

DIN Rail Temperature Transmitter

TMT131



- 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
- Galvanic isolation
- An internal temperature sensor for active temperature compensation
- Wide voltage supply range
- Customer specific measurement range settings
- Expanded resistance input (max 2K Ω)
- Expanded voltage input (max 2KmV)

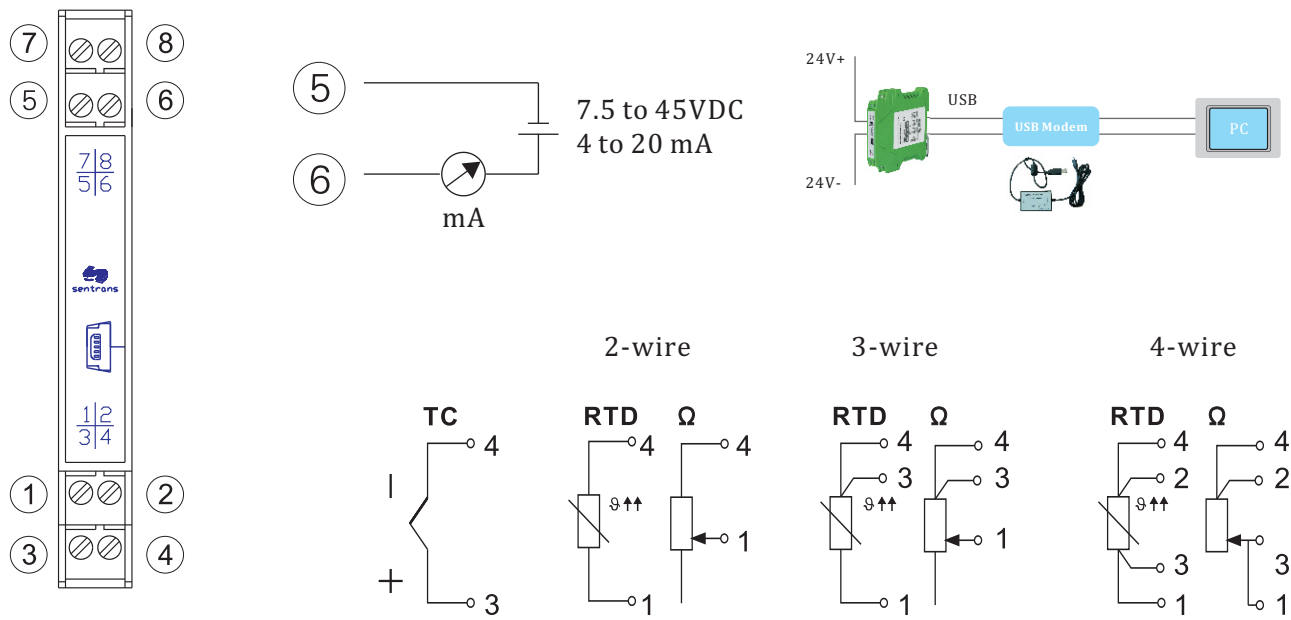
Technical data

Power supply	
Supply voltage	7.5 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 20.5 mA
	Sensor break; sensor open-circuit 3.6 mA
Load	max.(V _{power supply} -7.5 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 accord. To DIN 43 729 Form B; TAF 10 field housing

Input			
Input	Type	Measurement ranges	Min.meas.Ranges
Resistance thermometer(RTD)	Pt100	-200℃ to 850℃ (-328°F to 1562°F)	10K
	Pt500	▲ -200℃ to 250℃ (-328°F to 482°F)	10K
	Pt1000	▲ -200℃ to 250℃ (-328°F to 482°F)	10K
	Cu50	-50℃ to 150℃ (-58°F to 302°F)	10K
	Cu100	-50℃ to 150℃ (-58°F to 302°F)	10K
	*Ni100	-60℃ to 180℃ (-76°F to 356°F)	10K
	*Ni500	▲ -60℃ to 180℃ (-76°F to 356°F)	10K
	*Ni1000	▲ -60℃ to 150℃ (-76°F to 302°F)	10K
Resistance transmitter	Resistance(Ω)	0 to 400Ω	10Ω
		▲ 0 to 2000Ω	20Ω
Connection type:2-,3- or 4-wiere connection			
Thermocouples(TC)	B(PtRh30-PtRh6)	0 to 1820℃(32 to 3308°F)	500K
	E(NiCr-CuNi)	-270 to 1000℃ (-454 to 1832°F)	50K
	J(Fe-CuNi)	-210 to 1200℃ (-346 to 2192°F)	50K
	K(NiCr-Ni)	-270 to 1372℃ (-454 to 2501°F)	50K
	N(NiCrSi-NiSi)	-270 to 1300℃ (-454 to 2372°F)	50K
	R(PtRh13-Pt)	-50 to 1768℃(-58 to 3214.4°F)	500K
	S(PtRh10-Pt)	-50 to 1768℃ (-58 to 3214.4°F)	500K
	T(Cu-CuNi)	-270 to 400℃ (-454 to 752°F)	50K
Voltage transmitters(mV)	Millivolt transmitter(mV)	-10 to 75mV	5mV
		▲ -100 to 100mV	5mV
		▲ -100 to 500mV	6mV
		▲ -100 to 2000mV	20mV
▲ on request			
Performance characteristics			
Response time	1 s		
Reference operating conditions	Calibration temperature: 23℃(73.4°F)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 μ A		
Resolution	0.3 μ A		
Maximum measured error	Input	Type	Measurement accuracy
	RTD	Pt100, Ni100	0.2K or 0.08%
		Pt500, Ni500	0.5K or 0.20%
		Pt1000, Ni1000	0.3K or 0.12%
		Cu50	0.2K or 0.08%
		Cu100	0.3K or 0.12%
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%	
Ω	0 to 400Ω 0 to 2000Ω	± 0.1Ω or 0.08% ± 1.5Ω or 0.12%	
mV	-10 to 75mV -100 to 100mV -100 to 500mV -100 to 2000mV	± 20 μ V or 0.08% ± 0 μ V or 0.08% ± 0 μ V or 0.08% ± 0 μ V or 0.08%	

Environment conditions	
Ambient temperature limits	-40 to 85°C (-40°F to 185°F)
Storage temperature	-40 to 100°C (-40°F to 212°F)
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.
Explosion	Intrinsically safe: no limit
Others	
Weight	Approx. 90g
Materials	PA 66-FR

Electrical connections



Dimensions

