

Isolated active voltage or current signals are galvanically isolated and transmitted via the 2-channel analog data transmitter IM31-22EX-I from the Ex area to the safe area.

The device features two input circuits of 0/2...10 V and 0/4...20 mA as well as two short-circuit protected output circuits of 0/4...20 mA. Input circuits, output circuits 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 analogue signals from the explosion hazardous area to the safe area**
- **Input 2x0/2...10V or 0/4...20mA**
- **Output: 2x0/4...20 mA**
- **Galvanic isolation of input circuits to output 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**

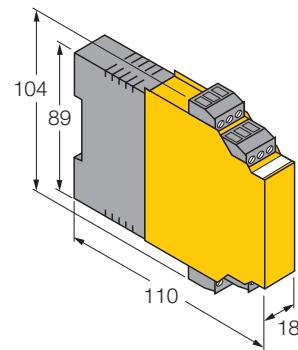
analogue signal transmitters

2-channel

IM31-22EX-I

Type	IM31-22EX-I
Ident-No.	7506322

Dimensions



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	2* 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	

	EEx ia IIC	EEx ia IIB
L_o [mH]	0.5, 4.5, 9.5	1.5, 9.5, 20
C_o [μ F]	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
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Degree of protection	IP20
Ambient temperature	-25 ... + 70 °C
Housing length	104 mm
Housing width	18 mm
Housing height	110 mm
Weight	137 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