



Instruction Manual



920 Series RTD Transmitter

Description

920 Series transmitters feature linearized output to temperature for RTD's. It is factory calibrated and designed for highest performance and lowest cost. The wide temperature range & stock availability make 920 Series an excellent choice for temperature signal transmission. A linearized output for RTD's is a unique performance feature of these transmitters.

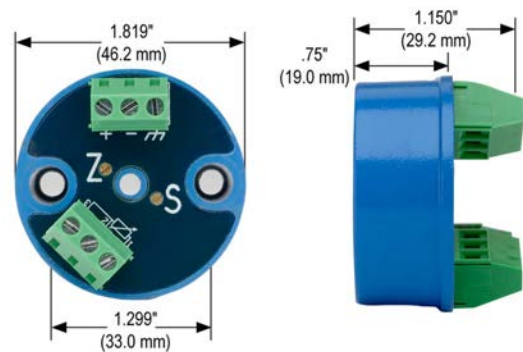
Note

Prior to unpacking and installation, please read the operating instructions and follow them carefully. These units are to be installed, used and serviced only by individuals who are familiar with the operating instructions and the applicable regulations for operational safety and accident prevention.

Control of Units

The units are calibrated and checked before shipment and shipped in good conditions. If you detect a visible defect on the unit, we recommend that you carefully check the packing material. In the event of a defect, please immediately notify the mail service/freight forwarder, as they are responsible for shipping damage.

Dimensions



Specifications

Conditions : $V_{nom} = 24 \text{ VDC}$, $T_{ambient} = 25^\circ\text{C}$

| | |
|---------------------------------|--|
| Input : | Pt100, 3-wire, $\alpha = 0.00385$, DIN EN 60751 |
| Output : | 4-20 mA loop powered, linear to temperature |
| Linearization : | $\pm 0.01\%$ FS |
| Power Supply : | 12-32 Vdc, polarity protected |
| Supply Effect : | 0.02 % / V |
| Zero Drift : | $\pm 0.02\%$ FS / °C |
| Span Drift : | $\pm 0.02\%$ FS / °C |
| Long Term Drift : | $\pm 0.05\%$ FS / year |
| Excitation Current RTD : | 0.8 mA |
| Sensor Lead Resistance RTD : | 500 ohm max. |
| Accuracy : | 0.1 % FS (includes effects of linearity, hysteresis and repeatability) |
| Span/Zero Adjustment : | 20 turn potentiometer, $\pm 10\%$ for zero and span |
| Maximum Loop Resistance : | $R_{max} = [V_{supply} - 12 \text{ Vdc}] / 20 \text{ mA}$ |
| Open Circuit Detection : | Over-scale limit : 27.0 mA, Under-scale limit : 2.2 mA |
| Warmup : | 30 seconds |
| Ambient Operating Temperature : | -40 °C.....85 °C (-40 °F...185 °F) |
| Storage Temperature : | -40 °C.....85 °C (-40 °F...185 °F) |
| Housing Material : | Zinc alloy, epoxy coated |
| Housing Dimensions : | 1.82" dia. x 1.15" H. |

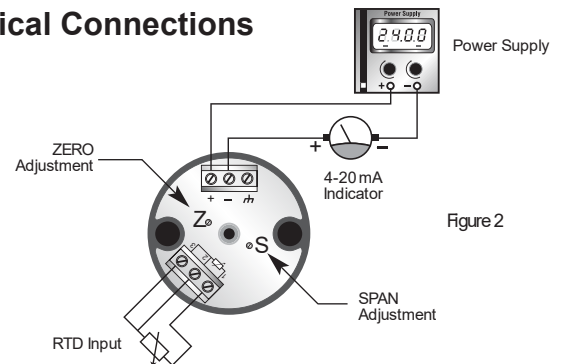
Disclaimer

NOSHOK guarantees that its products are free from defects in material and workmanship. This warranty is valid for a period of one year from the date of purchase, and covers these components of the products which are non-moving and not subject to normal wear. This warranty does not cover products which are modified or altered. Moreover, it does not cover electrical cables which are cut during installation.

The above stated warranty becomes null and void if anyone, other than service personnel authorized by NOSHOK, attempts to repair a defective product.

NOSHOK's only obligation under this warranty is to repair or replace, at NOSHOK's option, products that are found, upon NOSHOK's examination, to be defective. NOSHOK shall have no obligation for consequential damages to personal or real property, or for injury to any person.

Electrical Connections



Calibration Instructions

920 Series come factory calibrated. If you need to re-calibrate the unit, you will require the following equipment :

- 12-32 VDC power supply
- 4-20 mA indicator
- Precision RTD simulator
- Flat precision screwdriver
- Test leads.

1. Connect a DC power supply in series with 4-20 mA indicator to the (+) and (-) power terminals as shown (Fig. 2)
2. Connect the RTD simulator to the input terminals as shown (Fig. 2).
4. Simulate the required Zero and adjust the loop current to 4.00 mA with the "ZERO" potentiometer.
5. Simulate the maximum input value and adjust the loop current to 20.00 mA with the "SPAN" potentiometer.
6. Repeat step 4 and 5 until the correct reading is achieved.
7. Remove the input simulator and power supply.

The transmitter is now ready to be used.