

SF1302 SLIM-PROFILE TWO-WIRE RTD TRANSMITTER



The SF1302 is a low-cost, reliable, RTD input two-wire transmitter designed with the OEM in mind. These transmitters are housed in a low profile, 50 mm diameter extruded aluminum case. This thin design allows two transmitters to be stacked in one standard connection head for use with dual RTD sensors.

The SF1302 provides a DC output current (4/20 mA) proportional to a two-wire RTD input. Filtering and conditioning to reduce susceptibility to transients and noisy operations provides accurate, trouble-free operation. Linearization is provided for platinum RTDs.

The SF1302 utilizes a single constant current source to excite the RTD. The output ZERO and SPAN controls are located on the top of the case. Terminations are made to screw terminal connectors on the top of the case. A center hole provides clearance for 1/4 inch diameter and smaller sensors.

An optional DIN rail mounting kit allows the SF1302 to be mounted on standard 35mm rails. Two transmitters can also be stacked in the DIN rail if space is limited.

CALIBRATION

The SF1302 is shipped precalibrated. If there is a need to recalibrate, proceed as follows:

Connect the SF1302 in series with a 24 volt DC power supply and a precision decade resistance to the input screw terminals. Set the input to the low end of the temperature range and adjust the 'Z' (zero) control for 4.00 mA output. Increase the input to full

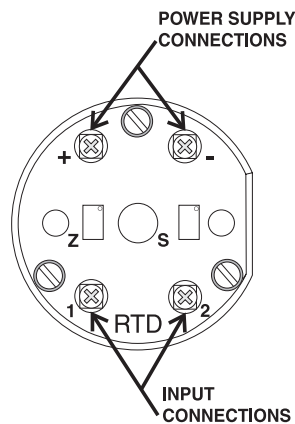
scale and adjust the 'S' (span) control for 20.00 mA output. Repeat adjustments until both levels are accurate, for there is a slight interaction between the controls.

INSTALLATION

The two-wire transmitter is designed to be mounted on a flat surface or in a standard thermocouple head, using 33mm hole spacing. The 5/8" ultra-slim profile of the series, allows for the mounting of two transmitters in a single connection head for use with dual sensor operation.

TERMINAL CONNECTIONS

Connect the power supply and signal leads as shown.



SPECIFICATIONS

INPUT

Two-wire, 100 ohm platinum RTD

INPUT RANGE

Specify any range withing RTDlimit (min 50°F / 28°C span)

OUTPUT

4/20 mA

EXCITATION CURRENT

2.65 mA

LOAD RESISTANCE

$R_{max} = (V_{supply} - 12 V) / .020 \text{ mA}$ kilohms

ACCURACY

±0.1% of span or 0.2 ohms, whichever is greater

LINEARITY

(Platinum RTD, output vs. temperature)

±0.05% of span at >32°F/0°C

±0.15% of span at <32°F/0°C

COMMON MODE REJECTION

100 dB, DC to 60 Hz

OPERATING TEMPERATURE

-13°F to 176°F / -26°C to 80°C

TEMPERATURE STABILITY

±0.02% of span of 0.025°C / °C, whichever is greater

MOUNTING

The SF series can be mounted in a connection head (TSH-A6L), explosion-proof housing (XJAY), or on a flat surface using the two 4.5 mm diameter mounting holes provided. Standard 33 mm hole center spacing allows for mounting in most connection heads.

The 7.4 mm center hole allows clearance for input wiring or for a 1/4" diameter temperature probe.

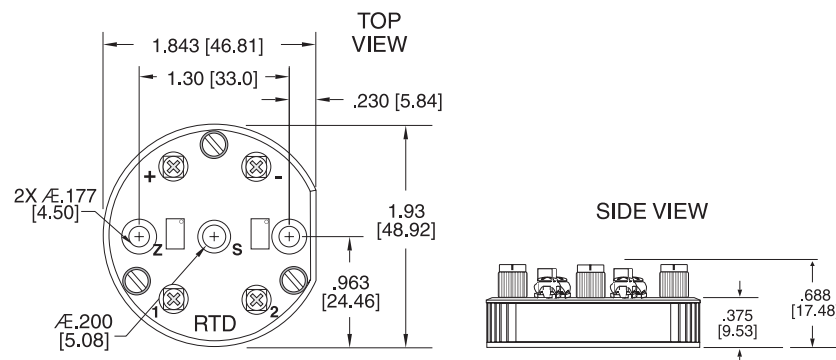
An optional DIN-Rail mounting kit is available (DMP2000) that allows the transmitter to mount on a standard 35mm symmetrical rail.

WARRANTY

The SF series of products carry a limited warranty of 5 + 5 years. In the event of a failure due to defective material or workmanship, during the 5 year period, the unit will be repaired or replaced at no charge.

For a period of 5 years after the initial 5 year warranty, the unit will be repaired, if possible, for a cost of 10% of the original purchase price.

CASE DIMENSIONS INCHES [mm]



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