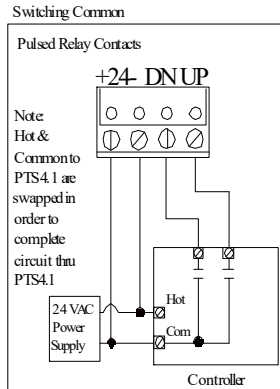
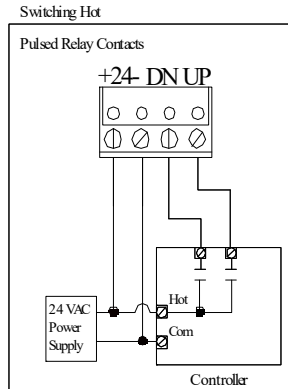
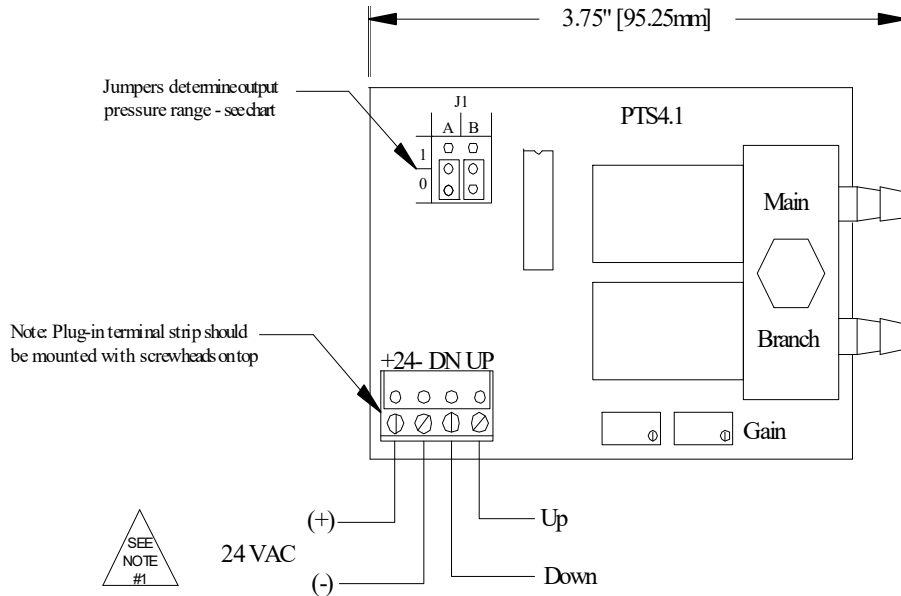




# Installation and Operation Instructions PTS4.1

## Floating Point to Modulated Pressure (Closed Loop) With Power “Brownout” Reset



Pressure Output Range	Jumper J1	
	A	B
0-10 psi 0-69 kPa	<input type="checkbox"/>	<input type="checkbox"/> 1
	<input type="checkbox"/>	<input type="checkbox"/> 0
5-15 psi 94-103 kPa	<input type="checkbox"/>	<input type="checkbox"/> 1
	<input type="checkbox"/>	<input type="checkbox"/> 0
0-15 psi 0-103 kPa	<input type="checkbox"/>	<input type="checkbox"/> 1
	<input type="checkbox"/>	<input type="checkbox"/> 0

### For Testing Only

Output Full 15 psi 103 kPa	<input type="checkbox"/>	<input type="checkbox"/> 1
	<input type="checkbox"/>	<input type="checkbox"/> 0

## INSTALLATION

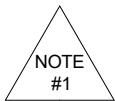
READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION.

**POWER CONNECTIONS** – This product operates only on 24 VAC, 50 or 60 Hz. Be sure to follow all local and electrical codes. Refer to wiring diagram for connection information.

Ground yourself before touching board. Some components are static sensitive.

