

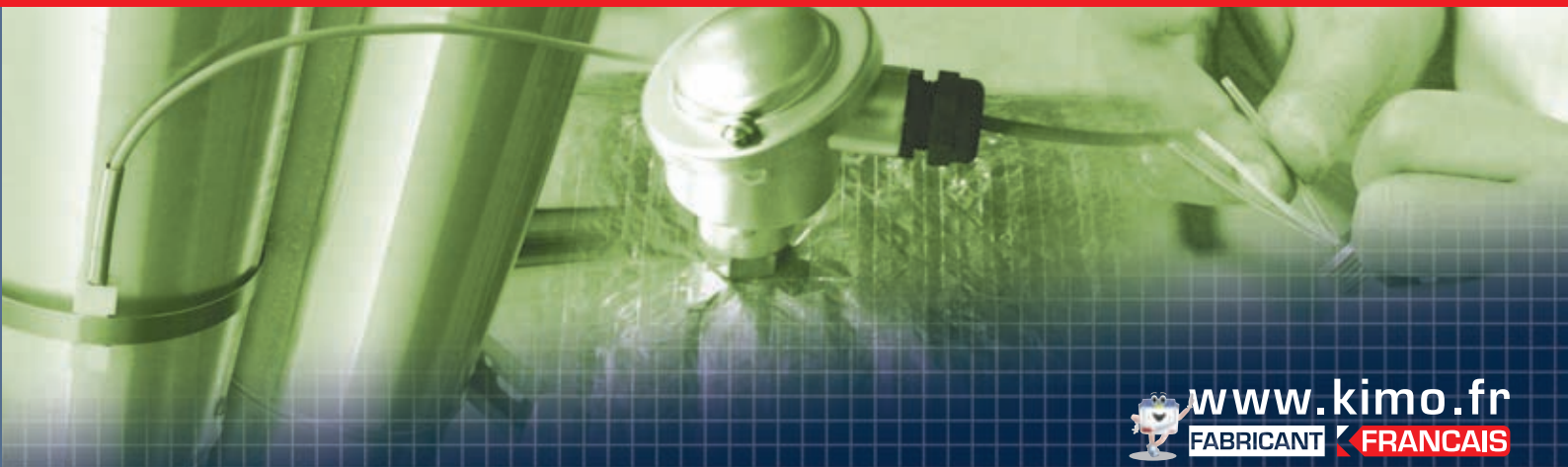


Temperature Probes

Technical datasheet



Temperature



SUMMARY

Useful informations - Connection headsp 1

Part 1 : Wire resistive element

F 50 - output DIN connector	p 5
F 50 I - with collapsible contact tip	p 7
SF 50 - temperature probe with cable	p 9
SF 50 I - with collapsible contact tip	p 11
SFBT 50 - for very low temperature	p 13
SFR 50 - with fixing fitting	p 15
SFC 50 - angled resistive element	p 17
SFP 50 - penetration probe	p 21
SFPP 50 - with needle ended tip	p 23
SFPPT 50 - T handle temperature probe	p 27
SFO 50 - for contact measurement by eyelet	p 29
SFSC 50 - with self adhesive patch	p 31
SFCS 50 - surface contact wire	p 33
SFCT 50 - for pipe	p 35
SFBA 50 - with bayonet	p 37
SFGT 50 - for aggressive application	p 39

Part 2 : Head resistive element

SG 50 - with ABS head housing	p 43
SG 100 - with ABS head	p 45
TM 50 - temperature transmitter	p 49
TG 100 - temperature transmitter	p 51
TM 100 - temperature transmitter	p 55
TST - thermostats	p 59
TB 50 - standard connection head	p 63
TBBT 50 - for very low temperature application	p 65
TBHT 50 - for very high temperature use	p 67
TM 50 - miniature connection head	p 69
TE 50 - waterproof	p 71
TP 50 - noryl	p 73
THIR 50 - with DIN 43650 head	p 75
TM 12 50 - plug-in head	p 77
TBEI 50 - with interchangeable mountings	p 79
TBRD 50 - with offset fitting	p 83
TBAJ 50 - with ambient tip	p 85
TBC 50 - bent RTD sensor	p 87
TBCT 50/TMCT 50 - for contact duct	p 91
TBB 50 - standard with mounting flange	p 95
TBRC 50 - standard with clamp fitting	p 97
TPGT 50 - for aggressive application	p 99
TPTT 50 - for aggressive application	p 101
Wine application - head or cable probe	p 103
Fermenting room - grip handle PT 100 probe	p 107
Compost - PT 100 probe	p 109

Part 3 : Wire thermocouple

F - with visible welding	p 113
F KI - mineral insulated thermocouple	p 115
SF K/SF KI - thermocouple with cable	p 117
SFR K - with fitting of fixation	p 119
SFC K - with angled or lined inconel thermocouple	p 121
SFP K - penetration probe	p 125
SFPP K - with handle to prick	p 127
SFPPT K - with T handle	p 131
SFAI K - with magnetic mounting	p 133
SFO K - for measurement of contact by eyelet	p 135
SFCT K - with cable for pipe	p 137
SFCS K - for surface contact	p 139
SFBA K - with bayonet	p 141
SFCSM K - for moving parts	p 143















Part 4 : Head thermocouple

TB K - with aluminium connection head	p 147
TBEI K - with interchangeable probe system	p 149
TBAJ K - with ambient tip	p 151
TBRD K - with offset fitting	p 153
TBC K - with aluminium connection head	p 155
TBCT K/TMCT K - for contact duct	p 159
TBAL K - for high temperature	p 163
TBAL S - for high temperature	p 164
TBAR K - with heat-resisting steel protector	p 165
TBB K - with mounting flange	p 167
TBRC K - with clamp fitting	p 169
Fermenting room - grip handle probe	p 171
Compost - thermocouple probe	p 173

Part 5 : Accessories

PT 100/PT 1000/CTN	Thermocouple
Watertight connections p 177	Watertight connections p 185
Thermowells .....p 178	Thermowells .....p 186
Connectors .....p 179	Fixations .....p 187
Bases .....p 179	Connectors .....p 187
Fixations .....p 180	Bases & panels .....p 190
Cords & cables .....p 181	Cords & cables .....p 192
Converters .....p 183	Converters .....p 193
Miscellaneous .....p 184	Miscellaneous .....p 194

Part 1 : Wire resistive element

	F 50 output DIN connector.....	p 5
	F 50 I with collapsible contact tip.....	p 7
	SF 50 temperature probe with cable.....	p 9
	SF 50 I with collapsible contact tip.....	p 11
	SFBT 50 for very low temperature.....	p 13
	SFR 50 with fixing fitting.....	p 15
	SFC 50 angled resistive element.....	p 17
	SFP 50 penetration probe.....	p 21
	SFPP 50 with needle ended tip.....	p 23
	SFPPT 50 T handle temperature probe.....	p 27
	SFO 50 for contact measurement by eyelet.....	p 29
	SFSC 50 with self adhesive patch.....	p 31
	SFCS 50 surface contact wire.....	p 33
	SFCT 50 for pipe.....	p 35
	SFBA 50 with bayonet.....	p 37
	SFGT 50 for aggressive application.....	p 39

+400°C

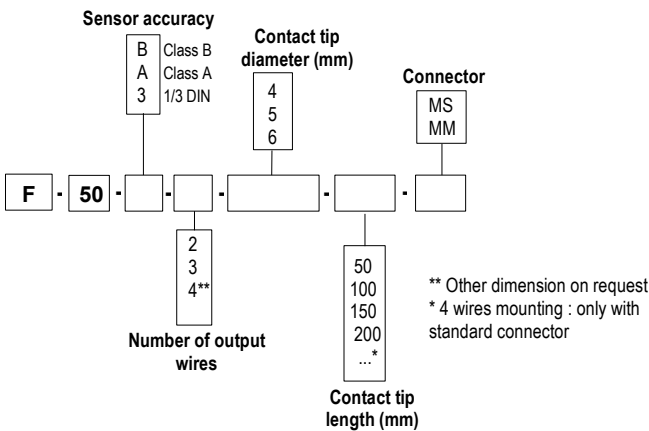


Temperature probe with resistive element and output on DIN connector

F 50 – FD 50

■ **Part numbers**

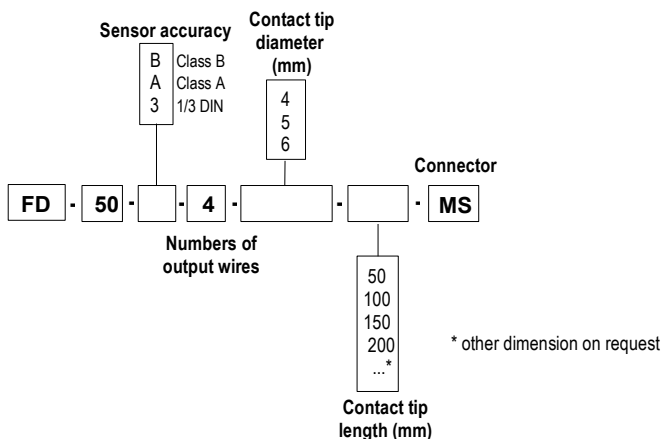
• **F 50**



Example : F50-B-2-4-50-MM

Model : Temperature probe Class B, 2 wires, contact tip diameter 4 mm and 50 mm length with connector type MM. **Measuring range** from -50 to +400 °C.

• **FD 50**



Example : FD50-B-4-4-50-MS

Model : Temperature probe Class B, 4 wires, contact tip diameter 4 mm and 50 mm length with connector type MS. **Measuring range** from -50 to +400 °C.

■ **Probe features**

- Temperature probe mounted on male connector
- Measuring range from **-50°C to +400°C**
- Rigid contact tip

■ **Technical features**

Operating temperature.....from -50°C to+400°C

Accuracy.....See "Tolerances" table

Sensor type.....**PT100 or PT1000** : Class B, Class A, 1/3 DIN as per DIN IEC751

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

Contact tip.....Stainless steel 316 L without welded, rigid

Mounting.....2, 3 or 4 wires for F 50
4 wires for FD 50



4 wires mounting only with standard connector

Connector.....miniature 2 and 3 flat pins in copper
standard 2, 3 and 4 flat pins in copper
temperature max : 200 °C

■ **Tolerances* of Pt100 and Pt1000 probes**

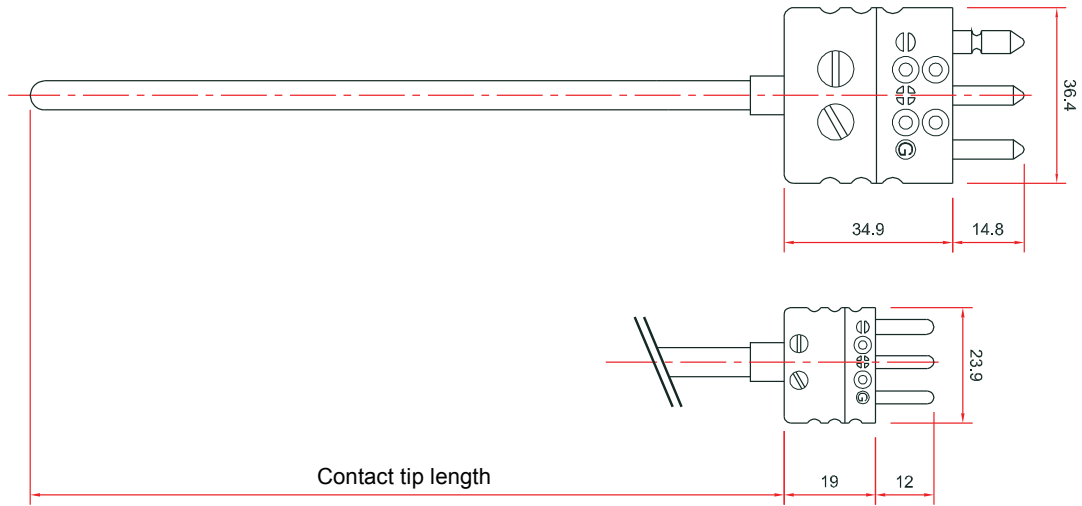
As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

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). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

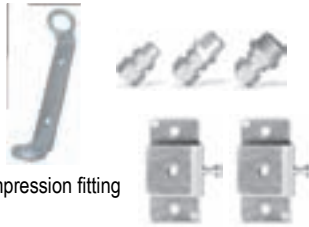
* Performed in laboratory conditions, the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

■ Dimensions



■ Accessories (See data sheet)

- Transmitter output 4-20 mA or 0/10V
- Wall mounting support
- Stainless steel mounting brackets
- 1/4, 1/2 gas screw nut
- Sliding connection
- Teflon or stainless steel ferrule for compression fitting



- Sleeve to weld for food industry (with 1/2" G female)
- Stainless steel junction fitting
- 1/2 gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



+550°C



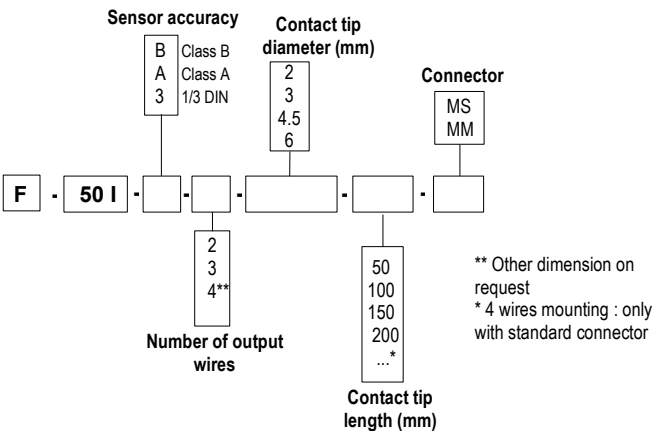
*Temperature probe
at resistive element with collapsible
contact tip and output on
Din connector*

F 50 I – FD 50 I

PT 100

Part numbers

• F 50 I

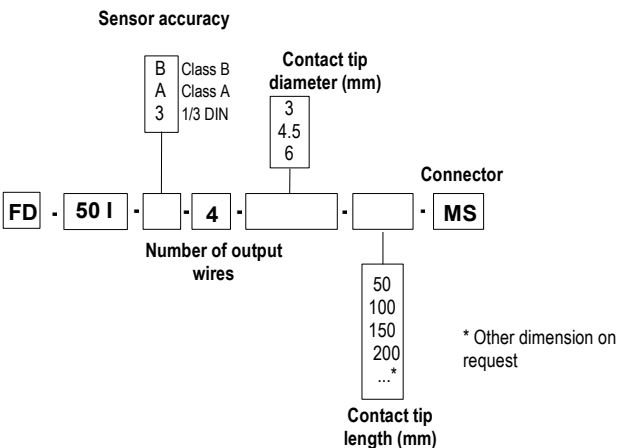


Example : F50I-B-2-3-500-MM

Model : Temperature sensor class B, 2 wires, contact tip of 3 mm of diameter and 500 mm of length with connector type MM.

Measuring range : from -50 to + 550 °C

• FD 50 I



Example : FD50I-B-4-3-500-MS

Model : Temperature sensor class B, 4 wires, contact tip of 3mm of diameter and 500 mm of length with connector type MS.

Measuring range : from -50 to + 550 °C

Probe features

- Temperature sensor mounted on male connector
- Measuring range from **-50°C to +550°C**
- Collapsible contact tip

Technical features

Operating temperature.....from -50°C to +550°C

Accuracy.....See "Tolerances" table

Sensor type.....**PT100 or PT1000** : Class B, Class A, 1/3 DIN as per DIN IEC751

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

Contact tip.....lined collapsible (semi-rigid)

Stainless steel 316 L without welding



Non-collapsible zone on 25 mm at the end of the contact tip

Mounting.....2, 3 or 4 wires for F 50 I

4 wires for FD 50 I



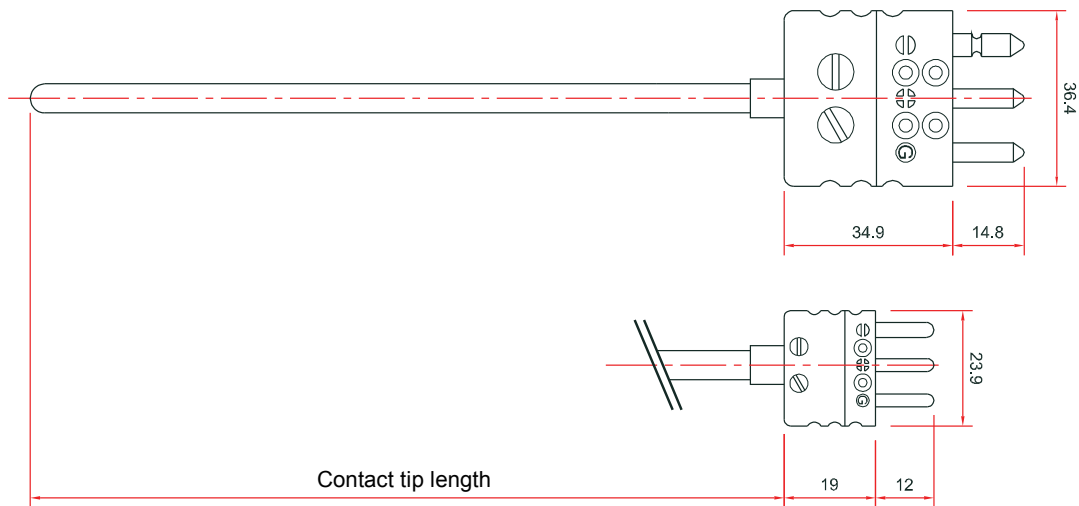
4 wires mounting only with a standard connector

Connector.....miniature 2 and 3 copper flat pins

standard 2, 3 and 4 copper round pins

Temperature max. : 200 °C

Dimensions



Tolerances* of Pt100 and Pt1000 probes

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

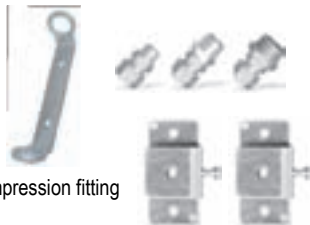
Temp °C	Tolerances					
	Class B		Class A		1/3 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-100	0.8	0.32	0.35	0.14	0.27	0.11
-50	0.55	0.22	0.25	0.1	0.19	0.08
0	0.3	0.12	0.15	0.06	0.1	0.04
100	0.8	0.3	0.35	0.13	0.27	0.1
200	1.3	0.48	0.55	0.2	0.44	0.16
300	1.8	0.64	0.75	0.27	0.6	0.21
400	2.3	0.79	0.95	0.33	0.77	0.26

Resistance values for Pt1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

* 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.

