

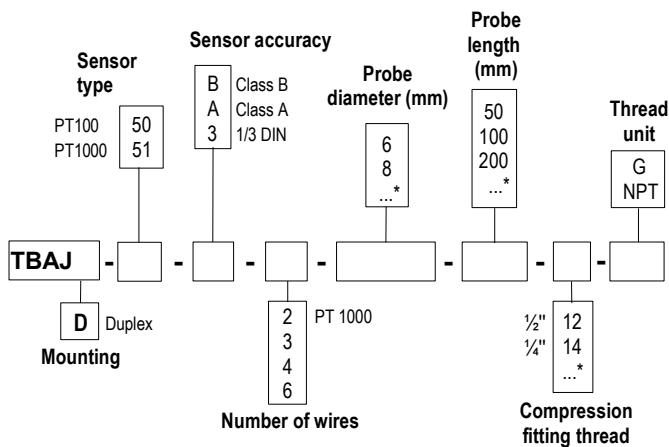


## RTD sensor with standard connection head and ambient tip

### TBAJ 50 / TBAJD 50

- Temperature sensor with stainless steel sheath and ambient end, with or without compression fitting.
- Measuring range (according to model) from **0 °C to +250 °C** (PT100 and PT1000).
- Wire mounting: **singlepair** (2,3 or 4 wires).  
**multipair** (4 or 6 wires).
- For other resistor types PT25, PT50, PT500, PT200 or NI, please contact us.

#### PART NUMBERS



\* Other dimensions available on request

**Example: TBAJ50-B-3-6-100-12G.**

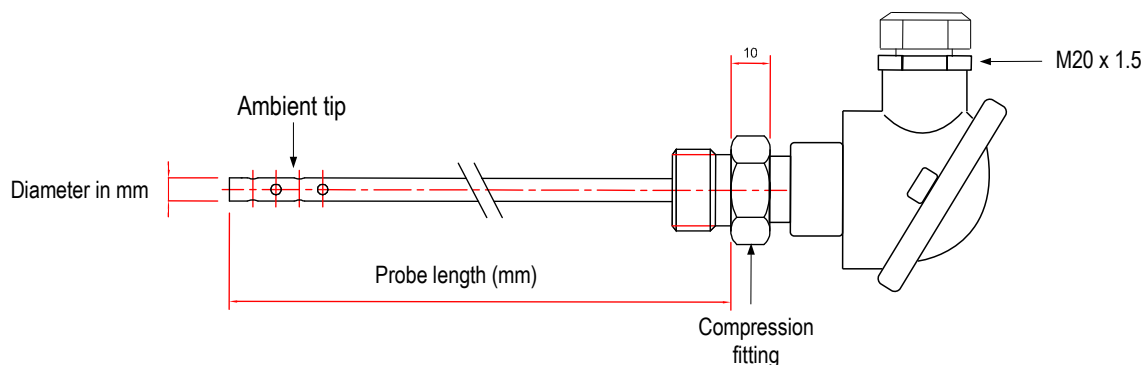
**Model:** Pt 100 temperature sensor, Class B, 3 wires in a sheath of 6 mm diameter and 100 mm length, and with a 1/2" thread plug.

**Measuring range from -50 °C to 250 °C.**

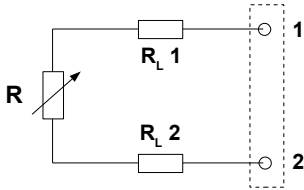
#### TRANSMITTER FEATURES

<b>Operating temperature</b>	From 0 °C to +250 °C (PT100 and PT1000)
<b>Accuracy</b>	<b>PT100 or PT1000:</b> see table "Tolerances"
<b>Sensor type</b>	<b>PT100 or PT1000:</b> Class B, Class A, 1/3 DIN as per DIN IEC751
<b>Wire mounting</b>	Single pair 2, 3 or 4 wires Multipair 4 or 6 wires
<b>Storage temperature</b>	From 0 °C to +80 °C
<b>Sheath</b>	316 L stainless steel, no welding, 3/4 to 4/4 hard. Ambient tip of 20 mm. 6 or 8 mm Ø or other on request
<b>Electrical connection</b>	With or without terminal block transmitter 4/20mA 0/10V as option
<b>Connection head</b>	Aluminium alloy Cable gland: M20 x 1.5 IP65 protection
<b>Adjustable mountings</b>	Compression fitting welded further along the sheath, flange, clamp, interchangeable probe system, restricted tip, ambient tip. See datasheet.

#### DIMENSIONS

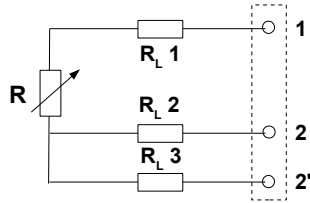


• 2-wire connection



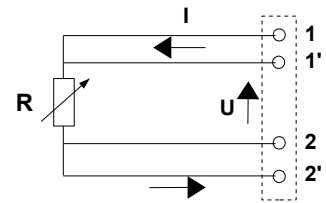
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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.

TOLERANCE OF PT100 AND PT1000 PROBES

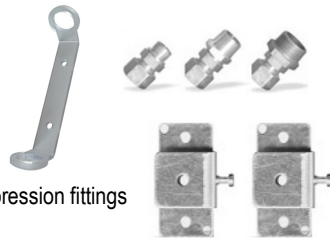
Norm as per IEC 751 (1993).

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

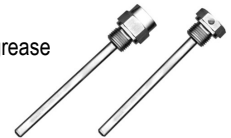
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e: at 0 °C for Class B PT1000 ± 0.3 °C → ± 1.2 Ω

ACCESSORIES (SEE DATASHEET)

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



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



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