



Temperature Transmitter

Datasheet

RRE-TR100

RRE-TR100 is a head mount temperature transmitter with a single input. The single input accepts thermocouples, RTD, resistance or voltage source. All inputs are linearized and converted in to an industrial standard 4 to 20 mA output for transmission to your system.

FEATURES

■ *Highlights*

- Can convert all inputs to 4-20 mA
- Input: thermocouples, RTD, resistance or voltage
- Configuration directly via PDA or PC
- Built-in Cold Junction Compensation
- Available with screw-in temperature probe



TECHNICAL DATA

■ *Specifications*

Accuracy	≤0.1%FS
Power supply	12-40V
Signal input	RTD TC resistance mV
Signal output	4-20mA 1-5V(customized)
Digital communication	Hart protocol
Response time	≤1s
Working temperature	-40-85
Ingress protection	4g ² -150Hz
Cold Junction Compensation	Build-in
Configuration	PAD or PC

■ *RTD temperature probes*

Description	Measuring range °C		Minimum measuring range	Connection type
PT100	-200	850	10K	Three-wire
Cu50	-50	150	10K	Three-wire

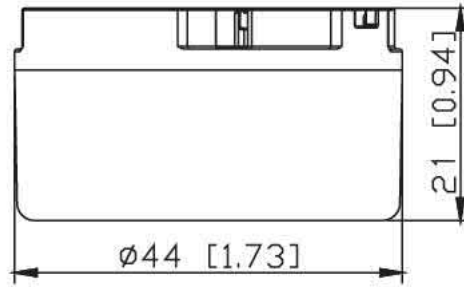
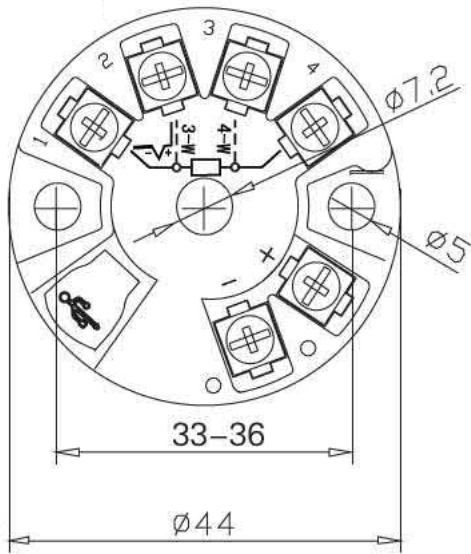
■ *Thermocouples*

Description	Measuring range °C		Connection type	Minimum measuring range
B	400	1820	Two-wire	500K
E	-100	1000	Two-wire	50K
J	-100	1200	Two-wire	50K
K	-180	1372	Two-wire	50K
N	-180	1300	Two-wire	50K
R	-50	1760	Two-wire	500K
S	-500	1760	Two-wire	500K
T	-200	400	Two-wire	50K

■ *RTD temperature probes*

Description	Measuring range Ω		Minimum measuring range	Connection type
Resistance transmitter	0	4500	500K	Two-wire

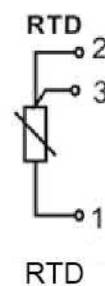
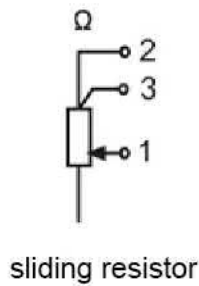
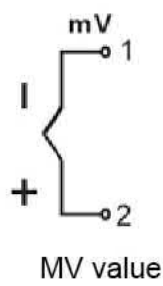
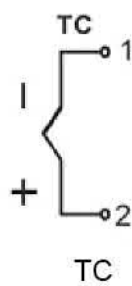
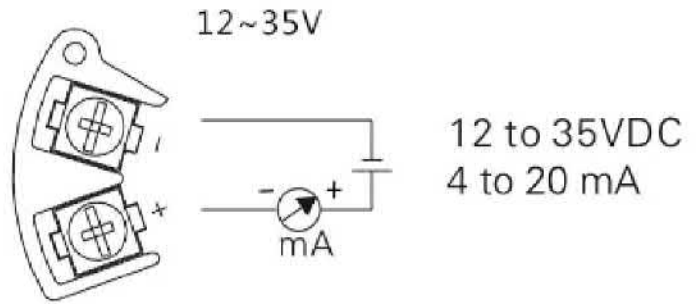
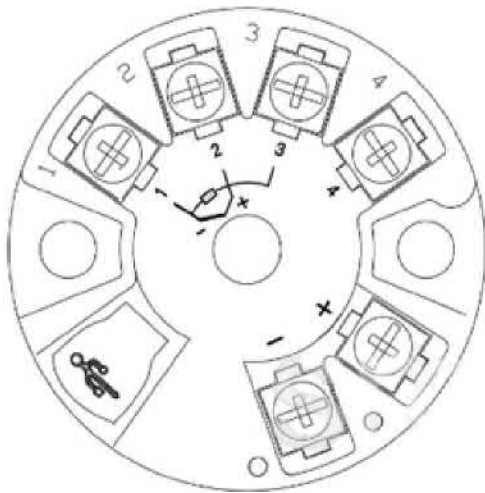
Block Diagram



: Mm(in)

Wiring

■ **Note:** When mounting on a sensor head, do not overtighten the screws.
 Take necessary measure to avoid corrosion or damage of cables and wires.



CONFIGURATION INTERFACE

■ Function

- Install the driver
- Connect the transmitter with PC, open the software
- Choose the sensor type and temperature unit
- Set the temperature range accordingly
- Click ok or amend if need modify and then finish
- Other parameters are default and no need to set normally

The screenshot displays the 'Intelligent temperature transmitter software V3.4' interface. At the top, there is a header with the software title and a 'TEMPERATURE TRANSMITTER' section featuring images of various sensors. Below this, the interface is divided into several functional panels:

- Process Monitor:** Contains input fields for 'Temperature: °C', 'Current: mA', 'Percentage: %', and 'Cold spot temperature: °C'. It includes 'Start' and 'Stop' buttons.
- Setting:** Features a 'Sensor' dropdown menu, a 'Unit: C' dropdown, 'Lower range:' and 'Upper range:' input fields, and a 'Damping: 0' dropdown. It has 'OK' and 'Amend' buttons.
- Master variable transmit:** Includes 'Zero:' and 'Adjust:' input fields with 'OK' and 'Amend' buttons.
- Cole spot transmit:** Includes 'Zero:' and 'Adjust:' input fields with 'OK' and 'Amend' buttons.
- 4-20mA output adjustment:** Shows 'setting point:' with radio buttons for '4mA' (selected) and '20mA'. It includes a 'Calibration' button and '+' buttons, along with 'OK' and 'Amend' buttons.

At the bottom left, the status is 'Status:waiting operation'. At the bottom right, there is a 'Serial port:' dropdown menu.



Model: 12-40V DC
Range: 12-20mA(dc)
Output: 4-20mA

Sensor: Pt100
Range: 0-100°C
S/N: 1411100
Date: 2012