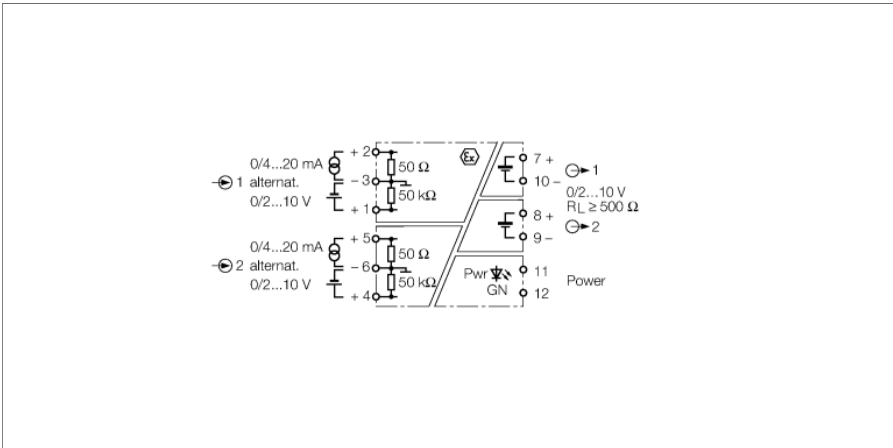


**Analog signal isolator
2-channel
IM31-22EX-U**



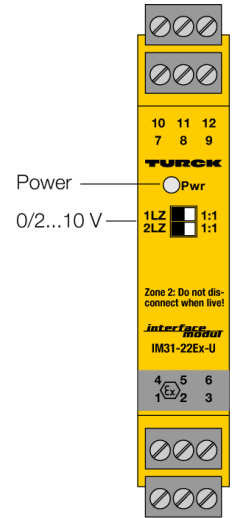
Standard active voltage or current signals are galvanically isolated and transferred via the 2-channel analog signal isolator IM31-22EX-U from the Ex area to the non-Ex area.

The device features two input circuits of 0/2...10 V and 0/4...20 mA as well as two short-circuit proof output circuits of 0...10 V.

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 (0...10 V).

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 circuits: 0/2...10 V or 0/4...20 mA
- Output circuits: 0/2...10 V
- Complete galvanic isolation



**Analog signal isolator
2-channel
IM31-22EX-U**

Type code	IM31-22EX-U
Ident no.	7506326
Flammability class acc. to UL 94	V-0
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 voltage	0/2...10 V
Load resistance voltage output	≥ 0.5 kΩ
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 isolation	
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. values:	terminal connection: 1...3 / 4...6
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_e/C_e	

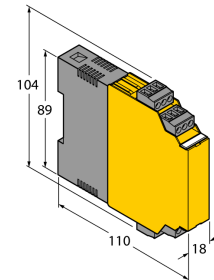
Ex ia	IIC			IIB		
	0.5	4.5	9.5	1.5	9.5	20
L_o [mH]						
C_o [μF]	2	1.5	1.3	9	6.7	6.1

Ex approval acc. to conformity certificate	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 / 4...6
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_e/C_e	

Ex ic	IIC			IIB		
	0.5	4.5	9.5	1.5	9.5	20
L_e [mH]						
C_e [μF]	3.9	2.5	2.2	17	12	10

MTTF 90 years acc. to SN 29500 (Ed. 99) 40 °C

Dimensions



**Analog signal isolator
2-channel
IM31-22EX-U**

Indication

Operational readiness green

Protection class

Ambient temperature	-25...+70 °C
Storage temperature	-40...+80°C
Relative humidity	≤ 95%
Dimensions	104 x 18 x 110 mm
Weight	136 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.	