

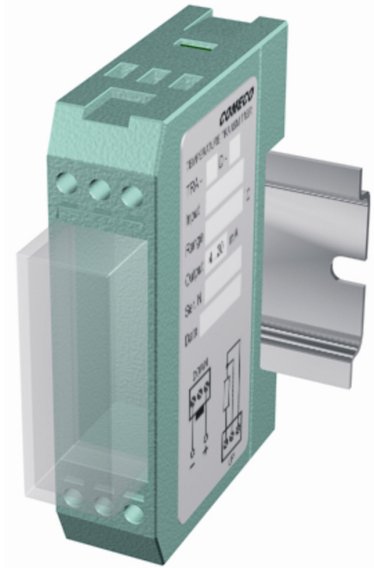
Intelligent Signal Isolator TRI

- ◆ Input and output powered by the current loops
- ◆ 4...20 to 4...20 mA or 4...20 to 20...4 mA selectable conversion
- ◆ Up to 4000 VAC isolation level
- ◆ 7 selectable thermocouple linearization blocks
- ◆ Mounting on DIN rail or in IP65 protection box

COMECO's signal isolator TRI is a compact 2-wire current-to-current transmitter providing optical isolation between the input and output current loops. The isolation level is normally 2500 VAC, but can be increased optionally to 4000 VAC. The TRI current isolator is an entirely passive device – it does not generate any supply voltages and does not need any additional supply for operating. The input part is powered by the input current loop (4...20 mA) and the output part is powered by the output current loop. Thanks to the use of high sophisticated electronics for its manufacturing, the TRI isolator offers some special features that can be activated by the user via internal programming jumpers:

- direct (4...20 to 4...20 mA) or reversed (4...20 to 20...4 mA) conversion;
- "Low" (3 mA) or "High" (22 mA) output status at input failure;
- thermocouple non-linear conversions providing temperature linear output.

TRI is designed for mounting on a 35 mm DIN rail according to EN50022, but it can be also enclosed in an IP65 protection box for wall mounting.



Technical specifications

Input

Input current	4...20 mA
Operating range	3.5...21 mA
Maximum admissible current	50 mA
Loop supply voltage	3...36 VDC
Input voltage drop	less than 2.6 V

Output

Output current	4...20 mA or 20...4 mA
Operating range	3...22 mA
Over-scale limit	32 mA
Loop supply voltage	8...32 VDC
Maximum line load	620 Ω at 24V/20mA
Output signal at input failure ⁽¹⁾	3 mA or 22 mA, selectable

Conversion

(selectable)

Linear conversion direct	input 4 mA	output 4 mA
Linear conversion reversed	input 20 mA	output 4 mA
Non-linear conversions	7 selectable thermocouple ranges: 3 "J" and 4 "K"	

⁽¹⁾ Outside the input operating range

⁽²⁾ May be mounted on rail by a special snap-on accessory, which is ordered separately (see 'Accessories').

Isolation

Input / output isolation	2500 VAC for 1 min
Increased isolation (option)	4000 VAC

Accuracy

Total measurement error	0.1% from span
Temperature drift	0.01% from span for 1 °C
Loop supply influence	negligible

Operating conditions

Operating temperature	-25...70 °C
Operating humidity	0...95 %RH, non-condensing
Storage temperature	-35...85 °C

Design and materials

Case material	plastic	
Wiring	screw terminals	
Mounting	on rail	in box ⁽²⁾
Dimensions [mm]	18x75x60	80x80x60
Weight	50 g	120 g
Protection class	IP20	IP65

Ordering code TRI - G12 - #1

Code	Feature or option	Code values
G12	Mounting	C - on DIN rail, D - in box IP65 (box included) ⁽²⁾
#1	Increased isolation level	X - none (standard isolation rate), HI - 4000 VAC