

- * 0.1% ACCURACY
- * MOUNTS IN STANDARD RTD CONNECTION HEADS
- * FULLY RFI PROTECTED
- * INTRINSICALLY SAFE



APPROVED



GENERAL DESCRIPTION

Conversion of thermocouple or milli-volt signals from field sensors may be accomplished using the DEVAR Model 18-811, Connection Head Mount, Signal Transmitter. The 18-811's compact size allows it to mount directly within thermocouple connection heads, providing a 4/20 mA output signal proportional to the milli-volt input signal.

Operational errors are eliminated by mounting the amplifier close to the thermocouple within the connection head. These errors, due to multiple TC cold junction connections, noise pickup, and possible voltage drops are not encountered because a stable 4/20 mA signal is transmitter directly from the TC assembly.

The unit is supplied precalibrated to standard temperature ranges for thermocouple, or mV signals.

Utilization of multi-turn trimmers for span and offset calibration ($\pm 25\%$ adjustment) enable precise 0.1% calibration.

Typical applications include installation within existing thermocouple connection heads where noise problems persist. The transmitter simply replaces the TC terminal block in the head.

The unit carries Factory Mutual Approval, Intrinsically Safe for Class 1, Division 1, Groups A, B, C, and D and non-incendive Class 1, Division 2, Groups A, B, C, and D. The low cost and rugged industrial design also makes them desirable for use in HVAC installations where reliable heating, cooling water, duct, or ambient temperature measurements are required.

SPECIFICATIONS

INPUT

Range:	mV or Thermocouple
	2 to 200 mV
	<u>Standard Range</u> <u>TC Type</u>
	0 to 200°F T, E, J, K
	0 to 300°F T, E, J, K
	0 to 500°F T, E, J, K
	0 to 750°F E, J, K
	0 to 1000°F E, J, K
	0 to 5 mV
	0 to 10 mV
	0 to 100 mV

OUTPUT

Range:	4 to 20 mA DC
Limit:	2.5 to 28 mA
Load:	$R_{Lmax} = (V_{SUPPLY} - 10)/0.02$
Load Effect:	±0.05% per 300 Ohm

PERFORMANCE

Accuracy:	±0.1% F.S., includes effects of Hysteresis, Linearity, and Repeatability
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ENVIRONMENTAL:

Ambient Temperature Range:	-25° to 85°C (-13° to 185°F)
Ambient Thermal Change Effect:	±0.02% / °C (±0.01% / °F)
Storage Temperature Range:	-65° to 125°C (-85° to 257°F)

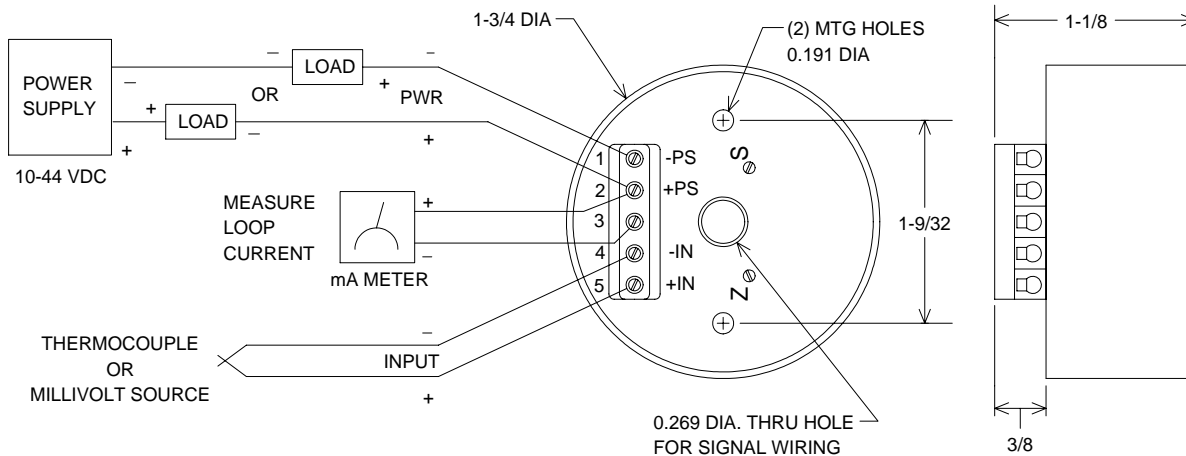
ELECTRICAL

Supply Voltage:	10 to 44 VDC
Max Change:	= ±0.01% per Volt Variation
RFI:	Protected from 20 MHz to 500 MHz per SAMA PMC 33.1-1978, 2 abc

OPTIONS

-ST	SnapTrack (12")
-M31D	DIN Rail Mounting Hardware
-M31S	SnapTrack Mounting Hardware
-CHN	Nylon Connection Head
-CHA	Aluminum Connection Head
-CHAS	Snap Top Connection Head
-CHX	Explosion Proof Connection Head
-NE4	NEMA 4 Enclosure (3" x 3" x 5")
-M37A	Explosion Proof Housing
-M37I	Explosion Proof Housing with Window
-M36	2" Pipe Mount (for -M37)
-SC	Special Calibration
-TB	Terminal Block (when Transmitter not in head)
-E88	Voltage Divider
-TCSF	Spring Loaded TC (specify length)
-TCBF	Brazed TC (specify length)
-W	Thermowell (specify length)
-IS	Intrinsically Safe

Model 18-811 General Dimensions & Typical Wiring



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