

PCT380 Smart Temperature Transmitter

Features

- Can convert all inputs to 4-20mA
- Input: thermocouple, RTD, resistance
- Configuration directly via PDA or PC
- Build-in cold junction compensation
- Available with screw-in temperature probe

Applications

- Equipment support
- Automatic Temperature measurement and control systems such as pumps, compressors, natural gas pipelines, etc
- Temperature measurement of water or oil in petroleum, chemical, electric power, textile, and environmental protection fields, etc.



Product overview

PCT380 Intelligent temperature transmitter (round card) is used for the signal input of resistance temperature detector (RTD) and thermocouple (TC), linear resistance input and 4 - 20mA analog output of the two-wire system. It is installed inside the sensor (Form B).

Notes:

- 1 When measuring temperature, the temperature measuring element should reach thermal equilibrium with the measured object.
- 2 Make sure the insertion length is accurate.
- 3 Please read the Instruction Manual of the product carefully before installation and check the relevant information of the product.
- 4 Strictly follow the wiring method for wiring, otherwise it may cause product damage or other potential faults.
- 5 Misuse of the product may cause danger or personal injury.

Notes:

- 1 Do not misuse documentation
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product may cause danger or personal injury.

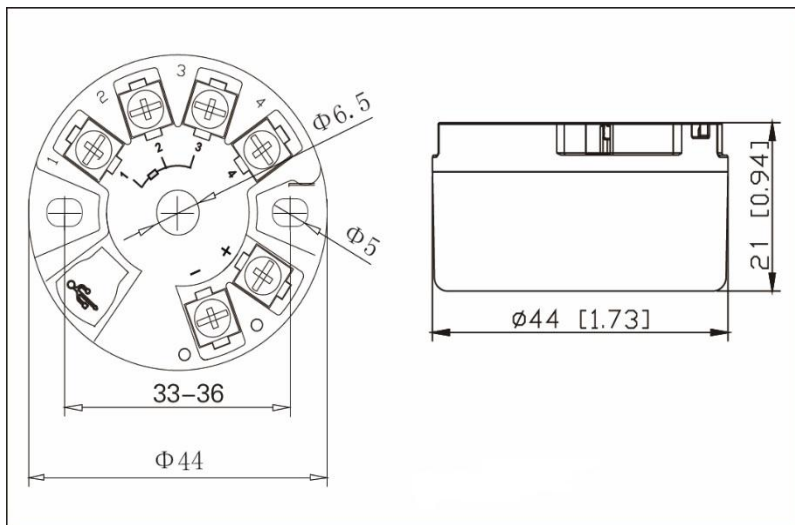
Technical Parameters	
Input signal	Resistance temperature detector (RTD), Thermocouple (TC),
Cold-junction compensation temperature scope	-20℃~60℃
Compensation precision	±1℃
Output signal	4-20mA
Load resistance	$RL \leq (U_e - 12) / 0.021$
Output current of upper & lower limit overflow alarm	I _H =21mA, I _L =3.8mA
Supply voltage	DC12-40V
Temperature drift	0.02%FS/℃
Response time	1s (up to 90% of the final value)
Used environmental temperature	-40~80℃
Storage temperature	-40~100℃
Vibration resistance	4g/2~150Hz
Installation angle	Unlimited
Installation area	B-type top cassette installation
Electromagnetic compatibility	Conform to GB/T18268 industrial equipment application requirements (IEC 61326-1)

Input Type and Transmission Accuracy				
Model	Type	Measurement scope	Minimum measurement scope	Conversion accuracy
Resistance	Pt100	-200~850℃	20℃	±0.1%range Or±0.2℃
Temperature detector (RTD)	Cu50	-50~150℃	20℃	±0.1%range Or±0.2℃
Thermocouple (TC)	B	100~1820℃	500℃	±0.1%range Or±1.5℃
	E	-100~1000℃	50℃	±0.1%range Or±0.5℃
	J	-100~1200℃	50℃	±0.1%range Or±0.5℃
	K	-180~1372℃	50℃	±0.1%range Or±0.5℃
	N	-180~1300℃	50℃	±0.1%range Or±0.5℃
	R	-50~1768℃	500℃	±0.1%range Or±1.5℃
	S	-50~1768℃	500℃	±0.1%range Or±1.5℃
	T	-200~400℃	50℃	±0.1%range Or±0.5℃
	Wre3-25	0~2315℃	500℃	±0.1%range Or±1.5℃
	Wre5-26	0~2310℃	500℃	±0.1%range Or±1.5℃