### MOUNTING:

Circuit board may be mounted in any position. If circuit board slides out of snap track, a nonconductive “stop” may be required. Use only fingers to remove board from snap track. Slide out of snap track or push against side of snap track and lift that side of the circuit board to remove. Do not flex board or use tools.



1. If required by BAS or controller specification, the 24 VAC neutral can be earth grounded at the transformer. Analog input, digital input, and analog output circuits should not be earth grounded at two points. Any field device connected to this transformer must use the same common. If you are not sure of other field device configuration, use separate transformers for isolation.
2. If the 24 volt AC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, AC Transorb, or other spike snubbing device across each of the shared coils. Without these snubbers, coils produce very large voltage spikes when de-energizing that can cause malfunction or destruction of electronic circuits.
3. You should measure the actual voltage output of the secondary. If the output is not fully loaded you may read a higher voltage than the circuit board can handle.

The gauge port will accept a miniature 1/8"-27 FNPT back-ported pressure gauge to allow direct reading of branch line pressure. The gauge should be sealed by Teflon sealing tape, and should be tightened just snug. A backup wrench should be used to hold the manifold.

Warranty does not include malfunction due to clogged valve. Main air port is filtered with the supplied 80-100 micron integral-in-barb filter. Periodically check the filter for contamination and flow reduction, and clean with a brush or replace if needed (Part # PN004).

The surface between the manifold and pressure transducer is a pressure seal. Do NOT stress the circuit board or allow the manifold to move. Hold the manifold in one hand while installing pneumatic tubing onto the barbed fittings and use care when removing tubing to avoid damaging fittings or moving manifold.

This unit requires at least two cubic inches (32.7 cu. cm ) of branch air line capacity to operate without valve oscillation, and main air must be minimum of 2 psi (13.8 kPa) above highest desired branch output pressure.

## **FIELD CALIBRATION**

The PTS4.1 output is factory calibrated in all jumper selectable pressure output ranges. Three output ranges can be selected to accommodate the range of the actuator by placement of the jumpers on J1 jumper block. **Note:** Do Not make any adjustments to zero or gain potentiometers.

1. Make sure the up/down signal inputs are disconnected. This will eliminate interruption by unexpected control signals.
2. **Setting the output pressure range.** Output pressure ranges are made by jumper selection on jumper block J1. Refer to the chart next to the wiring diagram or the legend imprinted on the PTS4.1 printed circuit board. Set jumper positions for one of the ranges described. Note: Be sure the MAIN air pressure is greater than the desired maximum branch output pressure. Jumper position A1/B1 will produce only the maximum calibrated output (15 psig standard) and will not modulate in this position. This jumper position is used for testing purposes only.

Connect the normally open (NO) terminals of two separate relays (or triac inputs) to the "UP" and "DN" inputs. A signal to both up and down inputs for 3 seconds will cause branch line pressure to drop to 0 psi. Connect one side of the relay(s) to terminal 24 (+) on the PTS4.1.

Connect power leads to 24 (+) and (-) on the PTS4.1, and power up.

If a power brownout occurs, the PTS4.1 automatically reboots (resets) its on-board processor. During a power brownout, power to the processor on the PTS4.1 is shut down, but pressure output remains same. When proper power level is restored, processor automatically powers up, and branch pressure output defaults to 0 psig.

EU Commission Directive 2002/95/EC (RoHS) Compliant

**Power Supply Voltage:** 24 VAC ( $\pm$  10%) 50 or 60Hz  
**Power Supply Current:** 150 mA (3.6 VA) maximum  
**Impedance:** 750 Ohms maximum  
**Digital Input:** 9-24 VAC ( $\pm$  10%) signal trigger level  
**Rate of Change:** 90 seconds

**Air Supply:** 25 psig (207 kPa) maximum supply pressure  
0-15 psig (0-103 kPa) maximum output pressure range  
**Accuracy:** 2% @ room temperature, 3% @ full operating temperature range  
**Selectable Output Pressure Ranges:** 0 to 15 psig, 0 to 10 psig, 5 to 15 psig