

# SST-TM10

## Temperature Head Mounted Transmitter



### PRODUCTS FEATURES

- High performance, high reliability
- Variety of sensor inputs
- Hart Digital communication
- Self-diagnostics function
- Universal settings with HART-protocol for various input signals
- 2 wire technology, 4 to 20mA analogue output
- High accuracy in total ambient temperature range
- An internal temperature sensor for active temperature compensation(For T/C)
- Customer specific measurement range settings

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## Temperature Head Mounted Transmitter

### 1. Product model code table

**SST-TM10 1 2 A W**

Configuration temperature sensor		Configuration transmitter connection		Certification	
1	Standard factory configuration Pt100	0	Standard factory configuration 3-wire	A	Version for non hazardous
2	Pt100 -200°C~850°C	1	Configuration connection TC	B	NEPSI Ex ia CT4
3	Pt500 -200°C~250°C	2	Configuration connection RTD (2-wire)		
4	Pt1000 -200°C~250°C	3	Configuration connection RTD (3-wire)		
5	Cu50 -50°C~150°C	4	Configuration connection RTD (4-wire)		
6	Cu100 -50°C~150°C				
7	Ni100 -60°C~180°C				
8	Ni500 -60°C~180°C				
B	Type B 0°C~1820°C				
E	Type E -270°C~1000°C				
J	Type J -210°C~1200°C				
K	Type K -270°C~1372°C				
N	Type N -270°C~1300°C				
R	Type R -50°C~1768°C				
S	Type S -50°C~1768°C				
T	Type T -270°C~400°C				

Configuration	
W	Standard factory configuration (Pt100/3-wire/0 to 100°C)
U	Customized measurement range
Z	Customized expanded configuration for TC
V	Customized expanded configuration for RTD

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### 2. Technical specification

Power supply	
Supply voltage	9 to 45 VDC(without display) , polarity protected
Output	
Output signal	4 to 20 mA
Signal on alarm	Underranging Linear drop to 3.8 mA
	OVERRANGING linear rise to 20.8 mA
	Sensor break; sensor open-circuit 3.8mA or 22 mA
Load	Max.(V <sup>power supply</sup> -9 V)/0.022 A
Linearisation/transmission behaviour	Temperature linear, resistance linear, voltage linear
Galvanic isolation	U=2000V AC (input/output)
Installation conditions	
Installation instructions	Installation angle:no limit
	Installation area:connection head according to DIN 43 729 Form B; TAF 10 field housing

Input	Type	Measurement ranges	Min. meas.ranges
Resistance thermometer (RTD)	Pt100	-200°C~850°C	10K
	Pt500	-200°C~250°C	10K
	Pt1000	-200°C~250°C	10K
	Cu50	-50°C~150°C	10K
	Cu100	-50°C~150°C	10K
	Ni100	-60°C~180°C	10K
	Ni500	-60°C~180°C	10K
	Ni1000	-60°C~150°C	10K
Resistance transmitter	Resistance (Ω)	0 Ω~400 Ω	10 Ω
		0 Ω~2000 Ω	20 Ω

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Connection type:2-,3- or 4-wire			
Thermocouples (TC)	B(PtRh30-PtRh6)	0°C~1820°C	500K
	E(NiCr-CuNi)	-270°C~1000°C	50K
	J(Fe-CuNi)	-210°C~1200°C	50K
	K(NiCr-Ni)	-270°C~1372°C	50K
	N(NiCrSi-NiSi)	-270°C~1300°C	50K
	R(PtRh13-Pt)	-50°C~1768°C	500K
	S(PtRh10-Pt)	-50°C~1768°C	500K
	T(Cu-CuNi)	-270°C~400°C	50K
Voltage transmitter (mV)	Millivolt transmitter (mV)	0 Ω~400 Ω	10 Ω
		0 Ω~2000 Ω	20 Ω
Performance characteristics			
Response time	1 s		
Reference operating conditions	Calibration temperature: 23°C(73.4F)50K		
Long-term stability	≤ 0.05%/year		
Switch on delay	≤ 5s		
Influence of ambient	Negligible		
Load influence	Negligible		
Power supply influence	Negligible		
Resolution	0.3 μA		
Maximum measured error	Input	Type	Measurement accuracy
	RTD	Pt100, Ni100	0.2K or 0.08%
		Pt500, Ni500	0.5K or 0.20%
	TC	Pt1000, Ni1000	0.3K or 0.12%
		Cu50	0.2K or 0.08%
Cu100		0.3K or 0.12%	
Ω	K, J, T, E	Typ.0.5K or 0.08%	
	N	Typ.1.0K or 0.08%	
mV	S, B, R	Typ.2.0K or 0.08%	
	0 Ω to 400 Ω	±0.1 Ω or 0.08%	
	0 Ω to 2000 Ω	±1.5 Ω or 0.12%	
	-75mV to 75 mV	±20μ V or 0.08%	
	-700mV to 2000V	±20μ V or 0.08%	

