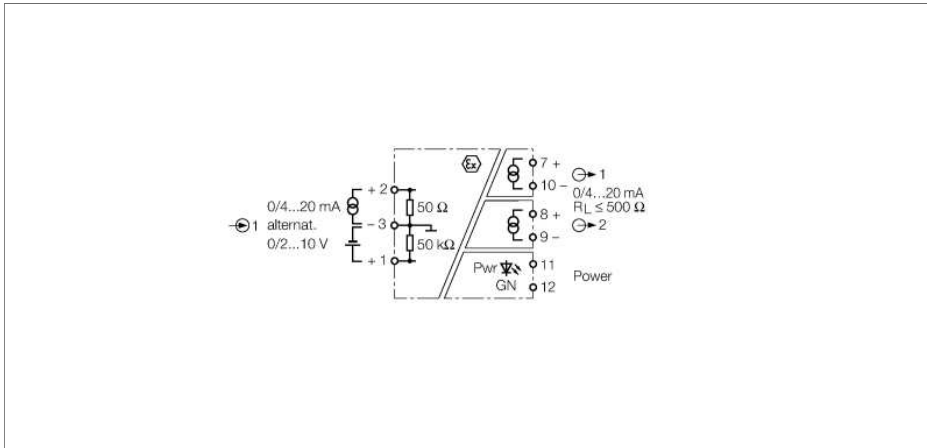


**Analog signal isolator
1-channel
IM31-12EX-I**



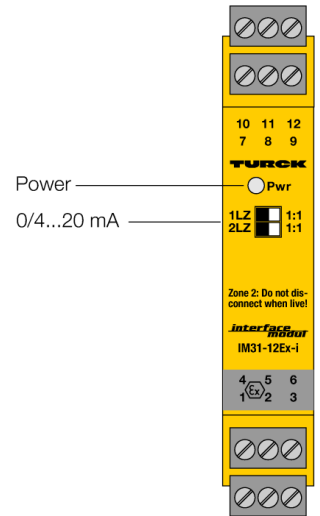
Standard active voltage or current signals are galvanically separated and transferred via the 1-channel analog signal isolator IM31-12EX-I from the Ex area to the non-Ex area. The signal is duplicated and provided at both outputs.

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 signal is 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).

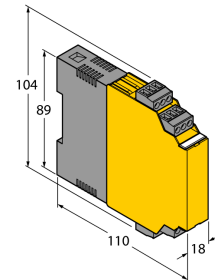
The green LED indicates operational readiness.

- Intrinsically safe input circuits Ex ia
- Application area acc. to ATEX: II (1) G, II (1) D; II 3 G
- 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
- Removable terminal blocks
- Complete galvanic separation



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

Dimensions



Type code	IM31-12EX-I																											
Ident no.	7506321																											
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																											
Current input	0/4...20 mA																											
Input resistance (current)	50 Ω																											
Output circuits																												
Output current	0/4...20 mA																											
Load resistance current output	≤ 0.5 kΩ																											
Limit frequency	≤ 30 Hz																											
Rise time (10-90%)	≤ 50 ms																											
Dropout time (90...10%)	≤ 50 ms																											
Measuring accuracy	≤ 0.2 % of full scale																											
Reference temperature	23 °C																											
Temperature drift	≤ 0.01 % / K																											
Galvanic separation																												
Test voltage	2.5 kV																											
Ex approval acc. to conformity certificate	TÜV 04 ATEX 2679																											
Application area	II (1) G; II (1) D																											
Protection type	[Ex ia Ga] IIC/IIB; [Ex ia Da] IIIC																											
Max. output voltage U _o	≤ 7.2 V																											
Max. output current I _o	≤ 1 mA																											
Max. output power P _o	≤ 2 mW																											
Rated voltage	250 V																											
Characteristic	linear																											
External inductance/capacitance L _o /C _o	<table border="1"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">IIC</th> <th colspan="3">IIB</th> </tr> <tr> <th>0.5</th> <th>4.5</th> <th>9.5</th> <th>1.5</th> <th>9.5</th> <th>20</th> </tr> </thead> <tbody> <tr> <td>Lo [mH]</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Co [μF]</td> <td>2</td> <td>1.5</td> <td>1.3</td> <td>9</td> <td>6.7</td> <td>6.1</td> </tr> </tbody> </table>		IIC			IIB			0.5	4.5	9.5	1.5	9.5	20	Lo [mH]							Co [μF]	2	1.5	1.3	9	6.7	6.1
	IIC			IIB																								
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Ex approval acc. to conformity certificate	TÜV 06 ATEX 553387 X																											
Application area	II 3 G																											
Protection class for belonging equipment	Ex nA [jc Gc] IIC/IIB T4 Gc																											
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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																											
Indication																												
Operational readiness	green																											

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

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