



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. Use no tools.

POWER CONNECTIONS:

1) **24 VDC** - with power off, connect 24 volt DC power supply to "PWR" (+) and "C" (-) or common terminals on the board.

24 VAC - with power off, connect one transformer secondary leg to "PWR" (+) and the other to "C" (-) or common terminals on the board.

Check the wiring configuration of any other loads that may be connected to this transformer. 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.

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) **If the 24 volt DC power is shared** with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, DC Transorb, or a diode placed across the coil or inductor. The cathode or banded side of the diode (or DC Transorb) connects to the positive side of the power supply. **Do not power without main air supply provided.**

4) The secondary voltage should be isolated from earth ground, chassis ground, and neutral leg of the primary winding. Grounding should be to the system common only. Failure to follow these procedures can result in improper operation.

5) 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. 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.

This unit requires at least two cubic inches (minimum) of branch air line capacity to operate without oscillation.

Field calibration voids warranty.

CHECKOUT

Select one of the four input signal combinations by moving the jumper shunt J1 identified as "Input Signal Range Selector"

Verify the MAN/AUTO switch is in the AUTO position. In AUTO, the manual override pot is inactive and the analog input signal is supplying the set-point. When switch is in the MAN position, the manual override pot is supplying the set point and the analog input signal is locked out. Turn the shaft right or left to increase or decrease the pneumatic output.

When the override switch is in AUTO position, the override output contacts (terminals OV) are open, flip the switch to MAN and the override output contacts are closed (unless ordered in the opposite configuration).

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 0-5 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 EPC2 incorporates two valves and is not a constant bleed controller. Its branch exhaust flow and response time is not limited by any internal restrictor and is similar to its load rate. The EPC2 is ideal for long branch line runs, multiple actuators, and outside air dampers because of its 750 scim capacity.

Note: If power to the EPC2 is lost, the branch line control valve will close and branch line pressure will be maintained (assuming no branch line leaks).

If power to the **EPC2FS (Fail-Safe)** is lost, the branch line control valve will open and branch line pressure will go to 0 psig.

Power Supply Voltage:

24 VDC (+10%/-5%)
24 VAC (+/-10%) at EPC2 terminals

Supply Current:

160 mA max. (200 mA max. FS model)

Feedback Signal Output:

Factory Calibrated 0-5 VDC = 0-15 psig

Air Supply:

Maximum 25 psig, minimum 18 main air supply
0-15 psi output pressure range

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

Exhaust rate: EPC2 - 750 scim, EPC2FS - 800 scim

Accuracy: EPC2-1% full scale, EPC2FS-1.5% full scale

Override Contact Rating: 24 VAC or 24 VDC, 1 A maximum