

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 device can 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 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

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

- 1) **24 VDC** - with power off, connect power supply to (+) and (-) terminals on the board.
24 VAC - with power off, connect one transformer secondary leg to (+) and the other to (-) or common on the board. Connect signal input (+) to "IN" and common to (-). 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.

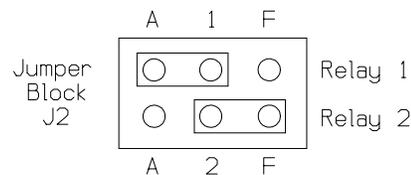
- 2) **If 24 volt AC power is shared** with devices that have coils such as relays, solenoids, or other inductors, each coil must have an MOV, AC Transorb, or other spike snubbing device across each of the shared coils. Without these snubbers, coils produce very large voltage spikes when de-energizing 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 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.
- 4) The power supply output 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 power supply. If the output is not fully loaded you may read a higher voltage than the circuit board can handle. To protect the loads, the relays should be adjusted before the loads are connected.

CALIBRATION AND CHECKOUT

1. Each relay can be individually set for a Fixed or Adjustable deadband. Place jumper shunts for relay 1 or 2 on A for adjustable or F for fixed (or a combination of each).

In the example shown below Relay 1 is set for an adjustable deadband. The turn on level is set with the High (H1) potentiometer. The turn off level is set with the Low (L1) potentiometer (see diagram on page 1 for location of H1 and L1).

Relay 2 is set for a fixed deadband, which allows a deadband of 3% of the input signal between the turn on and turn off signal levels. Use the Low (L1) potentiometer to set the turn off level of the fixed deadband (the High potentiometer is out of the circuit).



2. Three input signal ranges can be selected. Set J1 to the desired type. **Note:** If the first board is to receive a 0-20 mA signal, then any attached boards must be set at the 0-12 VDC signal mode to operate correctly! If the input signal is voltage, then set attached boards to same voltage as the first board. Up to 6 boards may be cascaded from same power supply. More can be connected if external power connection is jumpered to every sixth board.
3. After jumpers are placed in the desired setting, turn on 24 volt power supply.
4. Turn all four potentiometers counterclockwise (these are approx. 20 turn pots).
5. Provide an input signal level equal to the desired turnoff point.
6. Adjust the L potentiometer clockwise until the LED for that relay just turns OFF.
7. Turn the H potentiometer for the relay clockwise (these are approx. 20 turn pots).
8. Provide an input signal level equal to the desired turn-on point.
9. Adjust the H potentiometer counterclockwise until the LED for that relay just turns ON.
10. Repeat steps 5 through 9 for each relay.

Power Consumption:	45mA	Input Impedance:	0-12 VDC/1,000,000 ohms
Contact Ratings:	10 amps @ 120 VAC		0-24 VDC/20,000 ohms
			0-20 mA/499 ohms