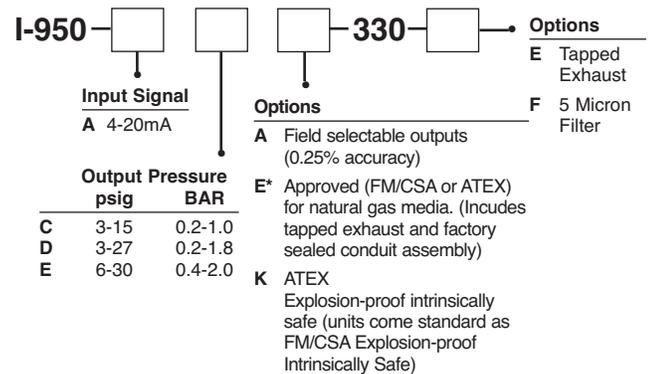
Zone Certification	Entity Parameters	Temperature Code	Enclosure
<b>Intrinsic Safety</b> Class I, Division 1, Groups A, B, C & D Class II, Division 1, Groups E, F, & G Class III, Division 1; Fibers	Vmax = 30 Vdc Imax = 150 mA Pi = 0.7 W Ci = 0 nF Li = 0 mH	T4 -40°C ≤ Ta ≤ 75°C	Nema-4X
<b>Nonincendive</b> Class I, Division 2, Groups A, B, C & D Class II, Division 2, Groups E, F, & G Class III, Division 2; Fibers		T4 -40°C ≤ Ta ≤ 75°C	
<b>Explosion-Proof</b> Class I, Divisions 1 & 2, Groups B, C & D Class II & III, Division 1, Groups E, F, & G	---	T6 -40°C ≤ Ta ≤ 75°C	Nema-4X

Suitable for use with methane or natural gas supply pressure media when ordered with tapped exhaust and factory sealed conduit assembly (Option E).

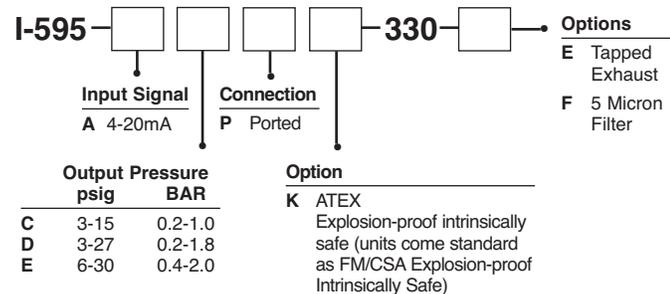
### ATEX Approval

Zone Certification	Entity Parameters	Temperature Code	Enclosure
<b>Intrinsic Safety</b> II 1 G Ex ia II C	Vmax = 30 Vdc Imax = 125 mA Pi = 0.7 W Ci = 0 nF Li = 0 mH	T* -55°C to Ta Max*	IP65
<b>Flameproof</b> II 2 G Ex d II B + H2 II 2 D Ex tD A21 T85°C	---	T6 -40°C ≤ Ta ≤ 75°C	IP65
<b>Limited Energy/Non-Sparking</b> II 3 G Ex nL IIC II 3 G Ex nA nL IIC	---	T* -55°C to Ta Max* T6 -55°C ≤ Ta ≤ 85°C	IP65

\*See energy limiting parameters. Refer to Instruction Manual 441-622-099.



\*E If ordering 950 "E", Type-330"E" must also be ordered.



### 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.



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