

Specifications

Input Signal

Pt50, Pt100, Pt500, Pt1000,
 Cu50, Cu100,
 T/C "J", T/C "K", T/C "E", T/C "L",
 T/C "L-GOST", T/C "T", T/C "U",
 0...1 V, 0...2 V, 0...5 V, 0...10 V,
 0...5 mA, 0...20 mA, 4...20 mA,
;

Output

Output Signal

range:

2-wire, 3-wire
 0...20 mA, 4...20 mA, 0...10 V,

.....

± 10%, via trimmer potentiometers
 8...32 VDC, (max. U_{out} + 3)...36 VDC,
 8...36 VDC, 12...36 VDC, 24 VDC
 750 Ω at 24V/20mA, 620 Ω at 24V/20mA
0.3% from span
0.02%/mA at 24 V
0.02% from span for 1 °C
-30...80 °C / 0...95% RH
IP20

ZERO and SPAN Adjustment Power Supply

Maximum Output Loop Load

Measurement Error

Self-heating Error

Temperature Drift

Operating Temperature / Humidity

Protection Class

v12-11.11



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FIXED-INPUT TRANSMITTER

TRN

for in-head mounting

OPERATION MANUAL

Warranty and Support

Warranty

COMEKO warrants this product to be free from defects in materials and workmanship for 2 years. If your unit is found to be defective within that time, we will promptly repair or replace it. This warranty does not cover accidental damage, wear or tear, or consequential or incidental loss. This warranty does not cover any defects caused by wrong transportation, storage, installation, or operating (see 'Specifications').

Technical support

In the unlikely event that you encounter a problem with your COMEKO device, please call your local dealer or contact directly our support team.

.....

serial number

.....

manufacturing date

QC check mark(passed)
(stamp)

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QD-8.2.4-WC



Please read this Operation Manual before mounting and operating!
Save the Manual for future references!

Overview

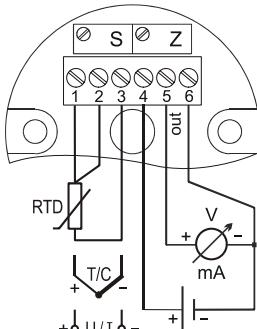
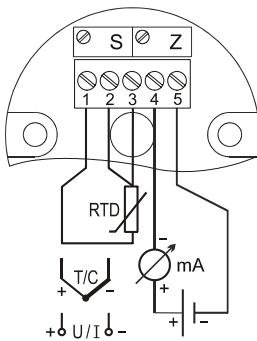


Important note:

Always keep the protective cover on to prevent the electronics from getting dirt on the soldering pads as well as getting electrostatic discharge by accidental touch.

TRN converts signals from various temperature sensors as well as linear analog input signals (current or voltage) into standard 2- or 3-wire (current or voltage) signal that can be safely sent over long distances to remote indicators, data loggers, or controllers. The transmitter is based on high-tech integral circuits, can withstand considerable electro-magnetic disturbances, and is a perfect low-cost solution for general-purpose applications.

Mounting and Wiring



Mounting

- ◆ TRN for in-head mounting is designed to be incorporated inside temperature protective heads with 33 mm distance between centers of the female threaded openings.
- ◆ Install the transmitter into the temperature probe head using two M4 screws with appropriate length. To ensure vibration proof, use special screws with springs.
- ◆ Your TRN can also be easily mounted on every 35 mm rail conforming to EN50022 by the means of a special snap-on accessory, which has to be ordered separately.

Wiring

- ◆ To wire a TRN with 2-wire output, connect the input with regard to its type – via terminals 1, 2, and 3 – and the external output circuit – through terminals 4(+) and 5(-) – as shown on the upper diagram.
- ◆ In case of a TRN with 3-wire output, connect the input and the external output circuit, following the lower diagram.
- ◆ In order to minimize measuring errors, make sure the connecting screws are tightened enough.

Calibrating



Important note:

To protect the device from damages as a result of ESD, always ground yourself and the tools and instruments you are working with!

Calibration kit

- ◆ resistance, voltage, or current source with an accuracy of at least $\pm 0.02\%$;
- ◆ milliammeter (in case of current output) or voltmeter (in case of voltage output) with an accuracy of at least $\pm 0.02\%$;
- ◆ 24 VDC power supply.

Calibration

It is recommended that the calibration be checked at least once a year as well as after any malfunction and/or repair.



We recommend calibration at COMECO CALIBRATING LABORATORY.

Nevertheless, if you intend to do calibrations on your own, you can do so via the ZERO ('Z') and SPAN ('S') adjustment potentiometers – provided such are mounted – by following the procedure below:

- ◆ Connect TRN to power supply, input source, and milliammeter / voltmeter as shown on the respective wiring diagram (see 'Wiring').
- ◆ Apply an input signal to give an output signal of approximately half the output range and leave the unit for 15 min at the ambient temperature it is intended to work at.
- ◆ Apply IN_{min} corresponding to the desired minimum input signal.
- ◆ Adjust the 'Z' potentiometer to get an output signal equal to the lower range limit.
- ◆ Apply IN_{max} corresponding to the desired maximum input signal.
- ◆ Adjust the 'S' potentiometer to get an output signal equal to the upper range limit.
- ◆ Repeat the previous 4 steps until readings converge.
- ◆ Secure the potentiometers with lacquer.