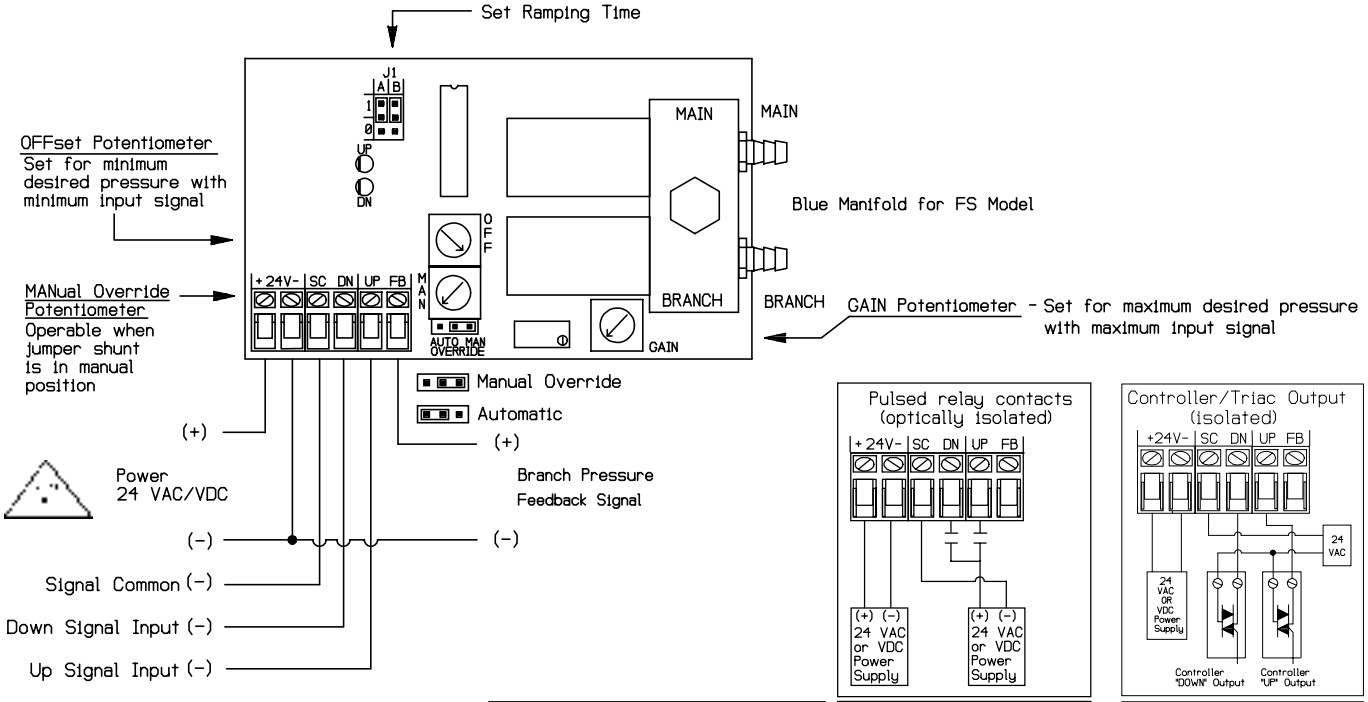
PTS3.3

Floating Point to Modulated Pressure Output, Closed Loop Control Standard and Fail-Safe



Ramping Times		
Version #1	Version #2	A B
45 Seconds	30 Seconds	1 0
60 Seconds	3 Minutes	
90 Seconds	6 Minutes	
120 Seconds	8 Minutes	

UP LED	DOWN LED	INDICATION
On	Off	Ramping Up
Off	On	Ramping Down
Fast Blink	Off	Maximum Output
Off	Fast Blink	Minimum Output
Slow Blink	Slow Blink	Output Holding

READ THESE INSTRUCTIONS BEFORE YOU BEGIN INSTALLATION

Ground yourself to discharge static electricity before touching any electronic equipment, as some components are static sensitive. The interface can 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 up against side of snap track and lift that side of the circuit board to remove. Do not flex board. Use no tools.