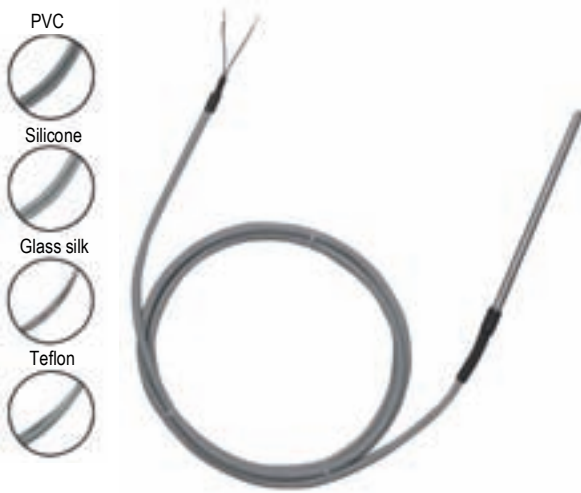
Accessories (See data sheet)

- Transmitter output 4-20 mA or 0/10V
- Wall mounting support
- Stainless steel mounting brackets
- 1/4, 1/2 gas screw nut
- Sliding connection
- Teflon or stainless steel ferrule for compression fitting



- Sleeve to weld for food industry (with 1/2" G female)
- Stainless steel junction fitting
- 1/2 gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell





Temperature probe with cable

SF 50 / SFD 50

Probe features

- Stainless steel temperature probes with conductive cable.
- Measuring range (according to cable)
from **-50°C to +400°C (PT100 and PT1000)**
from **-20°C to +120°C (CTN)**.
- 2 wires for NTC and PT1000 outputs,
- 3 or 4 wires for PT100 output.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

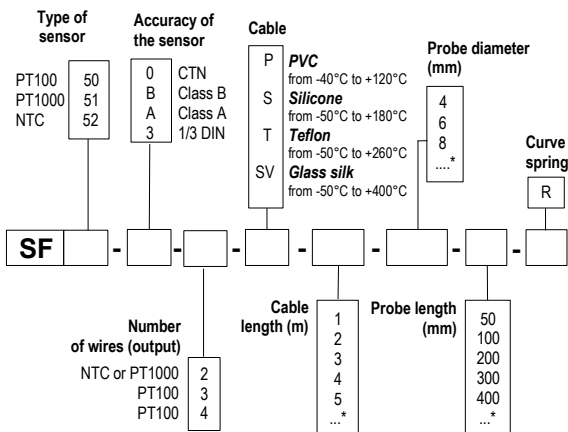
Transmitter features

- Working temperature**.....from -50°C to +400°C (PT100 and PT1000)
(According to cable) from -20°C to +120°C (NTC)
- Accuracy ***.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : class B, class A
and 1/10 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ Nominal
Beta value B25/85 = 3.695K ±1%
- Storage temperature**.....from -20°C to +80°C
- Working temperature of the cable**
PVC : from -40°C to +120°C
Silicone : from -50°C to +180°C
Teflon (PFA) : from -50°C to +260°C
Glass silk with stainless steel sheet : from -50°C to +400°C
- Probe**.....316 L stainless steel, watertight crimping with heat shrink tubing. (Except glass silk cable with standard mounting on stainless steel duct)

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

Part numbers

• SF 50 – Single pair probe -

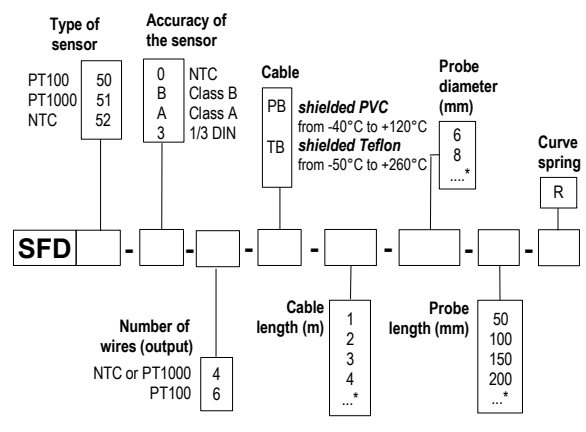


* Other length available on request

Example : SF51-B-2-P-1-4-100

Model : Temperature probe PT1000 Class B, 2 wires, PVC cable of 1 m length. Stainless steel protective sheath 4 mm Ø, length 100 mm without curve spring. Measuring range from -40 to +120°C.

• SFD 50 – Multipair Probe -



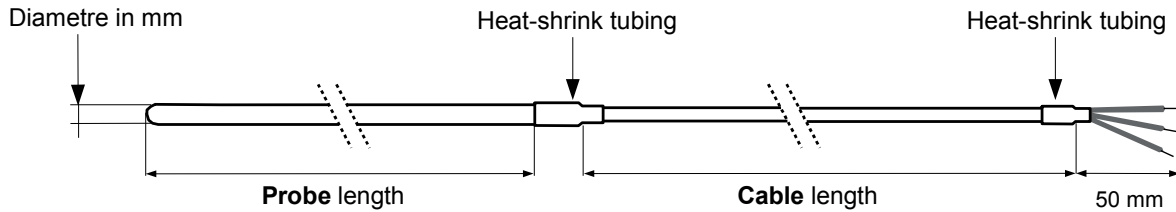
* Other length available on request

Example : SFD51-B-4-PB-1-6-100

Model : Temperature probe PT1000 Class B, 4 wires, shielded PVC cable of 1 m length. Stainless steel protective sheath 4 mm Ø, length 100 mm without curve spring. Measuring range from -40 to +120°C.

PT 100

■ Probes dimensions



■ Tolerance of PT100 and PT1000 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

■ Tolerances of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

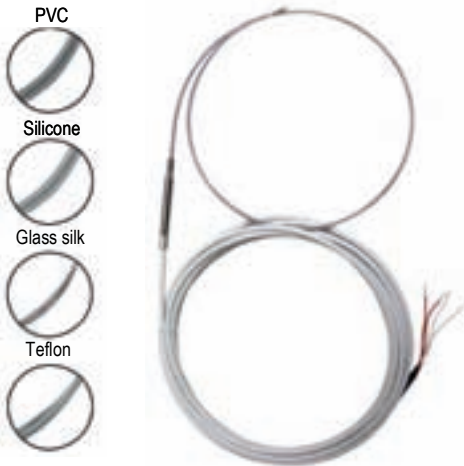
■ Accessories (See Datasheet)

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



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



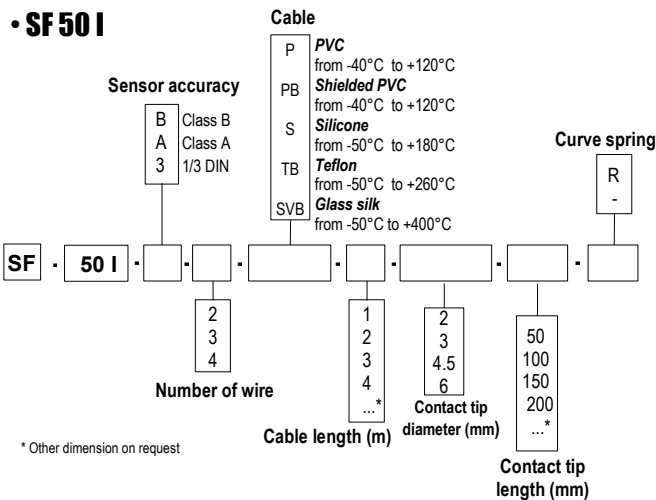


**Cable temperature probe
at resistive element and collapsible
contact tip**

SF 50 I – SFD 50 I

Part numbers

SF 50 I

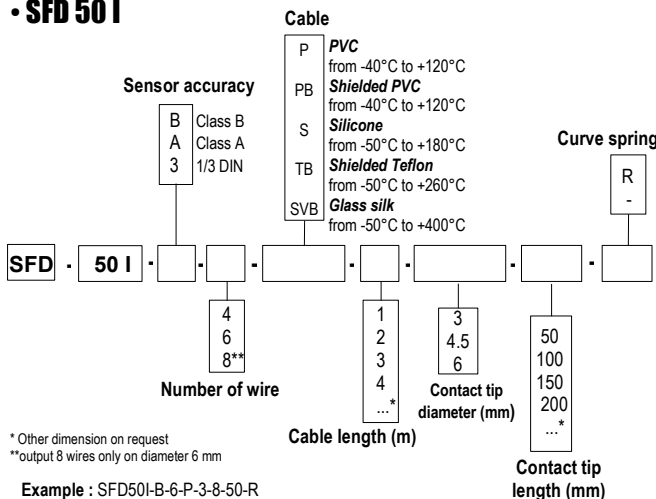


* Other dimension on request

Example : SF50I-B-4-P-3-2-50-R

Model : PT 100 temperature sensor class B, 4 wires, PVC cable of 3 m length. Contact tip of 2 mm diameter and 50 mm of length with curve spring.
Measuring range from -50 to +550 °C

SFD 50 I



* Other dimension on request

**output 8 wires only on diameter 6 mm

Example : SFD50I-B-6-P-3-8-50-R

Model : PT 100 temperature sensor class B, 6 wires, PVC cable of 3 m length. Contact tip of 8 mm diameter and 50 mm length with curve spring.
Measuring range from -50 to +550 °C


Probe features

- Temperature probe mounted on conductor cable with contact tip
- Measuring range from **-50°C to +550°C**
- Output 2, 3 or 4 wires for SF 50 I
4, 6 or 8 wires for SFD 50 I

Technical features

- Operating temperature.....from -50°C to +550°C
- Accuracy.....See "Tolerances" table
- Sensor type.....**PT100** : Class B, Class A and 1/3 DIN
As per DIN IEC751
- Storage temperature.....from -20°C to +80°C

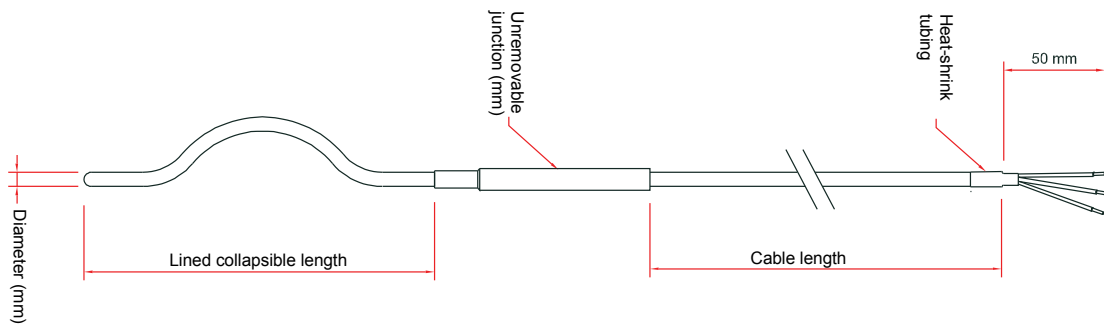
Contact tip.....lined collapsible (semi-rigid)
Stainless steel 316 L without welding



Non-collapsible zone on 25 mm at the end of the contact tip

- Junction.....5 mm diameter and 50 mm length in standard temperature max. : 150 °C
Waterproof junction on request
- Cable.....**PVC and shielded PVC** : from -40 to +150 °C
Silicone : from -50 to +180 °C
Teflon : from -50 to +250 °C
Glass silk : from -50 to +400 °C

Dimensions



Tolerance* of PT100 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

*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.

Accessories (See data sheet)

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



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





**RTD sensor with cable
for very low temperature**

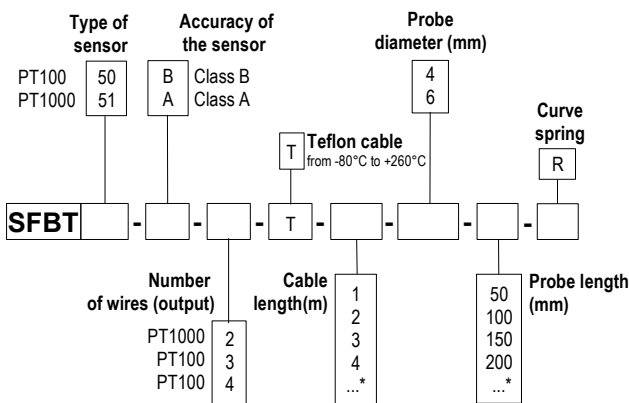
SFBT 50 / SFBTD 50

Probe features

- Stainless steel temperature probes with conductive cable.
- Measuring range (according to cable) :
from **-80°C to +50°C (PT100 and PT1000)**
- 2 wires (SFBT) or 4 wires (SFBTD) for PT1000
- 3 - 4 wires (SFBT) or 6 wires (SFBTD) for PT100.

Part numbers

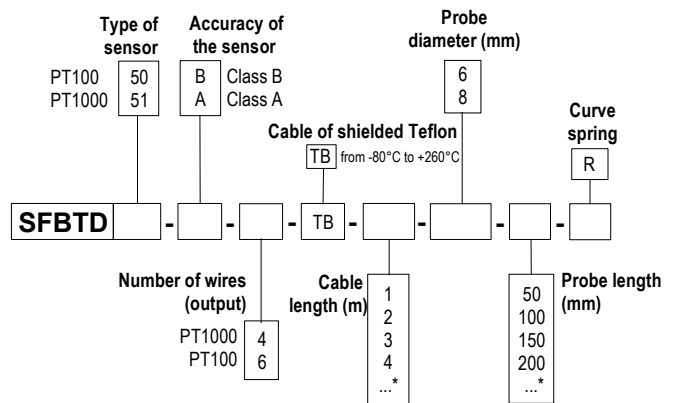
• SFBT 50 - Single pair -



* Other lengths available on request

Example : SFBT51-B-2-T-1-4-100-12
Model : Temperature probe PT1000 Class B, 2 wires, Teflon cable of 1 m length. Stainless steel protective sheath 4 mm Ø, length 100 mm, without curve spring. Measuring range from -80 to +50°C.

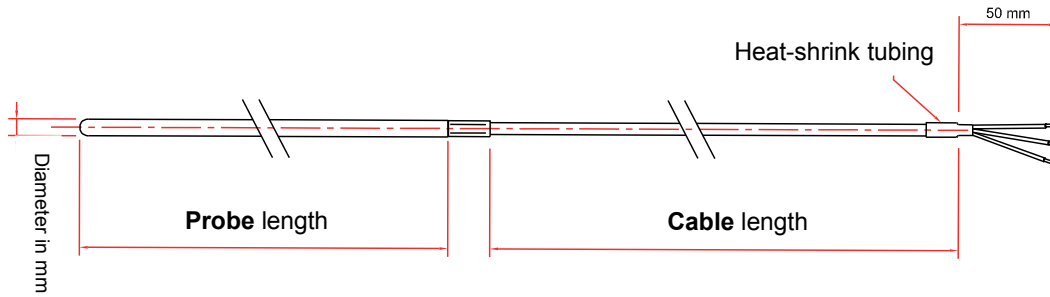
• SFBTD 50 - Multipair -



* Other lengths available on request

Example : SFBTD51-B-4-TB-1-6-100
Model : Temperature probe PT1000 Classe B, 4 wires, cable of 1m length in shielded Teflon. Stainless steel protective sheath 6 mm Ø, length 100 mm, without curve spring. Measuring range from -80 to +50°C.

Dimensions



Tolerance of PT100 and PT1000 probes.

