DIN Rail Temperature Transmitter TMT130

Universal temperature transmitter for resistance thermometers (RTD), thermocouples (TC), resistance and voltage transmitters, settable via PC-Programmbale
The slim housing with 12.5 mm wide for DIN-rail mounting

Application areas

- Temperature Transmitter for converting various input signals into a scalable 4 to 20 mA analogue output signal
- Input
  Resistance thermometers (RTD)
  Thermocouples (TC)
  Resistance transmitters (Ω)
  Voltage transmitters (mV)
- Installation on DIN Rail

Performance

- Universal settings with PC-Programmable 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
- Wide voltage supply range
- Customer specific measurement range settings
- Expanded resistance input (max 10KΩ)
- Expanded voltage input (max 2KmV)

Technical data

Input

	Type	Measurement ranges	Min.meas. Ranges
Resistance thermometer(RTD)	Pt100 Pt500 Pt1000	-200℃ to 850℃(-328℉ to 1562℉) -200℃ to 250℃(-328℉ to 482℉) -200℃ to 250℃(-328℉ to 482℉)	10K 10K 10K
	Cu50 Cu100	-50℃ to 150℃ (-58℉ to 302℉) -50℃ to 150℃ (-58℉ to 302℉)	10K 10K
	*Ni100 *Ni500 *Ni1000	-60℃ to 180℃ (-76℉ to 356℉) -60℃ to 180℃ (-76℉ to 356℉) -60℃ to 150℃ (-76℉ to 302℉)	10K 10K 10K
Resistance transmitter	Resistance(Ω)	0 to 400Ω 0 to 2000Ω 0 to 10000Ω	10Ω 20Ω 100Ω
*α=5000ppm/K or 6180ppm/K Connection type: 2-, 3- or 4-wire connection Sensor current: 0.5 mA			
Thermocouples(TC)	B(PtRh30-PtRh6) E(NiCr-CuNi) J(Fe-CuNi) K(NiCr-Ni) N(NiCrSi-NiSi) R(PtRh13-Pt) S(PtRh10-Pt) T(Cu-CuNi)	0 to 1820℃(32 to 3308℉) -270 to 1000℃(-454 to 1832℉) -210 to 1200℃(-346 to 2192℉) -270 to 1372℃(-454 to 2501℉) -270 to 1300℃(-454 to 2372℉) -50 to 1768℃(-58 to 3214.4℉) -50 to 1768℃(-58 to 3214.4℉) -270 to 400℃(-454 to 752℉)	500K 50K 50K 50K 50K 500K 500K 50K
Voltage transmitters(mV)	Millivolt transmitter(mV)	-10 to 75mV -100 to 100mV -100 to 500mV -100 to 2000mV	5mV 5mV 6mV 20mV

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 3.8 mA

Load	max.($V_{power\ supply}$-7.5 V)/0.0208 A
Linearisation/transmission behaviour	Temperature linear, resistance linear, voltage linear

Power supply

Supply voltage (polarity protected)	7.5 to 45 VDC(without display) , polarity protected

Performance characteristics

Response time	1 s		
Reference operating conditions	Calibration temperature: 23℃(73.4℉)±5K		
Long term stability	≤0.05%/year		
Switch on delay	≤5s		
Influence of ambient	Negligible		
Load influence	Negligible		
Power supply influence	Negligible		
Self stability configuration	0 to 2%		
Filter configurating	0 to 160 μA		
Resolution	0.3μA		
Maximum measured error		Type	Measurement accuracy
	Resistance thermometer RTD	Pt100, Ni100 Pt500, Ni500 Pt1000, Ni1000 Cu50 Cu100	0.2K or 0.08% 0.5K or 0.20% 0.3K or 0.12% 0.2K or 0.08% 0.3K or 0.12%
	Thermocouple TC	K, J, T, E N S, B, R	typ.0.5K or 0.08% typ.1.0K or 0.08% typ.2.0K or 0.08%

		Type	Measurement accuracy
Maximum measured error	Resistance transmitter(Ω)	0 to 400Ω 0 to 2000Ω 0 to 10000Ω	±0.1Ω or 0.08% ±1.5Ω or 0.12% ±7.5Ω or 0.20%
	Voltage transmitters(mV)	-10 to 75mV -100 to 100mV -100 to 500mV -100 to 2000mV	±20μV or 0.08% ±20μV or 0.08% ±30μV or 0.08% ±50μV or 0.08%

