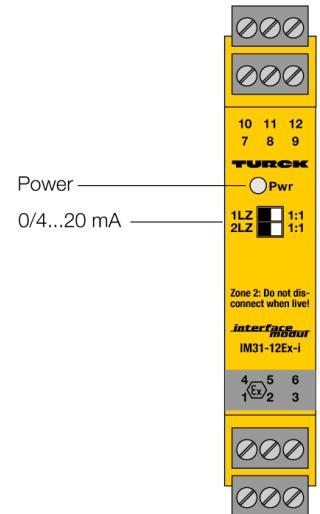
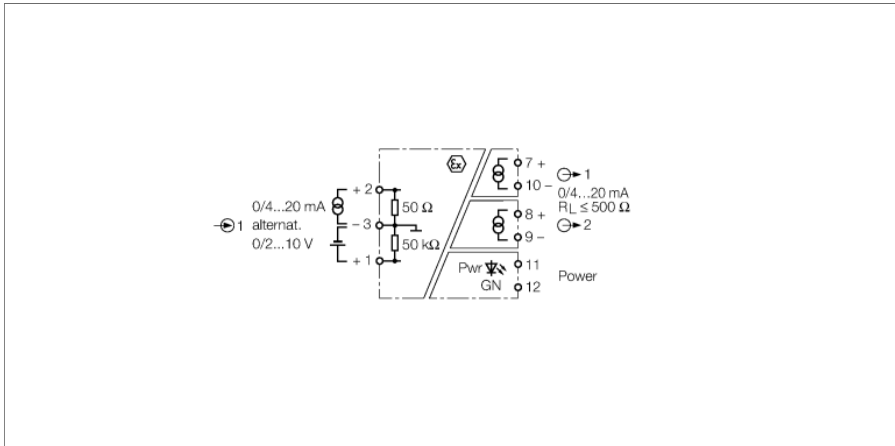


**Analog signal isolator  
1-channel  
IM31-12EX-I**



Standard active voltage or current signals are galvanically isolated and transferred via the 1-channel analog signal isolator IM31-12EX-I from the Ex area to the non-Ex area. 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 transfer characteristic is adjusted via a DIP switch at the front. In "1:1" switch position the input signals are transferred unattenuated to the outputs in the non-Ex area. In "LZ" switch position, a dead-zero signal at the input (0...10 V / 0...20 mA) is converted and provided as a live-zero signal at the output (4...20 mA).

The green LED indicates operational readiness.

- ATEX, IECEx, CSA, FM, UL, TIIS, GOST
- Installation in zone 2
- Transfer of standard 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

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

<b>Type code</b>	IM31-12EX-I
Ident no.	7506321
<b>Flammability class acc. to UL 94</b>	V-0
<b>Nominal voltage</b>	Universal voltage supply unit
Operating voltage	20...250 VAC
Frequency	40...70 Hz
Operating voltage range	20...125 VDC
Power consumption	≤ 2.2 W
<b>Voltage input</b>	0/2...10 VDC
Input resistance (voltage)	≥ 50 kΩ
Current input	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>Rise time (10-90%)</b>	≤ 50 ms
Dropout time (90...10%)	≤ 50 ms
Measuring accuracy	≤ 0.2 % of full scale
Reference temperature	23 °C
Temperature drift	≤ 0.01 % / K
<b>Galvanic isolation</b>	
Test voltage	2.5 kV

<b>Ex approval acc. to conformity certificate</b>	TÜV 04 ATEX 2679
Application area	II (1) G; II (1) D
Protection type	[Ex ia Ga] IIC/IIB; [Ex ia Da] IIIC
Max. values:	terminal connection: 1...3
Max. output voltage $U_o$	≤ 7.2 V
Max. output current $I_o$	≤ 1 mA
Max. output power $P_o$	≤ 2 mW
Characteristic	linear
Rated voltage	250 V
Internal inductance/capacitance $L_i/C_i$	$L_i = 65 \mu\text{H}; C_i = 52 \text{nF}$
External inductance/capacitance $L_o/C_o$	

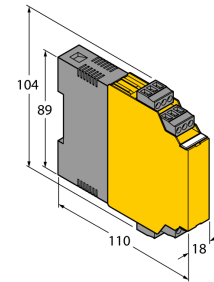
Ex ia	IIC			IIB		
	0.5	4.5	9.5	1.5	9.5	20
$L_o$ [mH]						
$C_o$ [μF]	2	1.5	1.3	9	6.7	6.1

<b>Ex approval acc. to conformity certificate</b>	TÜV 06 ATEX 553387 X
Application area	II 3 G
Protection type	Ex nA [ic Gc] IIC/IIB T4 Gc
Max. values:	terminal connection: 1...3
Max. output voltage $U_o$	≤ 7.2 V
Max. output current $I_o$	≤ 1 mA
Max. output power $P_o$	≤ 2 mW
Characteristic	linear
External inductance/capacitance $L_o/C_o$	

Ex ic	IIC			IIB		
	0.5	4.5	9.5	1.5	9.5	20
$L_o$ [mH]						
$C_o$ [μF]	3.9	2.5	2.2	17	12	10

**MTTF** 100 years acc. to SN 29500 (Ed. 99) 40 °C

**Dimensions**



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

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**Indication**

Operational readiness green

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**Protection class**

Ambient temperature	IP20
Storage temperature	-25...+70 °C
Relative humidity	-40...+80°C
Dimensions	≤ 95%
Weight	104 x 18 x 110 mm
Mounting instruction	140 g
Housing material	For mounting on DIN rail or mounting panel
Electrical connection	polycarbonate/ABS
Terminal cross-section	4 x 3-pole removable terminal blocks, reverse polarity protected, screw connection
Tightening torque	1 x 2.5 mm <sup>2</sup> / 2 x 1.5 mm <sup>2</sup>
	0.5 Nm

**Accessories**

Type code	Ident no.	Description	Dimension drawing
IM-CC-3X2BU/2BK	6900475	Cage clamp terminals for IM modules (Ex devices; width 18 mm); 2 blue/2 black, 3-pin, included in delivery.	