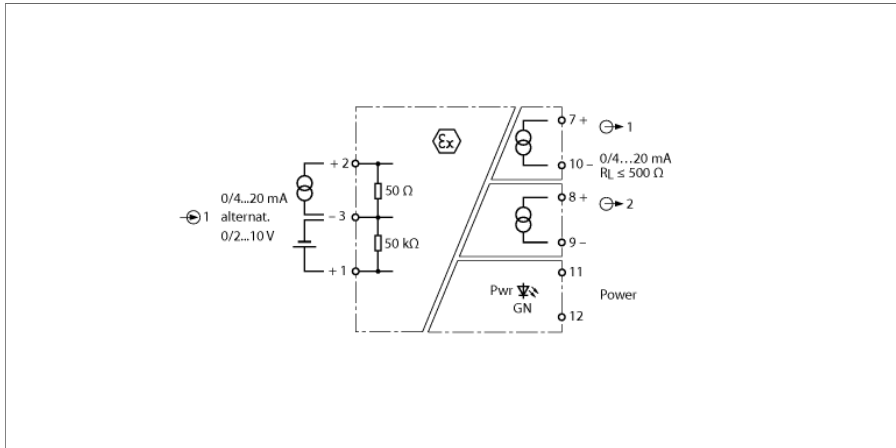


# Analog signal isolator 1-channel IM31-12EX-I



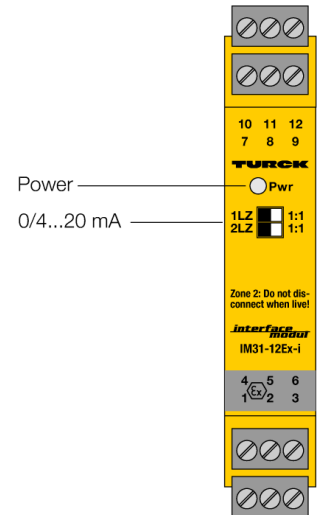
Normalized active voltage or current signals are transmitted galvanically isolated from the Ex area to the non-Ex area via the 1-channel analog signal isolator IM31-12EX-I. The signal is duplicated and provided at both outputs.

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 signals are transmitted without interference and made available at the outputs in the non-Ex area. 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).

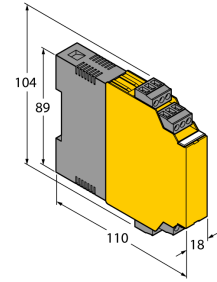
A green LED indicates operational readiness.

- Transmission of normalized analog signals from the Ex area to the non-Ex area
- Input circuit: 0/2...10 V or 0/4...20 mA
- Output circuit: 2 x 0/4 0...20 mA
- Complete galvanic isolation
- Input reverse-polarity protected
- ATEX, IECEx, UL, „FM<sub>US</sub>“, TR CU, NEPSI, KOSHA
- Installation in zone 2



## Dimensions

Type	IM31-12EX-I
ID	7506321
<b>Nominal voltage</b>	
Nominal voltage	Universal voltage supply unit
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage	20...125 VDC
Power consumption	≤ 2.2 W
<b>Voltage input</b>	
Voltage input	0/2...10 VDC
Input resistance (voltage)	≥ 50 kΩ
Input current	0/4...20 mA
Input resistance (current)	≤ 50 Ω
<b>Output circuits</b>	
Output current	0/4...20 mA
Load resistance current output	≤ 0.5 kΩ
<b>Response characteristic</b>	
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
<b>Galvanic isolation</b>	
Test voltage	2.5 kV RMS
<b>Important note</b>	
Important note	For Ex-applications the values specified in the corresponding Ex certificates (ATEX, IECEx, UL, etc.) apply.
Ex approval acc. to conformity certificate	TÜV 04 ATEX 2679
Application area	II (1) G; II (1) D
Ignition protection category	[Ex ia Ga] IIC/IIB; [Ex ia Da] IIIC
Ex approval acc. to conformity certificate	TÜV 06 ATEX 553387 X
Application area	II 3 G
Ignition protection type	Ex nA [ic Gc] IIC/IIB T4 Gc
Characteristic	linear
<b>Displays/Operating elements</b>	
Operational readiness	Green
<b>Mechanical data</b>	
Protection class	IP20
Flammability class acc. to UL 94	V-0
Ambient temperature	-25...+70 °C
Storage temperature	-25 ... +60 °C für UL, FM
Storage temperature	-40...+80 °C
Dimensions	104 x 18 x 110 mm
Weight	143 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 × 2.5 mm <sup>2</sup> /2 × 1.5 mm <sup>2</sup>
Tightening torque	0.5 Nm



**Accessories**

Type code	Ident no.		Dimension drawing
IM-CC-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex-devices with 18 mm overall width); includes: 2 pcs. 3-pin blue terminals and 2 pcs. 3-pin black terminals.	