



## 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. Don't flex board. Use no tools.

#### POWER CONNECTIONS:

- 1) 29.5 to 35 VDC - with power off, connect the DC power supply to "+" and "-" terminals on the board.  
24.7 to 28.5 VAC - with power off, connect one transformer secondary leg to the "+" terminal and the other to the "-" terminal on the board, along with signal input and signal output common. 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 AC (or DC) power is shared with devices that have coils such as relays, solenoids, or other inductors, each coil must have a diode, MOV, 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) 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. If you do not follow these procedures improper operation can result.
- 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. Install the dropping resistor (supplied) as shown in Figure A on page 1 if current input to the ISM4 is desired.

## CALIBRATION AND CHECKOUT

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The ISM4 is designed to accept a 0-5, 0 to 10 VDC, or 0-20 mA signal and output a range between 0.05 to 24.0 VDC.

ISM4 is factory calibrated to your specification when ordered. If field re-adjustment is required, contact factory for calibration details.

Supply Voltage	29.5 -35.0 VDC, 9.5 mA maximum 24.7 -28.5 VAC, 9.5 mA maximum
Input Voltage Range	0 to 10 VDC or 0 to 5 VDC
Input Current Range	0-20 mA (with addition of resistor -supplied)
Impedance	200,000 ohms
Output Voltage Range	Maximum of 0.05 to 24 VDC +/-1.0% Minimum of 0.05 to 5.0 VDC +/-1.0%
Impedance	1000 ohms
Gain	1 to 4.8 times Input Span
Signal Attenuation	50%, others optional
Signal Offset	- 5.0 to 13.5 volts, +/-1.0% (Note: Use of a negative offset will correspondingly reduce the maximum output)
Accuracy	1%