TR

In-head SMART Transmitters TRB

- ♦ Low price for a SMART transmitter
- ♦ Nigh resistance to electromagnetic disturbances
- ♦ User selectable 2 thermoresistances and 6 thermocouples
- ♦ Fast and convenient programming without power supply
- ♦ Built in digital filter

The **TRB** series transmitters distributed by CONECO are manufactured by Swedish company INOR. They are an economical variant of **SMART transmitter**. These transmitters allow the user at any time to:

- select the sensor type (2 thermoresistances and 6 thermocouples)
- to set the input range limits corresponding to output limits 4 and 20 mA
- to select output state at sensor break
- to adjust the "zero" (the offset)
- to select the suppression time of the built in digital filter

TRB series transmitters have an **interface to a PC** allowing the user to configure them using special software for WINDOWS™. The programming may be performed either **with the power on or off**. TRB transmitters feature **various mounting options**: in the protective head type "B" of a temperature sensor, in a box with high protection class, or on rail with a special snap on accessory. TRB transmitters are **exceptionally versatile** and offer solution to a vide range of applications requiring conversion of temperature sensor signals into current signal. They are easy to use, **low-priced** and resistant to electromagnetic disturbances.

Technical specifications

Input — Programmable

Pt100 (w=1.385), 3 wire	from min. -200 to max. +600 °C
Pt100 (w=1.391), 3 wire	from min. -200 to max. +600 °C
RTD selectable range	programmable within the ranges above
Minimal RTD range width	25 °C
Thermocouples E, J, K, L, T, U	from min. -200 to max. +600 °C
TC selectable range	programmable within the ranges above
Minimal TC range width	100 °C
Zero "offset" adjustment	from lower input range to 50% of the upper range

Interface

Interface type	RS-232
Software *(optional)*	For Windows: 3.11, 95, 98 and Windows NT Workstation 4.0

Input

Signal type	4 to 20 mA
Linearly proportional to	measured temperature
Resolution	5 µA
Current limits	L=3.5 mA, H=21.6 mA
Selection of current limit at sensor break	L or H - programmable
Output refresh time	1.5 s
Digital filter	[1] Suppression time 2.0 s

ABBREVIATIONS: RTD - thermoresistance; TC - thermocouple

Accuracy

Measurement error	0.4 % from span
Nonlinearity	within measurement error
Temperature drift	0.01 °C for 1 °C
Cold junction compensation	Automatic software: ± 0.5 °C

Power supply

Voltage	8 to 36 VDC
Admissible variations	4 Vp-p @ 50Hz
Line load	Max. 725Ω @ 24V/22mA

Operating conditions

Operating temperature	-40 to 85 °C
Operating humidity	0 to 95 %RH, non-condensing

Design and materials

Case material	Plastic	
Wiring	Screw terminals	
Central bore [mm]	Ø7	
Mounting	**In head** [2]	**in box**
Dimensions [mm]	Ø44x26	80x80x60
Weight	50 g	190 g
Protection: case/terminals	IP 56/10	IP 65

Ordering code   ➔   TRB - G12 - #1

Code	Feature or option	Code values
G12	Mounting	**B** - For mounting in a head type "B" [2], **D** - for mounting in a box IP-65
#1	Software	**X** - none, **S** - plus a software package for programming, monitoring and a cable to PC

[1] User programmable

[2] May be mounted on a rail by a special snap on accessory, which is ordered separately.