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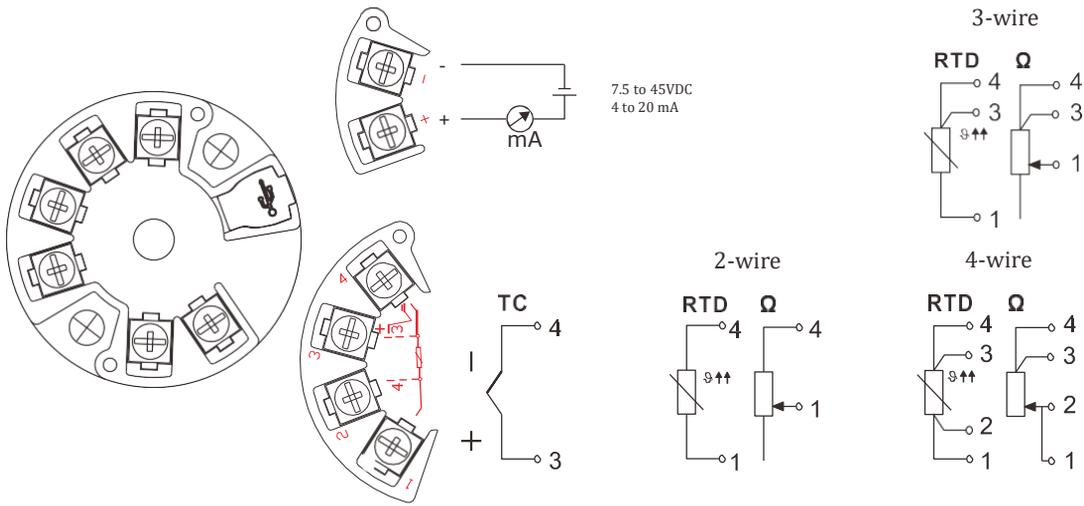
## Temperature Head Mounted Transmitter

Environment conditions	
Ambient temperature limits	-40 °C to 85 °C (-40 °F to 185 °F)
Storage temperature	-40 °C to 100 °C (-40 °F 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 GB/T17626.2-1998, compliance with IEC 61000-4-3:1995
Others	
Dimensions	Dia. 44mm X 24mm
Weight	Approx. 34g
Material	Housing: PC Potting: epoxy

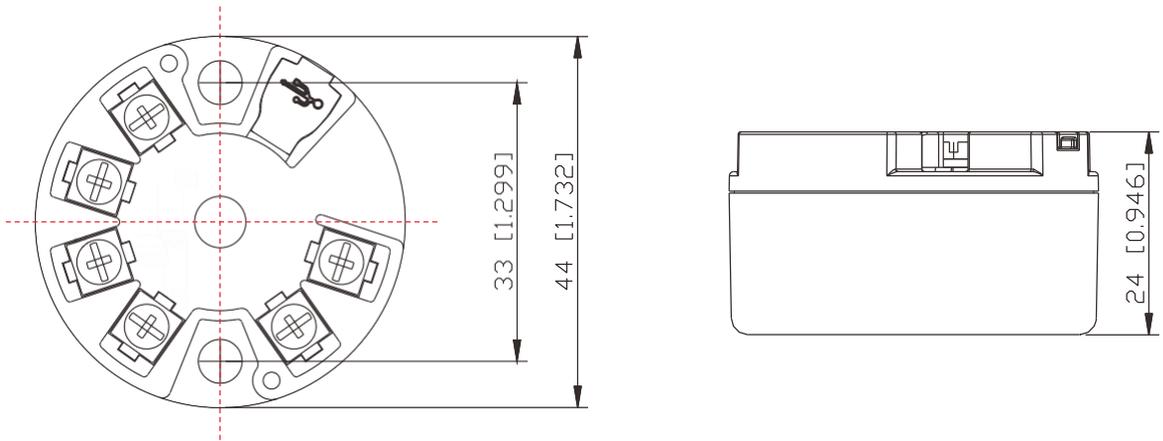
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## Temperature Head Mounted Transmitter

### 3. Electrical connections



### 4. Mechanical dimensions



\*All dimensions in mm

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### 5. Installation diagram

