

Produktinformation

Monitoring Relay MR50Ex



- Input standard signals 0/4..20 mA, 0/2..10 V DC
- Measuring range programmable
- Max. 2 alarm outputs
- Isolated analog output 0/4..20 mA, 0/2..10 V DC

Characteristics

The Monitoring Relay MR50Ex has inputs for industry standard signals 0/4..20 mA and 0/2..10 V DC. Measuring value and the programmed unit are shown in the display. The integrated transmitter supply offers direct connection of loop powered sensors. Simple programming, up to 2 alarm outputs (SPDT) and an optional available fully isolated free programmable analog output 0/4..20mA; 0/2..10 V DC meets the demand for different applications.

Technical data

Power supply

Supply voltage	: 230 V AC $\pm 10\%$, 115 V AC $\pm 10\%$, 24 V DC $\pm 15\%$ $U_m = 253$ V AC or 125 V DC (terminals 11 and 13)
Power consumption	: max. 5 VA
Operating temperature	: -10...+55 °C
CE-conformity	: ATEX-directive 2014/34/EU
Standards	: EN 60079-0:2006 EN 60079-11:2007 EN 61241-0:2006 EN 61241-11:2006,
EMC-directive / standard	: 2014/30/EU / EN 61326-1:2013

Inputs

Explosion protection	: Ex II (1) G [Ex ia] IIC/IIB or II (1) D [Ex iaD]
Approval	: TÜV 08 ATEX 554329
Input	: 0/4..20 mA; 0/2..10 V DC
Ri	: current 10 Ω , voltage 10 k Ω
Fault detection	: break of wire in the measuring circuit (terminals 45, 46 and 47)
Accuracy	: < 0.1 %, ± 1 Digit
Temperature coefficient	: 0.01 %/K

Safety data

Max. no load voltage U_0	: 18.9 V
Max. short circuit curr. I_0	: 92.5 mA
Max. output power P_0	: 580 mW
Resistance R	: 272 Ω
Characteristics	: trapezoidal
Internal inductivity	: 4 μ H
Internal capacity	: 1.2 nF
Transmitter supply	: approx. 16 V DC max. 20 mA (terminal 48)

Explosion protection

	Ex ia/IIC or ia/IIC	ia/IIB
Max. ext. inductivity	: 2.3 mH	0.1 mH
Max. ext. capacity	: 0.12 μ F	0.22 μ F

At connecting of externally supplied active intrinsically safe circuits the rules for the interconnection of intrinsically safe circuits have to be observed.

Max. values	U_i	: 30 V
	I_i	: 52 mA
	P_i	: 980 mW

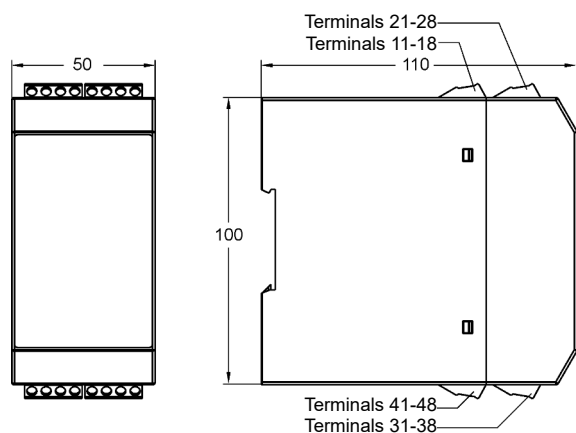
Outputs

Relay SPDT	: < 250 V AC < 250 VA < 2 A $\cos \varphi \geq 0.3$, < 300 V DC < 40 W < 2 A (terminals 21, 22, 23; 25, 26, 27)
Analog output	: 0/4..20 mA, burden $\leq 500 \Omega$; 0/2..10 V burden > 500 Ω , isolated, output changes automatically (burden dependent)
Accuracy	: 0.2 %; TK 0.01 %/K for connection at electrical equipments with supply voltage of max. 230V (terminals 17 and 18)
Fault function	: break of wire in the measuring circuit: → analog output 0 mA, < 3.6 mA or > 21.5 mA → alarm contact(s) min. or max. programmable
Display	: Graphic-LCD-Display, 128 x 64 Pixel, with white back-light
Case	: Polyamide (PA) 6.6, UL94V-0 acc. to DIN EN 60715
Weight	: approx. 450 g
Connection	: screw terminals 0.14..2.5 mm ² (AWG 26..14)
Protection class	: case IP30, terminals IP20, BGV A3

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Produktinformation

Dimensions



Ordering code

MR50Ex - 1. - 2. - 3. - 4. - 5. - 6.

1. Input	
1	standard signals 0/4..20 mA, 0/2..10 V DC, transmitter supply approx. 16 V DC, max. 20 mA, inputs intrinsically safe
2. Alarm output A1, A2	
2R	2 relay SPDT
3. Alarm output A3, A4	
00	not available
4. Analog output	
00	not installed
AO	0/4..20 mA, 0/2..10 V DC
5. Supply voltage	
0	230 V AC, $\pm 10\%$ 50-60 Hz
1	115 V AC, $\pm 10\%$ 50-60 Hz
5	24 V DC, $\pm 15\%$
6. Options	
00	without option

Connection diagram

