

Low-cost SMART Transmitter TRB

- ◆ Universal programmable input
- ◆ User-selectable 4 RTD types and 6 thermocouples
- ◆ Accepts linear current, voltage, and resistive signals
- ◆ Programmable input and output range
- ◆ Built-in programmable digital filter
- ◆ Manual output control
- ◆ Serial interface for programming
- ◆ IP65 box and Ex housing available

The intelligent non-isolated transmitter TRB, manufactured by COMECO, is available in case prepared for mounting in Ex housings, in casing for in-head mounting, and in another for DIN-rail mounting, as well as mounted into an IP65 protection box. This transmitter allows the user to:

- select sensor and input signal type;
- select and adjust input range;
- perform offset correction and device calibration;
- specify input ranges and output type (4...20 mA / 20...4 mA);
- select decimal point position and measurement unit;
- select output reaction at sensor failure;
- adjust the digital filter.

The TRB transmitter is easy to program via the specialized configuration software "TraCon". Thanks to its large capabilities and low price, TRB can be very useful in various industrial applications requiring temperature conversion before following measurement and control.



Technical specifications

Input	(programmable)
Pt100 (w=1.385); 3-wire	min. -100...max. 850 °C
Pt1000 (w=1.385); 3-wire	min. -100...max. 600 °C
PTC (1k at 25 °C); 3-wire	min. -50...max. 150 °C
PTC (2k at 25 °C); 3-wire	min. -50...max. 150 °C
RTD minimum range width	50 °C
Thermocouple "T"	min. -40...max. 400 °C
Thermocouple "J"	min. -20...max. 1000 °C
Thermocouple "K"	min. -20...max. 1300 °C
Thermocouple "S"	min. 0...max. 1700 °C
Thermocouple "R"	min. 0...max. 1700 °C
Thermocouple "B"	min. 200...max. 1800 °C
T/C minimum range width	100 °C
Linear current	0(4)...20 mA
Linear voltage	0...100 mV or 0...10 V ⁽¹⁾
Linear resistive	0...1 kΩ
Custom linear (option)	on request ⁽²⁾
Offset adjustment	within range limits
Digital low-pass filter	programmable
Digital peak filter	programmable
Input monitoring	(programmable)
Sensor failure reaction	< 3.8 mA or > 20.2 mA, programmable
Output	(programmable)
Signal type	4...20 mA or 20...4 mA
Linearly proportional to	measured value
Resolution	4 μA
Output calibration	through interface
Manual output control	0...100%, programmable

⁽¹⁾ Ask for availability!

⁽²⁾ Instead of linear current

⁽³⁾ Ordered separately

⁽⁴⁾ Head type "B" or any other with 33 mm distance between centers of the female threaded openings

⁽⁵⁾ May be mounted on rail by a special snap-on accessory, which is ordered separately (see 'Accessories').

⁽⁶⁾ May be mounted in different, separately ordered Ex housings for field applications (see 'Accessories').

Ordering code TRB - G12 - #1

Code	Feature or option	Code values
G12	Mounting	B - in head ^(4,5) , C - on DIN rail, D - in box IP65 (box included) ⁽⁵⁾ , E - in Ex housing (includes mounting kit only)
#1	Auxiliary input signal	X - none, Z - linear signal (specify!) ⁽²⁾

Accuracy

Measurement error	0.3% from span
Non-linearity	within measurement error
Temperature drift	0.01% from span for 1 °C
Cold junction compensation	automatic software, ± 0.5 °C

Power supply

Supply voltage	8...32 VDC ± 10%
Maximum line load	750 Ω at 24V/20mA

Interface

Interface type	RS232-based, requiring special cable ⁽³⁾
Configuration software	"TraCon", free

Operating conditions

Ambient temperature	-20...70 °C
Ambient humidity	0...95 %RH, non-condensing

Design and materials

Case material	plastic		
Wiring	screw terminals		
Mounting	in head ^(4,5,6)	on rail	in box ⁽⁵⁾
Interface connector	4-pin	3-pin	4-pin
Interface cable type ⁽³⁾	K1, K1U, K11U	K2, K2U, K12U	K1, K1U
Dimensions [mm]	ø44x23	18x90x58	80x80x60
Weight	40 g	60 g	180 g
Protection class	IP20	IP20	IP65