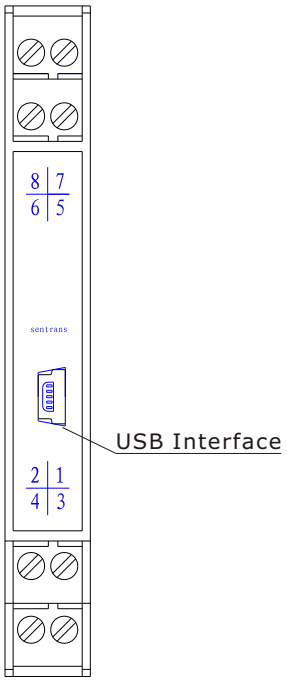
Environment conditions

Ambient temperature limits	-40 to 85℃(-40℉ to 185℉)
Storage temperature	-40 to 100℃(-40℉ to 212℉)
Condensation	Allowable
Degree of protection	IP 20
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.
Installation instructions	Installation angle: no limit

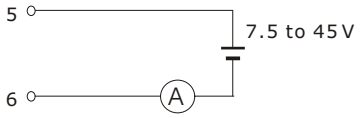
Others

Dimensions	12.5X99X112.5mm
Materials	PA 66-FR
Weight	Approx. 90 g

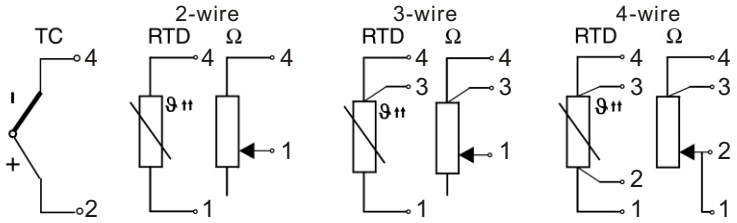
Electrical connections



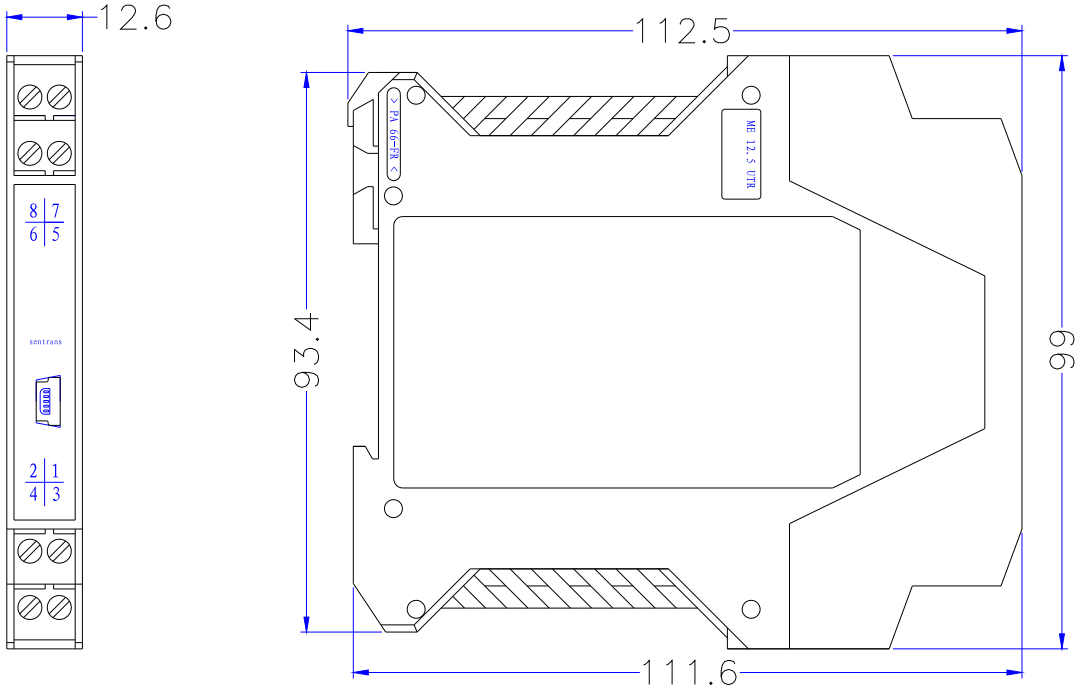
A. Power supply



B. How to connect a sensor



Demotions



Dimensions in mm (in)

How to programme