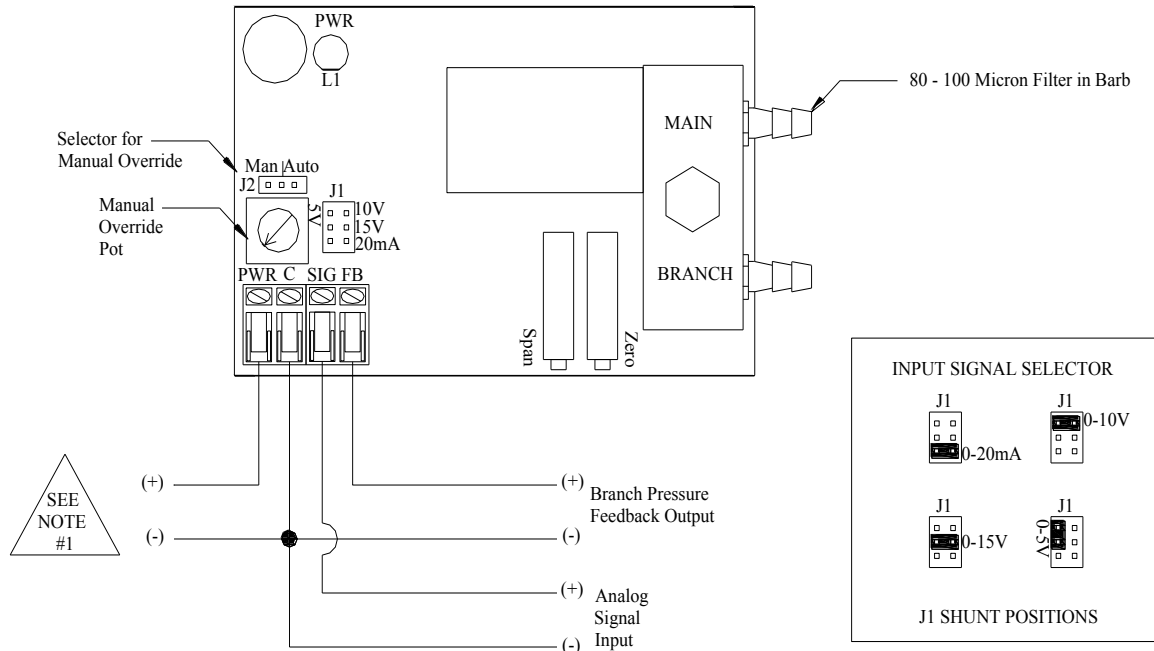




Installation and Operation Instructions PXP0/1/5/7.3

Analog Current or Voltage Input to Modulated Pressure Output With Bleed Orifice



INSTALLATION

READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION.

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 non-conductive "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.



POWER CONNECTIONS – THIS PRODUCT ACCEPTS 24 VDC OR 24 VAC POWER.

Be sure to follow all local electrical codes. Refer to wiring diagram for connection information. **Make all connections with the power off.**

- 1.) DC Power – Refer to wiring diagram for connection information.
If the 24 VDC power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, DC Transorb, or diode placed across the coil or inductor. The cathode, or banded side of the DC Transorb or diode, connects to the positive side of the power supply.
- 2.) AC Power – Refer to wiring diagram for connection information.
Check the wiring configuration of any other loads that may be connected to this transformer. 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. If the 24 VAC power is share 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. Refer to wiring diagram for connection information.

- 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, using a backup wrench to hold the manifold. ADJUSTMENT OF INSTALLED GAUGES. If installation requires adjustment of the gauge for proper reading of the face, turn the gauge no more than 1/2 turn in either direction. O-rings in the bottom of the gauge port will allow this without leakage.

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. Minimize stress between the circuit board and the manifold by holding the manifold in one hand while installing pneumatic tubing onto the fittings, and use care when removing tubing to avoid damaging fittings or moving manifold.

The bleed orifice can be unscrewed with a 1/4" hex nut driver for cleaning or inspection. Do not lose the sealing gasket or insert anything into the precision bleed orifice. Clean by swabbing with a degreaser and blowing clean air through the orifice from the opposite direction. The color of the hex nut indicates the size of the orifice: brass=0.007"; silver=0.010"; copper=0.005".

This unit requires at least two cubic inches (minimum) of branch air line capacity to operate without oscillation. Do not operate without main air supplied.

Field calibration voids warranty.

CHECKOUT

Select one of the four input/output signal combinations by moving the jumper shunt as shown on page 1.

Verify the MAN/AUTO jumper shunts are in the AUTO position (jumper over center pin and AUTO pin). In AUTO, the manual override pot is inactive and the analog input signal is supplying the set-point. When in the MAN position, the manual override pot is supplying the set point and the analog input signal is locked out.

Supply power and the LED power indicator will light, but only measurement will verify proper voltage. Apply minimum and maximum input signals and measure response. Response between the minimum and maximum values will be linear, therefore software algorithms are easy to derive.

The feedback signal range on all selections is 0 to 5 VDC and is proportional to the output pressure range of 0 – 15 psig.

The output and feedback signal will continue to vary proportionally if the input signal is increased beyond its upper limit (if there is enough main air available). However, do not exceed the listed maximum input signal voltage by more than 25%.

The PXP1/5/7.3 are constant bleed controllers and utilize a precision bleed orifice to maintain a measured flow of air across the valve. The PXP0.3 does not have a bleed orifice and depends on a continual pneumatic system branch bleed of 14 to 73 scim. Use the PXP0.3 when the downstream system includes pneumatic components that continually exhaust air. For proper operation, combined exhaust air flow (PXP orifice loss and branch system loss) must be between 14 and 73 scim.

The branch exhaust response time is determined by the combined exhaust air flow as well as pressure differentials. If power to the PXP1/5/7.3 is lost, it will continue to bleed through the orifice until branch pressure is zero psig.

To use the manual override, place the AUTO/MAN jumper shunt in the MAN position. The potentiometer is now operable, and using a small bladed screwdriver, you may increase or decrease the pneumatic output.

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

Power Supply Voltage:

24 VDC (+10%/-5%)

24 VAC (21.6 to 26.4 VAC) at PXP0/1/5/7.3 terminals

Supply Current:

160 mA Max.

Feedback Signal Output:

Factory Calibrated

0 – 5 VDC = 0 – 15 psig

Air Supply:

Main: Maximum 25 psig, minimum 20 psig

Output: 0 – 15 psig

Air Flow @ 20 psig main/15 psig Out, 750 scim

Accuracy:

1% at room temperature, ± 2% at full range of operating temperature