

Type 2000

Pneumatic and Electro-Pneumatic Valve Positioner

Stable and accurate positioning of rotary and linear valves

The ControlAir Type-2000 pneumatic and electro-pneumatic positioner provides stable and accurate positioning of rotary and linear valves. The force balanced instrument is simple, reliable and user friendly for calibration, maintenance and field upgrades. The electro-pneumatic unit is available with worldwide safety approvals in an Intrinsically Safe and Explosion-proof version. The NEMA-4X (IP 66) housing provides rugged resistance to severe industrial environments. The modular design of the Type-2000 allows multiple feature ordering options or easy field conversions.

Features

- **Modular construction** Base pneumatic unit can be quickly field converted to a fully optioned electro-pneumatic unit.
- **Rotary and linear, single and double acting**
- **Optional 4-20 mA feedback on mechanical switches**
- **External zero adjustment for easy calibration**
- **Compact design** Small size and low weight
- **Vibration, position and shock insensitive**
- **Stainless steel spool valve**
Long operating life
- **High gain pilot valve** Provides quick and accurate valve/actuator response
- **Standard pointed indicator (rotary), standard blank cover (linear) and optional raised beacon.**
- **High maximum supply pressure**
145 psig (10 Bar)
- **FM, CSA & ATEX approvals**
For Intrinsically Safe (CA2010/CA2011) and Explosion-proof (CA2020/CA2021) operation



ControlAir Inc.

Type 2000

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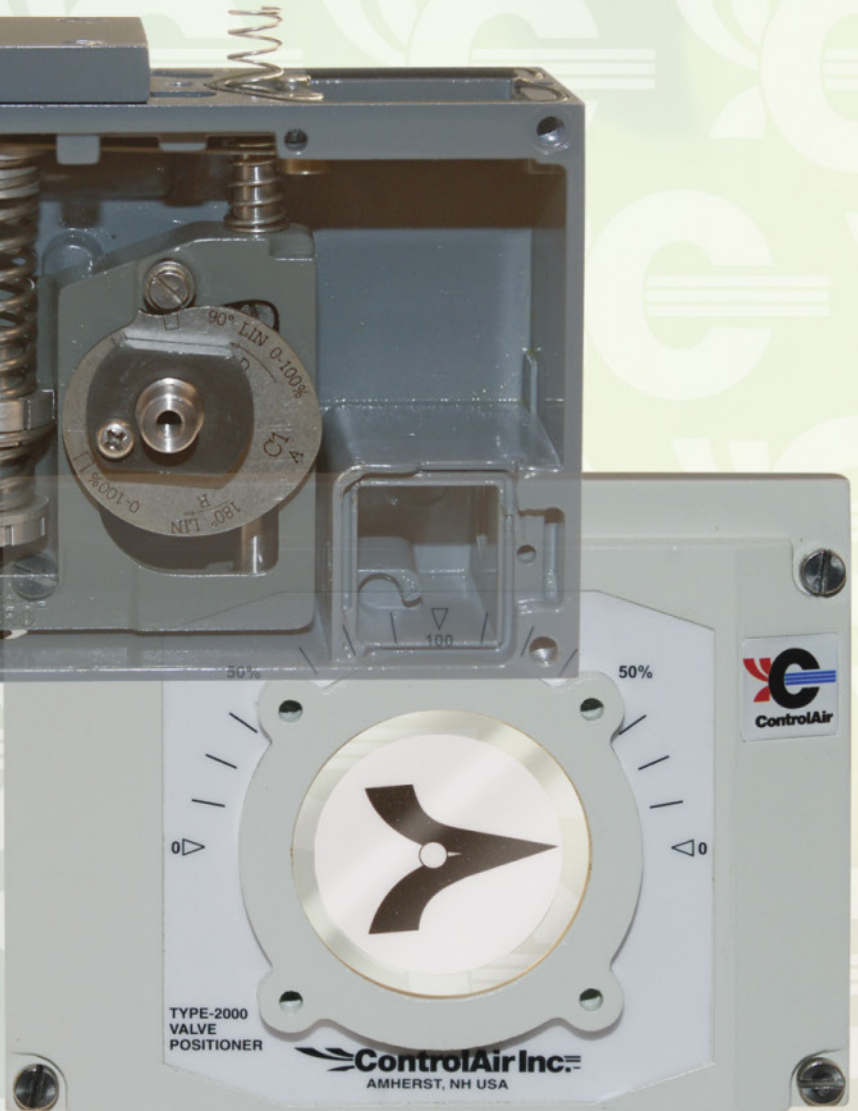
Type 595XP Explosion-proof I/P Transducer
(CA2020/CA2021)