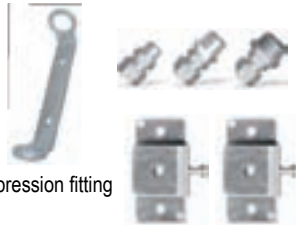
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

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 0/10V
- Wall fixing support
- Stainless steel mounting brackets
- ¼" or ½" Gas screw nut
- Stainless steel sliding connection
- Teflon or stainless steel ferrule for compression fitting



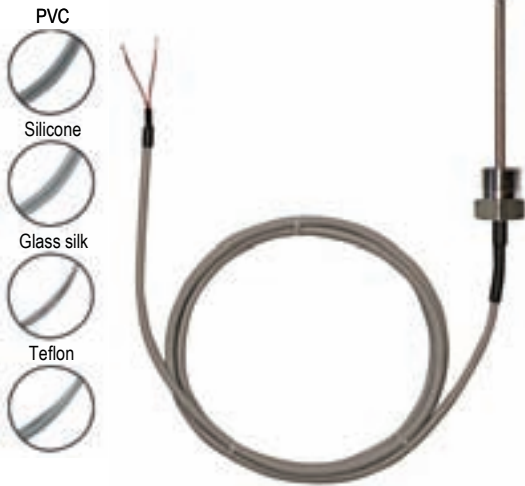
- Sleeve to weld for food industry
- Stainless steel union fitting
- ½" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



Temperature probe with cable at resistive element with fixing fitting



SFR 50 / SFRD 50



Probe features

- Temperature probe mounted on conductive cable with stainless steel contact tip and fitting.
- Measuring range (according to cable):
from -50°C to +400°C (PT100 and PT1000).
from -20°C to +120°C (NTC).
- 2 wires (SFR) or 4 wires (SFRD) for NTC and PT1000 outputs
- 3 - 4 wires (SFR) or 6 wires (SFRD) for PT100 output.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

Technical features

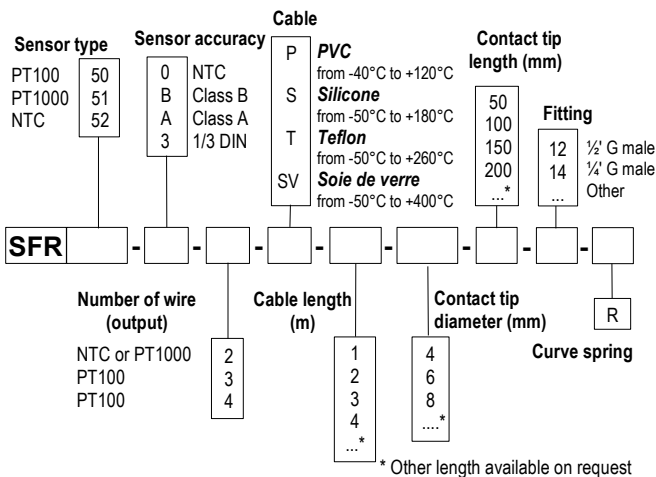
- Operating temperature**.....from -50°C to +400°C (PT100 and PT1000)
(According to cable) from -20°C to +120°C (NTC)
- Accuracy** *.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Sensor type**.....**PT100 or PT1000** : class B, class A and 1/10 DIN as per IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ Nominal
 Beta value B25/85 = 3,695K ±1%
- Storage temperature**.....from -20°C to +80°C
- Operating temperature of cable**.....**PVC** : from -40°C to +120°C
Silicone : from -50°C to +180°C
Teflon (PFA) : from -50°C to +260°C (Shielded is optional)
Glass silk with stainless steel sheet : from -50°C to +400°C
- Compression fitting**.....inox 316 L
- Thread**.....1/4" or 1/2" Gas screw nut
- Contact tip**.....316 L stain less steel, watertight crimping with heat shrink tubing. (Except glass silk cable with Standard mounting on stainless steel duct)
 Optional : curve spring

No 4-wire mounting for 4mm Ø contact tip

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

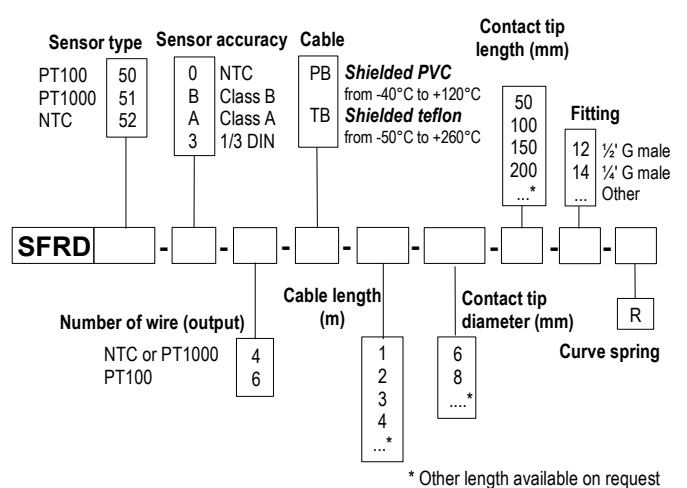
Part numbers

SFR 50 – Simple pair probe -



Example : SFR51-B-2-P-1-4-100-12
 Model : PT1000 temperature probe, Class B, 2 wires, PVC cable of 1m length. Stainless steel contact tip of 4 mm Ø, length 100 mm, fitting process with 1/2" G thread, without curve spring. **Measuring range from -40 to +120°C.**

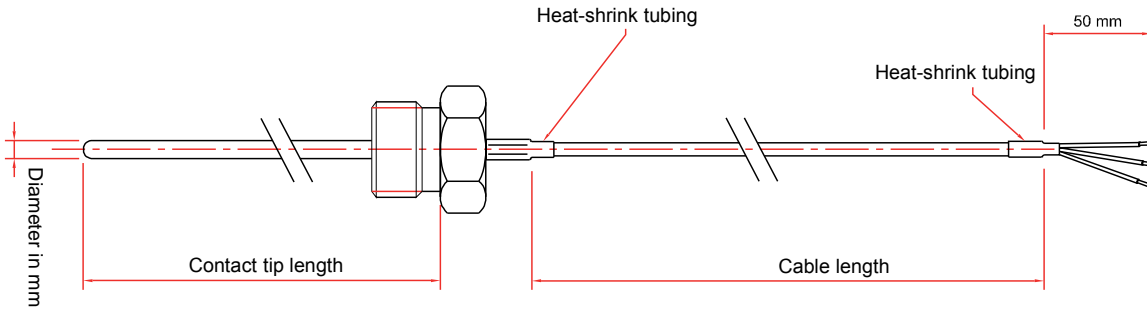
SFRD 50 – Multipair probe



Example : SFRD51-B-4-PB-1-6-100-12
 Model : PT1000 temperature probe, Class B, 4 wires, shielded PVC cable of 1m length. Stainless steel contact tip of 6 mm Ø, length 100 mm, fitting process with 1/2" G thread, without curve spring. **Measuring range from -40 to +120°C.**

PT 100

Probe dimensions



Tolerances* of PT100 and PT1000 probes.

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

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 PT1000 Class B $\pm 0,3^{\circ}\text{C} \rightarrow \pm 1,2 \Omega$

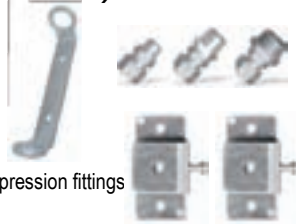
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °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.

Accessories (See data sheet)

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



- Sleeve to weld for food industry (avec manchon ½" G femelle à souder)
- Stainless steel junction fitting
- ½" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



Cable temperature probe at angled resistive element with or without fitting

Type SFC 50

SFC 50 - SFCD 50 – SFCR 50 – SFCRD 50



■ **General features**

- Temperature probe mounted on conductive cables with angled stainless steel contact tip, with or without stainless steel fitting
- Measuring ranges (according to cable) :
from -50°C to +400°C (PT100 and PT1000).
from -20°C to +120°C (NTC).
- **2 wires output (SFC, SFCR) or 4 wires output (SFCD, SFCRD) for NTC and PT1000.**
- **3-4 wires output (SFC, SFCR) or 6 wires output (SFCD, SFCRD) for PT100.**
- For other resistance types (PT25, PT50, PT500, PT200 or NI), please contact us.

■ **Technical features**

Operating temperature	from -50°C to +400°C (PT100 and PT1000)
(according to cable)	from -20°C to +120°C (NTC)
Accuracy *	PT100 or PT1000 : see "Tolerances" table
	NTC : see "Tolerances" table
Sensor type	PT100 or PT1000 : class B, class A, 1/3 DIN, as per DIN IEC751
	NTC : resistance at 25°C, R ₂₅ = 10KΩ Nominal
	Beta value B25/85 = 3,695K ±1%
Storage temperature	-20°C to +80°C
Operating temperature of cable	PVC : from -40°C to +120°C (Shielded on request)
	Silicone : from -50°C to +180°C
	Teflon (PFA) : from -50°C to +260°C (Shielded on request)
	Silk glass with stainless steel braid : from -50°C to +400°C
Probe and connection	316 L stainless steel
	Bent at 90° (other on request)
	Watertight crimping with heat-shrink tubing (except for silk glass with standard mounting on stainless steel duct)
	Curve spring available as option
Connection thread	½' or ¼' gas
Connection mounting	On L2 length (see drawing) : 12 or 14 corresponding to ½' G and ¼' G connections
	On L1 length (see drawing) : 12L1 or 14L1 corresponding to ½' G and ¼' G connections

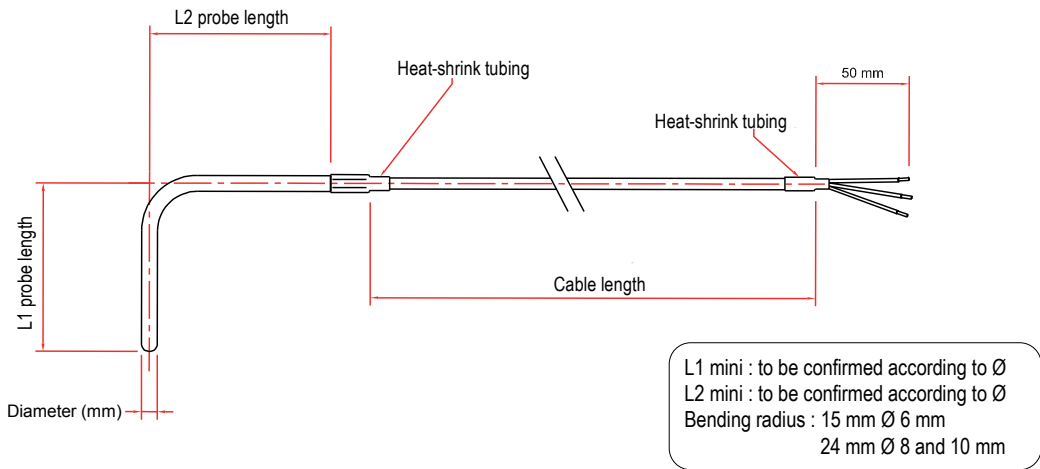
⚠ For Ø 4mm, the 4 wires mounting is not available

SFC 50 & SFCD 50

Angled cable probe
in simple pair or multipair mounting

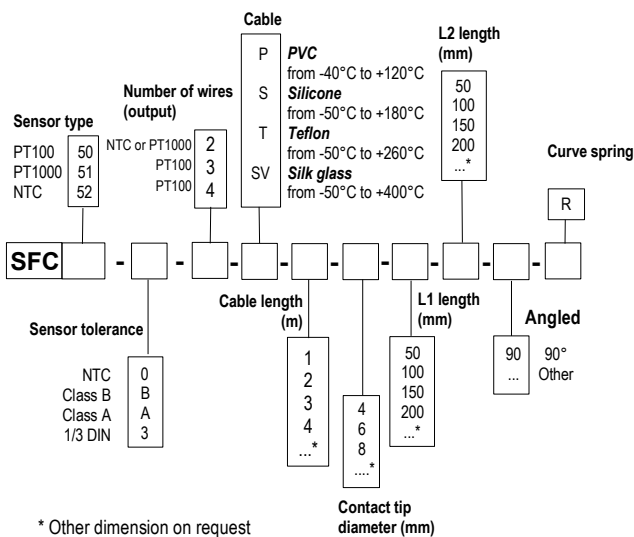


Dimensions



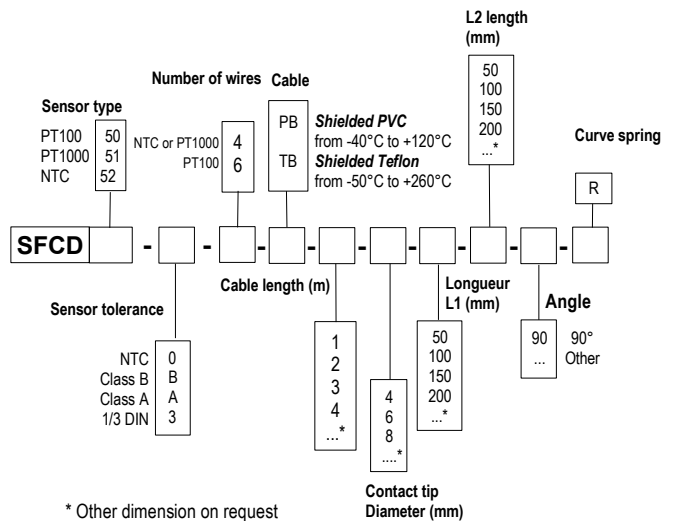
Part numbers

• SFC 50 – Single pair probe



Example : SFC-51-B-2-P-1-4-100-100-90-R
Model : PT1000 temperature probe class B, 2 wires, PVC cable of 1m length. Stainless steel contact tip Ø 4 mm angled at 90° and L1 and L2 lengths of 100 mm, with curve spring. **Measuring range from -40 to +120°C.**

• SFCD 50 – Multipair probe -



Example : SFCD-51-B-4-PB-1-6-100-100-90-R
Model : PT1000 temperature probe class B, 4 wires, shielded PVC cable of 1m length. Stainless steel contact tip Ø 6 mm angled at 90° and L1 and L2 lengths of 100 mm, with curve spring. **Measuring range from -40 to +120°C.**

SFCR 50 & SFCRD 50

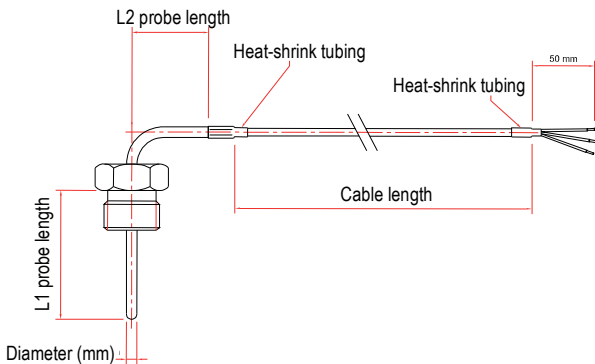
Angled cable probe with fitting
in simple pair or multipair mounting



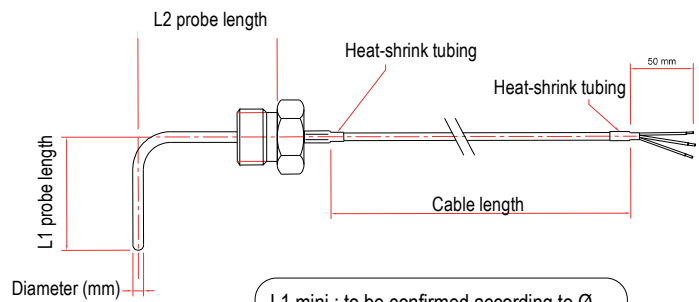
PT 100

Dimensions

• With fitting on L1



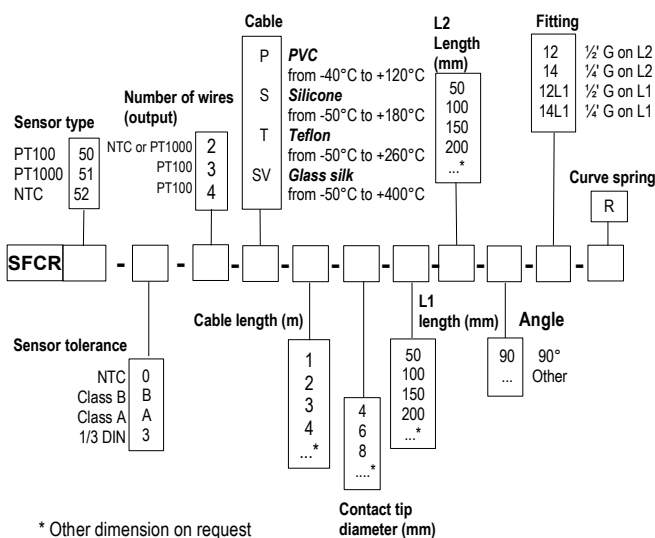
• With fitting on L2



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

Part numbers

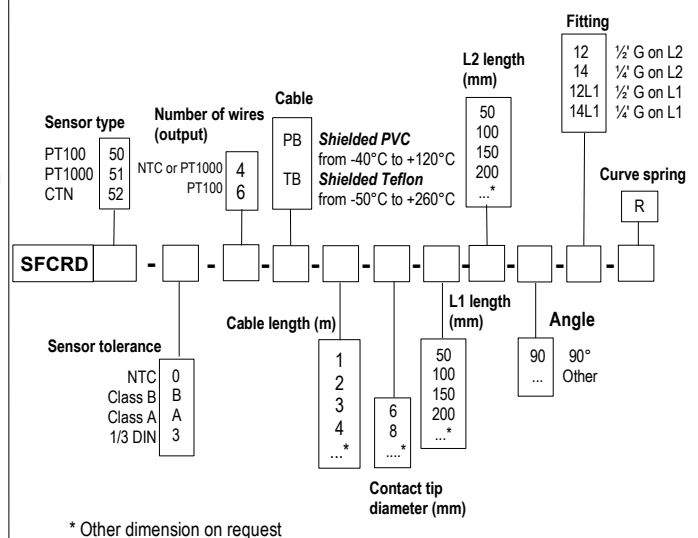
• SFCR 50 - Single pair probe -



Example : SFCR51-B-2-P-1-4-100-100-90-12-R

Model : PT1000 temperature probe class B, 2 wires, PVC cable of 1m length. Stainless steel contact tip Ø 4 mm angled at 90° and L1 and L2 lengths of 100 mm, with thread fitting ½ G fixed on L2, and with curve spring. **Measuring range from -40 to +120°C.**

