

5. ELECTRONIC PRESSURE REGULATOR (I/P, E/P) series 500X



Description

The ControlAir Type-500X converts a current or voltage input signal to a linearly proportional pneumatic output pressure. This versatile instrument is designed for control applications that require a high degree of reliability and repeatability at an economical cost.

Applications

Typically, these units are used for applications that require the operation of valve actuators, pneumatic valve positioners, damper and louver actuators, final control elements, relays, air cylinders, web tensioners, clutches and brakes. Industries that utilize the Type-500X include Petrochemical, Energy Management, Textile, Paper, Paper Converting and Food and Drug.



Features

- **INTEGRAL VOLUME BOOSTER**
Built in volume booster allows high flow capacity.
- **COMPACT SIZE**
- **LOW AIR CONSUMPTION**
- **REVERSE ACTING MODE POSSIBLE**
Increasing input signal decreases output pressure.
- **FLEXIBLE ZERO AND SPAN ADJUSTMENTS**
- **STANDARD PROCESS INPUTS**
- **GOOD PRICE/QUALITY**

Options

- **D - DIN 43650 Connector (≈MP2).**
Provided mounted to unit. Orients in 4 directions.
- **W - NEMA 4X (IP65) ENCLOSURE.**
For splashdown/outdoor use.

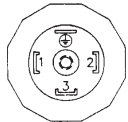
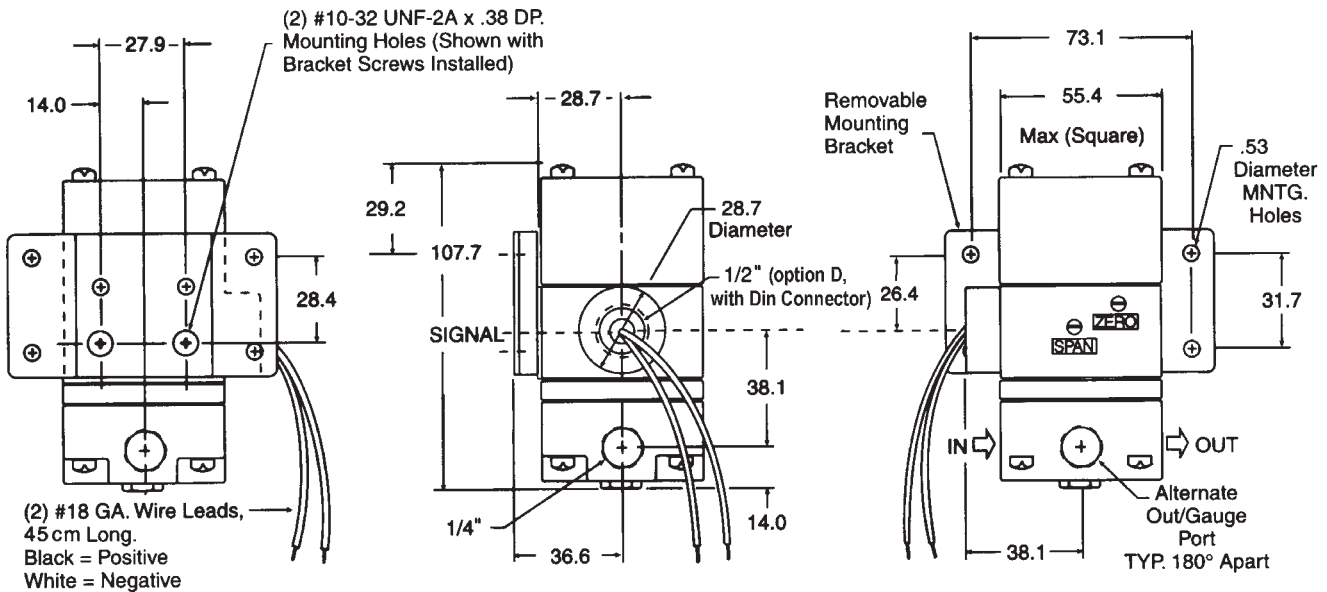
Specifications

