



Temperature head transmitter MST 1 Series

MST110



- RTD Pt100 Input
- Free programmable via PC-Software
- Communication using USB-Interface
- Option with eHART®-Protocol
- Wide voltage supply range
- Flat height (18mm)

Application

- Linearised temperature measurement with Pt100 3-wire sensor

Characteristics

- eHART®-protocol
 Communication through Supply loop 4...20mA using a standard HART®-Modem

Technical data

Power supply			
Supply voltage		7.5 ... 45V DC	
Input			
	Type	Measurement ranges	Min. measurement Ranges
MST10R: RTD	Pt100	-200 to 850 °C (-328 to 1562 °F)	10K
acc. to IEC 60751 ($\alpha=0.00385$)			
Connection type: 3-wire connection			
Sensor current: 0.5 mA			

Output	
Output signal	4 to 20 mA
Load	max. $(V_{\text{supply}} - 7.5 \text{ V})/0.022 \text{ A}$
Signal on alarm	Underranging: Linear drop to 3.8 mA
	Overranging: linear rise to 20.5 mA
	Sensor break; sensor open-circuit: 3.6 mA or 22mA
Linearisation/transmission behaviour	Temperature linear, resistance linear, voltage linear

Accuracy			
Accuracy	Input	Type	Accuracy
	RTD	Pt100	0.2K or 0.1% of span

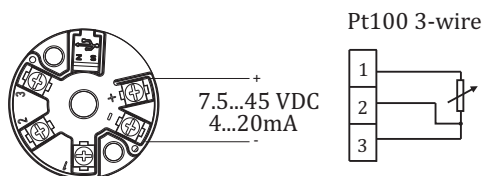
Performance characteristics	
Response time	1s
Reference conditions	Calibration temperature: +23 °C (73.4K) ± 5 K
Long term stability	≤0.05% /year
Switch on delay	≤5s
Influence of ambient	Negligible
Load influence	Negligible
Power supply influence	Negligible
Resolution	1µA

Environment conditions	
Installation instructions	Installation angle: no limit
	Installation area: Connection head accord. To DIN 43 729 From B; TAF 10 field housing"

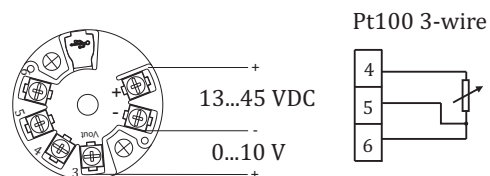
Storage temperature	
Ambient temperature limits	-40 to +85 °C (-40 to 185 °F)
Storage temperature	-40 to +100 °C (-40 to 212 °F)
Condensation	Allowable
Degree of protection	IP00/IP66 installed
Shock and vibration resistance	4g/2 to 150 Hz as per IEC 60068-26
Electromagnetic compatibility (EMC)	Interference immunity and interference emission according to IEC 61326-1 : 2006

Others	
Dimensions	44 x 18 mm
Weight	Approx. 30g
Materials	Housing: PC Potting: Silicone

Electrical Connection

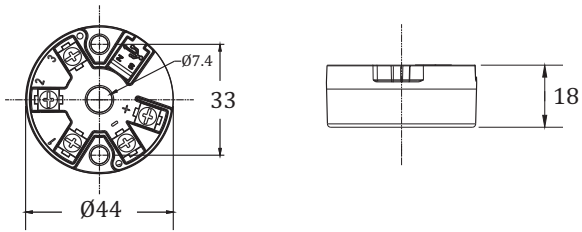


for type with 4...20mA output



for type with 0...10V output

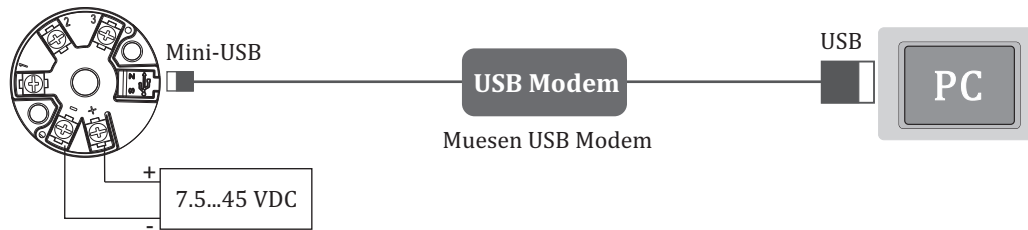
Dimensions



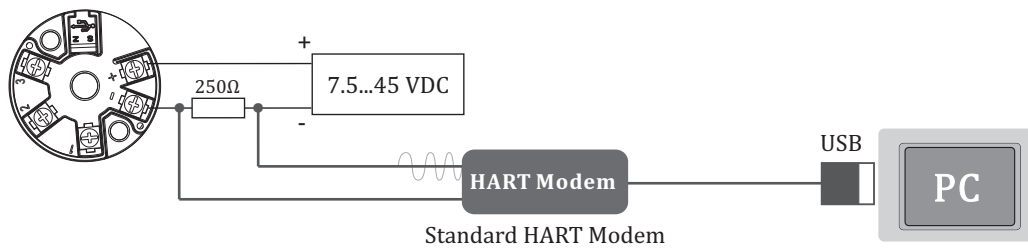
Dimensions in mm

Programming

Transmitter with USB-Interface:



Transmitter with eHART®-protocol



Odering code

MST 1 Series

	■	-	■	-	■	-	■
Type	Programmable Temperature head transmitter						
	MST110						
Input (free configurable)	Factory preset (Pt100, 3-wire, 0...100 °C)						
			1	0	0		
	Factory preset (Pt100, 3-wire, 0...200 °C)						
			2	0	0		
	Configuration according to customer specification						
			9	9	9		
Output	4...20mA, 2-wire						
						0	0
	0...5V, 3-wire						
						0	5
	0...10V, 3-wire						
						1	0
Communication type:	Configuration via PC-Software using USB-Modem						
							0 0
	Configuration via PC-Software using HART®-Modem (eHART®-protocol)						
							0 2

Inventory

Type	Interface
MST110-100-00-00	USB
MST110-100-00-02	eHART®