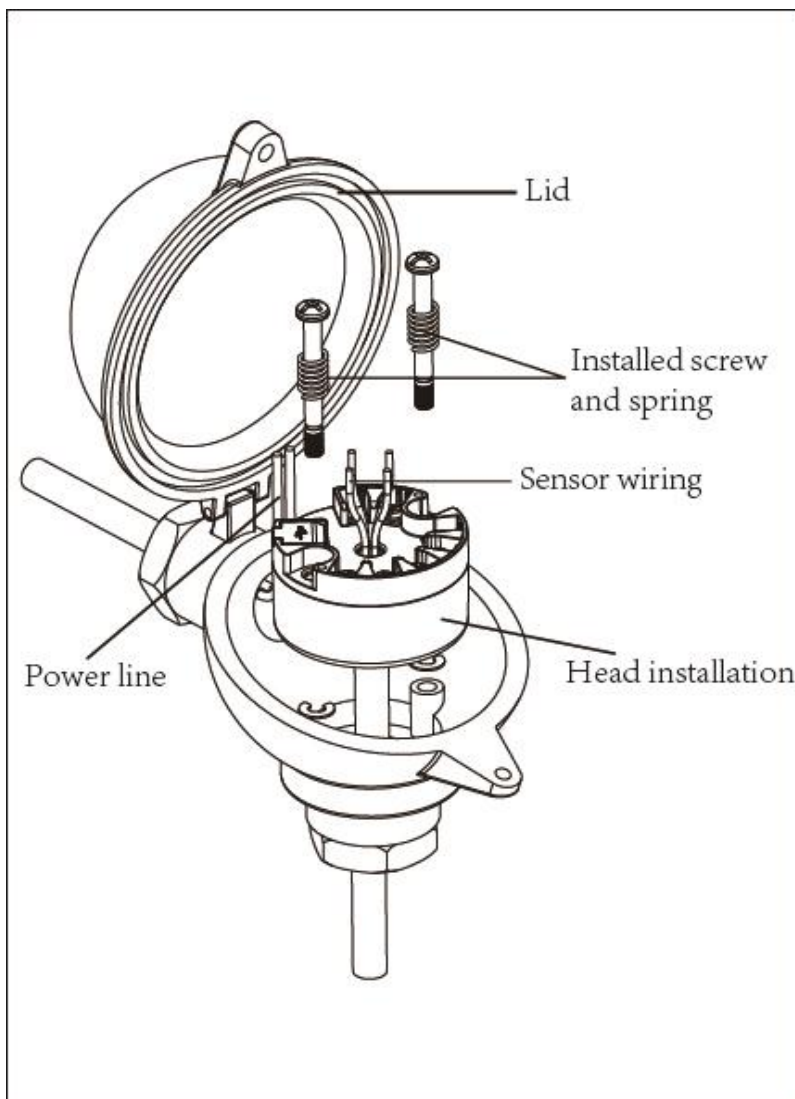
Notes:

1. The above accuracy data was obtained by testing at an ambient temperature of 20℃ ± 2℃.
2. The output precision “%” is relative to the set range.
3. The cold end compensation error needs to be added to the thermocouple measurement, and the internal cold end compensation error is ≤±1℃.

