KIMO INSTRUMENTS

Technical Data Sheet

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

***Thermocouple** temperature sensor*
***with** aluminium industrial connection head*
***stainless steel angled** or lined*
inconel with** or **without fitting

Type TBC K and TBCR K

TBC K – TBCD K – TBC KI – TBCD KI
TBCR K – TBCRD K – TBCR KI – TBCRD KI

General features

- Thermocouple types T, J, K and N
- Measuring range **from -40°C to +1000°C**
- Mounting with stainless steel contact tip 316 L or inconel 600
- Smooth or screwing mounting

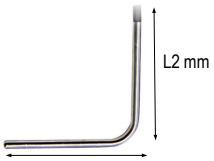
Technical features

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

*For **TBCKI** 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

Recommanded 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

Angled contact tip



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.....Stainless steel 316 L or lined inconel 600 for I series
Compacted magnesia and stainless steel 316 L for TBC and TBCD series
Angled at 90° (other on request)

Compression fitting.....Stainless steel 316 L

Smooth mounting without fitting : put anything

Mounting with fitting on L2 (See schema) : 12 or 14 corresponding to fitting ½'G and ¼'G.

Mounting with fitting on L2 (See schema) : 12L1 or 14L1 corresponding to fitting ½'G and ¼'G.

No 4 wires mounting for contact tip 4mm ø.

Thread.....With or without 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
IP65 protection

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

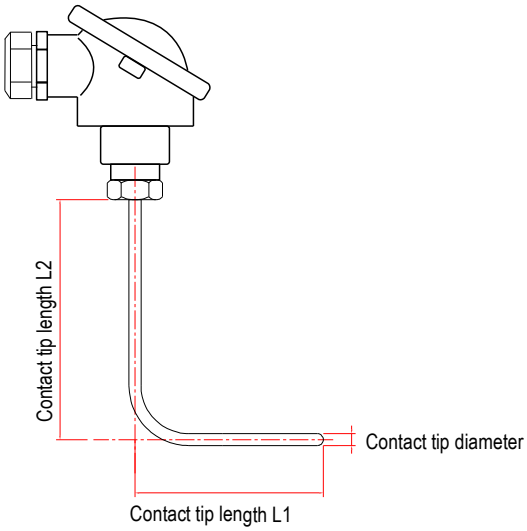
* Performed in laboratory conditions, the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

TBC K & TBC KI

Stainless steel angled or lined inconel with or without multipair mounting probe

Dimensions

L1 mini : according to Ø
L2 mini : according to Ø
Bending radius : 15 mm Ø 6 mm
24 mm Ø 8 et 10 mm



Part numbers

• TBC K – Stainless steel contact tip -

	Duplex	Type	Diameter (mm)	L1 Contact tip (mm)	L2 Contact tip (mm)	Angle	Welding	
TBC	D -	T J K N	6 8 10 12	50 100 150 200 *	50 100 150 200 *	90	- SCM	Insulated To earth

*other on request

Example : TBCJ-8-100-100-90-SCM
Model : Thermocouple sensor type J welded to earth with stainless steel contact tip 8 mm Ø angled at 90° and L1 and L2 lengths 100 mm.

• TBC KI – Inconel contact tip -

	Duplex	Type	Diameter (mm)	L1 Contact tip (mm)	L2 Contact tip (mm)	Angle	Welding	
TBC	D -	TI JI KI NI	3 4.5 6 8	50 100 150 200 *	50 100 150 200 *	90	- SCM	Insulated To earth

