

Produktinformation

Sensors and Instrumentation

Temperature Transmitter PMT50-2 /-3



- Signal conditioning – linearisation – output characteristic transformation
- Input for resistance and Potentiometer or RTD Pt100/Pt1000 and thermocouples
- Measuring range programmable
- Linearisation or transformation of output characteristic via 32 base-points programmable
- Automatic fault detection in the measuring circuit

Characteristics

The programmable universal transmitter PMT50 operates with analog input signals. The device convert input signals to analog output 0/4..20 mA; 0/2..10 V DC. Optional a serial interface is available. 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 ±10 %
 115 V AC ±10 %
 24 V DC ±15 %

Power consumption : < 5 VA
Operating temperature : -10..+55 °C
CE – conformity : IEC61326 05/2004, IEC 61000-4-2,
 IEC 61000-4-3, IEC 61000-4-4,
 IEC 61000-4-5, IEC 61000-4-6,
 IEC 61000-4-8, IEC 61000-4-11,
 CISPR16-1/16-2

Inputs
Fault detection : type -2: (only resistance measurement)
 broken line;
 type -3: broken line (Pt100 / Pt1000,TC)
 and short circuit (only Pt100 / Pt1000)

Device type 2
Input : resistance 0..100 kΩ,
 potentiometer min.1 kΩ.. max. 100 kΩ
Accuracy : < 0.2 %, ±1 Digit

Device type 3
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

Accuracy : < 0.1 %, ±1 Digit

Outputs
Alarm outputs : relay SPDT
 < 250 V AC < 250 VA < 2 A
 cos Phi ≥ 0.3
 < 300 V DC < 40 W < 2 A

Analog output : 0/4..20 mA burden ≤ 500 Ω,
 0/2..10 V burden > 500 Ω isolated
 output changes automatically
 (burden depending)

Fault indication : for broken line or short circuit detection
 → analog output (programmable)
 0 mA, < 3.6 mA or >21.5 mA
 → Alarm relays
 min. or max. programmable

Bus system
Modbus : RS485, RTU or ASCII
 max. 38400 Baud

Profibus : Profibus DP
Connection : 9 pole D-SUB plug in the front

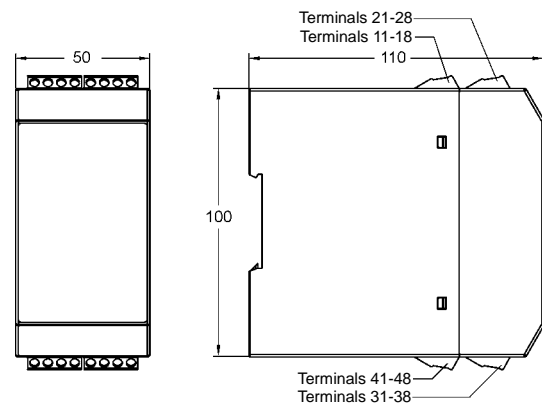
Display : Graphic-LCD-Display
 128 x 64 Pixel,
 with white LCD backlight

Case : Polyamide (PA) 6.6 , UL94V-0
 TS35 acc. to DIN EN 60715:2001-09

Weight : approx. 450 g
Connection : screw terminals 0.14..2.5 mm²
 AWG 26..AWG14

Protection class : case IP30, terminals IP20 acc. to
 BGV A3

Dimensions



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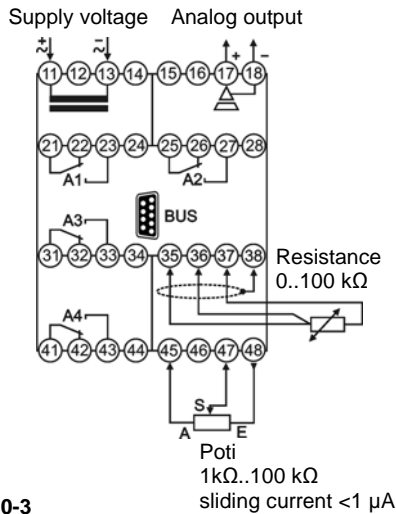
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Connection diagrams

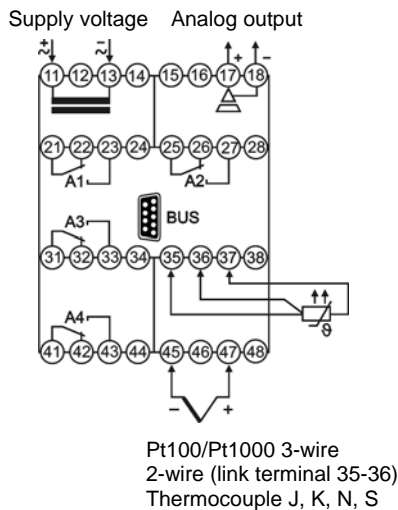
Device type PMT50-2

Resistance, Potentiometer



Device type PMT50-3

Pt100, Pt1000, thermocouple



Ordering code

1. 2. 3. 4. 5. 6.
 PMT50 - - - - - -

1. Device type/input	
2	Resistance in the range 0..100 kΩ Poti 1 kΩ..100 kΩ
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 output/BUS configuration	
00	not installed
2R	2 relay outputs, A3, A4 SPDT
MB	Modbus RTU/ASCII, RS485
PB	Profibus DP
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

Bus connection

Modbus		
PIN	Signal	EIA/TIA-485 Name
5	D1	B / B'
9	D0	A / A'
1	Common	C / C'
Profibus		
3	RxD / TxD-P	
5	DGND	
6	VP / +5V max. 10 mA	
8	RxD / TxD-N	

9-pol. D-Sub plug
in the front