

# Temperature transmitter



## Product overview

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

Input	
Input signal	Resistance temperature detector(RTD), thermocouple (TC), and linear resistance.
Cold-junction compensation temperature scope	-20~60℃
Compensation precision	±1℃
Output	
Output signal	4-20mA
Load resistance	$RL \leq (U_e - 12) / 0.021$
Output current of upper and lower limit overflow alarm	I <sub>H</sub> =21mA、I <sub>L</sub> =3.8mA
Power supply	
Supply voltage	DC12-40V
Other parameters	
Temperature drift	0.02%FS/℃ (Standard)
	0.0075%FS/℃ (Isolated)
Response time	Reach to 90% of the final value for 1s
Used environmental temperature	-40~80℃
Storage temperature	-40~100℃
Aseismicity	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)
Isolated type	
Insulation strength (between input and output)	1500Vrms (1 min, without spark)
Insulation resistance (between input and output)	≥100MΩ(under the 500 VDC)

**Input type and transmission accuracy(standard):**

Model	Type	Measurement scope	Minimum measurement scope	Scale range	Conversion accuracy
Resistance temperature detector (RTD)	Pt100	-200.0~850.0℃	10℃	≤100℃	0.20%
				>100℃	0.10%
	Cu50	-50.0~150.0℃	10℃	≤100℃	0.20%
				>100℃	0.10%
Thermocouple (TC)	B	400~1800℃	500℃	≤300℃	0.20%
				>300℃	0.10%
	E	-100~1000℃	50℃	≤300℃	0.20%
				>300℃	0.10%
	J	-100~1200℃	50℃	≤300℃	0.20%
				>300℃	0.10%

	K	-180~1372℃	50℃	≤300℃	0.20%
				>300℃	0.10%
	N	-180~1300℃	50℃	≤500℃	0.20%
				>500℃	0.10%
	R	-50~1768℃	500℃	≤500℃	0.20%
				>500℃	0.10%
	S	-50~1768℃	500℃	≤500℃	0.20%
				>500℃	0.10%
	T	-200~400℃	50℃	≤500℃	0.20%
				>500℃	0.10%
	Wre3-25	0~2315℃	500℃	≤500℃	0.20%
				>500℃	0.10%
	Wre5-26	0~2310℃	500℃	≤500℃	0.20%
				>500℃	0.10%

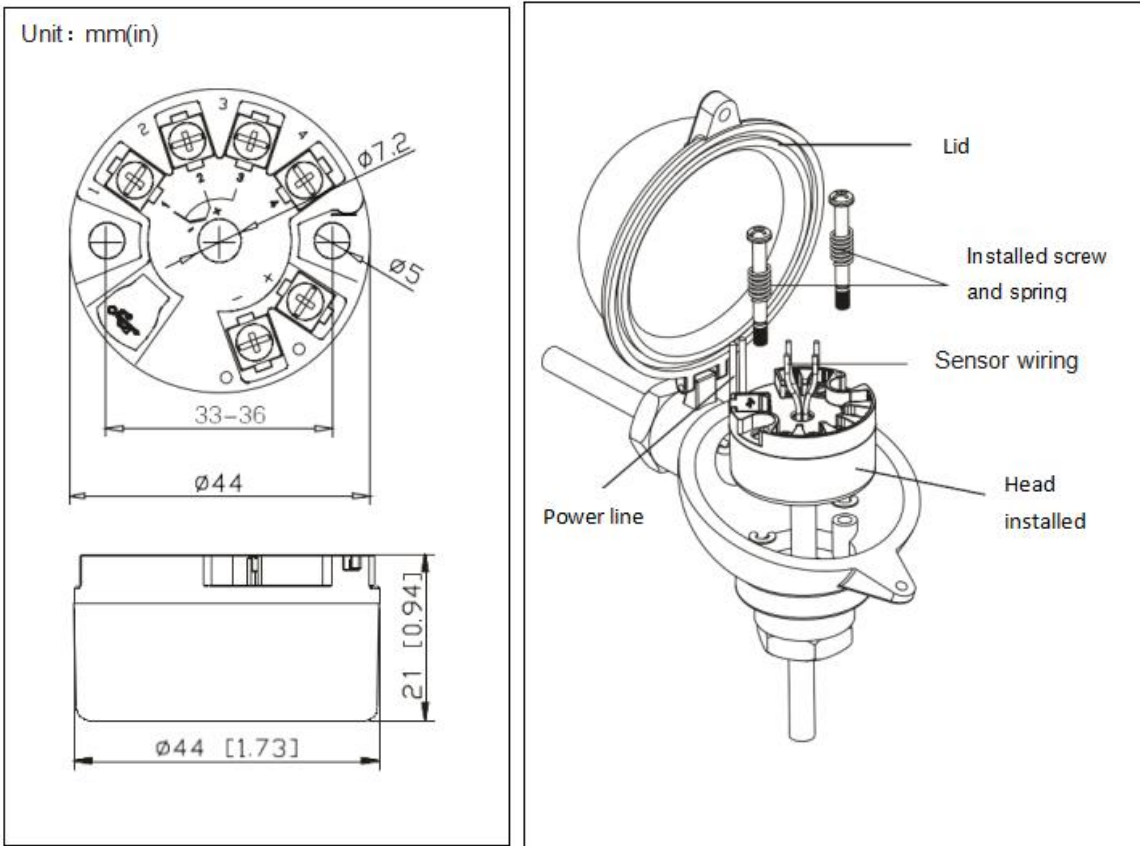
**Input type and transmission accuracy(Isolated):**

