KIMO INSTRUMENTS

Technical Data Sheet

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

*Industrial thermocouple temperature sensor with **aluminium connection head** and with **offset fitting***

TBRD K/ TBRD KI – TBRDD K / TBRDD KI

- Thermocouple types T, J, K and N.
- Measuring range **from -40°C to +1000°C**
- Mounting with offset fitting

Stainless steel contact tip max 400°C part numbers

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

	Duplex	Type	Effective length diameter (mm)	Effective length (mm)	Fitting	Thread unit	Height adjustment diameter (mm)	Height adjustment length (mm)
TBRD –	- / D	T / J / K / N	6 / 8 / 10 / *	50 / 100 / 150 / 200 / *	12 / 14 / *	G / NPT	6 / 8 / 10 / 12	50 / 100 / 150 / 200

*other on request

Example : TBRD-T-6-100-12-G-6-50

Model : Thermocouple sensor type T at head with contact tip of 100 mm effective length and 6 mm Ø and height adjustment length of 50 mm in 6 mm Ø . Contact tip with ½ G compression fitting.

Lined contact tip max 1000°C part numbers

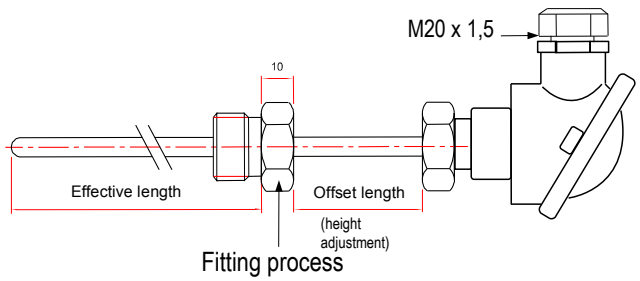
	Duplex	Type	Effective length diameter (mm)	Effective length (mm)	Fitting	Thread unit	Height adjustment diameter (mm)	Height adjustment length (mm)
TBRD –	- / D	TI / JI / KI / NI	3 / 4,5 / 6 / 8	150 / 300 / 500 / *	12 / 14 / *	G / NPT	6 / 8 / 10 / 12	50 / 100 / 150 / 200

*other on request

Example : TBRD-KI-6-150-12-G-6-50

Model : Thermocouple sensor type K in inconel at head with contact tip of 150 mm effective length and 6 mm Ø and height adjustment length of 50 mm in 6 mm Ø . Contact tip with ½ G compression fitting.

Dimensions



Technical features

Working temperature.....*For **TBK** series*
from -40°C to +350°C for Tc T
from -40°C to +400°C for J, K et N

*For **TBKI** series*
from -40°C to +350°C for Tc T
from -40°C to +750°C for Tc J
from -40°C to +1000°C for Tc K and Tc N

Recommended temperature.....*According to contact tip Ø in inconel 600*
from 0.5 to 1 mm Ø : up to 300°C
from 1.5 to 2 mm Ø: up to 750°C
3 mm Ø : up to 900°C
from 4.5 to 8 mm Ø : up to 1000°C

Accuracy* for class 1.....See "Tolerances" table

Mounting of welding.....Insulated or to earth hot welding
Single pair or 2x2 wires multipair mounting.

Contact tip.....*For **Effective length***
Stainless steel 316 L or lined inconel 600 for I series
Compacted magnesia and stainless steel 316 L for TBRDK-TBRDDK series

*For **Offset length***
Stainless steel 316 L

Compression fitting.....Stainless steel 316 L

Thread.....Fitting ½", ¼" G or NPT plug

Electrical connection.....Ceramic block junction 2 or 4 contacts.
Transmitter as option.

Connection head.....Aluminium alloy (max 120°C)
Cable gland : M20/150
IP 65 protection.

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

* Performed in laboratory conditions, the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

Tolerances of the probe*

As per IEC 584-3 norm

TC	MEASURING RANGE CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C ± 0.5°C From 125°C to +350°C ± 0.004 x T°abs
J	From -40°C to +750°C	From -40°C to +375°C ± 1.5°C From 375°C to 750°C ± 0.004 x T° abs
K	From -40°C to +1000°C	From -40°C to +375°C ± 1.5°C From 375°C to 1000°C ± 0.004 x T°abs
N	From -40°C to +1000°C	From -40°C to +375°C ± 1.5°C From 375°C to 1000°C ± 0.004 x T°abs

* Performed in laboratory conditions, the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

Most common thermocouple types

THERMOCOUPLE TYPE	+ CONDUCTOR	- CONDUCTOR	COLOR OF COMPENSATING CABLE
K	Nickel-Chrome 10%	Nickel-Aluminium 5% -Silicium	Ext. color + = GREEN, - = WHITE
T	Copper	Copper-Nickel	Ext. color + = BROWN, - = WHITE
J	Iron	Copper-Nickel	Ext. color + = BLACK, - = WHITE
N	Nickel 84,4% Chromium 14,2% Silicium 1,4%	Nickel 95,6% Silicium 4,4%	Ext. color + = PINK, - = WHITE
R	Platinum-Rhodium 13%	Platinum	Ext. color + = ORANGE, - = WHITE
S	Platinum-Rhodium 10%	Platinum	Ext. color + = ORANGE, - = WHITE
B	Platinum-Rhodium 30%	Platinum-Rhodium 6%	Ext. color + = GREY, - = WHITE

Accessories (See data sheet)

- Extension cable
- Compensating cable
- Standard or miniature connector
- Cable seal for plug and socket connector

- Miniature or standard fixed connector
- Miniature or standard connectors panel
- Extension lead
- Converters

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