

## Product information

# Temperature Transmitter PMT50Ex-3



- **Signal conditioning – linearisation – output characteristic transformation**
- **Input for RTD Pt100/Pt1000 and thermocouples**
- **Measuring range programmable**
- **Linearisation or transformation of output characteristic via 32 base-points configurable**
- **Automatic input fault detection**

### Characteristics

The programmable Temperature Transmitter PMT50 operates with RTD and thermocouple input signals. The device convert the signal to analog output 0/4..20 mA; 0/2..10 V DC. The device offers a linearisation function for any sensor curves and a simulator function. The integrated transmitter supply 24 V DC max. 30 mA allows the feeding of 2-and 3-wire sensors. 4 alarm outputs for monitoring and controlling are available.

### 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

Power consumption : < 5 VA  
 Operating temperature : -10..+55 °C  
 Conformity : CE, 2014/34/EU

#### Explosion protection

Marking : II (1) G [Ex ia] IIC/IIB or  
 II (1) D [Ex iaD]

#### Input

: Pt100 (3-wire) -100.0..+600.0 °C  
 Pt1000 (3-wire) -100.0..+300.0 °C  
 thermocouple (TC)  
 type J -100.0..+800.0 °C  
 type K -150..+1200 °C  
 type N -150..+1200 °C  
 type S -50..+1600 °C  
 (terminals 35, 36, 37; 45, 47)

Fault detection : broken line (Pt100 / Pt1000,TC)  
 short circuit (only Pt100 / Pt1000)

Accuracy : < 0.1 %,  $\pm 1$  Digit

#### Outputs

Alarm outputs : relay SPDT  
 <250V AC<250VA<2A;  $\cos \Phi \geq 0.3$   
 <300V DC<40W<2A

Analog output : 0/4..20 mA burden  $\leq 500 \Omega$   
 0/2..10 V burden > 500  $\Omega$ , isolated  
 output changes automatically  
 (burden depending)

- Accuracy : 0.2 %; TK 0.01 % / K

Fault function : for broken line or short circuit detection  
 → analog output 0 mA, < 3.6 mA or >21.5 mA  
 → alarm relays min. or max.

#### Display

: graphic-LCD-display, 128 x 64 Pixel  
 with white LCD backlight

#### Case

: Polyamide (PA) 6.6, UL94V-0  
 TS35

#### Weight

: approx. 450 g

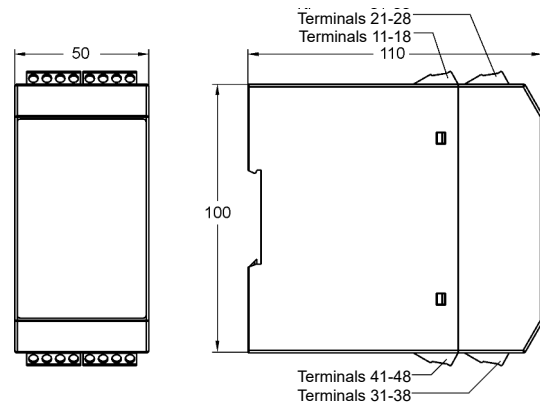
#### Connection

: screw terminals 0.14..2.5 mm<sup>2</sup>  
 AWG 26..AWG14

#### Protection class

: case IP30, terminals IP20 acc. to  
 BGV A3

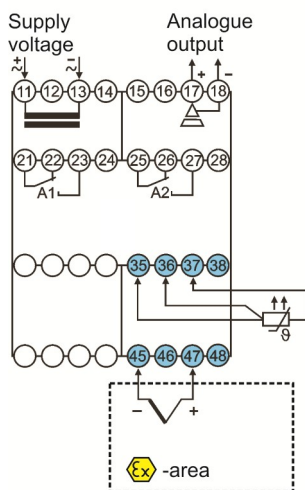
### Dimensions



## Product information

### Connection diagram

**Device type PMT50Ex-3**  
 Pt100, Pt1000, Thermocouple



### Ordering code

1. 2. 3. 4. 5. 6.  
 PMT50Ex -  -  -  -  -  -

1. Device type/input	
3	RTD Pt100, 3-wire, -100.0..+600.0 °C RTD Pt1000, 3-wire, -100.0..+300.0 °C Thermocouple J (Fe-CuNi), -100.0..+800.0 °C K (NiCr-Ni), -150..+1200 °C N (NiCrSi-NiSi), -150..+1200 °C S (Pt10Rh-Pt), -50..+1600 °C
2. Analog output	
AO	0/4..20 mA, 0/2..10 V DC isolated
3. Alarm outputs	
00	not installed
2R	2 relay outputs, A1, A2 SPDT
4. Alarm outputs	
00	not installed
5. Supply voltage	
0	230 V AC, ± 10 % 50-60 Hz
1	115 V AC, ± 10 % 50-60 Hz
5	24 V DC, ± 15 %
6. Options	
00	without option