• SFCRD 50 - Multipair probe -



Example : SFCRD51-B-4-PB-1-6-100-100-90-12-R

Model : PT1000 temperature probe class B, 4 wires, shielded PVC cable of 1m length. Stainless steel contact tip Ø 6 mm angled at 90° and L1 and L2 lengths of 100 mm, with thread fitting ½ G fixed on L2, and with curve spring. **Measuring range from -40 to +120°C.**

Tolerances* of Pt100 and Pt1000 probes

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms

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). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

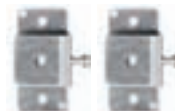
Tolerances* of NTC probes

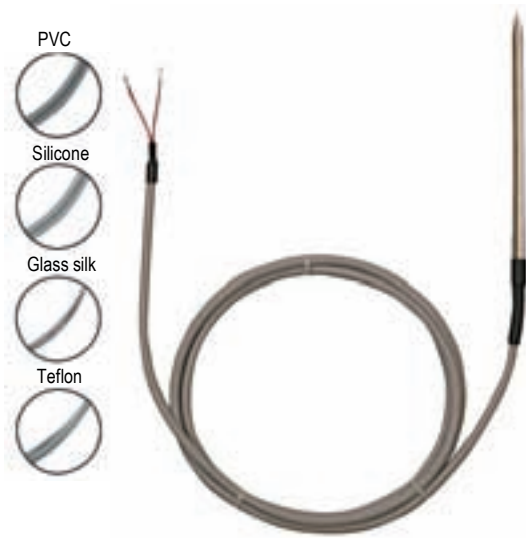
Measuring range °C	Tolerances °C
From -20°C to 0°C	± 0,5°C
From 0°C to +70°C	± 0,2 °C
From +70°C to +100°C	± 0,5 °C

* 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.

Accessories (see related data sheet)

- Transmitter output 4-20 mA or 0/10V
- Wall mounting support
- Stainless steel mounting brackets
- 1/4, 1/2 gas screw nut
- Sliding connection
- Teflon or stainless steel ferrule for compression fitting
- Sleeve to weld for food industry (with 1/2" G female)
- Stainless steel junction fitting
- 1/2 gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell





Penetration probe with cable

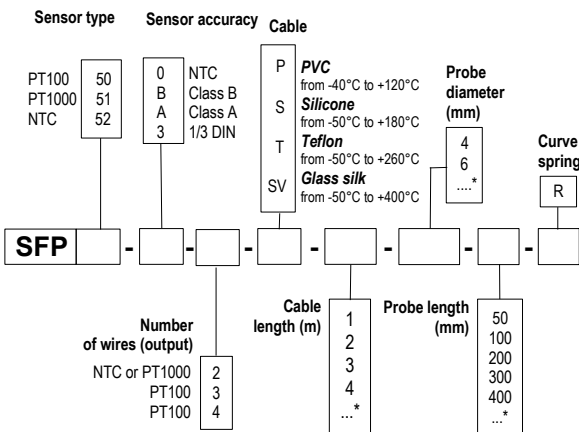
SFP 50 / SFPD 50

Probe features

- Stainless steel temperature probes with conductive cable and penetration sheath.
- Measuring range (according to cable)
from **-50°C to +400°C (PT100 and PT1000)**.
from **-20°C to +120°C (NTC)**.
- 2 wires for NTC and PT1000 outputs,
3 or 4 wires for PT100 output.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers

• SFP 50 – Single pair probe -

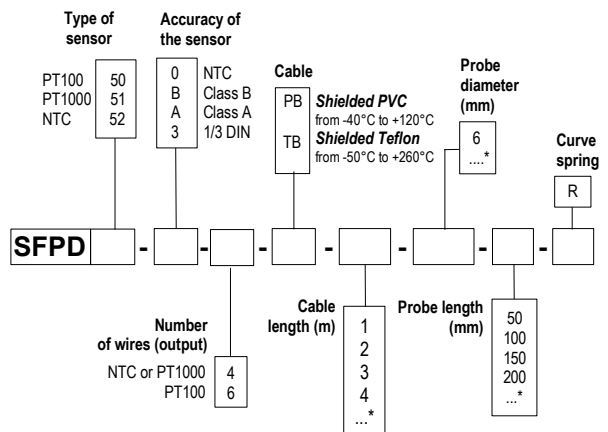


* Other length available on request

Example : SFP51-B-2-P-1-4-100

Model : Pt 1000 temperature sensor, Class B, 2 wires, PVC cable of 1 m length. Stainless steel protective sheath 4 mm Ø, length 100 mm, without curve spring. Measuring range from -40 to +120°C.

• SFPD 50 – Multipair Probe -

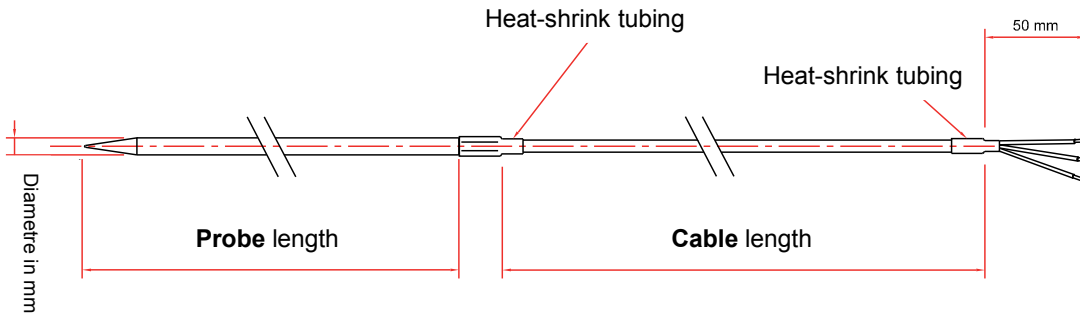


* Other length available on request

Example : SFPD51-B-4-PB-1-6-100

Model : Temperature sensor PT1000 Class B, 4 wires, shielded PVC cable of 1 m length. Stainless steel protective sheath 6 mm Ø, length 100 mm, without curve spring. Measuring range from -40 to +120°C.

■ Probes dimensions



■ Tolerance of PT100 and PT1000 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

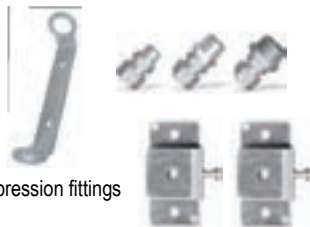
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

■ Tolerances of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

■ Accessories (See Datasheet)

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



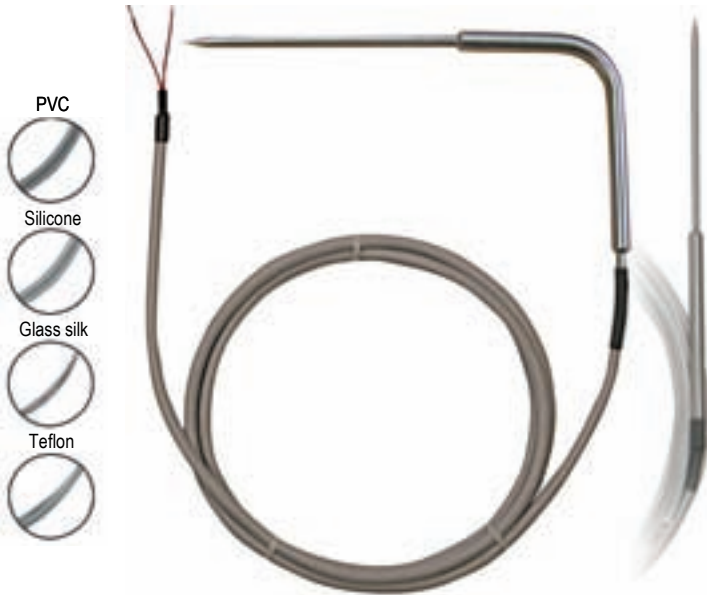
*Temperature probe with needle ended tip
at resistive element*



PT 100

Type SFPP 50

**SFPP 50 - SFPPD 50 /
SFPPC 50 - SFPPCD 50**

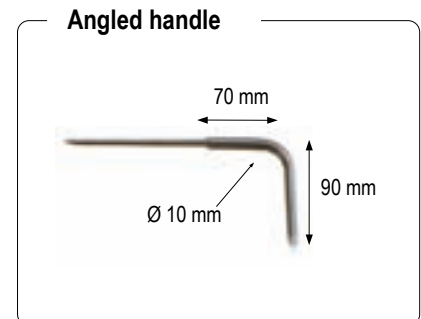
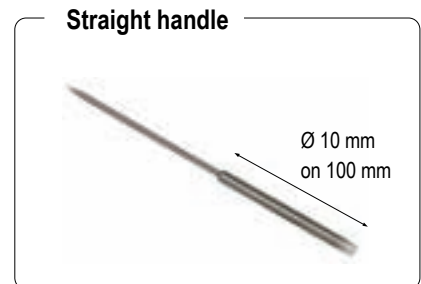


■ **Probe features**

- Penetration temperature probe mounted on straight or angled handle.
- Measuring range (according to cable) :
from **-50°C to +400°C** (PT100 et PT1000).
from **-20°C to +120°C** (NTC).
- **2 wires output** (SFPP, SFPPC) or
4 wires output (SFPPD, SFPPCD) for **NTC** and **PT1000**
- **3 - 4 wires output** (SFPP, SFPPC) or
6 wires output (SFPPD, SFPPCD) for **PT100**.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

■ **Transmitter features**

Working temperature	from -50°C to +400°C (PT100 and PT1000)
<i>(According to cable)</i>	from -20°C and +120°C (NTC)
Accuracy *	PT100 or PT1000 : see "Tolerances" table
	NTC : see "Tolerances" table
Sensor type	PT100 or PT1000 : class B, class A, 1/3 DIN
	as per DIN IEC751
	NTC : resistance at 25°C, $R_{25} = 10K\Omega$ Nominal
	Beta value B25/85 = 3,695K ±1%
Storage temperature	from -20°C to +80°C
Working temperature of the cable	Shielded PVC : from -40°C to +120°C
	Silicone : from -50°C to +180°C
	Shielded Teflon (PFA) : from -50°C to +260°C
	Glass silk with stainless steel sheet : from -50°C to +400°C
Mounting of output cable	Cable or stainless steel flexible 7 mm Ø output.
	Waterproof flexible optional on demand
	Curve spring optional (except stainless steel flexible output)
Contact tip	4.5 or 6 mm Ø in 316 L stainless steel
	Needle ended tip
	Handle : Straight 10 mm Ø length 100 mm
	Angled at 90° length 90 mm
	Other on request.



Tightness is optional for use in wet or submerged places

SFPP 50 & SFPPD 50

Tapping probe with cable and handle in simple pair or multipair assembly

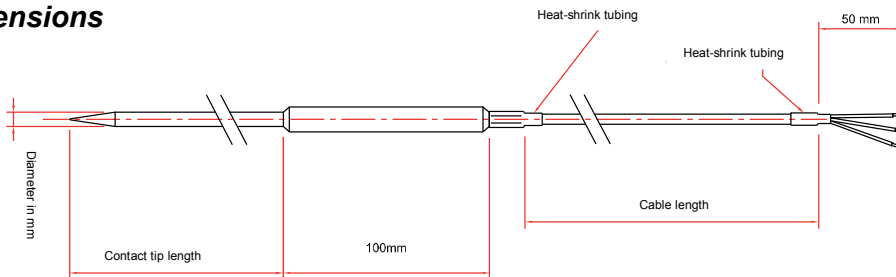
Straight handle probe on cable



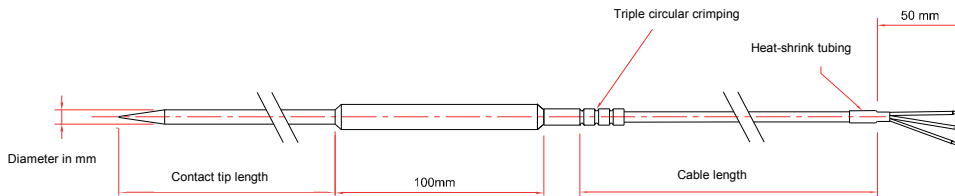
Straight handle probe on flexible



Probe dimensions



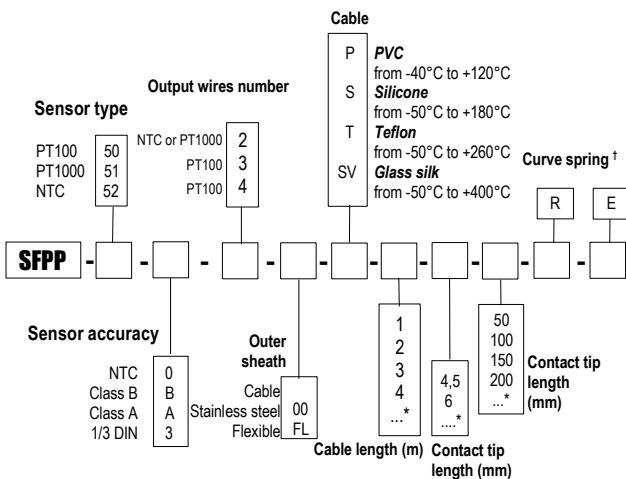
Optional : waterproof



Part numbers

Straight handle probes are available with **simple pair or multipair electrical assembly** :

Single pair probe – Ref. SFPP 50

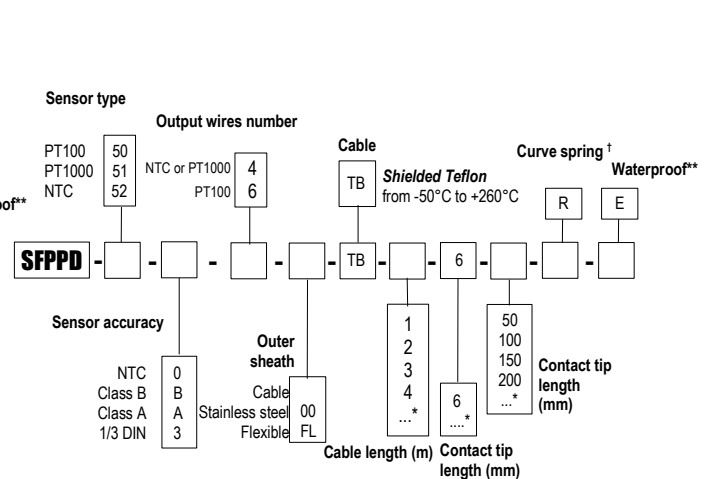


* Other length available on request
 † No curve spring on flexible outlet (FL)
 ** E for submerged use in compliance with rules of use

Example : SFPP51-B-2-00-P-1-45-100

Model : PT1000 temperature probe Class B, 2 wires, outer sheath in PVC cable of 1m length. Stainless steel contact tip Ø 4,5 mm tapping with right handle, length 100 mm, without curve spring. **Measuring range from -40 to +120°C.**

Multipair Probe – Ref. SFPPD 50



* Other length available on request
 † No curve spring on flexible outlet (FL)
 ** E for submerged use in compliance with rules of use

Example : SFPPD51-B-4-00-TB-1-6-100

Model : PT1000 temperature probe, Class B, 4 wires multipair mounting, outer sheath in shielded cable Teflon of 1m length. Stainless steel contact tip 6 mm Ø tapping with right handle, length 100 mm, without curve spring. **Measuring range from -50 to +260°C.**

