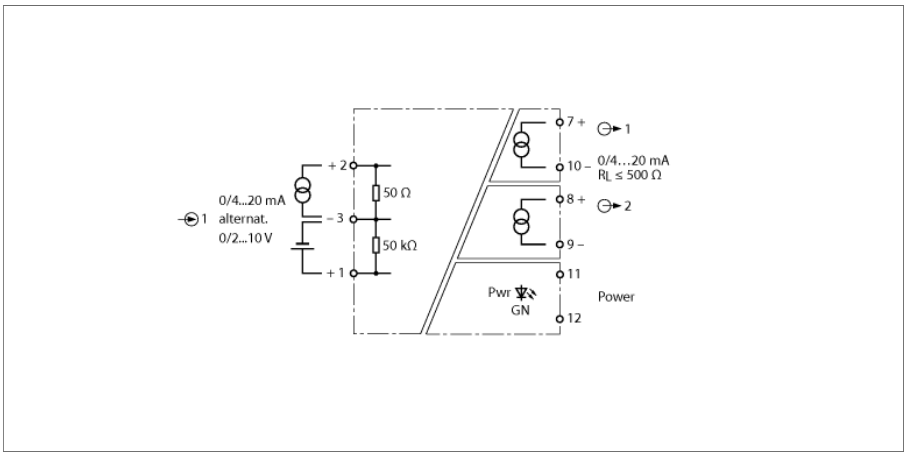
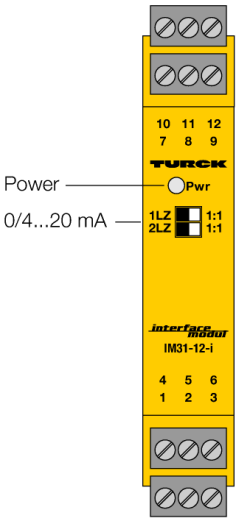
Analog signal isolator
1-channel
IM31-12-I





Normalized active voltage or current signals are transmitted galvanically isolated via the 1-channel analog signal isolator IM31-12-I. The signal is duplicated and provided at both outputs.

The device is equipped with one input circuit of 0/2…10 V or 0/4…20 mA and two short-circuit proof output circuits of 0/4…20 mA.

The transmission characteristic is adjusted via a DIP switch on the front. In switch position 1:1 the input signal is transmitted without interference and made available at the outputs. In "LZ" switch position, a dead-zero signal at the input (0…10 V or 0…20 mA) is converted and provided as a live-zero signal at the output (4…20 mA).

A green LED indicates operational readiness.

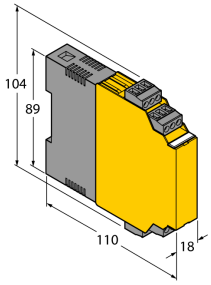
- **Transmission of normalized analog signals**
- **Input circuit: 0/2…10 V or 0/4…20 mA**
- **Output circuit: 2 × 0/4 0…20 mA**
- **Complete galvanic isolation**
- **Input reverse-polarity protected**

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Analog signal isolator
1-channel
IM31-12-I

Type designation	IM31-12-I
Ident no.	7506324
Nominal voltage	Universal voltage supply unit
Operating voltage	20…250 VAC
Frequency	40…70 Hz
Operating voltage range	20…125 VDC
Power consumption	≤ 2.2 W
Voltage input	0/2…10 VDC
Input resistance (voltage)	≥ 50 kΩ
Input current	0/4…20 mA
Input resistance (current)	≤ 50 Ω
Output circuits	
Output current	0/4…20 mA
Load resistance, current output	≤ 0.5 kΩ
Rise time (10…90 %)	≤ 50 ms
Fall time (90…10 %)	≤ 50 ms
Measuring accuracy (including linearity, hysteresis and repeatability)	≤ 0.1 % of full scale
Reference temperature	23 °C
Temperature drift	≤ 0.005 % of full scale/K
Galvanic isolation	
Test voltage	2.5 kV
Indication	
Operational readiness	green
Protection class	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature (min.)	-25 °C
Ambient temperature (max.)	70 °C
Storage temperature	-40…+80 °C
Relative humidity	≤ 95 %
Dimensions	104 x 18 x 110 mm
Weight	136 g
Mounting instructions	DIN rail (NS35) or panel
Housing material	Polycarbonate/ABS
Electrical connection	4 × 3-pin removable terminal blocks, reverse polarity protected, screw terminal
Terminal cross-section	1 x 2.5 mm² / 2 x 1.5 mm²
Tightening torque	0.5 Nm

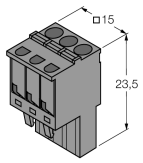
Dimensions



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Analog signal isolator
1-channel
IM31-12-I

Accessories

Type code	Ident no.	Description	Dimension drawing
IM-CC-3X2BK/2BK	7541218	Cage clamp terminals for IM modules (Ex-devices with 18 mm overall width); includes: 4 pcs. of 3-pin black terminals	

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