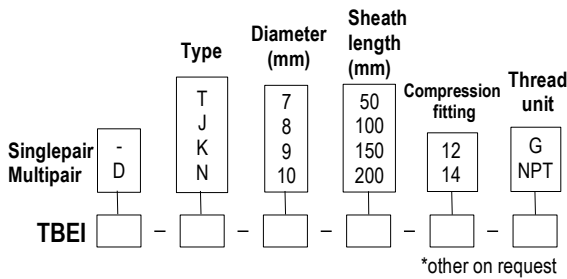


**Thermocouple sensor with standard connection head with interchangeable probe system**

**TBEI K – TBEID K**

- Thermocouple T, J, K and N.
- Operating temperature from **-40°C to +400°C**
- With or without compression fitting

**Part numbers for stainless steel sheath 400°C max.**

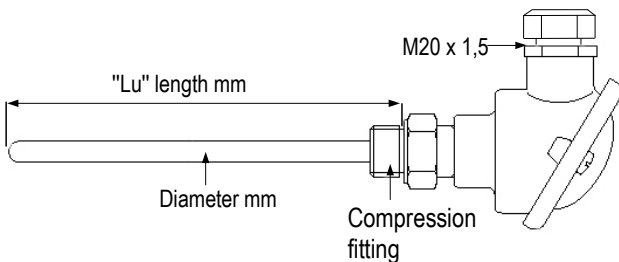


**Example :** TBEID-T-7-100-12-G

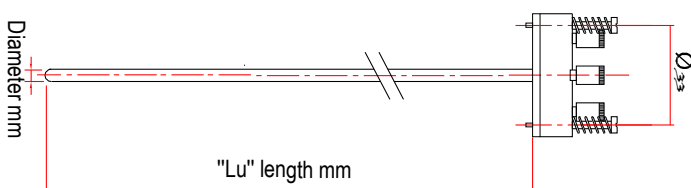
**Model :** Thermocouple T with a sheath of 100 mm length and 7 mm Ø. Compression fitting 1/2" G. Measurement insert 4 mm Ø and 140 mm length with multipair wires.

**Dimensions**

- Probe



- Internal interchangeable probe system



**Technical features**

**Operating temperature**.....from -40°C to +350°C for Tc T  
from -40°C to +400°C for J, K and N

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

**Type of welding**.....Ungrounded or ungrounded hot junction.  
Singlepair or 2x2 multipair.

**Sheath**.....316 L stainless steel.

**Interchangeable system**.....316 L stainless steel.

**Diameter** : according to external sheath Ø

Interchangeable system Ø	Ø min. of sheath
4 mm	7 mm
5 mm	8 mm
6 mm	9 mm
7 mm	10 mm

**LU** length : length of sheath + 40 mm

**Compression fitting**.....316 L stainless steel

**Thread**.....With or without 1/2", 1/4",  
Gaz or NPT plug

**Electrical connection**.....Terminal block (2 or 4 contacts)  
Optional transmitter.

**Connection head**.....Aluminium alloy  
cable gland : M20 x 1.5  
IP65 protection

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

**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°
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°
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°
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°

\* 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.



# Thermocouple interchangeable probe system

## EI K – EID K

- Thermocouple T, J, K and N.
- Working temperature from **-40°C to +400°C**
- With or without compression fitting

### Part numbers for stainless steel sheath 400°C max.

	Type	Diameter (mm)	Seath length (mm)
Singlepair	T	6	100
Multipair	J	8	200
	K	10	500
	N	*	*

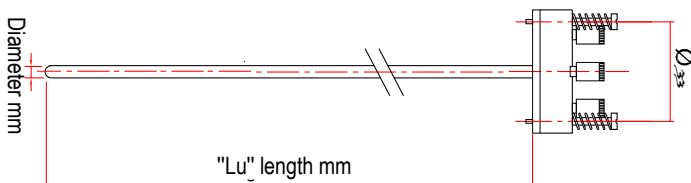
EI  -  -  -   
 \*other on request

LU length : length of sheath + 40 mm

Example : TBEID-T-7-100-12-G

Model : interchangeable probe system type T with sheath of 100 mm and a 7 mm Ø with a ½ G compression fitting. Multipair wires.

### Dimensions



### Technical features

Operating temperature.....from -40°C to +350°C for Tc T  
from -40°C to +400°C for J, K and N

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

Welding type.....Ungrounded or ungrounded hot junction.  
Singlepair or 2x2 multipair.

Sheath.....316 L stainless steel.

Interchangeable system.....316 L stainless steel.

Diameter : according to external sheath Ø

Interchangeable system Ø4 mm	Ø min. of sheath
5 mm	7 mm
6 mm	8 mm
7 mm	9 mm
	10 mm

LU length : length of sheath + 40 mm

Electrical connection.....Terminal block (2 or 4 contacts)  
Optional transmitter.  
With or without terminal block DIN Ø 42 mm mounted. 33 mm centre.

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

### 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°
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°
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°
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°

\* 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 TYPES	+ CONDUCTOR	- CONDUCTOR	COLOR OF COMPENSATING CABLE
K	Chromel	Alumel	Ext. color + = GREEN, - = WHITE
T	Copper	Constantan	Ext. color + = BROWN, - = WHITE
J	Iron	Constantan	Ext. color + = BLACK, - = WHITE
N	Nicrosil	Nisil	Ext. color + = PINK, - = WHITE
R	Platinum-13% Rhodium	Platinum	Ext. color + = ORANGE, - = WHITE
S	Platinum-10% Rhodium	Platinum	Ext. color + = ORANGE, - = WHITE
B	Platinum-30%Rhodium	Platinum- 6%Rhodium	Ext. color + = GREY, - = WHITE

## ■ **Accessories (See Datasheet)**

- 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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