

Temperature head transmitter MST 1 Series MST10RL



- RTD Pt100 Input
- Free programmable via PC-Software
- Communication using HART MODEM
- Option with eHART®-Protocol
- Wide voltage supply range

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
MST10RL: RTD	Pt100	-200 to 850 °C (-328 to 1562 °F)	10K
acc. to IEC 60751 ($\delta=0.00385$)			
Connection type: 3-wire connection			
Sensor current: 0.5 mA			
Output			
Output signal	4 to 20 mA		
Load	max.(Vversorgungsspannung-7.5 V)/0.022 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

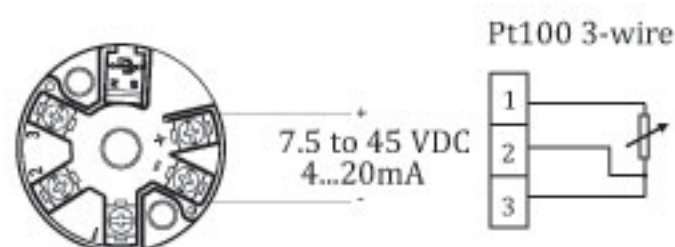
Performance characteristics	
Response time	1s
Referenzbedingungen	Calibration temperature: +23 °C (73.4K)± 5 K
Long term stability	≤0.05% /year
Switch on delay	≤5s
Influence of ambient	Negligible
Load influence	Negligible
Power supply influence	Negligible
Resolution	1μA

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 60 068-26
Electromagnetic compatibility (EMC)	Interference immunity and interference emission according to IEC 61326-1 : 2006

Others	
Dimensions	44 x 24.2 mm
Weight	Approx. 36g
Materials	Housing: PC Potting: Silicone

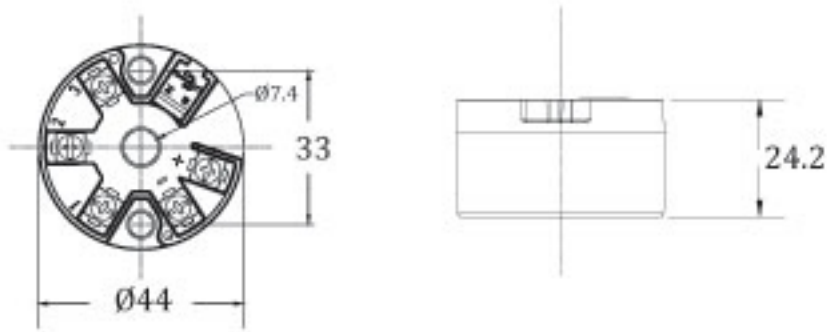
Electrical Connection



for type with 4...20mA output



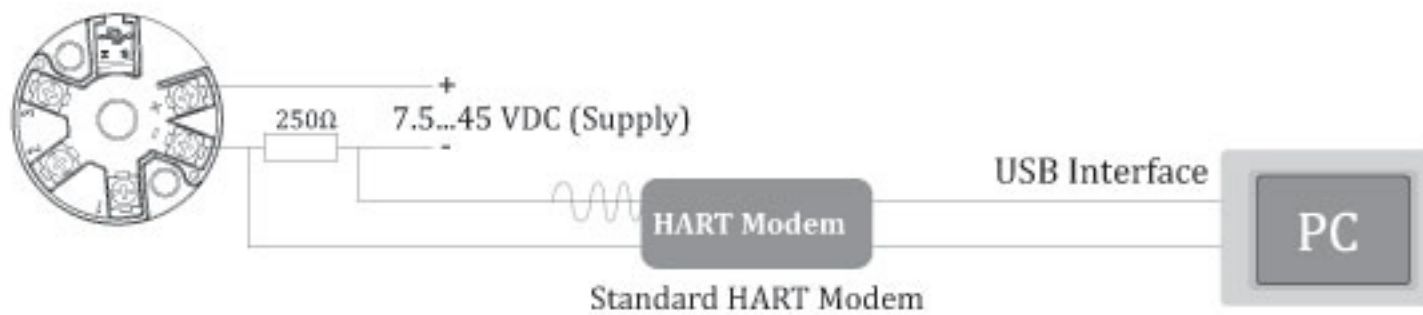
Dimensions



Dimensions in mm

Programming

Transmitter with eHART®-protocol



Ordering code

MST 1 Series

Type

Programmable Temperature head transmitter

	1	2	3	4	5
MST10RL					
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				0	0
Communication type:					
Configuration via PC-Software using HART®-Modem (eHART®-protocol)					0 2

Input (free configurable)

Factory preset (Pt100, 3-wire, 0...100 °C)

Factory preset (Pt100, 3-wire, 0...200 °C)

Configuration according to customer specification

Output

4...20mA, 2-wire

Communication type:

Configuration via PC-Software using HART®-Modem (eHART®-protocol)