POWER CONNECTIONS - THIS PRODUCT ACCEPTS 24 VOLTS AC OR DC POWER

Be sure to follow all local and electrical codes. Refer to wiring diagram for connection information.

1) **The secondary supply voltage to the interface should be isolated from earth ground, chassis ground, and neutral leg of the primary winding. Any field device connected to this transformer must use the same system common. If you are not sure of other field device configuration, use separate transformers. Failure to follow these procedures can result in improper operation.**

2) **If 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 24 volt DC power is shared with devices that have coils such as relays, solenoids, or triac wiring 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) **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" FNPT back-ported pressure gauge to allow direct reading of branch line pressure.

GREYSTONE ACCURACY BY DESIGN

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The gauge should be sealed with teflon sealing tape. A backup wrench should be used 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: 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 of branch air line capacity to operate without valve oscillation, and main air must be minimum of 2 psi above highest desired branch output pressure.

FIELD CALIBRATION

The PTS3.3 pressure output is factory calibrated at 0 psi minimum and 15 psi maximum. This output can be re-calibrated to match the pressure range of the actuator with the GAIN and OFF(set) potentiometers on the PTS3.3. *Note:* The ZERO potentiometer is factory calibrated. Do not adjust.

1. Make sure the up/down signal inputs are disconnected. This will eliminate interruption by unexpected control signals.
2. Setting the minimum pressure. Place the AUTO/MAN shunt to the AUTO position. Drive the PTS3.3 to the minimum position by removing the 24V power connection for 3 seconds, then reconnect. The DOWN LED will blink, indicating the output is now at minimum. Adjust the OFF(set) pot to the desired pressure output, or until the actuator just starts to move. The range of the OFF(set) pot is 0 to 10 psi.
3. Setting the maximum pressure. Now place the AUTO/MAN shunt to the MAN position. Turn the MAN(ual) pot full clockwise. Turn the GAIN pot for the maximum desired output pressure, or until the actuator just stops. The range of the GAIN pot is 10.5 to 20.0 psi. Note: Be sure the MAIN air pressure is greater than the desired maximum branch output pressure.
4. Repeat. Because the OFF(set) and GAIN pots are slightly interactive, steps 2 and 3 must be repeated until the desired minimum and maximum pressures are repeatable. Since the DOWN LED is already blinking and the manual pot is set full clockwise, it is only required that you move the AUTO/MAN jumper shunt back and forth from MAN to AUTO when repeating steps 2 and 3. Calibration is usually accomplished in less than 3 iterations.

Connect the normally open (NO) terminals of two separate relays, or the normally open terminals of a tri-state relay to the “DN” and “UP” inputs. Connect the common terminal of the relay(s) to terminal SC (signal common) on the PTS3.3. A signal to both up and down inputs for 3 seconds will cause branch line pressure to drop to 0 psi.

Note: On a power failure the PTS3.3 will maintain branch line pressure, but the PTS3.3FS will exhaust the branch line pressure to 0 psi.

Power Supply:
- Supply Voltage 24 VDC (+/- 10%) or 24 VAC (22 to 28 volts) measured at PTS3.3 terminals
- Supply Current 160 mA max. (200 mA max. on FS model)

Digital Input: 12-24 VAC/VDC signal trigger level

Feedback Signal Output: Factory calibrated 0-5 VDC = 0-15 psig

Air Supply:
- 25 psig maximum, 20 psig minimum
- 0-15 psig output pressure range
- Air flow @ 20 psig main/15 psig out, Supply valve: 750 scim.
- Exhaust rate: PTS3.3 and PTS3.3FS - 750 scim.

Rates of Change (**Version 1**)
- 45 seconds
- 60 seconds
- 90 seconds
- 120 seconds

Rates of Change (**Version 2**)
- 30 seconds
- 3 minutes
- 6 minutes
- 8 minutes

Other rates of change can be ordered.

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