

Analog Signal Isolator TRIL

- ◆ Low cost
- ◆ Passive and active variants
- ◆ 4...20 to 4...20 mA conversion
- ◆ 3750 VAC isolation level
- ◆ Increased input protection
- ◆ Mounting on DIN rail or in IP65 protection box

COMECO's signal isolator TRIL is a compact 2-wire current-to-current transmitter providing optical isolation of 3750 VAC between the input and output current loops. TRIL is available in 2 variants:

- passive: an entirely passive device, which does not generate any supply voltages and does not need any additional supply to operate; the input part is powered by the input current loop (4...20 mA), and the output part is powered by the output current loop;
- active: uses the energy of the output loop power supply (3-wire connection) to generate an isolated supply voltage for the input loop; provides an increased input over-voltage and over-current protection.

TRIL is designed for mounting on a 35 mm DIN rail according to EN 50022, but it can be also enclosed in an IP65 protection box for wall mounting.



Technical specifications

Input	'0'	'1'
Input current	4...20 mA	4...20 mA
Operating range	3.5...21 mA	3.5...21 mA
Maximum admissible current	50 mA	50 mA
Loop supply voltage	3...36 VDC	24 VDC ± 10%
Input voltage drop	> 2.6 V	less than 2.6 V
Surge-voltage protection	6.8 V ⁽¹⁾	6.8 V ⁽¹⁾
Over-voltage protection	none	39 V ⁽¹⁾ , 90 V ⁽²⁾
Over-current protection	none	40 mA
Output	'0'	'1'
Output current	4...20 mA	4...20 mA
Operating range	3...22 mA	3...22 mA
Over-scale limit	32 mA	32 mA
Loop supply voltage	8...32 VDC, 2-wire	24 VDC ± 10%, 3-wire
Maximum line load	620 Ω at 24V/20mA	620 Ω at 24V/20mA
Output signal at input failure	< 2 mA	< 2 mA
Over-voltage protection	39 V ⁽¹⁾	39 V ⁽¹⁾
Input / output isolation	3750 VAC for 1 min	3750 VAC for 1 min

⁽¹⁾ Surge Zener diode

⁽²⁾ Gas-discharge arrester

⁽³⁾ May be mounted on rail by a special snap-on accessory, which is ordered separately (see 'Accessories').

Accuracy

Total measurement error	0.35% from span
Temperature drift	0.03% 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 ⁽³⁾
Dimensions [mm]	18x90x58 80x80x60
Weight	50 g 120 g
Protection class	IP20 IP65

Ordering code TRIL* - G12

Code	Feature or option	Code values
*	Variant	0 - passive, 1 - active
G12	Mounting	C - on DIN rail, D - in box IP65 (box included) ⁽³⁾