*other on request

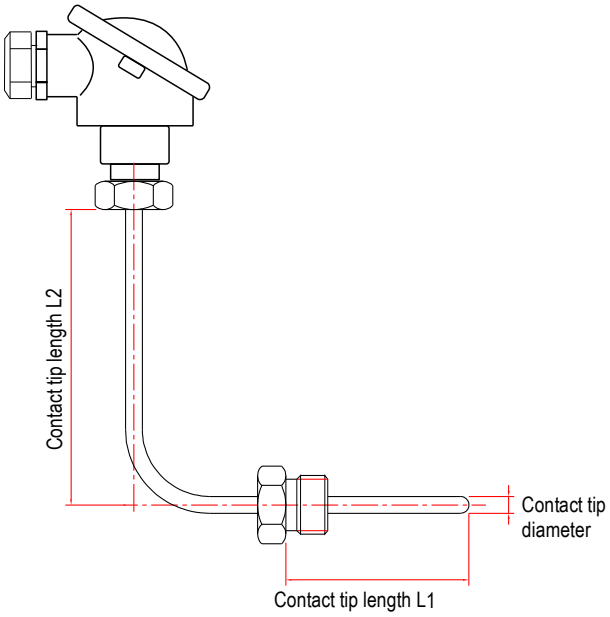
Example : TBCJI-8-100-100-90-SCM
Model : Thermocouple sensor type J welded to earth with inconel contact tip 8 mm Ø angled at 90° and L1 and L2 lengths 100 mm.

TBCR K & TBCR KI

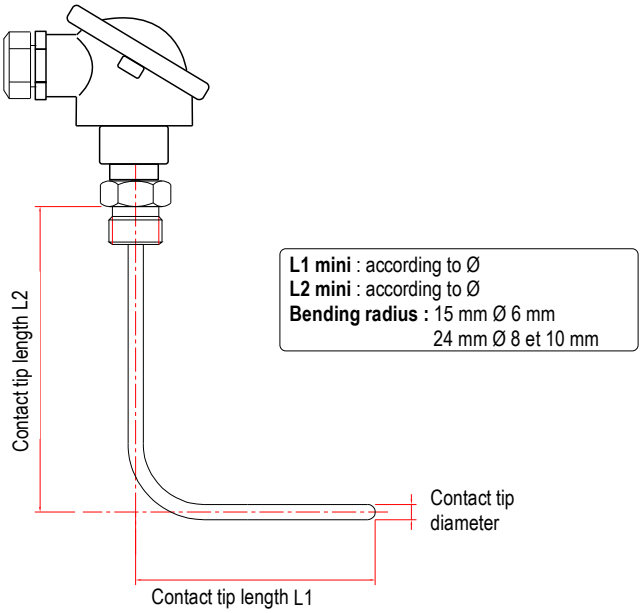
Stainless steel angled or lined inconel with fitting and with or without multipair mounting probe

Dimensions

• With fitting on L1



• With fitting on L2



Part numbers

• TBCR K - Stainless steel contact tip -

	Duplex	Type	Diameter (mm)	L1 Contact tip (mm)	L2 Contact tip (mm)	Fitting	Thread	Angle	Welding
TBCR	D -	T J K N	6 8 10 12	50 100 150 200 *	50 100 150 200 *	12 14 12L1 14L1	G NPT	90	- SCM Insulated To earth

*other on request

Example : TBCRJ-8-100-100-12-G-90-SCM
Model : Thermocouple sensor type J welded to earth with stainless steel contact tip 8 mm Ø angled at 90° and L1 and L2 lengths 100 mm with fitting ½'G on L2.

• TBCR KI - Inconel contact tip -

	Duplex	Type	Diameter (mm)	L1 Contact tip (mm)	L2 Contact tip (mm)	Fitting	Thread	Angle	Welding
TBCR	D -	TI JI KI NI	3 4.5 6 8	50 100 150 200 *	50 100 150 200 *	12 14 12L1 14L1	G NPT	90	- SCM Insulated To earth

*other on request

Example : TBCRJI-8-100-100-12-G-90-SCM
Model : Thermocouple sensor type J welded to earth with inconel contact tip 8 mm Ø angled at 90° and L1 and L2 lengths 100 mm, with fitting ½'G on L2.

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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