SFPPC 50 & SFPPCD 50

Angled handle tapping probe with cable
in simple pair or multipair assembly

Angled handle probe on cable

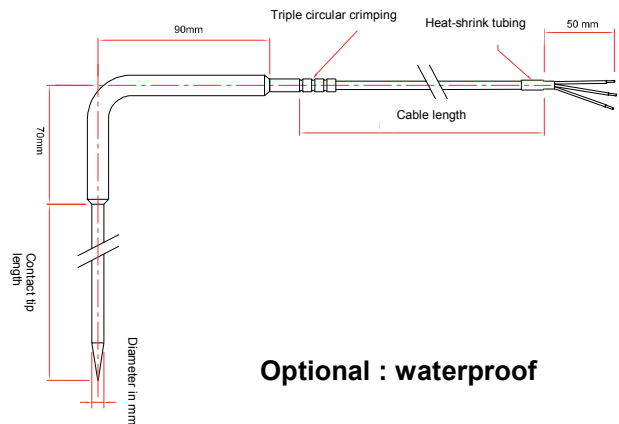
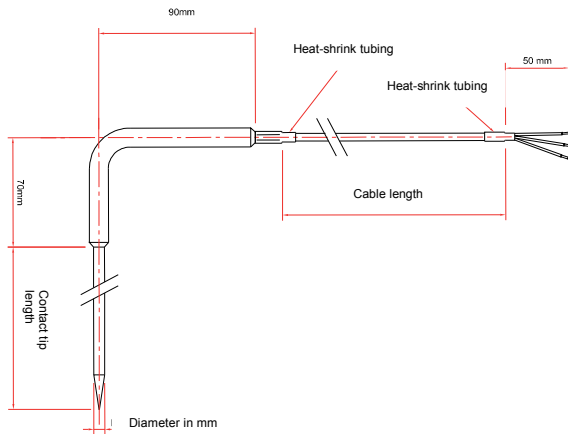


Angled handle probe on flexible



PT 100

Dimensions probe

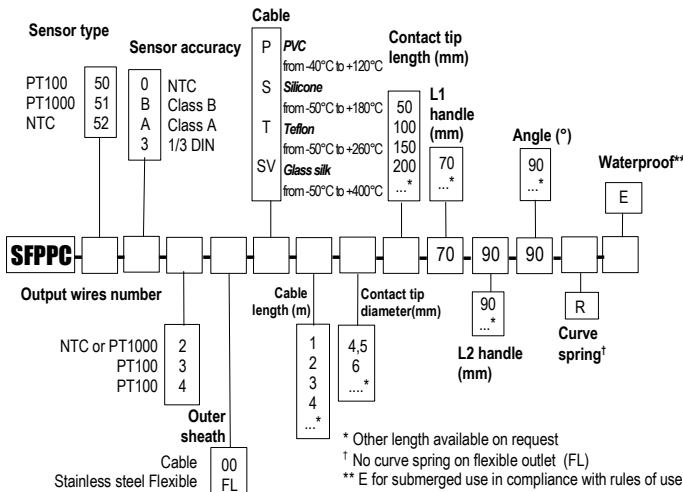


Optional : waterproof

Part numbers

Angled handle probes are available with simple pair or multipair electrical assembly :

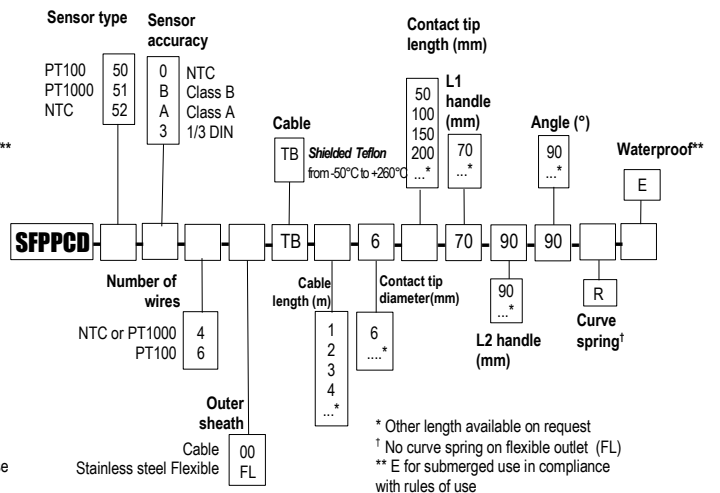
Single pair probe – Ref. SFPPC 50



Example : SFPPC51-B-2-00-P-1-45-100-70-90-90

Model : PT1000 temperature probe Class B, 2 wires, outer sheath in PVC cable of 1m length . Stainless steel contact tip Ø 4,5 mm tapping with angled handle, L1 length 70mm and L2 length 90 mm, angled handle of 90°, without curve spring. **Measuring range from -40 to +120°C.**

Multipair Probe – Ref. SFPPCD 50



Example : SFPPCD51-B-4-00-TB-1-6-100-70-90-90

Model : PT1000 temperature probe, Class B, 4 wires, outer sheath in cable shielded Teflon of 1m length . Stainless steel contact tip Ø 6 mm tapping with angled handle of L1 length of 70mm and L2 length of 90 mm, angled handle of 90°, without curve spring. **Measuring range from -50 to +260°C.**

Tolerance of PT100 and PT1000 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

*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.

Tolerances of NTC probes

Measuring range °C	Tolerances °C
From -20°C to 0°C	± 0,5°C
From 0°C to +70°C	± 0,2 °C
From +70°C to +100°C	± 0,5 °C

Accessories (See data sheet)

- Transmitter output 4/20 mA or 0/10V
- Wall fixing support
- Stainless steel mounting brackets
- 1/4 " or 1/2" Gas screw nut
- Compression fitting
- Teflon or stainless steel ferrule for compression fittings
- Raccord de fixation alimentaire
- Stainless steel union fitting
- 1/2" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



T handle temperature probe with cable at resistive element

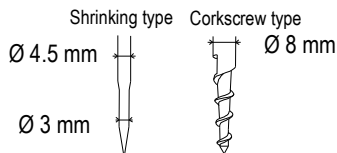
SFPPT 50 / SFPPTD 50



Probe features

- Temperature probe à piquer mounted on T handle.
- Measuring ranges (according to cable):
 from **-50°C to +400°C (PT100 and PT1000)**
 from **-20°C to +120°C (CTN)**.
- 2-wire output (SFPPT) or
 4-wire output (SFPPTD) for NTC and PT1000
- 3-4 wire output (SFPPT) or
 6-wire output (SFPPTD) for PT100.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

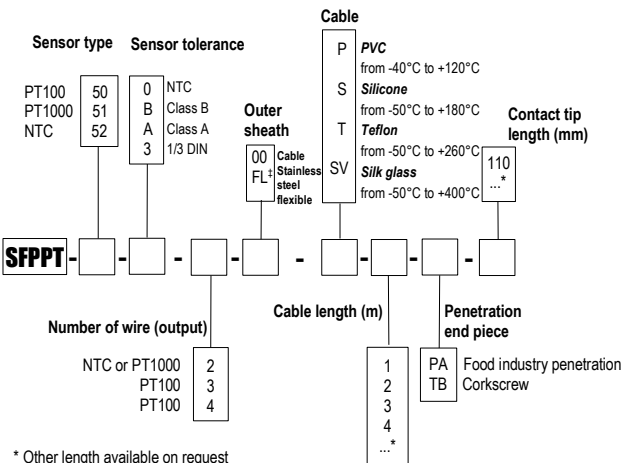
Penetration end piece



Part numbers

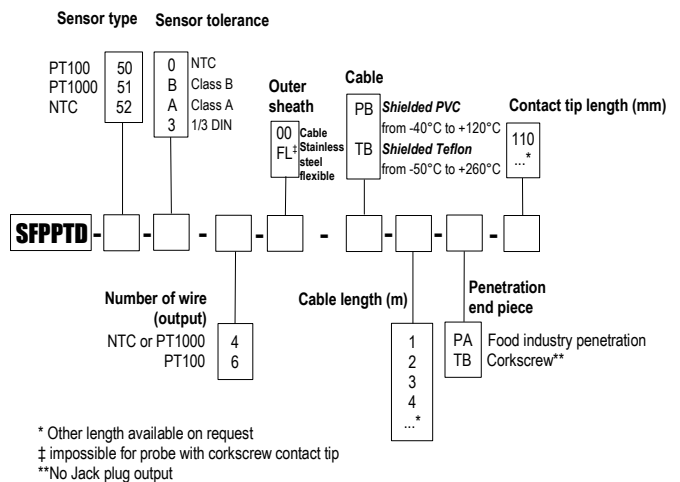
T handle probes are available with **simple pair or multipair electrical assembly** :

• Single pair probe – Ref. SFPPT 50



Example : SFPPT50-B-3-00-P-2-PA-110
 Model : PT100 temperature probe, Class B, 3 wires, outer sheath in PVC cable of length 2 m. Stainless steel contact tip 4,5 mm Ø for food industry penetration of length 110 mm with shrinking type penetration end piece. **Measuring range from -40 to +120°C.**

• Multipair probe – Ref. SFPPTD 50

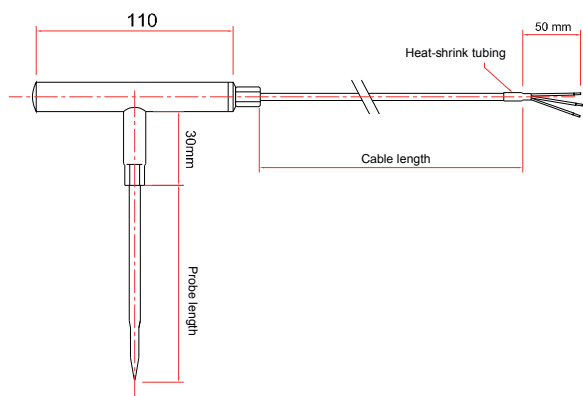


Example : SFPPTD50-A-6-00-TB-2-PA-110
 Model : PT100 temperature probe, Class A, multipair assembly 6 wires, outer sheath in shielded Teflon cable of length 2m. Stainless steel contact tip 4,5 mm Ø for food industry penetration of length 110 mm with shrinking type penetration end piece. **Measuring range from -50 to +260°C.**

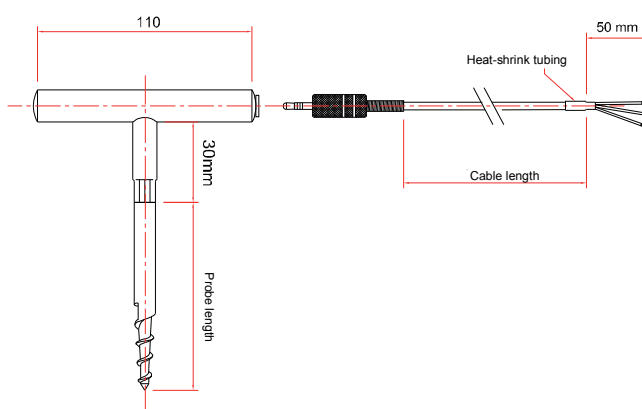
PT 100

■ Dimensions probes

• Probe with smooth contact tip



• Probe with corkscrew contact tip



■ Tolerance* of PT100 and PT1000 probes.

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

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
 i.e : at 0°C for PT1000 Class B $\pm 0,3^{\circ}\text{C} \rightarrow \pm 1,2 \Omega$

■ Tolerances* of NTC probes

Measuring range °C	Tolerances °C
From -20°C to 0°C	$\pm 0,5^{\circ}\text{C}$
From 0°C to +70°C	$\pm 0,2^{\circ}\text{C}$
From +70°C to +100°C	$\pm 0,5^{\circ}\text{C}$

* 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.

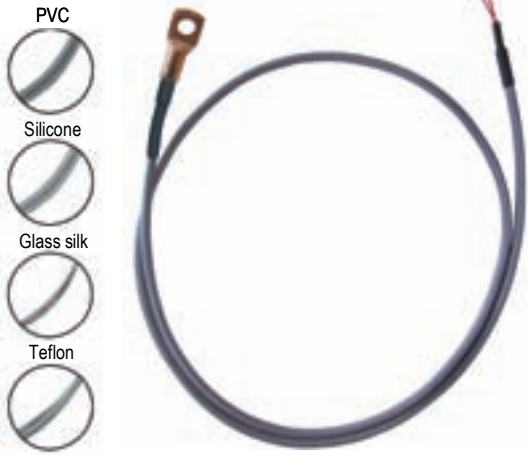
■ Accessories (See data sheet)

- DIN Rail transmitter output 4/20 mA or 0/10V
- Calibration certificate

**Temperature probe
with cable at resistive element
for contact measurement by eyelet**



BT 100

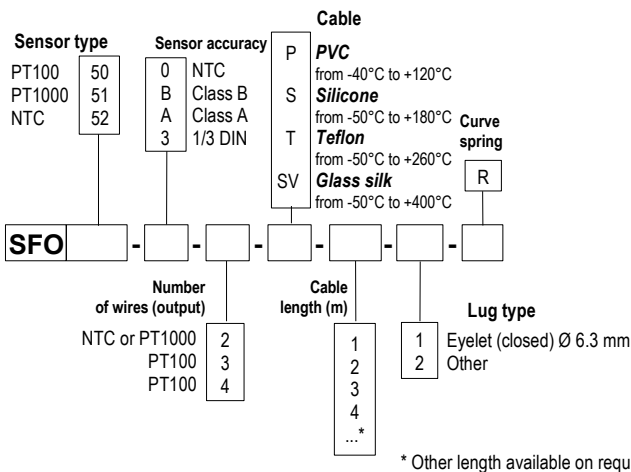


Probe features

- Temperature probe mounted on conductor cables with stainless steel contact tip and perforated copper eyelet (Ø 6.3 mm).
- Measuring range (according to cable) :
 from -50°C to +400°C (PT100 et PT1000).
 from -20°C to +120°C (NTC).
- 2 wires output (SFO) or 4 wires (SFOD) for NTC and PT1000
 3 or 4 wires output (SFO) or 6 wires (SFOD) for PT100.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

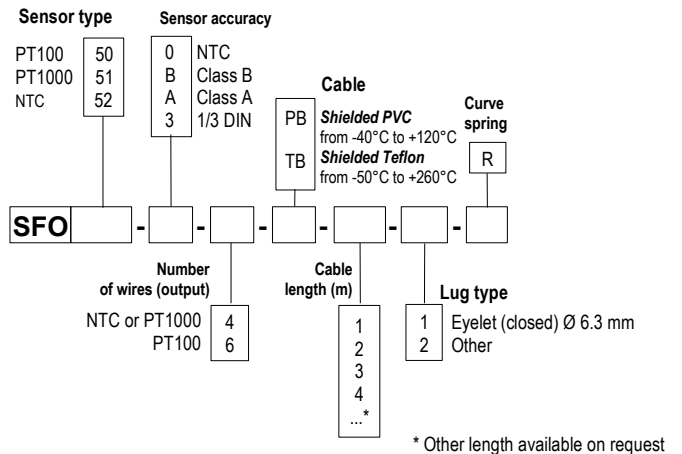
Part numbers

SFO 50 - Single pair probe -



Example : SFO51-B-2-P-1-2
 Model : Pt 1000 temperature sensor, Class B, 2 wires, PVC cable of 1m length.
 Stainless steel contact tip 4.5 mm Ø , length 60 mm, with a copper eyelet perforated Ø 6.3 mm, without curve spring. **Measuring range from -40 to +120°C.**

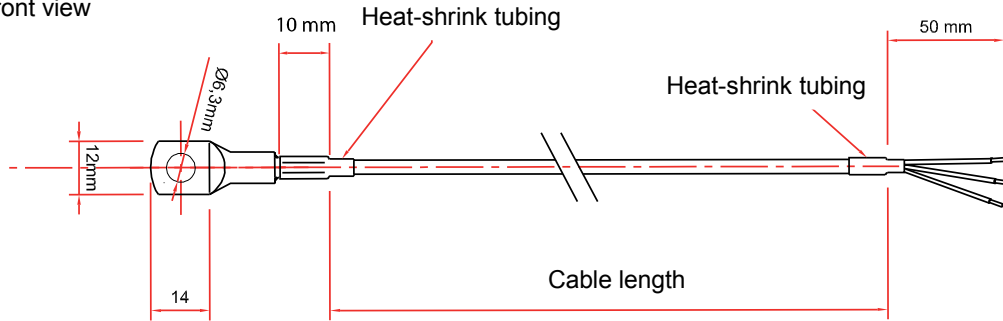
SFOD 50 - Multipair Probe -



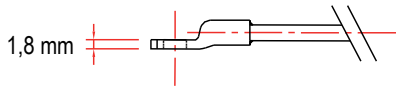
Example : SFOD51-B-4-P-1-2
 Model : Pt 1000 temperature sensor, 4 wires, shielded Teflon cable of 1m length.
 Stainless steel contact tip 5 mm Ø , length 60 mm, with a copper eyelet perforated Ø 6.3 mm, without curve spring. **Measuring range from -40 to +120°C.**

Probes dimensions

• Front view



• Side view



Tolerance of PT100 and PT1000 probes.

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

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

Tolerances of NTC probes

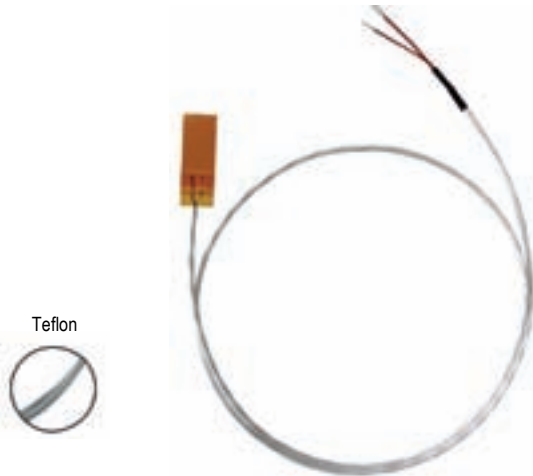
Measuring range °C	Tolerances °C
From -20°C to 0°C	± 0,5°C
From 0°C to +70°C	± 0,2 °C
From +70°C to +100°C	± 0,5 °C

*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.

