

- \* **HIGH ACCURACY 0.05% FOR COMPUTER INTERFACE**
- \* **ISOLATES AND DUPLICATES SIGNALS FROM 0.1 mA TO 50 mA**
- \* **COMPLETELY SEALED FOR HARSH ENVIRONMENTS**
- \* **EXPLOSION PROOF HOUSING AVAILABLE**



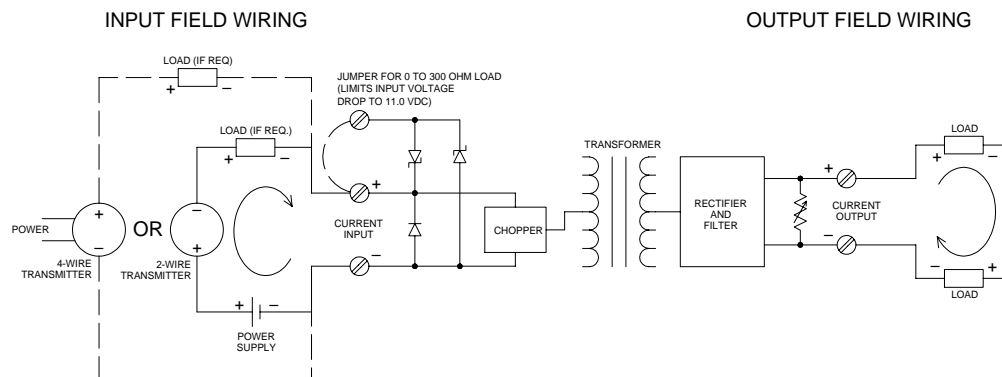
### GENERAL DESCRIPTION

The Model 18-269A is designed to provide signal isolation when problems occur when connecting field signals in new installations or in replacement of existing devices. This highly accurate, compact, self-powered device obtains its power from the transmitting current loop signal thus eliminating the need for an additional power source. As little as 0.1 mA is required to operate the unit with an input voltage drop equal to the output voltage drop + 3.5 + (40 × I<sub>O</sub>).

Complete signal isolation is provided by a chopper amplifier and an inductive (transformer) coupling circuit. This enables grounding if the input signal, output signal or both without affecting signal transfer.

The completely sealed 18-269A accurately repeats the input signal (4 to 20 or 10 to 50 mA) and does not require any internal calibration for switching from 4 to 20, to 10 to 50 mA. The only adjustment provided is the load adjust potentiometer, which precisely matches the isolator output current to the total resistance of the output loop. The device may be operated within any range from as low as 100 micro amps to 50 mA (Example: 1 to 5 mA, 4 to 20 mA, 10 to 50 mA).

Excellent protection against RFI, output circuit opening, input current signal reversal, along with high common-mode rejection is provided.



**Input Voltage Drop:**

Equal to output voltage drop + (3.5V + (40 × I<sub>O</sub>))  
 Input voltage limited to 11.0 Volts w/ load jumper

**Common Mode Rejection:**

120 dB @ 60 Hz

**Load Trim Adjusts:**

10 to 610 Ohms

**Output Load (Max.):**

0.1 mA to 20 mA (610 Ohms)  
 0.1 mA to 50 mA (210 Ohms)

**Load Regulation:**

Less than +0.1% / 10 Ohm change (@ 250 Ohm load)

**Temperature Effect:**

Less than ±0.005% / °F

**Temperature Range:**

-40°F to +140°F

**Isolation Rating:**

600 VAC RMS or 10,000 VDC  
 (between input, output, and case)

**RFI Protection:**

Less than 0.25% F.S. for 470 MHz  
 5W transmitter @ 1.0 ft.

**Housing:**

Compact 2" × 2" × 1.8" steel enclosure  
 Tin plated and completely sealed

**Max. Input Current:**

100 mA without damage

**Weight:**

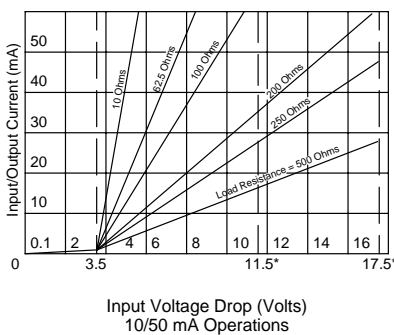
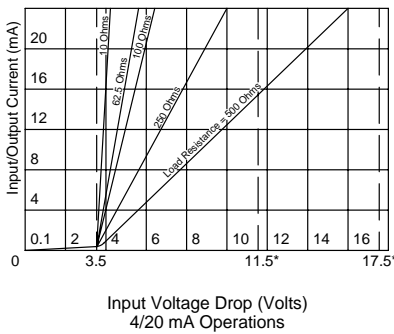
3.5 oz.

**Ordering Information:**

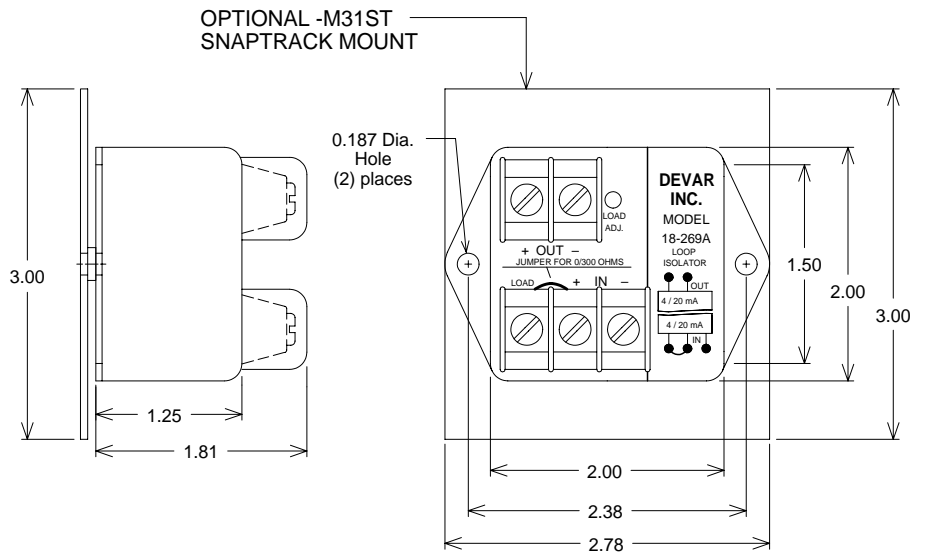
Basic Model 18-269A  
 4 to 20 mA, 250 Ohm load Standard

**Options:**

- |                          |        |
|--------------------------|--------|
| SnapTrack Mount          | -M31ST |
| Explosion Proof Housing  | -M37   |
| NEMA-4X Enclosure        | -NE4   |
| Stainless Steel Tag      | -M14S  |
| 10/50 mA IN, 4/20 mA OUT | -52    |



\* To maintain Input Loop Continuity, in the event the output loop circuit opens, the 18-269A will limit the input voltage drop at 17.5 volts, or 11.5 volts with jumper for low - load option. The output loop current will also be limited to a constant value where it crosses 17.5 V or 11.5 V line. These limits will not be affected with excess input current.



**DEVAR Inc.**

706 BOSTWICK AVE.  
 BRIDGEPORT, CT 06605-2396  
 TEL: 203-368-6751 FAX: 203-368-3747  
 TOLL FREE: (800) 566-6822  
 www.devarinc.com