

## Type 5500

# Multi-station, Digital-to-Pneumatic Pressure Regulator

*4, 6, or 8 station air pressure control from a common air supply with DeviceNet™ or Profibus™*

### Manifold Features

- **One Node Providing Multi-Station Control**  
4, 6, or 8 station air pressure control off of one fieldbus node.
- **Individual Pneumatic Shutoff Valves**  
Allows adding, changing or removing electronic pressure regulators without shutting off the main air supply. Service one station while the others remain in operation.
- **Reduced System Wiring**  
Only one power cord and one fieldbus connection required for up to 8 pressure outputs.
- **Feedback Option**  
Pressure sensor monitors regulator output and sends electronic signal back to PLC across DeviceNet™ or Profibus™ DP network.
- **Common Air Supply**  
Eliminates additional plumbing of individual supply lines.

### Regulator Features

- **Compact Size**  
Great for high-density mounting.
- **Easy Access External Zero and Span Adjustments**  
Convenient calibration.
- **High Flow Capacity**  
Internal volume booster.

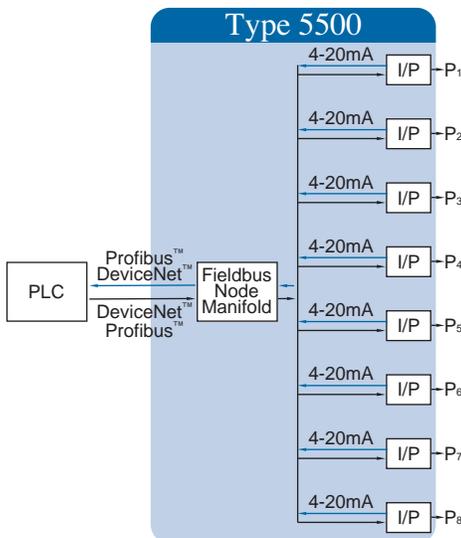


# Type 5500

# Accurate, multi-station control with a single fieldbus node



This multi-station manifold uses a common air supply to provide electronic proportional control of output pressure from any combination of 4, 6, or 8 station units through the use of a DeviceNet™ or Profibus™ communication network. An 8-bit digital signal describing the required output pressure for each electronic regulator is sent by DeviceNet™ or Profibus™ to the Type 5500 node. The Type 5500 converts the digital signal into the appropriate 4-20mA signal that is sent to each corresponding I/P transducer which adjusts output pressure to the desired setting. An optional pressure sensor feeds back a diagnostic signal by DeviceNet™ or Profibus™ to the controller, which then monitors pressure output from each I/P.



## S P E C I F I C A T I O N S

### Performance Specifications

<b>Linearity/Hysteresis &amp; Repeatability</b>	<±0.5% of span
<b>Supply Pressure Sensitivity</b>	<±0.1% of span per 1.0 psig change
<b>RFI/EMI Effect</b>	Less than 0.5%

### Functional Specifications

<b>Input</b>	DeviceNet™ or Profibus™ DP
<b>Power Supply</b>	24 Volts
<b>Outputs (psig)</b>	3-15, 3-27, 6-30, 2-60, 3-120
<b>Air Consumption</b>	1.8 scfm per station at mid range typical
<b>Supply Pressure</b>	100 psig max. for 3-15, 3-27, 6-30 psig units 150 psig max. for 2-60, 3-120 psig units
<b>Flow Capacity</b>	4.5 scfm at 25 psig supply (3-15, 3-27, 6-30 psig) 12.0 scfm at 100 psig supply (3-15, 3-27-, 6-30 psig) 20.0 scfm at 150 psig supply (2-60, 3-120 psig)
<b>Relief Capacity</b>	2.0 scfm at 5 psig above set point
<b>Temperature Limits</b>	-20 to +150 F

### Physical Specifications

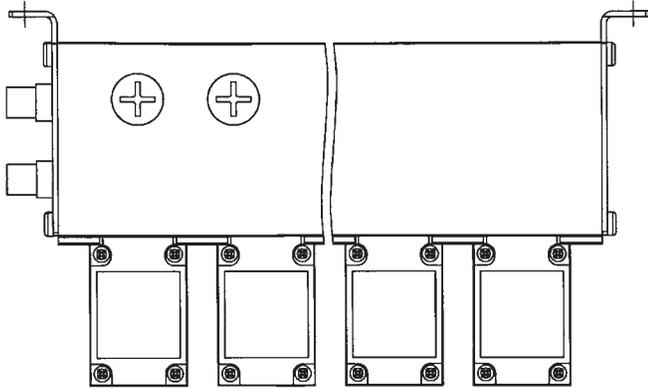
<b>Media</b>	Clean, dry, oil-free, air-filtered to 40 micron	
<b>Port Sizes</b>	Air Supply	3/8" NPT
	Air Output	1/4" NPT
<b>Electrical Connections</b>	Power	12mm 4 Pole
	DeviceNet™	12mm 5 Pole
<b>Mounting</b>	Wall or DIN Rail	
<b>Weight</b>	4 station	9.7 lb
	6 station	13.6 lb
	8 station	19.4 lb

