

Temperature Transmitter (Head Mount Type)

Model No. **KIT-TT10 Series**

KINS



KIT-TT10 Series



Universal head transmitter for resistance thermometers (RTD), thermocouples (TC), resistance, (Ω) voltage transmitters,

Application areas

- Temperature Transmitter (Head Mount Type) 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

- 2 wire technology, 4 to 20mA analogue output
- High accuracy in total ambient temperature range
- Galvanic isolation(Excluded in case of KIT-TT12)
- An internal temperature sensor for active temperature compensation(For T/C)
- Wide voltage supply range
- 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. $(V_{\text{power supply}} - 7.5 \text{ V}) / 0.022 \text{ A}$
Linearisation/transmission behaviour	Temperature linear, resistance linear, voltage linear
Galvanic isolation	U=2000V AC (input/output)

Pressure Gauge
Differential Pressure Gauge & Switch
Accessories of Pressure Gauge
Thermometer & Thermometer Switch
Thermocouple & RTD
Thermowell
Transmitter
Indicator etc.
Technical data

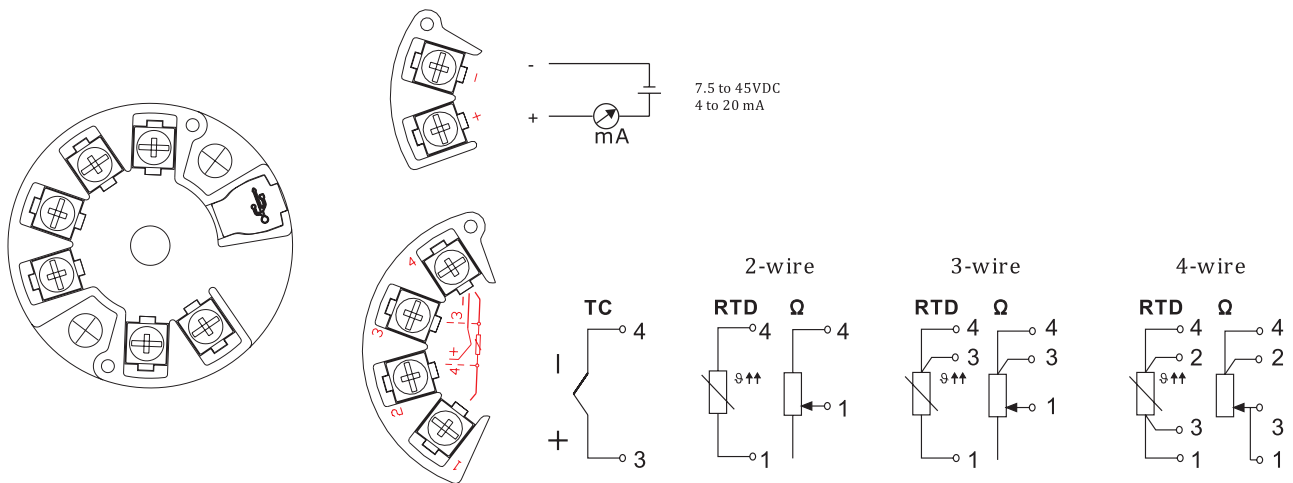
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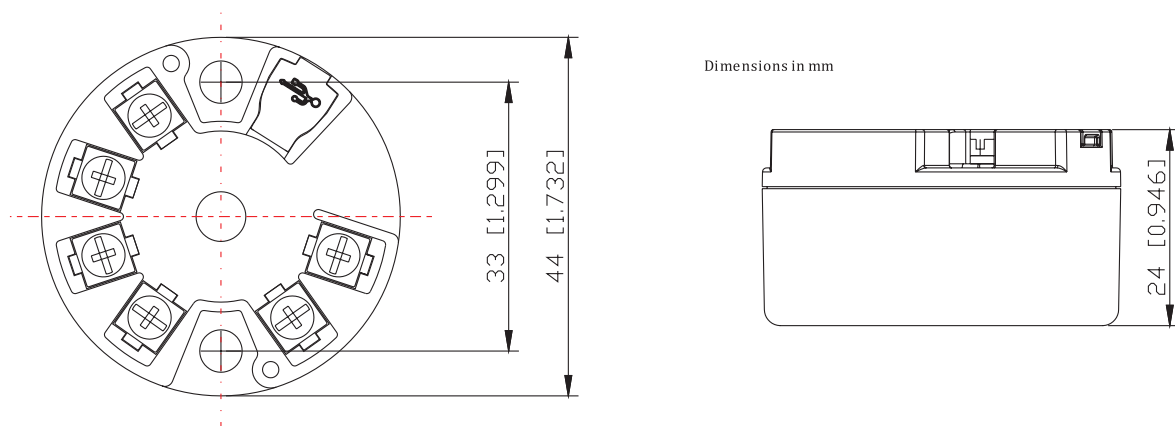
Input			
Input	Type	Measurement ranges	Min.meas.Ranges
Resistance thermometer(RTD)	Pt100	-200°C to 850°C (-328°F to 1562°F)	10K
	Pt500	▲ -200°C to 250°C (-328°F to 482°F)	10K
	Pt1000	▲ -200°C to 250°C (-328°F to 482°F)	10K
	Cu50	-50°C to 150°C (-58°F to 302°F)	10K
	Cu100	-50°C to 150°C (-58°F to 302°F)	10K
	*Ni100	-60°C to 180°C (-76°F to 356°F)	10K
	*Ni500	▲ -60°C to 180°C (-76°F to 356°F)	10K
	*Ni1000	▲ -60°C to 150°C (-76°F to 302°F)	10K
Resistance transmitter	Resistance(Ω)	0 to 400 Ω	10 Ω
		▲ 0 to 2000 Ω	20 Ω
Connection type:2-,3- or 4-wire connection			
Thermocouples(TC)	B(PtRh30-PtRh6)	0 to 1820°C(32 to 3308°F)	500K
	E(NiCr-CuNi)	-270 to 1000°C(-454 to 1832°F)	50K
	J(Fe-CuNi)	-210 to 1200°C(-346 to 2192°F)	50K
	K(NiCr-Ni)	-270 to 1372°C(-454 to 2501°F)	50K
	N(NiCrSi-NiSi)	-270 to 1300°C(-454 to 2372°F)	50K
	R(PtRh13-Pt)	-50 to 1768°C(-58 to 3214.4°F)	500K
	S(PtRh10-Pt)	-50 to 1768°C(-58 to 3214.4°F)	500K
	T(Cu-CuNi)	-270 to 400°C(-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°C(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 Pt500, Ni500 Pt1000, Ni1000 Cu50 Cu100
	TC	K, J, T, E N	typ.0.5K or 0.08% typ.1.0K or 0.08%
		S, B, R	typ.2.0K or 0.08%
Ω	0 to 400 Ω	±0.1Ω or 0.08%	
	0 to 2000 Ω	±1.5Ω or 0.12%	
mV	-10 to 75mV	±20μV or 0.08%	
	-100 to 100mV	±0μV or 0.08%	
	-100 to 500mV	±0μV or 0.08%	
	-100 to 2000mV	±0μV or 0.08%	

