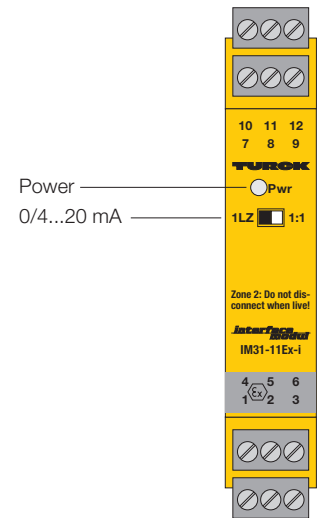


Active voltage or current signals are galvanically isolated and transmitted via the 1-channel analog data transmitter IM31-11EX-I from the Ex area to the safe area.

The device is equipped with one input circuit of 0/2...10 V or 0/4...20 mA and one short-circuit protected output circuit of 0/4...20 mA. Input circuit, output circuit and supply voltage are each galvanically isolated.

In 1 : 1 switch position input signals are transmitted without attenuation to the outputs in the safe area. In "LZ" switch position a dead-zero signal at the input (0...10 V / 0...20 mA) is converted to a live-zero signal at the output (4...20 mA)

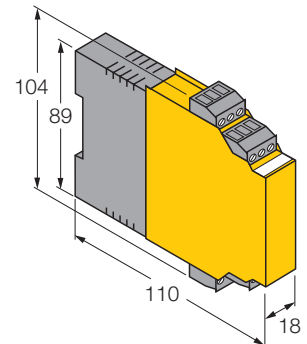
The green LED indicates operational readiness.



- **Intrinsically safe input circuits EEx ia**
- **Application area according to ATEX : II (1) GD**
- **Transmission of standard analog signals from the explosion hazardous area to the safe area**
- **Input 0/2...10V or 0/4...20mA**
- **Output: 0/4...20 mA**
- **Galvanic isolation of input circuits to put circuits and supply voltage**
- **Removable terminal blocks**
- **Universal operating voltage (20...250VAC/ 20...125VDC)**
- **Galvanic isolation of input circuits to output circuits and supply voltage**

analogue signal transmitters
1-channel
IM31-11EX-I

Dimensions



Type	IM31-11EX-I									
Ident-No.	7506320									
Nominal voltage	Universal voltage supply unit									
Operational voltage range:	20 ... 250 VAC									
Frequency	≥ 40 ... ≤ 70 Hz									
Operational voltage range:	20 ... 125 VDC									
Power consumption	≤ 2.2 W									
Voltage	0/2...10 VDC									
Input resistance	50 kΩ									
Input resistance	50 Ω									
Current	0/4...20 mA									
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									
Linearity deviation	≤ 0.1 % of full scale									
Drift	< 0.1 % /annually									
Effect of load impedance	< 0.02 % of full scale									
Effect of supply voltage	< 0.5 % of full scale									
Temperature drift	≤ 0.01 % / K									
Test voltage	2.5 kV									
Constant voltage supply	250 V									
Ex approval acc. to conformity certificate										
Ex approval acc. to conformity certificate	TÜV 04 ATEX 2679									
Application area	II (1) GD									
Protection type	[EEx ia] IIC									
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										
	<table border="1"> <thead> <tr> <th></th> <th>EEx ia IIC</th> <th>EEx ia IIB</th> </tr> </thead> <tbody> <tr> <td>L_o [mH]</td> <td>0.5, 4.5, 9.5</td> <td>1.5, 9.5, 20</td> </tr> <tr> <td>C_o [uF]</td> <td>2, 1.5, 1.3</td> <td>9, 6.7, 6.1</td> </tr> </tbody> </table>		EEx ia IIC	EEx ia IIB	L_o [mH]	0.5, 4.5, 9.5	1.5, 9.5, 20	C_o [uF]	2, 1.5, 1.3	9, 6.7, 6.1
	EEx ia IIC	EEx ia IIB								
L_o [mH]	0.5, 4.5, 9.5	1.5, 9.5, 20								
C_o [uF]	2, 1.5, 1.3	9, 6.7, 6.1								
Application area	II 3 G									
Application area	II 3 G									
Protection type	EEx nA nC [nL] IIC/IIB T4									
Indication										
Operational readiness	green									
Degree of protection	IP20									
Ambient temperature	-25 ...+ 70 °C									
Housing length	104 mm									
Housing width	18 mm									
Housing height	110 mm									
Weight	134 g									
Mounting instruction	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									