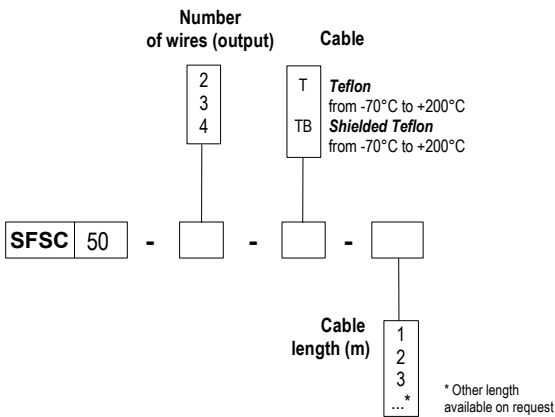
Probe with self adhesive patch

SFSC 50

- Probe with thin and flexible laminar resistance.
- Enables good response times.
- Measuring range : **from -70°C to +200°C**



■ **Part numbers**

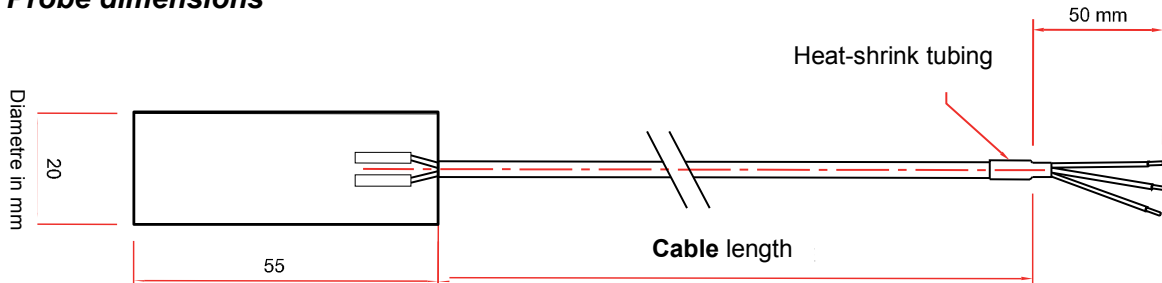


Example : SFSC50-3-T-4
Model : Pt 100 temperature sensor, Class A, 3 wires, Teflon cable of 4 m length. **Measuring range from -70 to +200°C.**

■ **Transmitter features**

- Operating temperature**.....from -70°C to +200°C
- Accuracy ***.....± (0.15°C + 0.002 ltl)
 thus ± 0.15°C at 0°C
 and ± 0.35°C at 100°C
- Sensor type**.....PT100 Class A
 Single pair
 as per IEC751
- Dimensions**.....50 x 20 mm and 0.3 mm depth
- Insulation**.....polyimide
- Cable**.....T : Pfa 2 or 3 conductors
 TB : Shielded Pfa 2, 3 or 4 conductors
- Storage temperature**.....from -20°C to +80°C

■ **Probe dimensions**



Tolerance of PT100 and PT1000 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

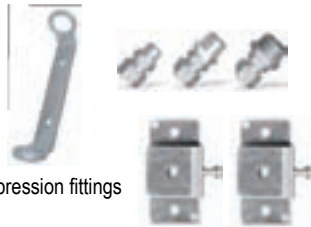
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

Tolerances of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

Accessories (see data sheet)

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

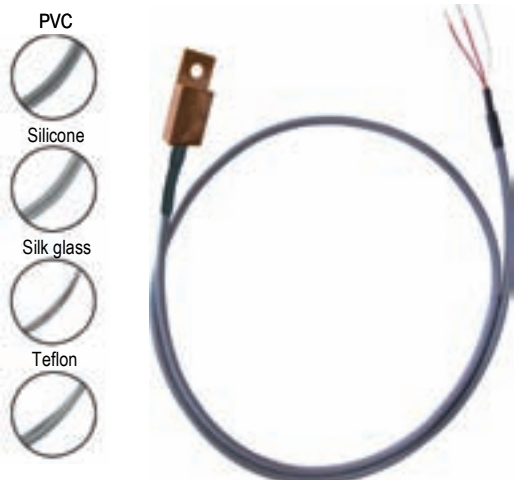


Colle silicone transparente

For watertightness and sticking.
Ready to use. Moisture cured.
Flexible at high and low temperature.
UV and time resistant.
Tube of 90 ml.

- Part number : KI - TCS





Surface contact wire temperature probe

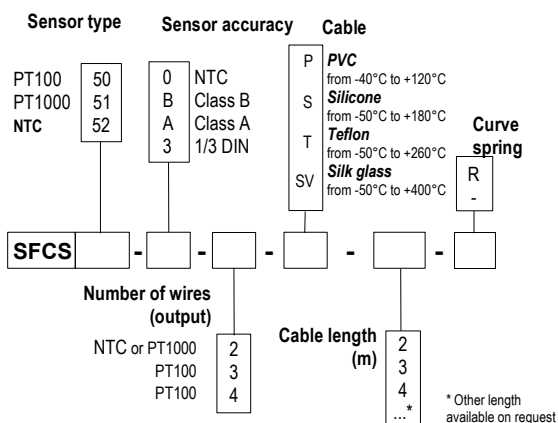
SFCS 50 / SFCS50

- Temperature probe with copper tip for surface contact
- Measuring ranges (according to cable) **from -50°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC)
- Wire mounting: **simple** (2,3 or 4 wires).
duplex (4 or 6 wires)
- For other resistance types (PT25, PT50, PT500, PT200 or NI, please contact us)

PT 100

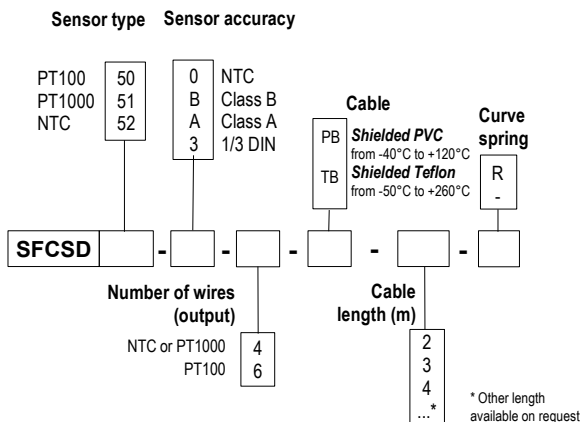
Part numbers

• SFCS – Single pair probe -



Example: SFCS50-B-3-P-4
Model: Class B PT100 temperature probe, 3-wire, PVC cable length 4m, without curve spring. Measuring range from -40 to +120°C.

• SFCS50 – Multipair probe -



Example : SFCS50-B-6-PB-4
Model : Class B Pt100 temperature probe, 6-wire, shielded PVC cable length 4m without curve spring. Measuring range from -40 to +120°C.

Transmitter features

Operating temperature.....for SFCS types
(according to cable) from -50°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)

for SFCS50 types
from -50°C to +250°C (PT100 and PT1000)
from -20°C to +120°C (NTC)

Accuracy.....PT100 or PT1000: see « Tolerances » table
NTC: see "Tolerances" table

Sensor type.....PT100 or PT1000: Class B, Class A,
1/3 DIN as per DIN IEC751
NTC: resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta value B25/85 = 3,695K ±1%

Wire mounting.....single pair, 2, 3 or 4 wires

multipair 4 or 6 wires

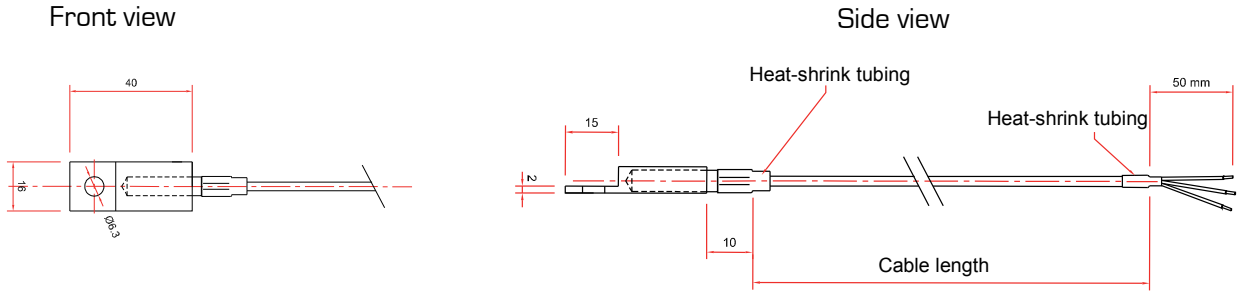


Storage temperature.....from -20°C to +80°C

Contact tip.....40 x 16 x 7,5mm
Ø 6,3 mm hole
made of copper

Operating temperature
for cable.....PVC : from -40°C to +120°C
Silicone: from -50°C to +180°C
Teflon (PFA): from -50°C to +260°C
Silk glass: from -50°C to +400°C

Dimensions



Tolerances* of Pt100 and Pt1000 probes

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

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). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

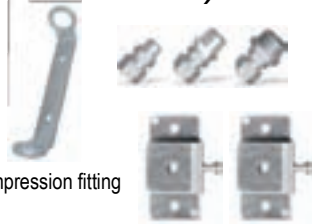
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
From -20°C to 0°C	± 0,5°C
From 0°C to +70°C	± 0,2 °C
From +70°C to +100°C	± 0,5 °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.

Accessories (see related data sheet)

- Transmitter output 4-20 mA or 0/10V
- Wall mounting support
- Stainless steel mounting brackets
- 1/4, 1/2 gas screw nut
- Sliding connection
- Teflon or stainless. steel ferrule for compression fitting



- Sleeve to weld for food industry (with 1/2" G female)
- Stainless steel junction fitting
- 1/2 gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell





PT 100



Supplied with adjustable ring Ø 100 mm

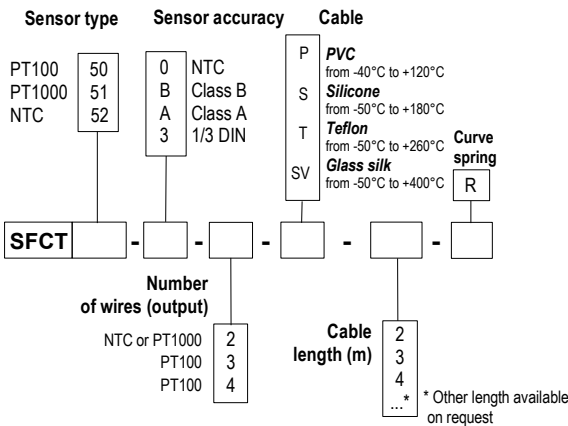
Temperature probe with cable for pipe

SFCT50 / SFCTD50

- Temperature probe with contact tip for pipe (all diameter).
- Measuring range (according to cable)
 - from -50°C to +400°C (PT100 and PT1000).
 - from -20°C to +120°C (NTC).
- 2 wires for NTC and PT1000 outputs, 3 or 4 wires for PT100 output.
- For other resistance types PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers

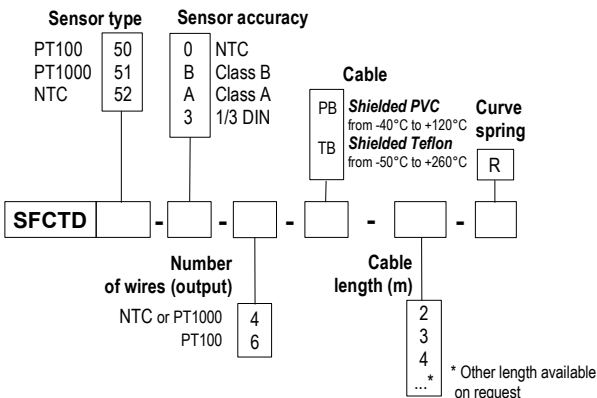
• SFCT – Single pair probe -



Example : SFCT50-B-3-P-4

Model : Pt 100 temperature probe, Class B, 3 wires, PVC cable of 4 m length without curve spring. Measuring range from -40 to +120°C.

• SFCTD – Multipair Probe -



Example : SFCTD50-B-6-PB-4

Model : Pt 100 temperature probe, Class B, 6 wires, PVC cable of 4 m length without curve spring. Measuring range from -40 to +120°C.

Transmitter features

Operating temperature.....for SFCT type
(According to cable) from -50°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)

for SFCTD type
from -50°C to +250°C (PT100 and PT1000)
from -20°C to +120°C (NTC)

Accuracy*.....PT100 or PT1000 : see "Tolerances" table
NTC : see "Tolerances" table

Sensor type of sensor.....PT100 or PT1000 : Class B, Class A
and 1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ Nominal
Beta value B25/85 = 3.695K ±1%

Wire mounting.....single pair 2, 3 or 4 wires

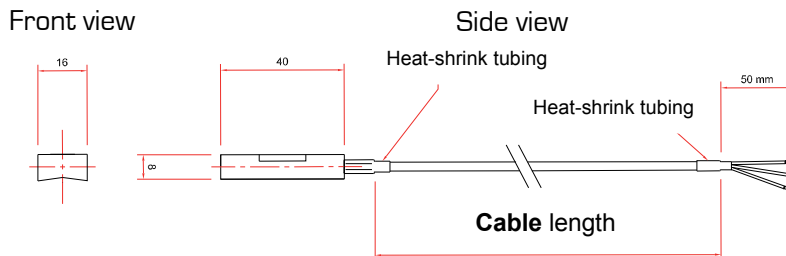
Storage temperature.....multipair 4 or 6 wires from -20°C to +80°C

Contact tip.....40 x 16 x 8,5 mm
V shape
screw fastener
made of AU4G (aluminium)

Connection.....supplied with stainless steel adjustable ring for DN 100. Other adjustable ring available on request

Operating temperature of cable.
PVC : from -40°C to +120°C
Silicone : from -50°C to +180°C
Teflon (PFA) : from -50°C to +260°C
Glass silk with stainless steel sheet : from -50°C to +400°C

Probes dimensions



Tolerance* of PT100 and PT1000 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

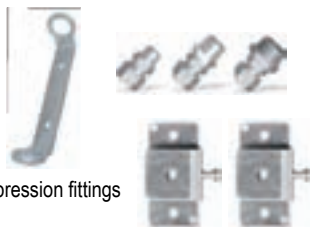
*Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

Accessories (See related datasheet)

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



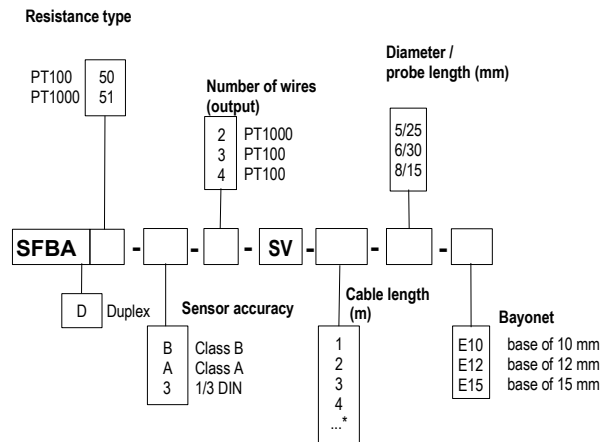
Ref. FTang – SFCT50 / SFCTD50 - 03/08 B – We reserve the right to modify the characteristics of our products without notice.

Wire temperature probe with resistive element and bayonet

SFBA 50 / SFBAD 50



Part numbers



* Other dimension available on request

Example : SFBA51-B-2-SV-1-630-E12
Model: Pt 1000 bayonet temperature probe, Class B, 2-wire, silk glass cable 1m long.
Stainless steel probe Ø 6 mm and 30mm length.
Bayonet for 12mm thread.
Measuring range from -50 to +400°C.

Probe features

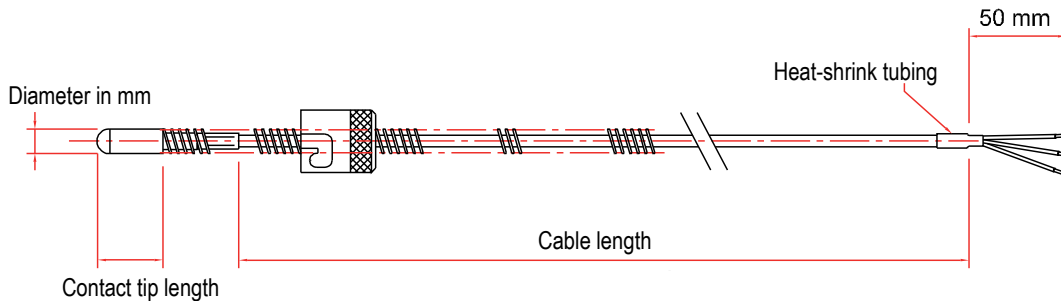
- Temperature probe mounted on conductive cable, with stainless steel contact tip and bayonet probe.
- Measuring ranges (according to cable) : **from -50°C to +400°C (PT100 and PT1000).**
- For other resistances (PT25, PT50, PT500, PT200 or NI), please contact us

Technical features

- Working temperature**.....from -50°C to +400°C
- Accuracy ***.....**PT100 or PT1000** : see "Tolerances" table
- Sensor type**.....**PT100 or PT1000** : class B, class A, 1/3 DIN, as per DIN IEC751
- Storage temperature**.....-20°C to +80°C
- Probe**.....316 L stainless steel.
5/25 : Ø 5 mm and length 25 mm
6/30 : Ø 6 mm and length 30 mm
8/15 : Ø 8 mm and length 15 mm
- Cable**.....output on glass silk cable, stainless steel armoured.
2, 3 or 4 conductors 0,22 mm².
Temperature range: from -50 to +400°C
- Bayonet**.....bayonet connection (2 pins)
nickel brass, for Ø 10, 12 or 14 mm thread
to screw on 200mm spring

* 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.

