

- * ACCEPTS MILLIVOLT OR THERMOCOUPLE INPUTS
- * FULLY RFI PROTECTED
- * 3 AMP SPDT ALARM CONTACTS
- * $\pm 0.1\%$ ACCURACY
- * DIN RAIL OR SNAPTRACK MOUNTING AVAILABLE
- * NEMA 4X AND EXPLOSION PROOF HOUSING AVAILABLE



GENERAL DESCRIPTION

When a temperature alarm is needed, with minimal space to mount it, the 18-241 Thermocouple Alarm is the answer!

The Devar Model 18-241 Thermocouple Alarm Trip provides a compact, low cost, versatile alarm which is suitable for high or low temperature alarm action.

It is ideal for surface or 3" SnapTrack mounting with wiring via standard screw terminals. Cold junction compensation for ISA thermocouple types is provided and is located at the terminal strip so that ambient temperature changes have minimal effect on the measurement accuracy.

The Model 18-241 features a 0 to 100% adjustable set point which may be read as a 0 to 1.0 VDC signal at the field wiring terminal block. This unique set point measurement facilitates alarm settings eliminating the need of a TC calibrator. A simple multi-meter is used to read the set point voltage. An LED lamp provides indication of alarm conditions.

Standard features include thermocouple break, UP or DOWN scale; adjustable deadband from 1.6% to 8% of span; selection of high or low alarm action and RFI protection to meet SAMA specifications PMC 33.1 - 1978 abc.

For locations where electrical power is not available, an optional battery pack (option - B) incorporating lithium batteries is offered. These batteries will remain operational for 1 year on standby and 19 days in the alarm condition. A second LED indicator flashes when the battery power level is low.

The unit is supplied with a standard surface mounting bracket that may also be snapped into 1 3" SnapTrack. Other mounting (option -M31D), NEMA 4X (-NE4) and explosion proof Housing (-M37E).

SPECIFICATIONS - MODEL 18-241

PERFORMANCE

Accuracy: $\pm 0.1\%$ of span (includes combined effects of linearity repeatability and hysteresis referred to mV input).

INPUT

Signal: mV or all thermocouple sources
 Input Span: 2 to 20 mV
 Input Break: Optional up or down scale
 Input Source Current: 15 nA, max. (without break protection)
 70 nA, max. (with break protection)

OUTPUT

Output: Silver contacts, SPDT
 Contact Ratings: 3 Amp Max. 28 VDC
 Deadband: Selectable by dipswitch
 1.6% to 8% of span
 Alarm Set Point: Adjustable from 0 to 100% (read as 0 to 1.00 VDC)
 Alarm Action: Set high or low

ENVIRONMENT

Operating Temperature: -25°C to $+75^{\circ}\text{C}$
 Thermal Shift: Millivolt: Less than $0.02\%/^{\circ}\text{C}$ of span > 10 mV
 Thermocouple: $+1$ mV/ $^{\circ}\text{C}$ due to Thermocouple reference junction compensation

ELECTRICAL

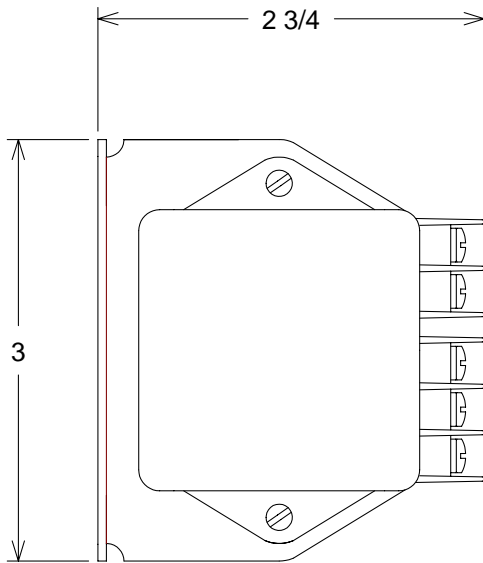
Supply Voltage: 8 to 44 VDC

OPTIONS

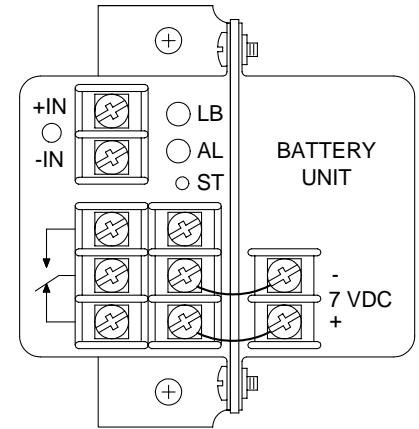
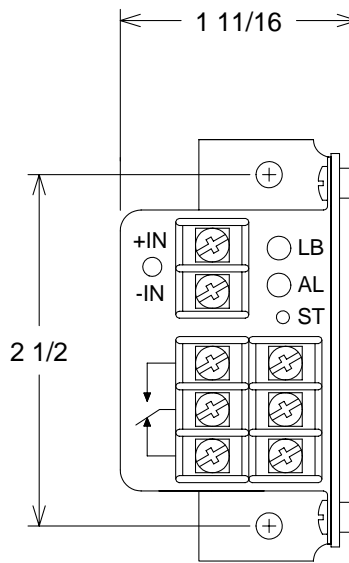
-B Battery Power Pack
 Type: Lithium Battery
 Working Voltage: 3.5 VDC
 Capacity: 3.5 mAH
 Low Battery Indication: 3.5 mAH
 Battery Life: Standby, 1 year; alarm condition, 19 days
 -NE4 NEMA 4X Housing
 -M37E Explosion Proof Housing
 -M31D DIN Rail Mounting

WEIGHT

6 oz. (with battery 9 oz.)



MODEL 18-241



MODEL 18-241-B