Temperature	
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
Others	
Dimensions	Dia. 44 mmX24 mm
Weight	Approx. 34g
Material	Housing: PC Potting: epoxy

Electrical connections



Dimensions

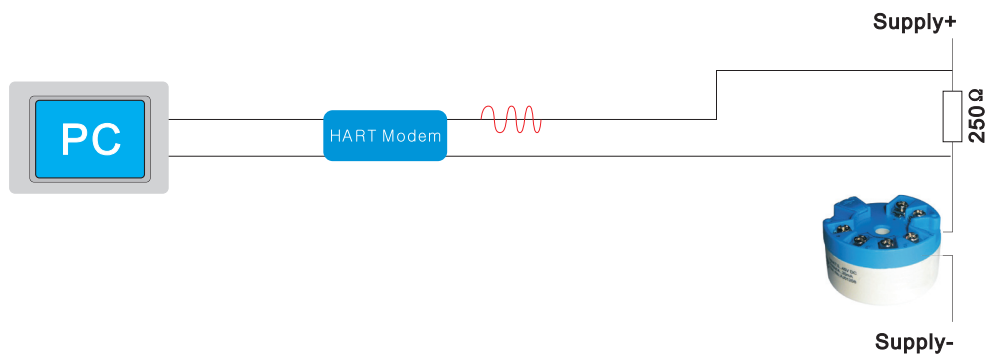


- Pressure Gauge
- Differential Pressure Gauge & Switch
- Accessories of Pressure Gauge
- Thermometer & Thermometer Switch
- Thermocouple & RTD
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How to programme



Ordering code

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- 2 : Input - RTD (Only)
- 3 : Input - Multi (RTD/TC/ Ω /mV)
- 4 : Input - Multi (RTD/TC/ Ω /mV) with Hart Protocol
- 1 : Head Mounted Type

Pressure Gauge

Differential Pressure Gauge & Switch

Accessories of Pressure Gauge

Thermometer & Thermometer Switch

Thermocouple & R.T.D

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Indicator etc.

Technical data