KIMO INSTRUMENTS

Technical Data Sheet

Pressure • Temperature • Humidity • Air Velocity • Airflow • Sound level

*RTD sensor with standard head and **resistive element** for very high temperature use*

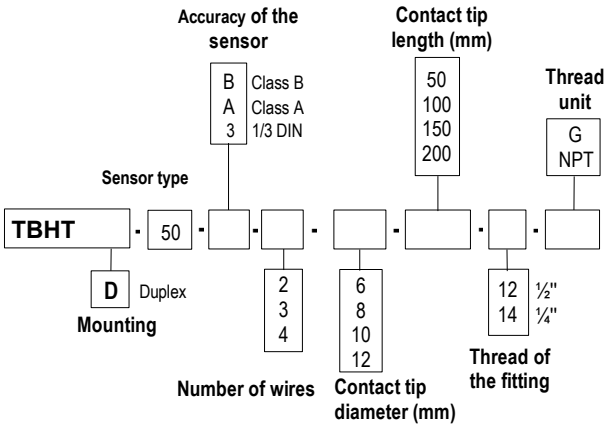
CE

TBHT 50 / TBHTD 50

- Temperature sensor with or without compression fitting and stainless steel contact tip.
- Measuring range (According to reference) : **from -50 to +550°C**
- Mounting of wire : **single pair** (2,3 or 4 wires).
  multipair (4 wires).

Part numbers

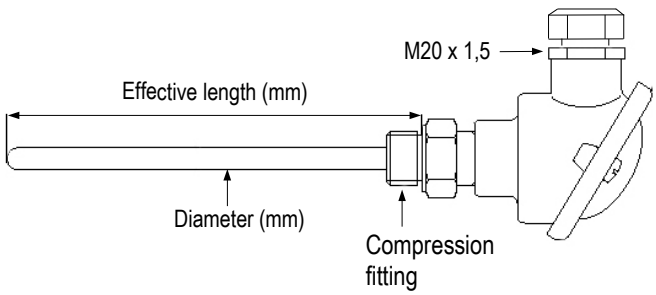
To order, just add the codes to complete the part number.



* Other dimension on request

Example : TBHT-50-B-3-8-100-12G.
Model : PT 100 temperature probe, class B, 3 wires diameter 8 mm and length including thread 100 mm.
With compression fitting ½' G.
Standard measuring range from -50°C to + 550°C.

Dimensions



Technical features

Working temperature.....from -50°C to +550°C
(According to reference)

Accuracy.....**PT100 :** see "Tolerances" table

Type of sensor.....**PT100** : Class B, Class A, 1/3 DIN
As per DIN IEC751

Mounting of wire.....single pair 2, 3 or 4 wires
multi pair only 2x2 wires

Storage temperature.....from -20°C to +80°C

Contact tip.....316 L stainless steel, no welding, 3/4 to 4/4 hard

Compression fitting.....316 L stainless steel

Thread.....with or with out, 1/4, 1/2, male au pas Gas or NPT plug (other tread on request)

Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

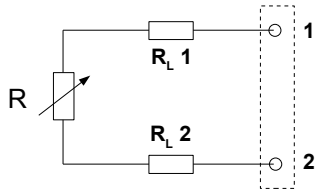
Tolerance of PT100 probes

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

Temp °C	Tolerances					
	Class B		Class A		1/3 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-100	0.8	0.32	0.35	0.14	0.27	0.11
-50	0.55	0.22	0.25	0.1	0.19	0.08
0	0.3	0.12	0.15	0.06	0.1	0.04
100	0.8	0.3	0.35	0.13	0.27	0.1
200	1.3	0.48	0.55	0.2	0.44	0.16
300	1.8	0.64	0.75	0.27	0.6	0.21
400	2.3	0.79	0.95	0.33	0.77	0.26

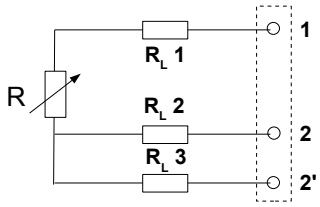
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



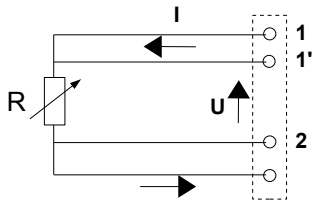
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be subtracted from the measured resistance between 1 and 22' terminals. This is the most common connection.

• 4-wire connection



Regulated current is going through 11' and 22' terminals and the measurement is made at the sensor terminals, so none of the line resistors are taken into account. This is the most accurate connection.

Accessories (See data sheet)

- Transmitter output 4/20 mA or 0/10V
- Wall fixing support
- Stainless steel mounting bracket
- ¼ " or ½" Gas screw nut
- Stainless steel compression fitting
- Teflon or stainless steel ferrule for compression fittings

- Sleeve to weld for food industry
- Stainless steel union fitting
- ½" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell

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Tel : + 33. 1. 60. 06. 69. 25 - Fax : + 33. 1. 60. 06. 69. 29
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