Appearance Structure Diagram (mm)

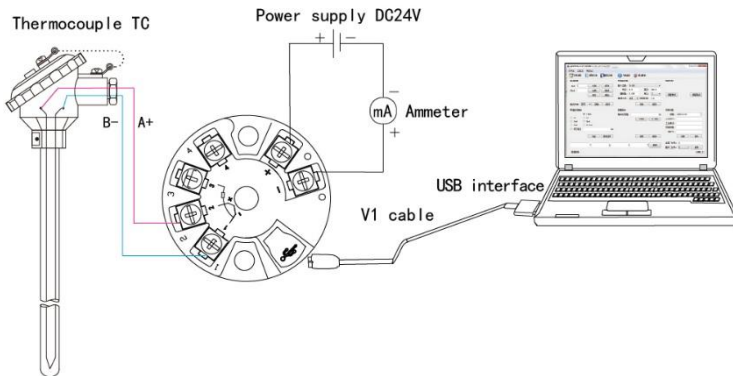


Installation Schematic Diagram

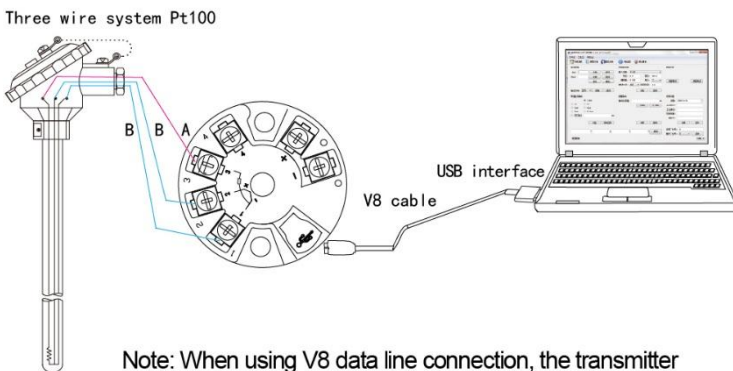


Configuration Schematic Diagram

V1 data line connection mode:

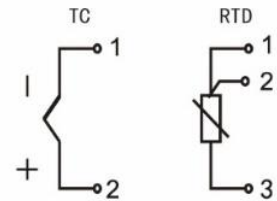
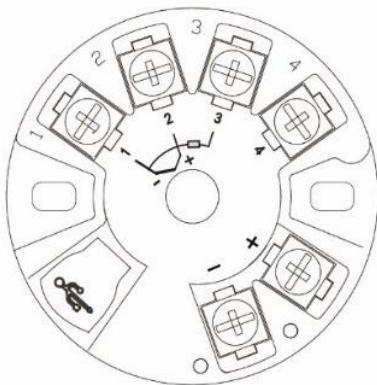


V8 data line connection mode:

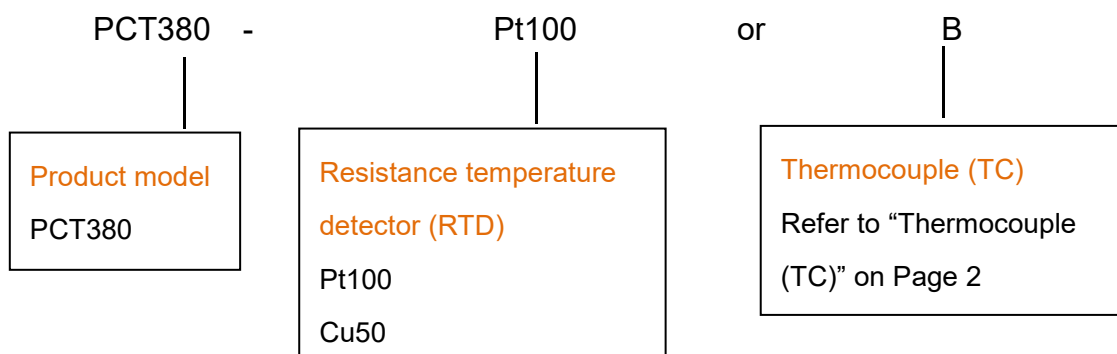


Note: When using V8 data line connection, the transmitter is not allowed to connect 24V power supply.

Wiring Diagram



Note: 1. For input of the two-wire heating resistor, terminals 1 and 2 must be shorted;
 2. three wire heating resistance input: the resistance of the three wires should be the same as far as possible, each wireThe resistance cannot exceed 10Ω;
 3. thermocouple input, compensation wire should be directly connected to the instrument input wiring terminal,Do not connect wires of other materials in the middle, otherwise it will cause measuring errors.



Wotian reserves the right to make any change in this publication without notice. The information provided is believed to be accurate and reliable as of this product sheet.

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