Type 590X
Intrinsically Safe
I/P Transducer
(CA2005/CA2010/CA2011)



Type 2000
Pneumatic Positioner
(CA2000)

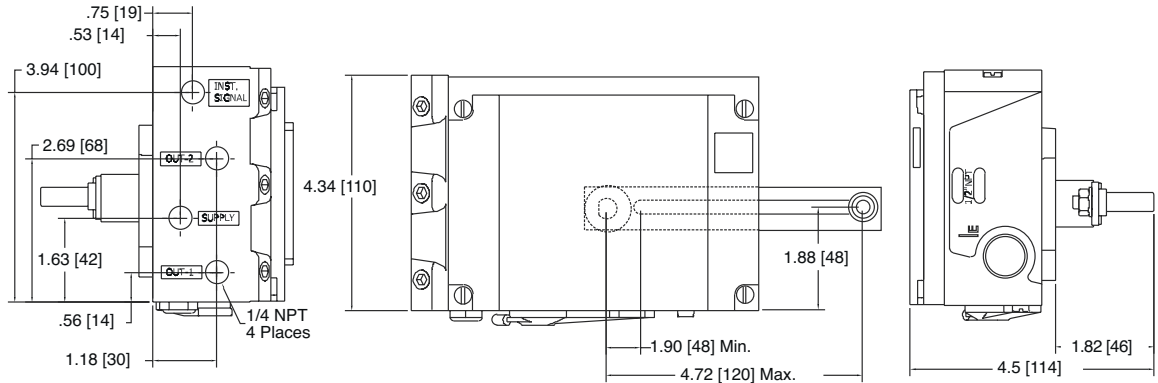
Standard Cover with
Arrow Indicator (Rotary)



