

**SMART Transmitters TRS**

TR

- ◆ Low price for quality SMART transmitter
- ◆ Select one of 10 thermoresistances and 11 thermocouples
- ◆ Program your custom input for your custom sensor
- ◆ Sensor calibration
- ◆ **SmartSense** monitoring for sensor electrical insulation leaks
- ◆ Built in programmable digital filter
- ◆ Input to output isolation
- ◆ Ex - approved version available

The intelligent transmitters of the TRS series offered by COMECO are manufactured Swedish company INOR. They are SMART transmitters with wide range of applications. TRS transmitters allow the user to:

- select sensor type (10 thermoresistances and 11 thermocouples)
  - create an input for a custom sensor (mA, mV, Ω)
  - enter calibration corrections of the sensor
  - specify input ranges and output type (4 ...20 mA/20...4mA)
  - select output state at sensor break
  - monitor sensor electrical insulation by means of **SmartSense** system
  - adjust the "zero" (the offset), the **digital filter** and the sampling time
- Using the specialized software easily programs the transmitters. TRS are available in various mounting options: in sensor protection head type "B", in IP65 box or on rail. The impressive capabilities of TRS transmitters and their low price determine their wide industrial application.



**Technical specifications**

<b>Input</b>		Programmable	<b>Accuracy</b>	
<i>PtX (w=1.385), 3(4) wire</i>	from min. -200 to max. +1000 °C		<i>Measurement error</i>	0.2 or 0.1 <sup>(1)</sup> % from span
<i>RTD resistance at 0 °C</i>	10Ω ≤ X ≤ 1000Ω		<i>Nonlinearity</i>	within measurement error
<i>Pt100 (w=1.391), 3(4) wire</i>	from min. -200 to max. +1000 °C		<i>Temperature drift</i>	0.01 or 0.005 <sup>(1)</sup> °C for 1 °C
<i>Ni100, 3(4) wire</i>	from min. -60 to max. +250 °C		<i>Cold junction compensation</i>	Automatic software: ± 0.5 °C
<i>Ni1000, 3(4) wire</i>	from min. -60 to max. +150 °C		<b>Power supply</b>	
<i>RTD selectable range</i>	programmable in the ranges above		<i>Voltage</i>	6.5÷36 or 8÷30 <sup>(2)</sup> VDC
<i>RTD minimal range width</i>	10 Ω		<i>Admissible variations</i>	4 Vp-p @ 50Hz
<i>Thermocouples (11 types)</i>	AE, B, E, J, K, L, N, R, S, T, U		<i>Max line load</i>	725Ω or 695Ω <sup>(2)</sup> @24V/23mA
<i>TC input range</i>	from min. -10 to max. +500 mV		<b>Interface</b>	
<i>TC selectable range</i>	programmable in the ranges above		<i>Interface type</i>	RS-232
<i>TC minimal range width</i>	2 mV		<i>Software (optional)</i>	For Windows: 3.11, 9x and NT
<i>Resistive, 3(4) wire<sup>(4)</sup></i>	from min. 0 to max. 2000 Ω		<b>Ex-option</b>	
<i>Other custom input</i>	mV/Ω within the ranges above		<i>Classification</i>	class EEx ia IIC T4, T5, T6
<i>Custom input linearization</i>	9 or 40 <sup>(1)</sup> points or 8 polynomials <sup>(1)</sup>		<i>Norm</i>	CENELEC
<i>Zero (offset) adjustment</i>	within input ranges		<b>Operating conditions</b>	
<i>Input isolation (optional)</i>	1500 VAC for 1 min		<i>Operating temperature</i>	-40 to 85 °C
<b>Input monitoring</b>		Programmable	<i>Operating humidity</i>	0 to 95 %RH, noncondensing
<i>Sensor break reaction</i>	Programmable: 3.5÷21.6 mA		<b>Design and materials</b>	
<i>SmartSense monitoring</i>	or 3.5÷22.8 mA <sup>(1)</sup>		<i>Case material</i>	Plastic
<b>Output</b>		Programmable	<i>Wiring</i>	Screw terminals
<i>Signal type</i>	4 to 20 mA or 20 to 4 mA		<i>Mounting</i>	<b>In head<sup>(3)</sup></b> <b>On rail</b> <b>In box</b>
<i>Linearly proportional to</i>	measured value		<i>Dimensions [mm]</i>	Ø44x26    90x58x18    80x80x60
<i>Resolution</i>	5 µA		<i>Weight</i>	50 g    70 g    190 g
<i>Current limits</i>	L=3.5 mA, H=21.6 or 22.8 mA		<i>Protection: case/terminals</i>	IP 56/10    IP 20/20    IP 65
<i>Output refresh time</i>	1.5 s or 0.17 s <sup>(1)</sup>			
<i>Digital filter:</i>	programmable			
<i>Suppression time</i>	2s or from 0 to 10 s <sup>(1)</sup>			

ABBREVIATIONS: RTD - thermoresistance; TC - thermocouple

**Ordering code**



**TRS\* - G12 - #1#2#3**

Code	Feature or option	Code values
*	Transmitter variant	<b>N</b> - normal variant, <b>P</b> - variant "Plus" with extended specifications
G12	Mounting	<b>B</b> - For mounting in a head type "B", <b>C</b> - for mounting on a rail, <b>D</b> - for mounting in a box IP-65
#1	Input to output isolation	<b>X</b> - none, <b>I</b> - isolated input transmitter
#2	EX approval	<b>X</b> - none, <b>E</b> - EEx ia IIC T4/T6 approved version
#3	Software	<b>X</b> - none, <b>S</b> - plus a software package for programming, monitoring and a cable to PC

<sup>(1)</sup> For variant "P"

<sup>(2)</sup> With Ex option

<sup>(3)</sup> May be mounted on rail by a special snap on accessory, which is ordered separately.

<sup>(4)</sup> 4-wire RTD input can also be ordered by a special request

COMECO reserves the right of changing specifications without prior notice!