

**Product Information**

**Standard Signal Transmitter PMT50Ex-1**



**PROFIBUS**

- **Signal conditioning – Linearisation – Characteristic adjustment**
- **Input for standard signals 0/2..10 V and 0/4..20 mA**
- **Measuring range programmable**
- **Linearisation and characteristic adjustment programmable via 32 bases**
- **Automatic input fault detection**

**Characteristics**

The programmable universal transmitter PMT50Ex operates with analog input signals. The device convert input signals to an 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 16 V DC max. 20 mA allows the feeding of 2- and 3-wire transmitter. 2 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 %  
 Um = 253 V AC and 125 V DC (terminals 11, 13)

Power consumption : < 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

**Explosion protection**  
 Marking : II (1) G [Ex ia] IIC/IIB or II (1) D [Ex iaD]  
 Approval : TÜV 08 ATEX 554329

Input : 0/2..10 V DC, 0/4..20 mA  
 Fault detection : broken line in the measuring circuit  
 Ri : current 10 Ω  
 voltage 10 kΩ (terminals 45, 46, 47)

Accuracy : < 0.1 %, ±1 Digit  
 Max. U<sub>0</sub> no load : 18.9 V  
 Max. I<sub>0</sub> short circuit : 92.5 mA  
 Max. output power P<sub>0</sub> : 580 mW  
 Resistance : 272 Ω  
 Characteristic curve : trapezoidal  
 Internal inductivity : 4 µH  
 Internal capacity : 1.2 nF  
 Transmitter supply : 16 V DC, max. 20 mA (terminals 48)

**Explosion protection Ex ia/IIC or ia/IIC ia/IIB**

Max. external inductivity : 2,3 mH 0,1 mH 5 mH  
 Max. external capacity : 0,12 µF 0,22 µF 0,76 µF  
 Max. values U<sub>i</sub> : 30 V  
 I<sub>i</sub> : 52 mA  
 P<sub>i</sub> : 980 mW

**Outputs**  
 Alarm outputs : relay SPDT  
 < 250 V AC < 250 VA < 2 A cos φ ≥ 0,3  
 < 300 V DC < 40 W < 2 A (terminals 21, 22, 23; 25, 26, 27)  
 Analog output : 0/4..20 mA burden ≤ 500 Ω  
 0/2..10 V burden > 500 Ω isolated output changes burden depending

Accuracy : 0.2 %; TK 0.01 %/K (terminals 17, 18)  
 Fault indicating : break of wire in the measuring circuit  
 → analog output programmable 0 mA, < 3.6 mA or > 21.5 mA  
 → alarm relay(s) min. or max. programmable

**Bus system**  
 Modbus : RS485, RTU or ASCII max. 38400 Baud  
 Profibus : Profibus DP  
 Connection : 9pol. D-SUB connector in the front

**Display** : graphic-LCD-Display, 128 x 64 Pixel with white back-light

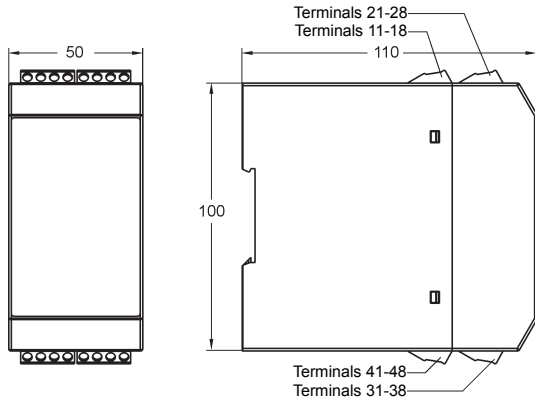
**Case** : Polyamide (PA) 6.6, UL94V-0

Weight : approx. 450 g  
 Connection : screw clamps 0.14..2.5 mm<sup>2</sup> AWG 26..AWG14  
 Protection class : case IP30, terminals IP20 acc. to BGV A3

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**Product Information**

**Dimensions**



**Ordering code**

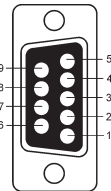
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**PMT50Ex** -  -  -  -  -  -

<b>1. Model/input</b>	
1	Standard signals 0/4..20 mA, 0/2..10 V DC
	Intrinsically safe EX II (1) G [Ex ia] IIC/IIB EX II (1) D [Ex iaD]
<b>2. Analog output</b>	
AO	0/4..20 mA, 0/2..10 V DC, isolated
<b>3. Alarm outputs</b>	
00	not installed
2R	2 relay outputs, A1, A2 SPDT
<b>4. BUS configuration</b>	
00	not installed
MB	Modbus RTU/ASCII, RS485
PB	Profibus DP
<b>5. Supply voltage</b>	
0	230 V AC, ± 10 % 50-60 Hz
1	115 V AC, ± 10 % 50-60 Hz
5	24 V DC, ± 15 %
<b>6. Options</b>	
00	without option

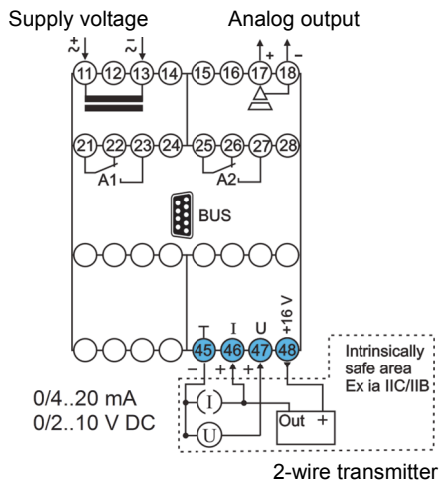
**Bus connection**

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 connector in the front



**Connection diagram**



... professional Instruments "MADE IN GERMANY"