

RTD sensor with standard head and with resistive element for very low temperature application

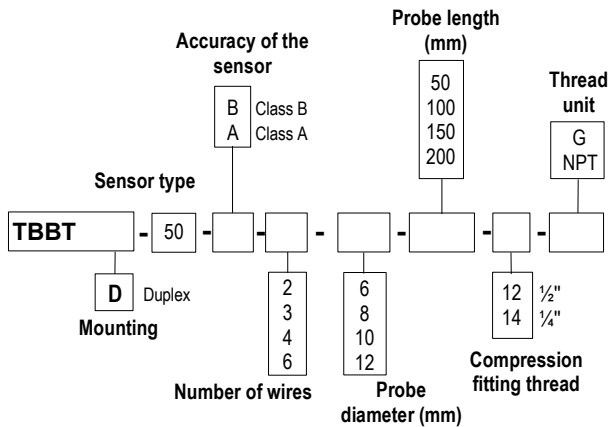
TBBT 50 / TBBTD 50

- Temperature sensor with or without compression fitting and stainless steel contact tip.
- Measuring range (According to reference) **from -200 to +80 °C**
- Mounting of wires: **single pair** (2,3 or 4 wires).
multipair (4 or 6 wires).



PART NUMBERS

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



* Other dimension on request

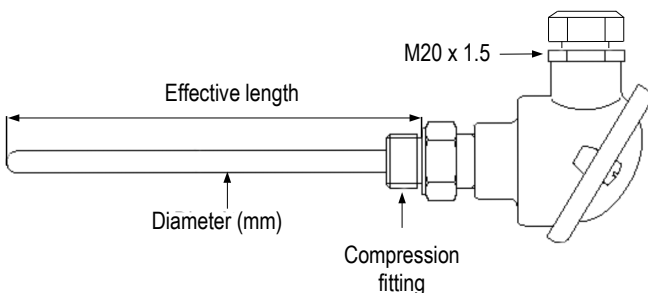
Example: TBBT-50-B-3-8-100-12G.

Model: PT 100 temperature sensor class B, 3 wires with 8 mm diameter and length with thread of 100 mm.
With compression fitting 12 1/2' G.
Measuring range from -200 °C to +80 °C.

TECHNICAL FEATURES

Working temperatures (according to reference)	From -200 °C to +80 °C
Accuracy*	PT100: see "Tolerances" table
Sensor type	PT100: Class B, Class A as per DIN IEC751
Mounting of wires	Single pair 2, 3 or 4 wires Multipair 4 or 6 wires
Storage temperature	From -20 °C to +80 °C
Contact tip	316 L stainless steel, no welding, from 3/4 to 4/4 hard
Compression fitting	316 L stainless steel
Thread	With or without, 1/4, 1/2, Gas or NPT plug (other thread on request)
Electrical connection	With or without terminal block Transmitter 4/20 mA 0/10 V as option
Connection head	Aluminium alloy cable gland: M20 x 1.5 IP65 protection

DIMENSIONS PROBE



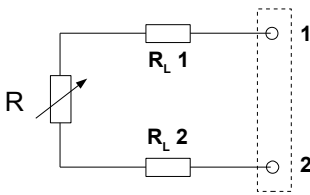
TOLERANCES* OF PT100 PROBES

Norm as per IEC 751 (1993).

Temp °C	Tolerances			
	Class B		Class A	
	± °C	± Ohms	± °C	± Ohms
-100	0.8	0.32	0.35	0.14
-50	0.55	0.22	0.25	0.1
0	0.3	0.12	0.15	0.06
100	0.8	0.3	0.35	0.13
200	1.3	0.48	0.55	0.2
300	1.8	0.64	0.75	0.27
400	2.3	0.79	0.95	0.33

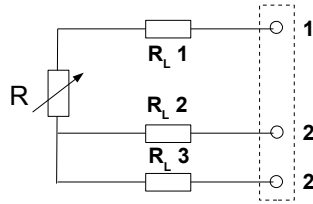
*all accuracies indicated in this technical data sheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

• 2-wire connection



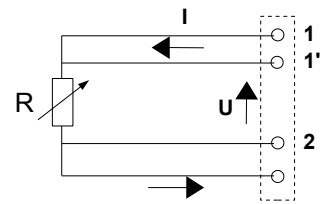
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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.

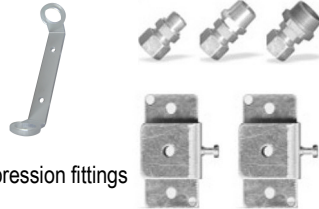
• 4-wire connection



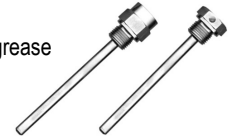
Regulated current is going through 11' and 22' terminals and the measurement is made at the sensor terminals, so none of the line resistors are taken into account. This is the most accurate connection.

ACCESSORIES (SEE DATASHEET)

- Transmitter output 4/20 mA or 0/10 V
- Wall fixing support
- Stainless steel mounting brackets
- 1/4" or 1/2" Gas screw nut
- Stainless steel compression fitting
- PTFE or stainless steel ferrule for compression fittings



- Sleeve to weld for food industry
- Stainless steel union fitting
- 1/2" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



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