



BANNING
TEMPERATURE TRANSMITTER
TP110



BANNING

DESCRIPTION

The TP110 compact temperature transmitter uses the resistance of platinum resistance to change with temperature and shows a certain functional relationship to measure the temperature of the measured medium. The product is composed of temperature sensor, compensation circuit and conversion circuit. It has the advantages of stable performance, high sensitivity and strong reliability.

CHARACTERISTICS

- Integrated compact design
- Can output 4-20mA standard signal, can also output Pt100 resistance signal
- A variety of mechanical connection methods, various threads, clamps, sanitary, etc.

PERFORMANCE

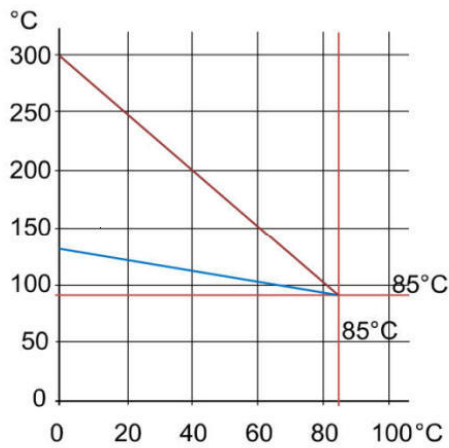
Parameter	TP110
Shell	Outer diameter: \varnothing 18mm; material: stainless steel AISI 304 (1.4031)
Electrical Interface	M12 plug, 4-pin
Output signal	4 ~ 20mA two-wire system or Pt100 resistance
Supply voltage	DC 9-30V
Temperature range	-40°C~+300°C (with standard heat sink)
Minimum temperature range	20°C
Precision	Grade A, 1/3 Grade B
Alarm	Lower limit \leq 3.6mA or upper limit \geq 21.5mA
Maximum load	$R_L \leq (U_s - 9)/25\text{mA}$
Sensor material	Stainless steel AISI 304 (standard); stainless steel AISI 316L (optional)
Sensor diameter	Standard \varnothing 6mm, others can be customized
Sensor length	<1000mm
Ambient temperature	Pt100 output: -40°C~125°C; with transmitter: -40°C~85°C
Protection level	IP67
Pt100 Class A	$\pm (0.15 + 0.002 \cdot t)$ °C
Wire outlet method of thermal resistance	Single: 2/3/4 lines optional; Double: 2 lines

APPLICABLE

- Widely used in food, beverage and pharmaceuticals, water treatment, hydraulics, engineering machinery, energy and electricity, HVAC, etc.;

RANGE OF WORKING TEMPERATURE

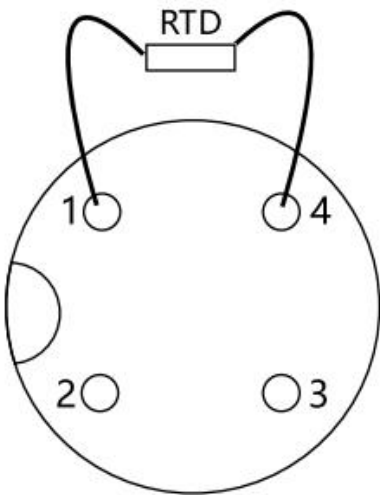
Medium temperature



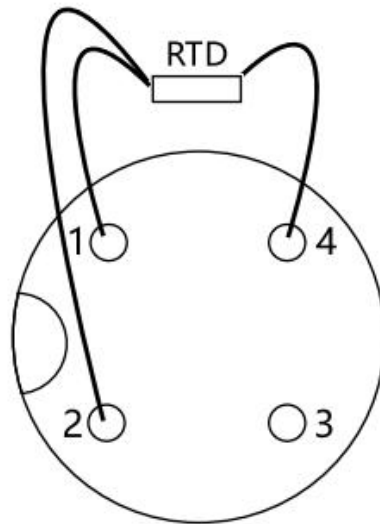
Ambient temperature

- With standard heat sink
- Without heat sink

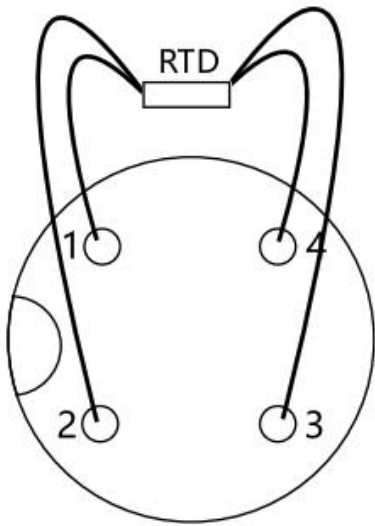
WIRING DIAGRAM



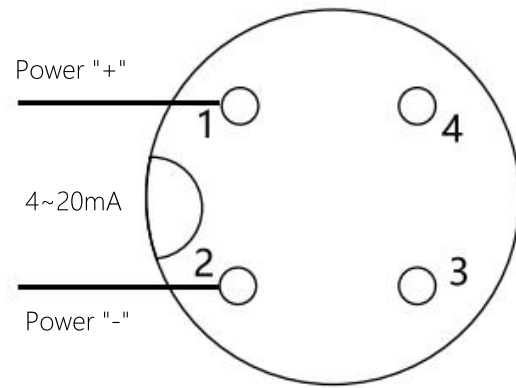
Resistance signal 2-wire connection example