Model	Type	Measurement scope	Minimum measurement scope	Scale range	Conversion accuracy
Resistance temperature detector (RTD)	Pt100	-200.0~850.0℃	20℃	≤100℃	0.20%
				>100℃	0.10%
	Cu50	-50.0~150.0℃	20℃	≤100℃	0.20%
				>100℃	0.10%
Thermocouple (TC)	B	400~1800℃	500℃	≤300℃	0.20%
				>300℃	0.10%
	E	-100~1000℃	50℃	≤300℃	0.20%
				>300℃	0.10%
	J	-100~1200℃	50℃	≤300℃	0.20%
				>300℃	0.10%
	K	-180~1372℃	50℃	≤300℃	0.20%
				>300℃	0.10%
	N	-180~1300℃	50℃	≤500℃	0.20%
				>500℃	0.10%
	R	-50~1768℃	500℃	≤500℃	0.20%
				>500℃	0.10%
	S	-50~1768℃	500℃	≤500℃	0.20%
				>500℃	0.10%
	T	-200~400℃	50℃	≤500℃	0.20%
				>500℃	0.10%

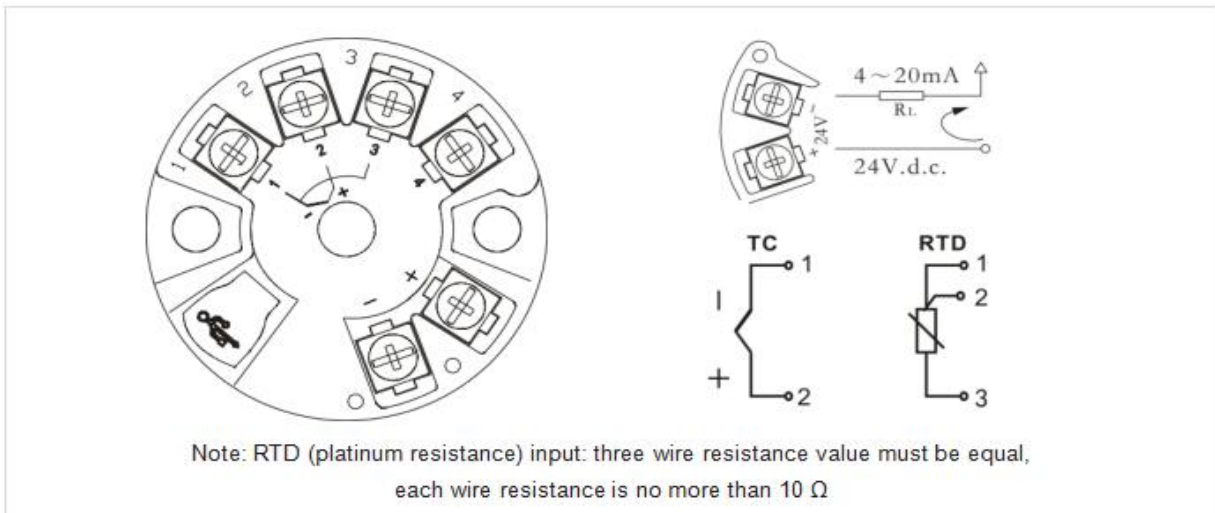
Notes:

1. The above accuracy data was obtained by testing at an ambient temperature of  $20^{\circ}\text{C} \pm 2^{\circ}\text{C}$
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  $\leq \pm 1^{\circ}\text{C}$ .

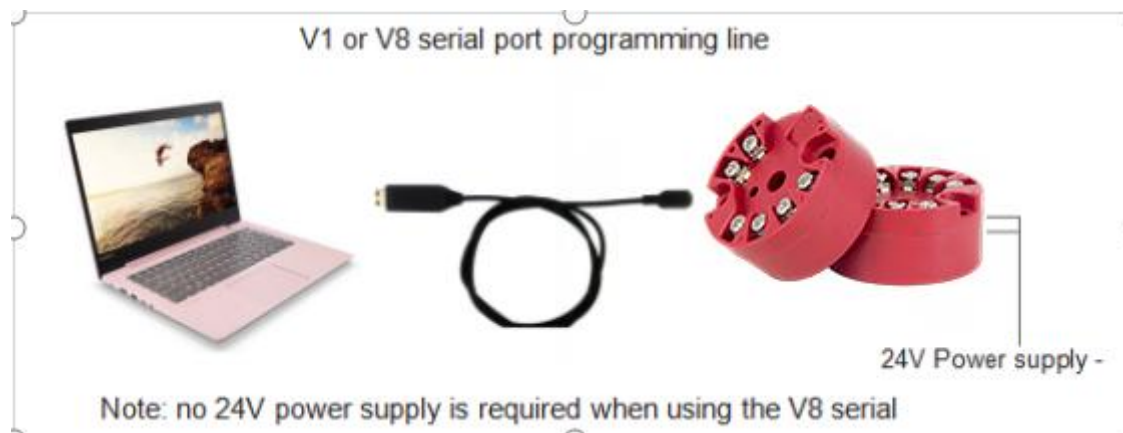
**Dimension & Installation**



**Wiring Diagram**



Standard



Isolated



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