Probe dimensions



Tolerances* of Pt100 and Pt1000 resistive probes

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms

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). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

Tolerances* of NTC resistive probe

Temperature range in °C	Tolerances °C
From -20°C to 0°C	± 0,5°C
From 0°C to +70°C	± 0,2 °C
From +70°C to +100°C	± 0,5 °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.

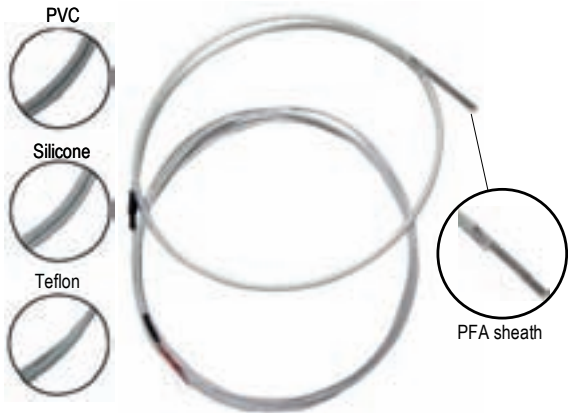
Accessories (see datasheet)

- 4-20 mA or 0/10V output transmitter
- Wall fixing support
- Stainless steel mounting brackets
- 1/4, 1/2 gas screw net
- Compression fitting
- Teflon or stainless steel ferrule for compression fittings



- Sleeve to weld for food industry (with 1/2" G female)
- Stainless steel union fitting
- 1/2 gas or NPT thread cut
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



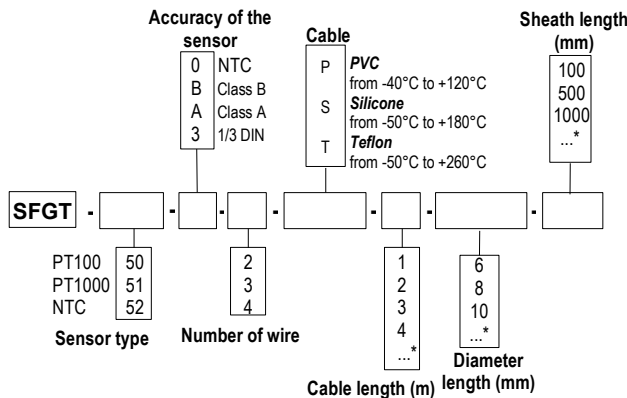


Cable temperature probe at resistive element for aggressive environment

SF GT 50 – SFGTD 50

Part numbers

• SFGT



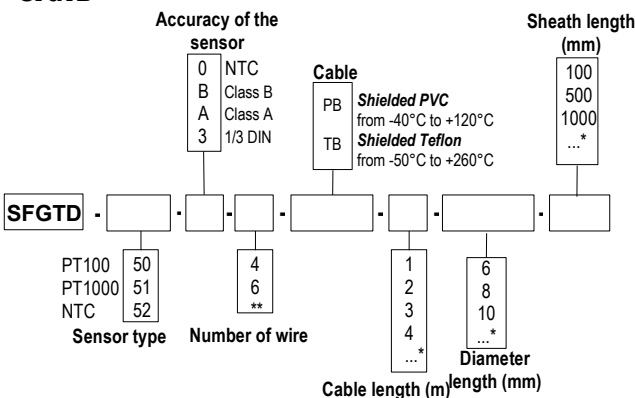
* Other dimension on request

Example : SFGT50-B-3-P-3-6-500

Model : Temperature sensor PT100 Class B, 3 wires, PVC cable of 3 m length and of 6 mm diameter with a sheath of 500 mm length.

Measuring range : from -40 to +120 °C

• SFGTD



* Other dimension on request

** no 6 wires for output 6 mm, or mounting with stainless steel protection

Example : SFGTD50-B-6-PB-3-8-500

Model : Multipair temperature sensor PT100 Class B, 6 wires, shielded PVC cable of 3 m length and of 8 mm diameter with a sheath of 500 mm length.

Measuring range : from -40 to +120 °C

Probe features

- Temperature sensor mounted under PFA sheath
- Measuring range from -50°C to +550°C (PT100 and PT1000) from -20 °C to +120 °C (NTC)
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

Technical features

Operating temperature.....from -50°C to +250°C (PT100 and PT1000) (According to cable) from -20°C to +120°C (NTC)

Accuracy.....PT100 or PT1000 : see "Tolerances" table
NTC : see "Tolerances" table

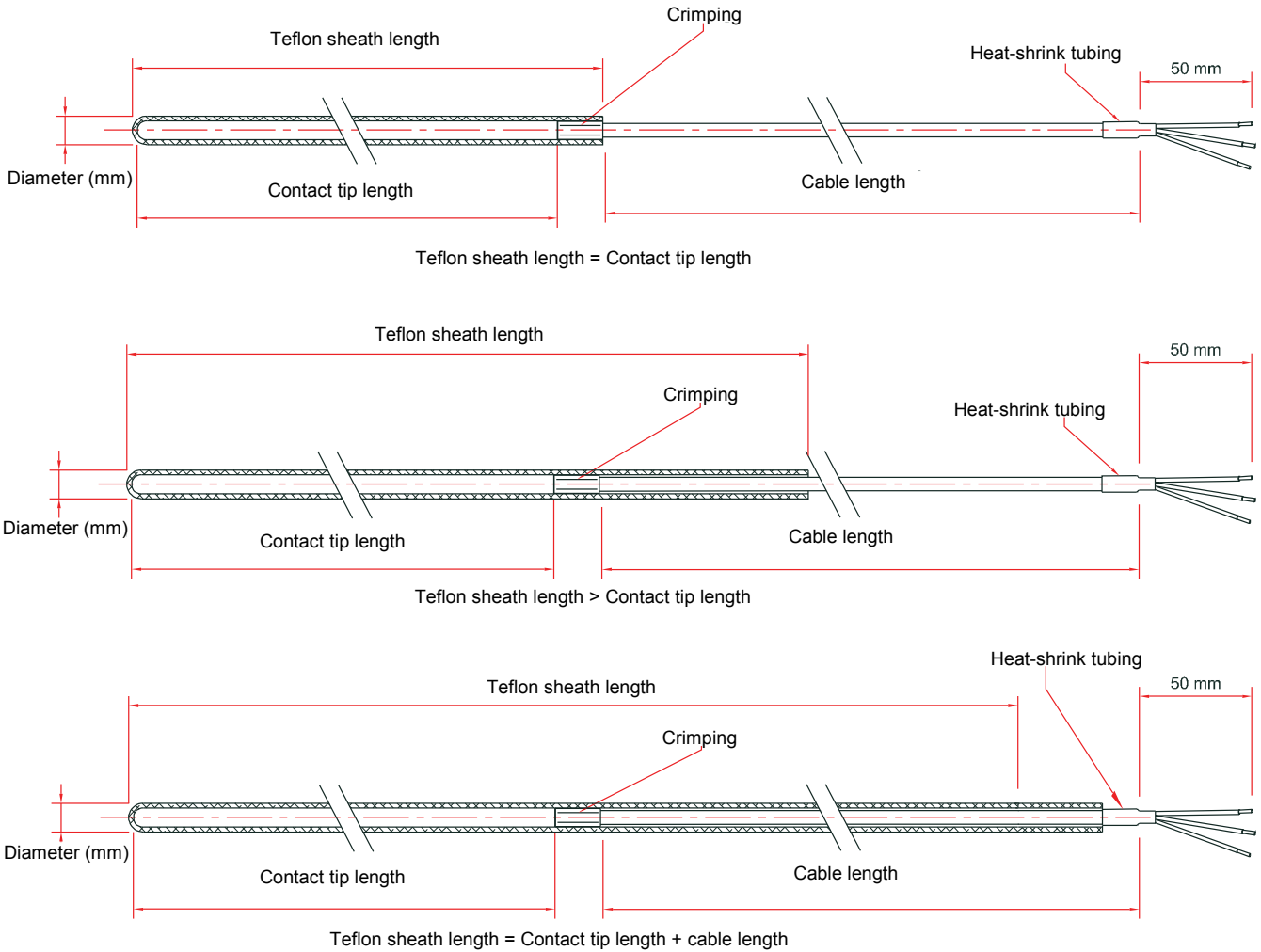
Type of sensor.....PT100 or PT1000 : Class B, Class A, 1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

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

Operating temperature.....PVC : from -40 to +120 °C
Silicone : from -50 to +180 °C
Teflon (PFA) : from -50 to +260 °C

Contact tip.....perfluoralkoxy (PFA) sheath temperature max.
At short term use : 280 °C
Softening at +/- 327 °C

Dimensions



Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

Tolerances* of PT100 and PT1000 probes

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

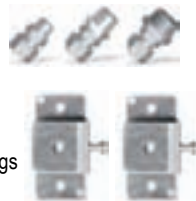
Temp °C	Tolerances					
	Class B		Class A		1/3 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-100	0.8	0.32	0.35	0.14	0.27	0.11
-50	0.55	0.22	0.25	0.1	0.19	0.08
0	0.3	0.12	0.15	0.06	0.1	0.04
100	0.8	0.3	0.35	0.13	0.27	0.1
200	1.3	0.48	0.55	0.2	0.44	0.16
300	1.8	0.64	0.75	0.27	0.6	0.21
400	2.3	0.79	0.95	0.33	0.77	0.26

Resistance values for Pt1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

*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.

Accessories (See data sheet)

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



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



Part 2 : Head resistive element



SG 50
with ABS head housing.....p 43



SG 100
with ABS headp 45



TM 50
temperature transmitter.....p 49



TG 100
temperature transmitter.....p 51



TM 100
temperature transmitter.....p 55



TST
thermostats.....p 59



TB 50
standard connection head.....p 63



TBBT 50
for very low temperature use.....p 65



TBHT 50
for very high temperature use.....p 67



TM 50
miniature connection head.....p 69



TE 50
waterproof.....p 71



TP 50
noryl.....p 73



THIR 50
with DIN 43650 head.....p 75



TM 12 50
Plug-in head.....p 77



TBEI 50
with interchangeable mountings...p 79



TBRD 50
with offset fitting.....p 83



TBAJ 50
with ambient tip.....p 85



TBC 50
bent RTD sensor.....p 87



TBCT 50/TMCT 50
for contact duct.....p 91



TBB 50
standard with mounting flange....p 95



TBRC 50
standard with clamp fitting.....p 97



TPGT 50
for aggressive application.....p 99



TPTT 50
for aggressive application.....p 101



Wine application
head or cable probe.....p 103



Fermenting room
grip handle PT 100 probe.....p 107



Compost
PT 100 probe.....p 109

PT 100

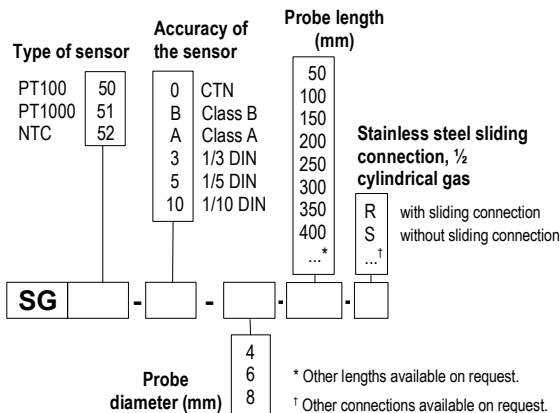


**Temperature sensor
with ABS head housing
SG 50**

- Temperature sensor with stainless steel probe.
- Measuring ranges from -50°C to +100°C (PT100 and PT1000).
from -20°C to +100°C (NTC).
- Terminal block connection, output 2, 3 or 4 wires.
- ABS IP65 housing.
- With or without stainless steel compression fitting, 1/2" cylindrical gas (other available on request).
- Quick and easy mounting 1/4" turn system with wall-mount plate.
- For other resistor types PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers

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

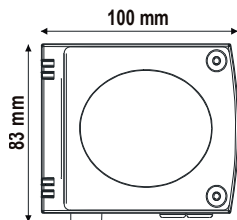


Example : SG51-B-4-100-R

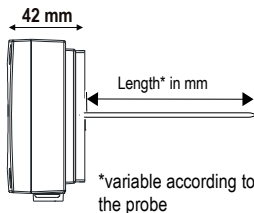
Model : Temperature sensor PT1000 Class B. Stainless steel probe Ø 4 mm, length 100 mm, with stainless steel sliding connection 1/2 cylindrical gas on IP65 ABS housing. Measuring range from -50 à +100°C.

Housing dimensions

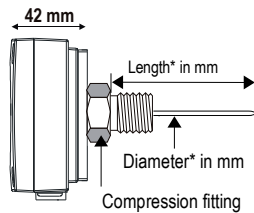
(including wall-mount plate)



Without compression fitting



With compression fitting



For thermowell using
Thread model : add 20 mm to probe length.
Fixing screw model : add 10 mm to probe length.

Transmitter features

Measuring ranges	from -50°C to +100°C (PT100 and PT1000) from -20°C to +100°C (NTC)
Accuracy *	PT100 or PT1000 : see "Tolerances" table NTC : see "Tolerances" table
Type of sensor	PT100 or PT1000 : Class B, Class A, 1/3 DIN, 1/5 DIN, and 1/10 DIN as per DIN IEC751 NTC : resistance at 25°C, R ₂₅ = 10KΩ Nominal Beta B25/85 value = 3.695K ±1%
Probe	316 L stainless steel, 3/4 to 4/4 hard, no welding
Compression fitting	316 L stainless steel , 1/2"G male
Environment	air and neutral gases

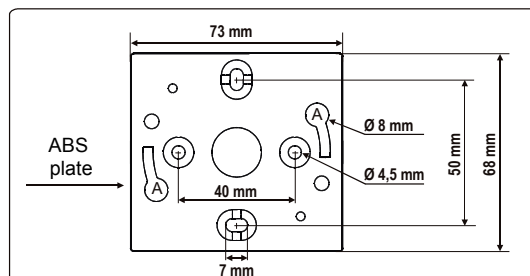
*all accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

Housing features

Housing	ABS
Fire-proof classification	H-B as per UL94
Dimensions	See drawings beside
Protection	IP 65
Cable grid	for cables Ø 7mm maxi
Weight	110g
Working temperature	from -20°C to +80°C

Mounting

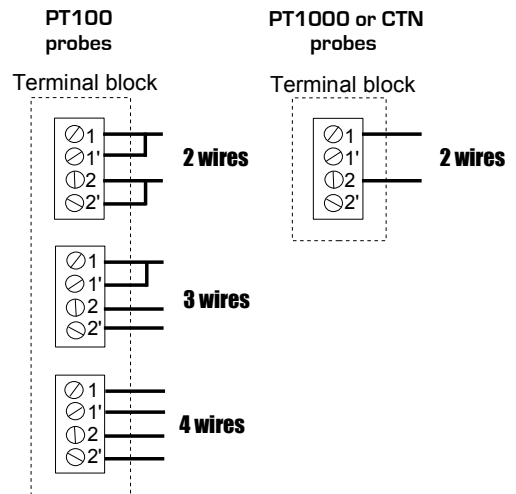
Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : Ø 6 mm (with the screws and pins supplied with the transmitter). Insert the transmitter on the plate (see A on the drawing below) and rotate its housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed. For models with duct mount, an additional drilling of Ø14mm must be made before mounting the ABS plate.



Electrical connection – as per NFC15-100 norm

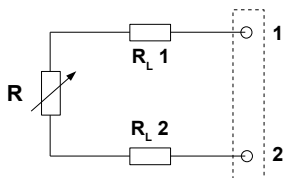


Cable connection on terminal block



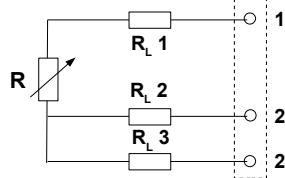
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



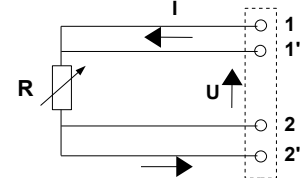
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

Temp °C	Tolerances									
	Class B		Class A		1/3 DIN		1/5 DIN		1/10 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-50	0.55	0.22	0.25	0.1	0.19	0.08	0.11	0.04	0.06	0.02
0	0.3	0.12	0.15	0.06	0.1	0.04	0.06	0.02	0.03	0.01
100	0.8	0.3	0.35	0.13	0.27	0.1	0.16	0.05	0.08	0.03

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

Tolerances of NTC probes

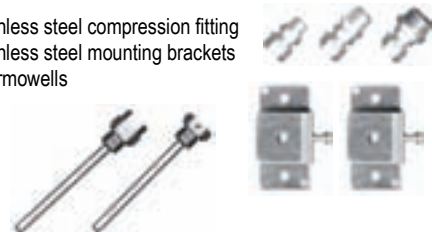
Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

Maintenance

Clean the housing and probe only with cloth dampened with soapy water. Please avoid any of the following solvents at any concentration : petrol, petroleum, acetone, trichloroethylene, ammonia, acid, bicarbonate soap or bleach.