Resistance signal 3-wire connection example

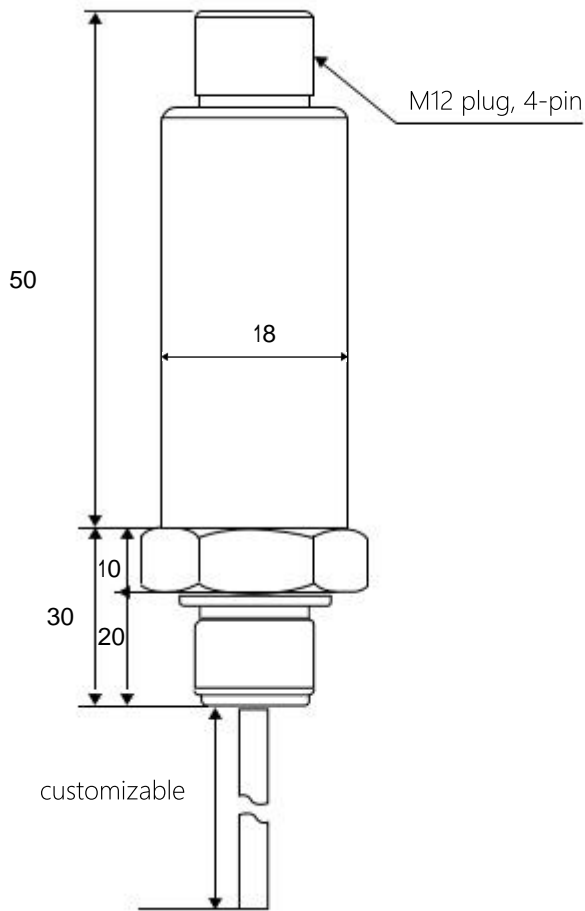


Resistance signal 4-wire connection example

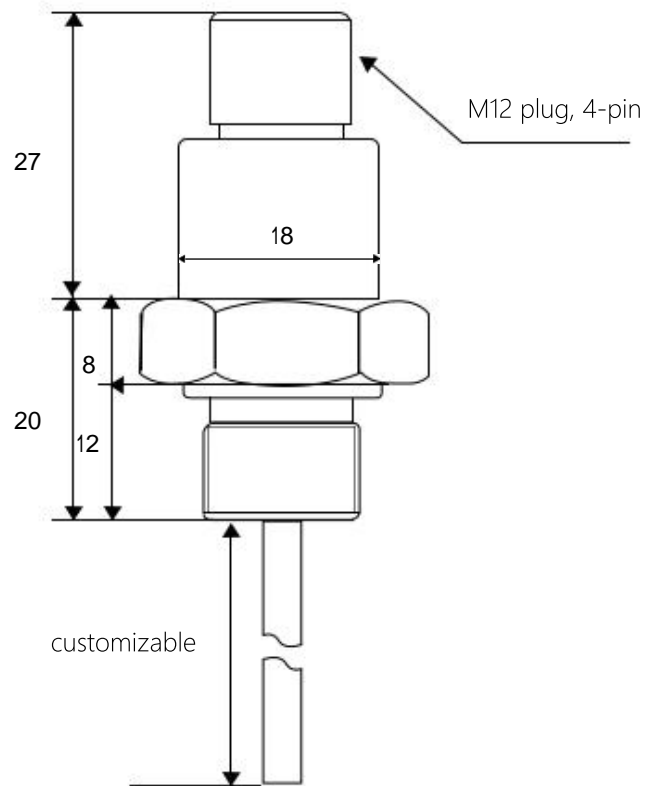


4-20mA current output connection example

DIMENSIONS

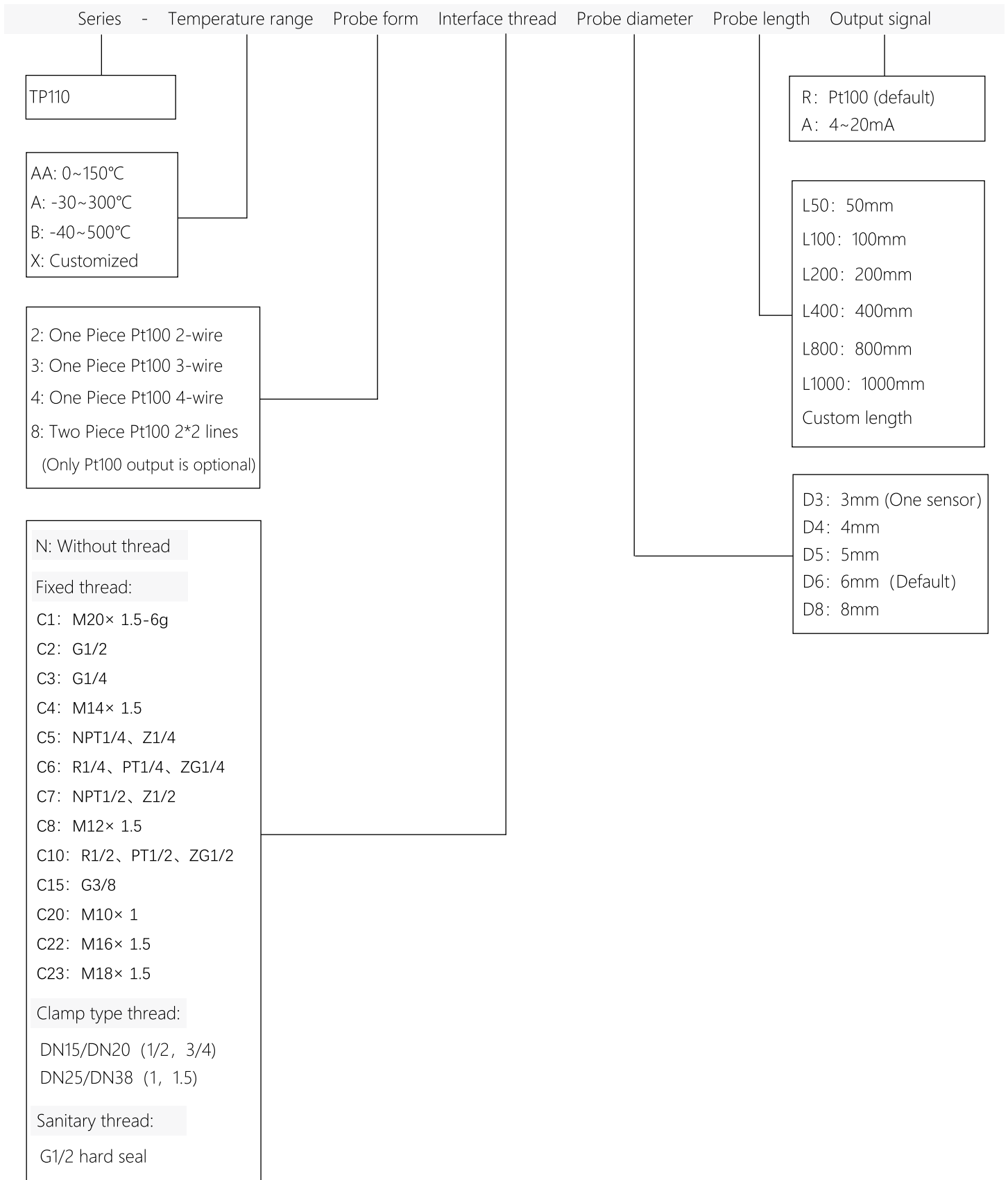


4~20mA (Below 100°C)



Pt100 (-40~500°C)

NOMENCLATURE



FOR EXAMPLE: TP110-A3ND3L50R

The series is TP110, temperature range -30~300°C, single Pt100 3-wire connection, without thread, probe diameter 3mm, probe length 50mm, and the output signal Pt100 resistance.

DISCLAIMER

⚠ Warning

LIFE OR PROPERTY RISK

- Please ensure that this product has been designed as part of whole system and already considered related risks, make sure the product has the correct ratings and is designed based on the entire system. It must not be used when applications related to serious life or property damage risks.

Failure to follow this instruction can result in death or serious injury.

⚠ Warning

PERSONAL INJURY

- DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to follow this instruction can result in death or serious injury.

⚠ Warning

MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to follow this instruction can result in death or serious injury.

Warranty/Remedy

Banning warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Banning's standard product warranty applies unless agreed to otherwise by Banning in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Banning during the period of coverage, Banning will repair or replace, at its option, without charge those items that Banning, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Banning be liable for consequential special, or indirect damages.**

While Banning may provide application assistance personally, through our literature and the Banning web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Banning assumes no responsibility for its use.

SALES & SERVICE

Banning serves its clients through a worldwide network of sales offices, agents and distributors. For application assistance specifications, prices or names with the nearest authorized dealer, please contact your sales specialist or contact us directly:

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