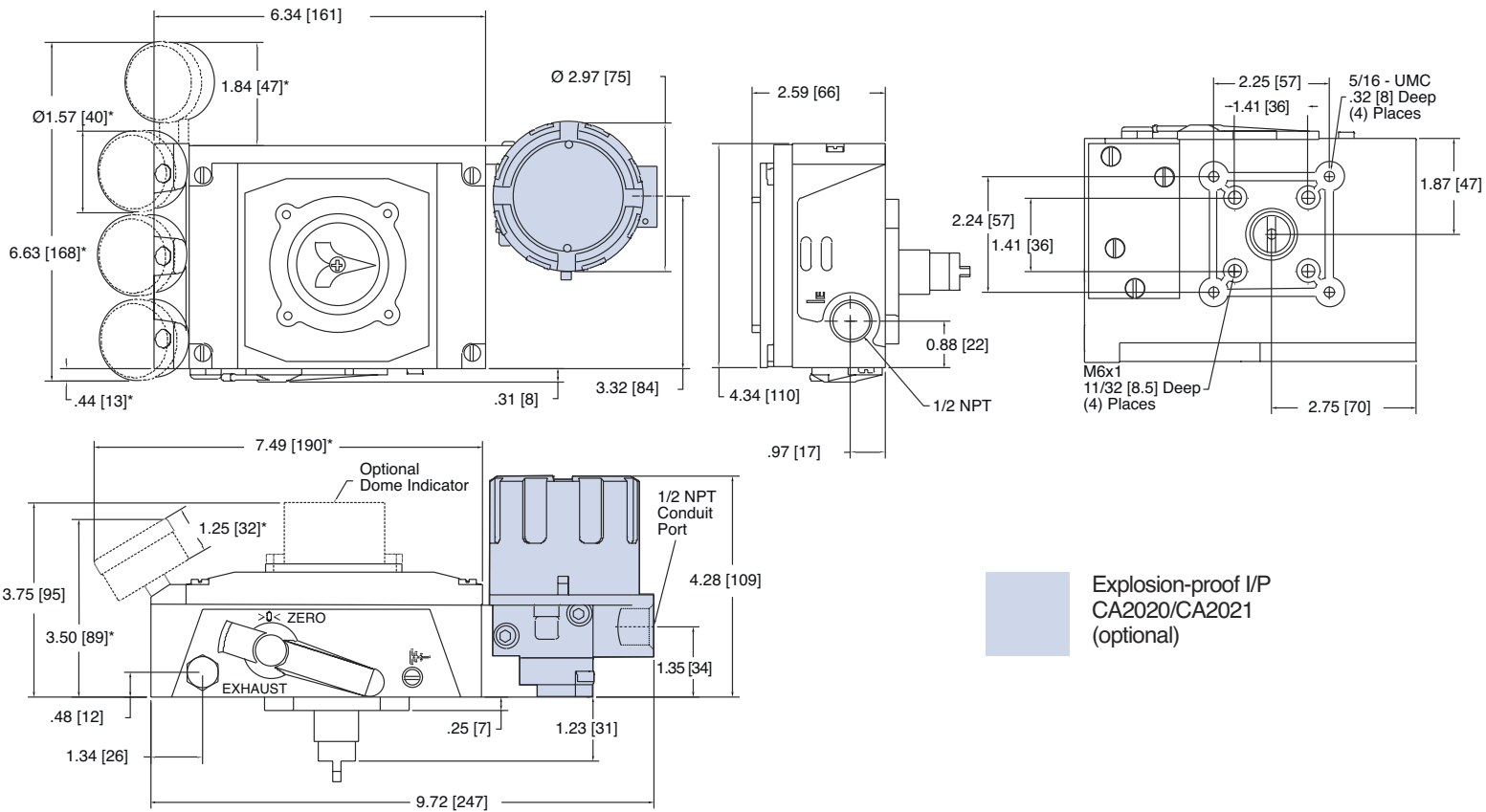
Type 2000 Dimensions

In [mm]

LINEAR

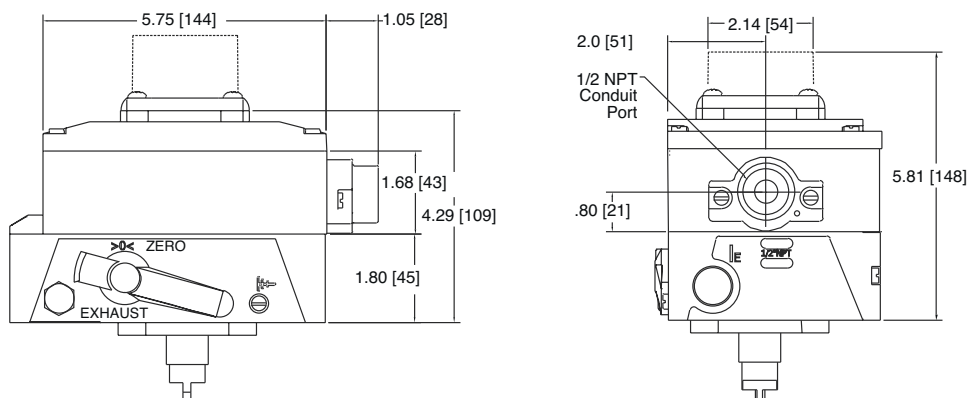


ROTARY



Explosion-proof I/P
CA2020/CA2021
(optional)

FEEDBACK / SWITCH (OPTION)



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FUNCTIONAL SPECIFICATIONS

Type-2000	Pneumatic (CA2000)		Electro-Pneumatic (CA2005/CA2010/CA2011)	
Input Signal	3-15 PSI (0.2-1.0 Bar)		4-20 mA (Ri<250 ohms)	
Supply Pressure	<145 PSI (<10 Bar)		21.8-145 PSI (1.5-10 Bar)	
Linearity Error	<0.7 % f.s		<1.0% f.s	
Hysteresis	<0.4% f.s		<0.6% f.s	
Repeatability	<0.3% f.s		<0.5% f.s	
Pressure Gain	750 P out/P in		750 P out/P in	
Flow Capacity @29 PSI (2.0 Bar) @87 PSI (6.0 Bar) @145 PSI (10 Bar)	SCFM 9.5 28.3 47.1	NI/min 268.9 800.1 1333	SCFM 9.5 28.3 47.1	NI/min 268.9 800.1 1333
Air Consumption @29 PSI (2.0 Bar) @87 PSI (6.0 Bar) @145 PSI (10 Bar)	SCFM 0.18 0.53 0.88	NI/min 5.09 424.5 707.5	SCFM 0.2 0.6 1.0	NI/min 5.7 17.0 28.3
Impedance			260 Ohms @ 70°F	
Loop Load			5.2 Volts @ 70°F	

