

Universal Signal Isolator TRIM

- ♦ Input / output / supply triple isolation
- ♦ Accepts mA, mV, V, or Ω linear signals
- ♦ Positive and negative mA or V output
- ♦ Built-in digital filter
- ♦ Direct and reverse conversion
- ♦ Full digital technology – no analog adjustments
- ♦ DIN-rail case and 11-pin box for rail mounting

COMECO's signal isolator TRIM is an active triple-isolated transmitter with separate isolated power supply with 1000 VAC isolation level. The input part is internally powered and generates 24 VDC excitation voltage for external devices connected to TRIM input (current loops, transmitters, etc.). The input may accept various mA, mV, V (unipolar and bipolar) as well as resistive linear signals. The output part is internally energized and generates standard or custom specified linear current or voltage (positive or negative) signals. Thanks to the use of high sophisticated electronics for its manufacturing, the TRIM isolator offers some special features that can be activated by the user via internal programming jumpers:

- direct or reversed conversion;
- upscale or downscale output status at input failure;
- custom specified non-linear conversions.

TRIM is available in a case for mounting on a 35 mm DIN rail according to EN50022 and in a convenient 11-pin box for socket mounting.



Technical specifications

Input

Linear current	0...5 mA, 0(4)...20 mA
Linear voltage	0...50 mV, 0...100 mV, 0...1 V, -1...1 V, 0...2 V, 0...5 V, 0...10 V, -10...10 V
Linear resistive	0...1 k Ω
Custom linear (option)	min. -10...max. 10 V ⁽¹⁾ , 0...max. 100 mA ⁽¹⁾ , 0...100 Ω ...100 k Ω ⁽¹⁾
Current-input impedance	max. 10 Ω
Voltage-input impedance	min. 1 G Ω (1 M Ω for range span > 1.5 V)
Input isolation	> 1000 VAC for 1 min

Output

Linear current	0(1)...5 mA, 2...10 mA, 0(4)...20 mA
Linear voltage	0...1 V, 0...2 V, 0(1)...5 V, 0(2)...10 V
Custom linear (option)	on request ⁽¹⁾
Current-output load	max. 620 Ω
Voltage-output load	min. 1 k Ω ⁽²⁾
Direct or reverse conversion	selectable
Output signal at input failure	upscale or downscale, selectable
Output isolation	> 1000 VAC for 1 min
Excitation voltage	24 VDC, max. 30 mA

⁽¹⁾ On request. Specify range additionally!

⁽²⁾ Minimum 50 k Ω for negative output voltage ranges!

⁽³⁾ Ordered separately (see 'Accessories').

Accuracy

Measurement error	0.1% from span
Temperature drift	0.01% from span for 1 °C
Power supply influence	negligible

Power supply

Supply voltage	12...24 V
Consumption	max. 100 mA
Isolation	> 1000 VAC for 1 min

Operating conditions

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

Design and materials

	'R1'	'R2'
Dimensions [mm]	23x90x58	35x78x91
Mounting	on rail	in socket or on rail
Maximum weight [g]	80	180
Protection class	IP20	IP20
Case material	plastic	plastic
Wiring	screw terminals	socket UNDECAL ⁽³⁾

Ordering code TRIM - G0.G6.G11

Code	Feature or option	Code values
G0	Case	R1 - for rail mounting, R2 - 11-pin box
G6	Input signal	A - 0...5 mA, B - 0...20 mA, C - 4...20 mA, F - 0...50 mV, G - 0...100 mV, H - 0...1 V, H1 - -1...1 V, I - 0...2 V, J - 0...5 V, K - 0...10 V, K1 - -10...10 V, L - resistance, Z - other
G11	Output signal	B - 0...5 mA, C - 1...5 mA, D - 2...10 mA, E - 0...20 mA, F - 4...20 mA, G - 0...1 V, H - 0...2 V, I - 0...5 V, J - 1...5 V, K - 0...10 V, L - 2...10 V, Z - other