

SR8401

THERMOCOUPLE INPUT HIGH VIBRATION AND G FORCE TOLERANCE ISOLATED TWO-WIRE TRANSMITTER

FEATURES

- Withstand High Vibration and G Force (Shock) Environment
- Provides DC Output Proportional to any Thermocouple Input*
- Fully Isolated Input / Output
- Reverse Polarity-Protected
- Upscale or Downscale Burnout Protection
- 5 Year Warranty

DESCRIPTION

The SR8401 is a low-cost, reliable, thermocouple input two-wire transmitter designed specifically for high vibration and G force environments. The unit is suitable for field or panel mounting in various industrial housings and enclosures. It provides a DC output current (4/20 mA) proportional to a thermocouple input. The SR8401 output is galvanically isolated from the input.

Cold junction compensation is provided by a solid state temperature sensor embedded in the thermocouple input terminal strip. The output ZERO and SPAN controls are accessible through the top of the case. Terminations are made to screw terminals on the top of the case.

The circuit board is conformal coated for protection from humidity and contamination.

TYPICAL APPLICATIONS

Remote temperature data acquisition. Elimination of ground loops and common mode signals.

SPECIFICATIONS

INPUT RANGE

select any type thermocouple
(min span 5 mV)

INPUT IMPEDANCE

10 megohms

OUTPUT RANGE

4/20 mA
Current limited = 35mA

ISOLATION OUTPUT / INPUT

Output / Input
1000 Volts RMS sinewave

MAX LOAD RESISTANCE

= $[(V_{supply} - 10)/20 \text{ mA}]$ kilohms

RESPONSE TIME

Step Change
250 ms for 99% of final value

ACCURACY

±0.1% of span

LINEARITY

Better than ±0.05% of span (mV)
(input to output)

COMMON MODE REJECTION

120 dB, DC to 60 Hz

OPERATING TEMPERATURE

-13°F to 176°F / -25°C to 80°C

TEMPERATURE STABILITY

±0.01% of span per°C

POWER

10-36 VDC, polarity-protected

SUPPLY VOLTAGE EFFECT

0.02% of span max, 10-36 VDC

* Within specified range limits.

ORDERING INFORMATION

INPUT

Select Units

Deg C Deg F

Enter Input

Zero Scale

Full Scale

Select Sensor

- J TC
- K TC
- R TC
- S TC
- T TC
- E TC
- N TC
- B TC

Open Sensor Response

Upscale Downscale

TAGS

Specify Tag Numbers

Tag number is typed on product label at no charge.

Enter Tag Number(s)

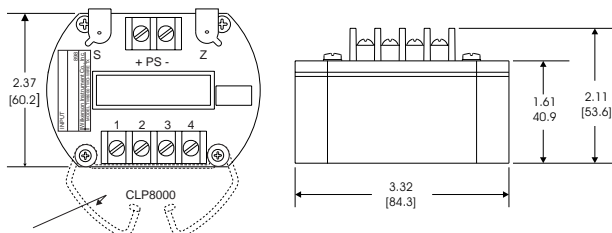
ACCESSORIES

SR8401

DMP8500	Mounting Plate, DIN-Rail & Surface (SC5000 & TW8000)	QTY _____
HKB-HFC	Killark Explosion-Proof Housing, no Window (TW8000)	QTY _____
HKB-HKGL	Killark Explosion-Proof Housing with Window (TW8000)	QTY _____
DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____

DIMENSIONS

Inches [mm]



CONNECTIONS

PIN PS +	Power Supply +
PIN PS -	Power Supply -
PIN 1	T/C Input +
PIN 2	No Connection
PIN 3	T/C Input -
PIN 4	Shield