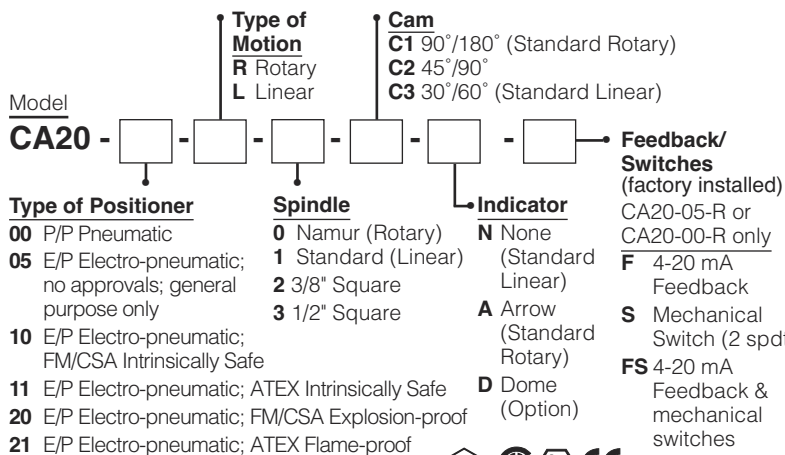
Mechanical Switches (S & FS Option)	
Input Signal	Honeywell V15S05-CZ100 A05-01
Switch Type	SPDT
Loop Load	5A 125/250 VAC/0.1A 48 VDC
Operating Force	100gf
Position Feedback (F & FS Option)	
Voltage Supply	12-30 VDC
Output	2 Wire; 4-20 mA DC
Loop Impedance	Max. 700Ω @ 24 VDC
Linearity Error	<1.5% F.S.
Hysteresis Error	<0.5% F.S.

PHYSICAL SPECIFICATIONS

Temperature Range	-40° to 185° F (-40° to 85° C)	
Port Sizes	Pneumatic: 1/4" NPT; Gauge Ports - 1/8" NPT Electric: 1/2" NPT; M20-1.5 (ATEX)	
Media	Clean, dry, oil-free instrument air, filtered to 40 micron	
Enclosure	Nema 4X / IP66 aluminum with polyester epoxy finish	
Weight	3.5 lbs (1.6 kg) 5.1 lbs (2.3 kg)	3.8 lbs (1.7 kg) CA2005/CA2010/CA2011 5.4 lbs (2.5 kg) CA2005 with feedback 4.8 lbs (2.2 kg) CA2020/CA2011

Ordering Information

Use this coding system to order



Approvals

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

- 2100 Intrinsically Safe**
Class I, Division 1, Groups A, B, C, D
Nonincendive
Class I, Division 2, Groups A, B, C, D
- 2020 Intrinsically Safe**
Class I, II & III, Division 1, Groups A, B, C, D, E, F, G
Explosion-Proof
Class I, Division 1, Groups B, C, D
Dust Ignition-Proof
Class II, III, Division 1, Groups E, F, G

Model ATEX Approvals

- 2011 Intrinsically Safe**
II 1 G Ex ia IIC T4/T5/T6
- 2021 Intrinsically Safe**
II 1 G Ex ia IIC T4/T5/T6
Flame-Proof – ATEX
II 2 G Ex d IIB + H2 T6
II 2 D Ex tD A21 T850C

Entity Parameters
Ui (Vmax) = 40 VDC
Li (Imax) = 125 mA
Ci = 0
Li = 0
Pi = 0.7 watts max.

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8 Columbia Drive / Amherst, NH 03031 USA

Website: www.controlair.com

Email: sales@controlair.com

603-886-9400 FAX 603-889-1844

An ISO-9001:2008 Certified Company