	Low Output Range (Up to 30 psig)	High Output Range (Up to 120 psig)
Min./Max. Supply Pressure	Minimum - 3 psig (21 kPa) Above maximum output Maximum - 100 psig (700 kPa)	Minimum - 5 psig (35 kPa) Above maximum output Maximum - 150 psig (1050 kPa)
Supply Pressure Sensitivity	< ± 0.1% of span per psig (< ± 0.15% of span per 10 kPa)	< ± .04% of span per 1.0 psig (7.0 kPa)
Terminal Based Linearity	< ± 0.75% of span	< ± 1.5% of span typical, ± 2.0% max.
Repeatability	< 0.5% of span	< 0.5% of span
Hysteresis	< 1.0% of span	< 0.5% of span
Response Time	Dependent on pressure range, typically less than 0.25 sec for 3-15 psig units	
Flow Rate	4.5 scfm (7.6 m3/hr ANR) at 25 psig (175 kPa) supply, 12.0 scfm (20.0 m3/hr ANR) at 100 psig (700 kPa) supply	20.0 scfm (34.0 m3/hr) at 150 psig (1050 kPa) supply
Relief Capacity	2 scfm (3.4 m3/hr) at 5 psig (35 kPa) above 20 psig (140 kPa) setpoint	7 scfm (11.9 m3/hr) at 10 psig (69 kPa) above 20 psig (140 kPa) setpoint
Maximum Air Consumption	.05 scfm (.07 m3/hr) midrange typical	.07 scfm (.14 m3/hr) midrange typical
Media	Oil free, clean dry air filtered to 40 micron	
Temp. Range (Operating)	-30°C to 60°C	
Port Sizes	G 1/4" (NPT available on request)	
Weight	0.94 kg	0.94 kg

Conversion:

- 1 psi g = 6.9 kPa = 0.069 bar
- 1 scfm = 1.7 m³/hr

Dimensional Drawings (dimensions are in mm)



TERMINAL	CONNECTION
1	POSITIVE (+)
2	NEGATIVE (-)
3	NOT USED
⊕	GROUND (⊕)

Ordering Information

Type 500X I/P Transducers

Part Number	Input	Output Range		Impedance
		psi	kPa	
500-AADU	4-20 mA	3-9	20-60	90 Ohms
500-ABDU	4-20 mA	9-15	60-100	90 Ohms
500-ACDU	4-20 mA	3-15	20-100	180 Ohms
500-ADDU	4-20 mA	3-27	20-185	220 Ohms
500-AEDU	4-20 mA	6-30	40-200	220 Ohms
500-AFDU	4-20 mA	1-17	7-117	250 Ohms
500-BCDU	10-50 mA	3-15	20-100	70 Ohms
500-BDDU	10-50 mA	3-27	20-185	85 Ohms
500-BEDU	10-50 mA	6-30	40-200	85 Ohms
500-AGDU	4-20 mA	2-60*	14-420	225 Ohms
500-AHDU	4-20 mA	3-120*	20-830	260 Ohms
500-BFDU	0-60 mA	2-120*	15-830	220 Ohms

Type 500X E/P Transducers

Part Number	Input	Output Range		Impedance
		psi	kPa	
500-CCDU	0-5 VDC	3-15	20-100	615 Ohms
500-CDDU	0-5 VDC	3-27	20-185	530 Ohms
500-CEDU	0-5 VDC	6-30	40-200	530 Ohms
500-DCDU	1-9 VDC	3-15	20-100	985 Ohms
500-DDDU	1-9 VDC	3-27	20-185	840 Ohms
500-DEDU	1-9 VDC	6-30	40-200	840 Ohms
500-CFDU	0-5 VDC	2-60*	14-420	500 Ohms
500-EHDU	0-10 VDC	3-120*	20-830	805 Ohms

Grey indicated types (with Din Connector, option D) = delivery from stock