## P R I N C I P L E S O F O P E R A T I O N

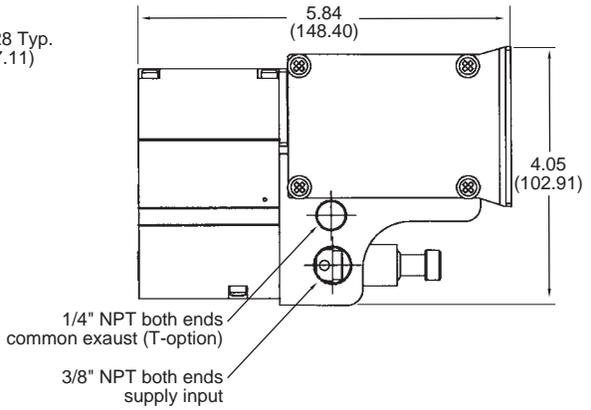
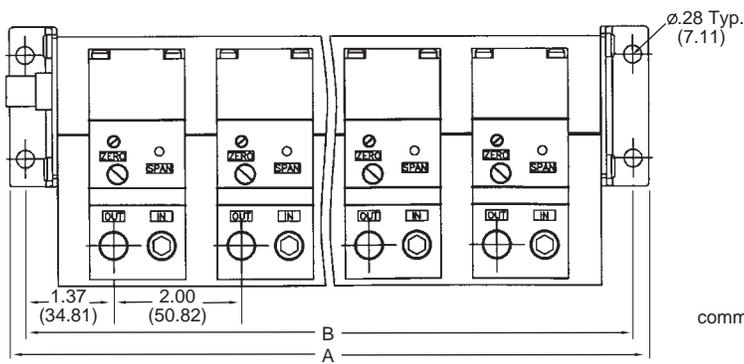
1. The PLC program sends an 8-bit digital signal across DeviceNet™/Profibus™ to the Type 5500 node describing the required output pressure for each I/P.
2. The node converts the 8-bit digital signal into the appropriate 4-20mA signal and sends it onto each I/P.
3. The I/P receives the 4-20mA signal and adjusts to the appropriate pressure.
4. Each I/P output pressure is monitored by its own pressure transducer.
5. The pressure transducer sends an analog signal back to the DeviceNet™/Profibus™.
6. It is then converted into a digital signal and sent back to the PLC across DeviceNet™/Profibus™.

Feedback Option (F)

# Type 5500 Dimensions

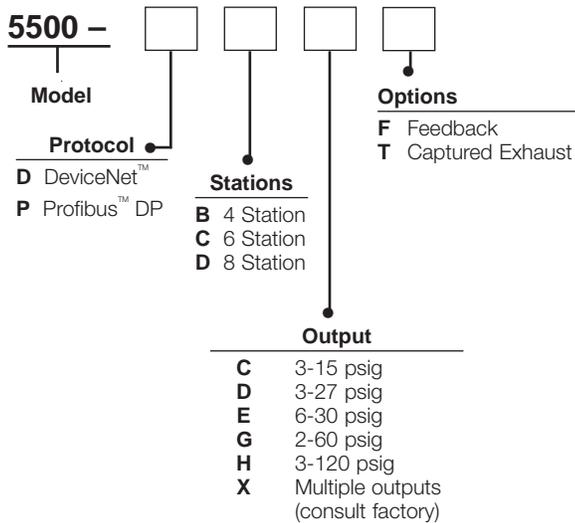


Stations	Length "A"		Length "B"	
	in	(mm)	in	(mm)
4	10.0	(254.0)	9.5	(241.6)
6	14.0	(355.6)	13.5	(343.2)
8	18.0	(457.2)	17.5	(444.8)



# Type 5500 Ordering Information

Use this coding system to order



## 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.

## Options

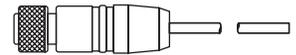
- F-Feedback** Pressure sensor monitors regulator output and sends electronic signal to PLC through DeviceNet™/Profibus™ network.
- T-Captured Exhaust** All exhaust from regulators is plumbed out the manifold using 1/4" NPT port.

## Accessories

Both a power cord and connecting cable are required and must be purchased separately

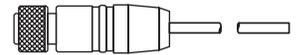
### 4 Pole Micro Power Cord

- 2 Meter #445-919-001  
5 Meter #445-919-002



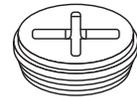
### DeviceNet™ Female Micro-Thin Cable

- 6 Foot #445-919-003  
12 Foot #445-919-004



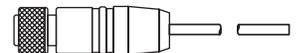
### Blank Station Plug #445-739-040

To block off unused stations



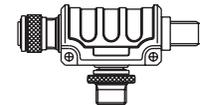
### Profibus™ Female 12mm Reverse Key Single Ended Cable

- 2 meter #445-919-005  
5 meter #445-919-006



### Profibus™ Tee Connector

#445-901-084



### Profibus™ Terminating Resistor

#445-901-085



### DIN-Rail Mounting Kit #445-766-027

For replacement only—a DIN-Rail Mounting Kit comes standard with the ControlAir Type 5500.

(Includes 4 screws and clips)



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