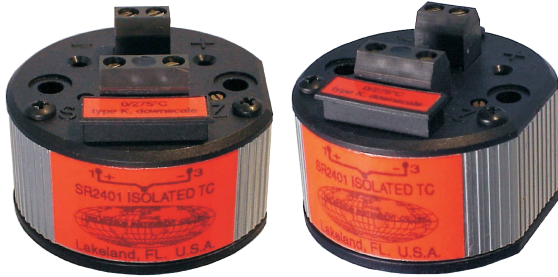


SR2400 AND SR2401

THERMOCOUPLE INPUT TWO-WIRE TRANSMITTERS



FEATURES

- Provides DC Output Proportional to any Thermocouple Input**
- Fully Isolated Input / Output (SR2401)
- Unlimited * Choice of Input Ranges via Interchangeable Range Cards
- Reverse Polarity-Protected
- Upscale or Downscale Burnout Protection
- Test Points for Loop Current Monitoring without Breaking Loop Circuit
- 50 mm Diameter Case - 33 mm Mounting Hole Spacing
- NEMA-4 Connection Head and Explosion-Proof Housing Available
- Intrinsically Safe Design with FM & CSA Approvals Pending
- Low Cost
- 5 Year Warranty

DESCRIPTION

The SR2400 and SR2401 are low-cost, reliable, thermocouple input two-wire transmitters for field or panel mounting in various industrial housings and enclosures. They provide a DC output current (4/20 mA) proportional to a thermocouple input. On model SR2401 the output is galvanically isolated from the input.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning. Model SR2401 provides isolation by using a feedback VCO

to develop a pulse train with a duty cycle proportional to the input signal amplitude. This pulse train is coupled through a pulse transformer to output circuitry, where the duty cycle data is converted to a 4/20 mADC output level proportional to the millivolt signal from the thermocouple.

Ranging is accomplished via a plug-in range card which characterizes the input to the desired thermocouple types and sets the temperature range and burnout protection (upscale and downscale). 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 terminal connectors on top of the case.

Test points located on the transmitter's front panel allow verification of loop current value, using a millimeter, without breaking the loop current.

TYPICAL APPLICATIONS

Remote temperature data acquisition. Elimination of ground loops and common mode signals (SR2401).

SPECIFICATIONS

INPUT RANGE

select any type thermocouple
(min span 5 mV)

MAX LOAD RESISTANCE

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

COMMON MODE REJECTION

120 dB, DC to 60 Hz

INPUT IMPEDANCE

10 megohms

RESPONSE TIME

Step Change
250 ms for 99% of final value

OPERATING TEMPERATURE

-13°F to 176°F / -25°C to 80°C

OUTPUT RANGE

4/20 mA
Current limited = 35mA

ACCURACY

±0.1% of span

TEMPERATURE STABILITY

±0.01% of span per°C

ISOLATION (SR2401)

Output / Input
1000 Volts RMS sinewave

LINEARITY

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

POWER

10-36 VDC, polarity-protected

SUPPLY VOLTAGE EFFECT

0.02% of span max, 10-36 VDC

* Within specified range limits.

** For linearized output see SC5000 series.

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

ISOLATION

Select Isolation

Yes No

OPTIONS

Conformal Coating

TAGS

Specify Tag Numbers

Tag number is typed on product label at no charge.

Enter Tag Number(s)

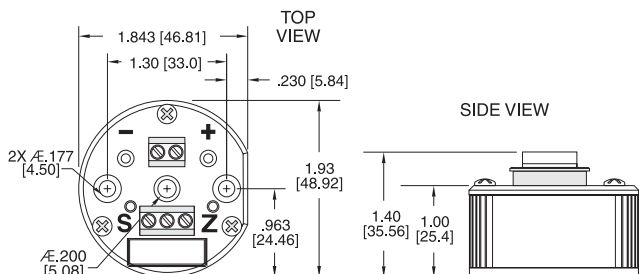
ACCESSORIES

SR2400 AND SR2401

DMP2000	Mounting Plate, DIN-Rail & Surface (SR2000 & TW300)	QTY _____
TSH-A6L	NEMA-4 Aluminum Connection Head (SR2000 & TW300)	QTY _____
SR-CARD	Silver Series Transmitter Range Card (SR2000)	QTY _____
DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____
XJAY	Explosion-Proof Housing (SR2000 & TW300 Series)	QTY _____

DIMENSIONS

Inches [mm]



CONNECTIONS

