SMART Temperature Field Transmitter TMT199 with HART-protocol Instruction

Introduction

TMT199 with HART protocol is the high performance temperature transmitter that accepts.Thermocouple,RTD,ohms or DC milivolts inputs and converts it to a 4 to 20mA DC signal for transmission.

Application areas

- Field mounted temperature transmitter with HART- protocol for converting various input signals into a scalable 4 to 20 mA analogue output signal
- Input
  Resistance thermometer (RTD)
  Thermocouple (TC)
  Resistance transmitter (Ω)
  Voltage transmitter (mV)

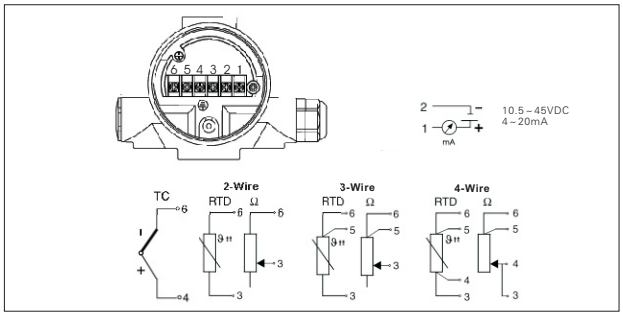
Performance

- Universal settings with HART-protocol for various input singnals
- 2 wire technology, 4 to 20mA analogue output
- High accuracy in total ambient temperature range
- Galvanic isolation
- An internal temperature sensor for active temperature compensation(For T/C)
- Wide voltage supply range
- Customer specific measurement range settings
- Multiparametric backlight rotatable LCD Display
- Expanded resistance input (max 10KΩ)
- Expanded voltage input (max 2KmV)

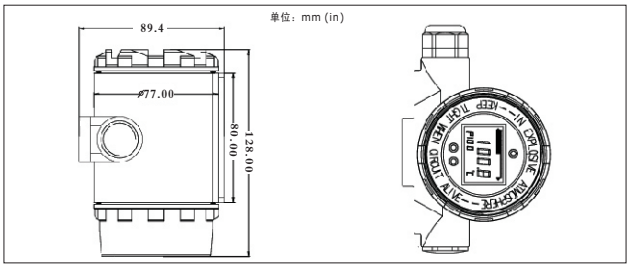
Tehnical data

Output signal	4...20mA
Supply voltage	7.5...45VDC
Load	Max.($V_{power\ supply}$-7.5V)/0.0208A
Signal on alarm	Underranging Linear drop to 3.8 mA
	Overranging Linear rise to 20.8 mA
	Sensor break;sensor open-circuit 3.8 mA
Input current required	≤3.6mA
Current limit	≤22mA
Ambient temperature	-40 to 85℃(-40℉ to 185℉)
Storage temperature	-40 to 100℃(-40℉ to 212℉)
Ingress protection	Ip20
Moisture condensation	Allowable
Accuracy(Pt100)	≤0.2K or 0.08%
Cold junction	Internal
Measurement Range	Depending on the sensor connection and input signals
Galvanic isolation	2KVAC(In/Out)
Influence of ambient	Negligible
Load influence	Negligible
Power supply influence	Negligible
Resolution	0.3μA

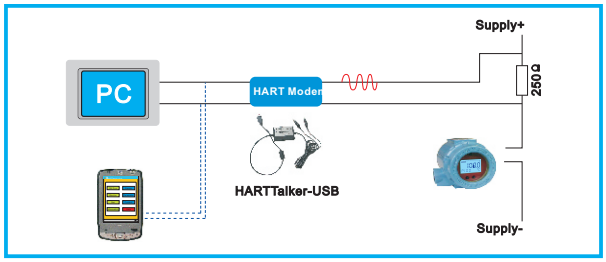
Electrical connection



Dimensions



Howe to programme



Technical data

	Type	Measurement ranges	Min.meas.Ranges
Resistance thermometer (RTD)	Pt100	-200℃ to 850℃	10K
	Pt500、Pt1000	-200℃ to 250℃	10K
	Cu50、Cu100	-50℃ to 150℃	10K
	Ni100、Ni500 (5000ppm/k、6180ppm/k)	-60℃ to 180℃	10K
	Ni1000 (5000ppm/k、6180ppm/k)	-60℃ to 150℃	10K
Resistance transmitter	Resistance(Ω)	0 to 400Ω	10Ω
		0 to 2000Ω	20Ω
		0 to 10000Ω	100Ω
Thermocouples (TC)	B(PtRh30-PtRh6)	0 to 1820℃	500K
	E(NiCr-CuNi)	-270 to 1000℃	50K
	J(Fe-CuNi)	-210 to 1200℃	50K
	K(NiCr-Ni)	-270 to 1372℃	50K
	N(NiCrSi-NiSi)	-270 to 1300℃	50K
	R(PtRh13-Pt)	-50 to 1768℃	500K
	S(PtRh10-Pt)	-50 to 1768℃	500K
	T(Cu-CuNi)	-270 to 400℃	50K
Voltage transmitters (mV)	Millivolt transmitter(mV)	-10 to 75mV	5mV
		-100 to 100mV	5mV
		-100 to 500mV	6mV
		-100 to 2000mV	20mV