Programmable Transmitter with fixed input TROJ

CE

- ♦ **For low-budget applications**
- ♦ **Fixed input with programmable range**
- ♦ **Programmable conversion range**
- ♦ **2- or 3-wire output line connection**
- ♦ **Low profile**
- ♦ **Vibration-proof design**
- ♦ **Programming via free "TraCon" software**
- ♦ **In-head and DIN-rail versions**
- ♦ **IP65 box and Ex housing available**

COMECO's temperature transmitter TROJ is part of a new project for cheap fixed-input programmable transmitter. It has an input accepting Pt100 RTD and 8 thermocouples and a voltage or current 2- or 3-wire output. This model allows programming of the range and conversion direction as well as sensor failure reaction and no user calibration is necessary to be provided. TROJ is available in a case for mounting inside sensor protection head, in a box with high protection class or an Ex box, and in a case for mounting on DIN rail. The serial interface allows fast and easy configuration. Thanks to the combination of performance, reliability, simplicity, flexibility, and low price, the TROJ transmitter is easy to use and very widely applicable.

Technical specifications

Input

Input	(programmable)[1]
Pt100 (w=1.385); 3-wire	min. -200…max. 600 °C
Thermocouple "B"	min. 200...max. 1800 °C
Thermocouple "E"	min. -20...max. 600 °C
Thermocouple "J"	min. -20...max. 900 °C
Thermocouple "K"	min. -20...max. 1200 °C
Thermocouple "N"	min. -20...max. 1200 °C
Thermocouple "R"	min. 0...max. 1700 °C
Thermocouple "S"	min. 0...max. 1700 °C
Thermocouple "T"	min. -40...max. 400 °C
Input / output conversion	direct or reverse, programmable
Minimum programmable range	$\Delta t \geq 50°C$

Output [6]

Output [6]	'2'	'3'
Voltage	-	0...1/2/5/10 V
- minimum load	-	1 MΩ
Current	4...20 mA	0(4)...20 mA
- maximum load	800 Ω at 24V/20mA	750 Ω at 24V/20mA
Sensor failure reaction	< 3.9 mA or > 20.2 mA, programmable	downscale or upscale, programmable

Power supply

Power supply	
Supply voltage	10...32 VDC (I-output)
	13...36 VDC (U-output)
Admissible variations	1 Vp-p at 50 Hz

Accuracy

Accuracy	
Measurement error	0.3% from span
Non-linearity	within measurement error
Self-heating error	0.005%/mA at 24 V
Temperature drift	0.01% from span for 1 °C
Cold junction compensation	automatic software, ± 0.5 °C
RTD 3-wire line compensation	up to 25 Ω per wire

Interface

Interface	
Interface type	RS232, requiring special cable [2]
Configuration software	"TraCon", free

Operating conditions

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

Design and materials

Design and materials			
Case material			plastic
Wiring			screw terminals
Mounting	in head [3,4,5]	on rail	in box [4]
Interface connector	4-pin	3-pin	4-pin
Interface cable type [2]	K1, K11U	K2, K12U	K1, K11U
Dimensions [mm]	ø44x19	18x90x58	80x80x60
Weight	30 g	90 g	170 g
Protection class	IP20	IP20	IP65

(1) Factory programming is available. Specify the lower and upper span limits when ordering.
(2) Ordered separately.
(3) Head type "B" or any other with 33 mm distance between centers of the female threaded openings.
(4) May be mounted on rail by a special snap-on accessory, which is ordered separately (see 'Accessories').
(5) May be mounted in different, separately ordered Ex housings for field applications (see 'Accessories').
(6) For 2-wire output line, output signal can only be 4…20mA (G11 = F).

Ordering code TROJ✷ - G6'6".G11.G12 - #1

Code	Feature or option	Code values
✷	Variant	**2** – with 2-wire output line [6], **3** - with 3-wire output line
G6'	Input signal	**B** - thermoresistance, **C** - thermocouple
G6"	Sensor	RTD **D** - Pt100
		T/C **B** - "B", **E** - "E", **J** - "J", **K** - "K", **N** - "N", **T** - "T", **R** - "R", **S** - "S"
G11	Output signal [6]	**E** - 0…20 mA, **F** - 4…20 mA, **K** - 0…10 V, **G** – 0…1, **H** – 0…2, **I** – 0…5, **Z** – other
G12	Mounting	**B** - in head [2,3], **C** - on DIN rail, **D** - in IP65 box (box included) [4], **E** - in Ex box (includes mounting kit only)
#1	Factory pre-set range	**X** - none, **(RANGE)** (see table above)

COMECO reserves the right of changing specifications without prior notice!