Accessories (See Datasheet)

- Stainless steel compression fitting
- Stainless steel mounting brackets
- Thermowells



Ref. FTang - SG50 - 09/07 A – We reserve the right to modify the characteristics of our products without notice.

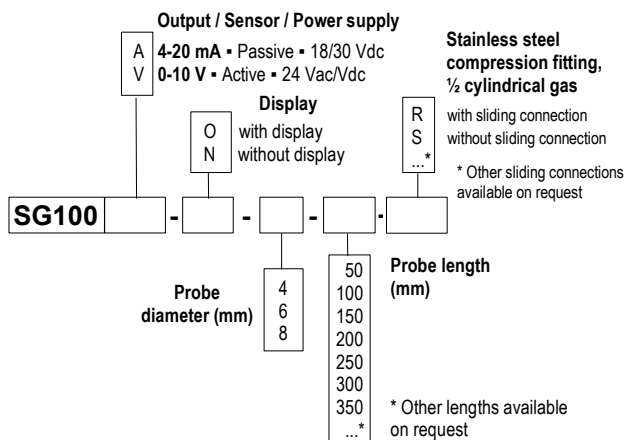


**Temperature sensor
with ABS head
SG 100**

- Temperature sensor with a PT100 Class A stainless steel probe.
- Measuring range from 0 to +50°C, from -20 to +80°C, from -50 to +50°C, from 0 to +100°C. (According to model, see "Configuration").
- 0-10 V output, active sensor, power supply 24 Vac/Vdc (3-4 wires) or 4-20 mA output, passive loop, power supply 18 to 30 Vdc (2 wires).
- ABS IP 65 housing, with or without display.
- Quick and easy mounting 1/4" turn system with wall-mount plate.
- LCC100 configuration software (optional).
- With or without stainless steel sliding connection, 1/2" cylindrical Gas.

Part numbers

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

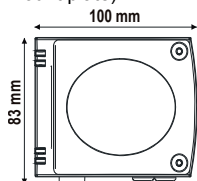


Example : SG100 - V - O - 4 - 100 - R

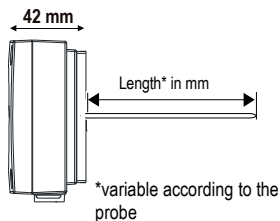
Model : PT100 Class A temperature sensor, with display.
 Stainless steel probe Ø 4, length 100 mm with stainless steel compression fitting 1/2" cylindrical gas on IP65 ABS housing. 0-10V active sensor with a 24 Vac/Vdc power supply.

Housing dimensions

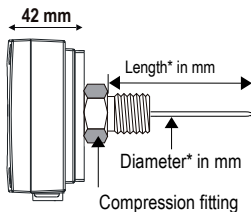
(including wall-mount plate)



Without compression fitting



With compression fitting



For thermowell using
 Thread model : add 20 mm to probe length.
 Fixing screw model : add 10 mm to probe length.

Transmitter features

- Measuring range..... see table ("configuration")
- Units of measurement..... °C, °F
- Accuracy*..... ±0,5% of reading ±0,4°C (PT100 Class A)
- Resolution..... 0,1°C
- Type of sensor..... PT 100 Class A as per DIN IEC751
- Working temperature (probe)..... from -50°C to +100°C
- Probe..... 316 L stainless steel, 3/4 to 4/4 hard, no welding
- Compression fitting..... 316 L stainless steel, 1/2"G male

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

Technical specifications

- Output / Power supply..... active sensor 0-10 V (power supply 24 Vac/Vdc ± 10%), 3-4 wires
 passive loop sensor 4-20 mA (power supply 18/30 Vdc), 2 wires
 maximum load : 500 Ohms (4-20 mA)
 minimum load : 1 K Ohms (0-10 V)
- Consumption..... 2 VA (0-10V) or max. 22 mA (4-20mA)
- Electro-magnetical compatibility..... EN 61326
- Electrical connection screw terminal block for cables 1.5 mm² max
- Communication to PC..... Kimo RS 232 cable
- Environment..... air and neutral gases

WITH or WITHOUT display

Housing features



- Housing..... ABS
- Fire-proof classification..... H-B as per UL94
- Dimensions..... see drawings beside
- Protection..... IP 65
- Display..... 5- digits LCD. Dimensions 50 x 15 mm
- Height of the digits..... 10 mm
- Cable grip..... for cables Ø 7mm max.
- Weight..... 145g (with display) – 110g (without display)
- Working temperature (housing)..... from -20°C to +50°C (with display)
 from -20°C to +80°C (without display)

■ Connection

For models
SG 100 - V - O & SG 100 - V - N • Output 0-10 V – active sensor

Connection to PC
LCC100 software

(a) Output terminal block
(b) Power supply terminal block
(c) Cable tubing
(d) DIP Switch

Power supply

(b) Vdc.....direct voltage
GND.....ground

OR

(b) Vac.....alternative voltage (phase)
Vac.....alternative voltage (neutral)

Output

(a) GND.....ground
Vdc T.....direct voltage (temperature)

(c) Cable grip : to insert the cable, it is required to slightly cut the rubber.

For models
SG 100 - A - O & SG 100 - A - N
• Output 4-20 mA – passive loop

(a) Vdc.....direct voltage
IT.....direct current (temperature)

(a) Terminal block

■ Electrical connection - as per norm NFC15-100

⚠ This connection must be made by a qualified technician. To make the connection, the transmitter must not be energized.

For models
SG 100 - V - O & SG 100 - V - N • Output 0-10 V – active loop

≡≡≡ **4 wires**

Output terminal block: GND, Vdc T
Power supply terminal block: Vdc, GND

Regulator display or PLC / BMS: - (GND), + (Passive type)

Power supply: 24 Vdc or 24 Vac Class II

OR

≡≡≡ **3 wires**

⚠ To make a 3-wire connection, before powering up the transmitter, connect the ground to the output of the input ground. See drawing below.

Output terminal block: GND, Vdc T
Power supply terminal block: Vdc, GND

Power supply: 24 Vdc or Phase Neutral Power supply 24 Vac

OR

For models
SG 100 - A - O & SG 100 - A - N • Output 4-20 mA – passive loop

≡≡ **2 wires**

Output terminal block: Vdc, Ir
Power supply: 18-30 Vcc

Regulator display ou PLC / BMS passive type

OR

Output terminal block: Vdc, Ir
Power supply: 18-30 Vcc

Regulator display or PLC / BMS active type

Configuration

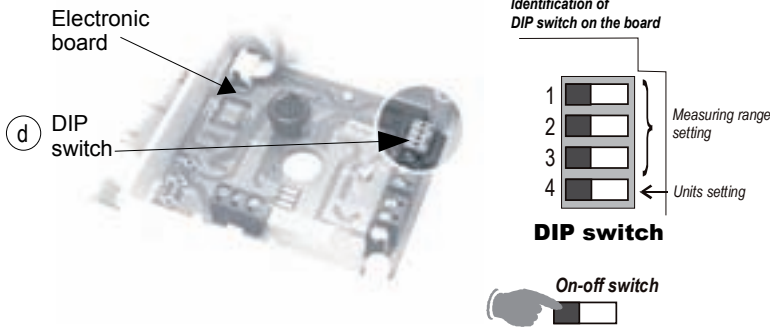
You can configure all parameters of the transmitter : measuring ranges, units, output (according to model) either by DIP switch and/or via software (see below)

Configuration by DIP switch

To configure the transmitter, please unscrew the 2 screws from the housing, and then open it.



Whilst configuring the transmitter, **it must not be energized**. Make the required setting with the DIP switches (as shown on the drawing beside). When the transmitter is configured, you can power it up.



Caution !

Please follow carefully the combinations shown alongside on the DIP switch.

If the combinations are wrong, the following message will appear on the display of the transmitter "CONF ERROR".

In that case, unplug the transmitter, set the DIP switches correctly, and then power up the transmitter.

Units setting

To set measuring unit, set the on-off DIP switch, as shown alongside.

Configurations	°C	°F
Combinations	1	1
	2	2
	3	3
	4	4

Measuring range setting

To set the measuring range, set the on-off switches 1, 2 and 3 of the measuring range, as shown alongside.

Configurations	Measuring ranges			
	0 to 50 °C	-20 to 80 °C	-50 to 50 °C	0 to 100 °C
Combinations	1	1	1	1
	2	2	2	2
	3	3	3	3
	4	4	4	4

Initialization of the transmitter

When the transmitter is powered up, it initializes and displays the digits , and then its configuration including :
 - The measuring range - The analogue output.

1 - The measuring range.

The following message is displayed : . This is the low value of the measuring range, and its digit value : **ex** :

The following message is displayed : . This is the high value of the measuring range and its digit value : **ex** :

The arrow displayed (at the bottom or on the right of the screen) is relative to the unit of measurement : **ex** : from 0 to 100 °C.

2 - The analogue output.

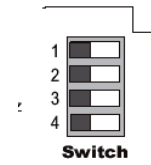
If the analogue output is in 4-20mA, then the following message will appear :

If the analogue output is 0-10 V, then the following message will appear :

After the display of the configurations, the transmitter displays , which confirms that the initialization is finished and you can start the measurements.

Configuration via software
(with optional LCC100 software)

Easy, user-friendly configuration with the software !
You can configure your own intermediate ranges.



Example : for a transmitter with a range of -50 to +100°C, the minimum configurable range is 20°C. For example, you can configure your transmitter with a range from -20 to +80°C, or from +80 to +100°C...

- To access the configuration via software, first of all, set the DIP switch as shown below, then connect the cable to the transmitter (see alongside and refer to "Connection").
- **Please refer to the user manual of the LCC 100 to make the configuration.**

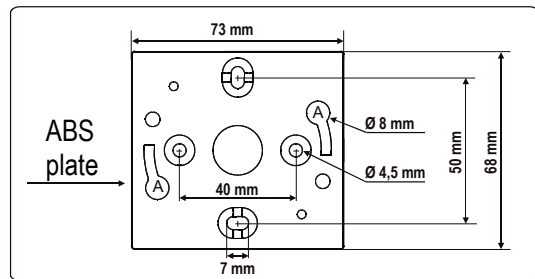


Caution !

The configuration of the parameters can be done either with the **DIP switch**, or via **software** (you cannot combine both methods).

Mounting

Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : Ø 6 mm (with the screws and plugs supplied with the transmitter). Insert the transmitter on the plate (see A on the drawing beside) and rotate its housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.
For the model with duct mount, an additional hole Ø14mm must be made before mounting the ABS plate.



Tolerance of the PT100 Class A.

Temp°C	Tolerances Class A	
	± °C	± Ohms
-50	0.25	0.1
0	0.15	0.06
100	0.35	0.13

Maintenance

Clean the housing and probe only with cloth dampened with soapy water. Please avoid any of the following solvents at any concentration : petrol, petroleum, acetone, trichloroethylene, ammonia, acid, bicarbonate soap or bleach.

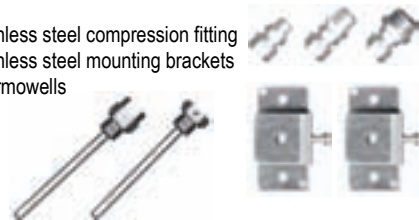
Options

- Power supply class 2, input 230 Vac, output 24 Vac, **ref.KIAL-100A**
- Power supply class 2, input 230 Vac, output 24 Vdc, **ref.KIAL-100C**
- Configuration LCC 100 software with RS 232 cable

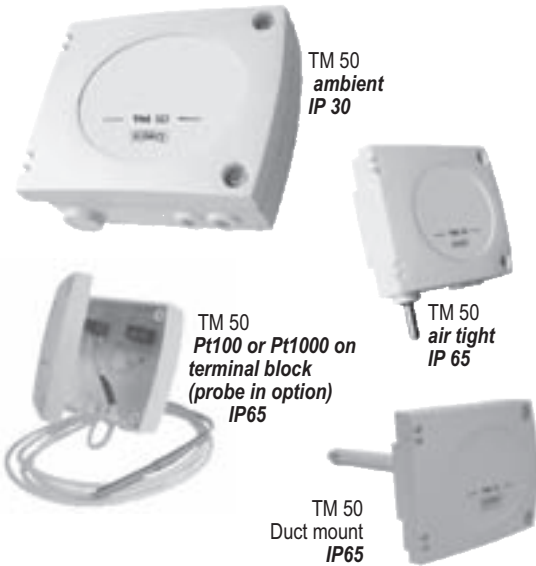


Accessories (See Datasheet)

- Stainless steel compression fitting
- Stainless steel mounting brackets
- Thermowells



Ref. FTang - SG100 - 09/07 A - We reserve the right to modify the characteristics of our products without notice



Temperature transmitter TM 50

- Temperature transmitter type TM 50/51
- Pt100 3 wires output or Pt1000 2 wires (according to the model)
- ABS IP65 and IP 30 housing, without display
- Quick and easy mounting "1/4 turn" system with wall-mount plate

■ Features of the transmitter

Temperature

Working principle : a platinum resistance (Pt 100 or Pt1000) is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases.

Example : for 0°C \simeq 100 Ω - for 100°C \simeq 138,5 Ω (Pt100)
for 0°C \simeq 1000 Ω - for 100°C \simeq 1385 Ω (Pt1000)

Measuring range.....-20 to +80°C (air tight and duct mount model)
+10 à +40°C (ambient model)

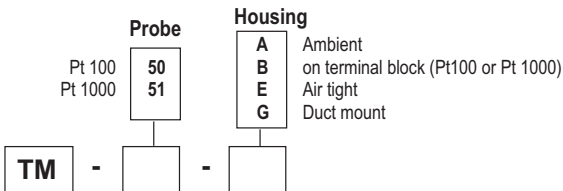
Accuracy*.....Pt100 class A as per DIN IEC751
Pt1000 class A as per DIN IEC751

Response time.....1/e (63%) 5 sec. (ambient model)
1/e (63%) 20 sec. (air tight model)
depending on the probe (Pt100 on terminal block)

Type of fluid.....air and neutral gases

■ Part number

To order, just add the code to complete the part number

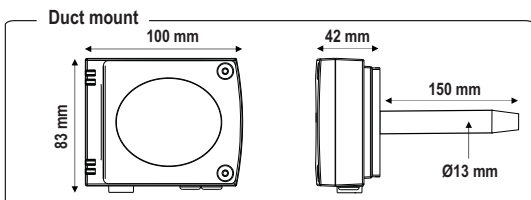
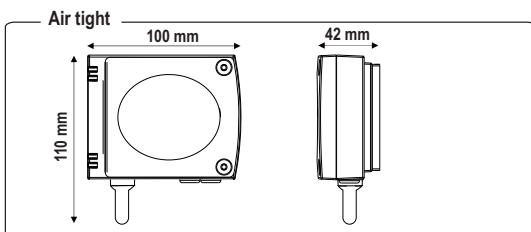
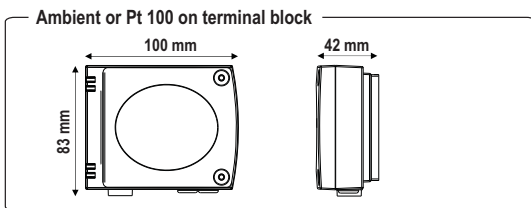


Example : TM 50-A

Model : temperature transmitter TM 50, ambient housing IP 30.

■ Dimensions

(with wall-mount plate)



■ Features of the housing

Housing.....ABS

Fire-proof classification.....HB as per UL94

Dimensions.....see drawing beside

Protection.....IP 65 (air tight, duct mount and Pt100 on terminal block models)
IP 30 (ambient model)

Cable grip.....for cables Ø 7 mm max.

Weight.....110 g

■ Technical specifications

Output.....Pt100 (3 wires) or Pt1000 (2 wires)

Electrical connection.....screw terminal block for cables Ø 1.5 mm² max.

Working temperature.....-20 to +80°C (air tight model)

+10 to +40°C (ambient model)

depending on the probe (Pt100 on terminal block)

Storage temperature.....-10 to +70°C

Environment.....air and neutral gases

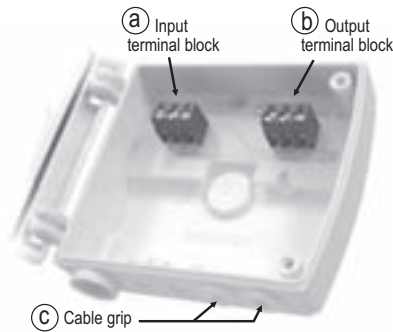
*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

Connection



For the model

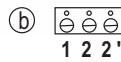
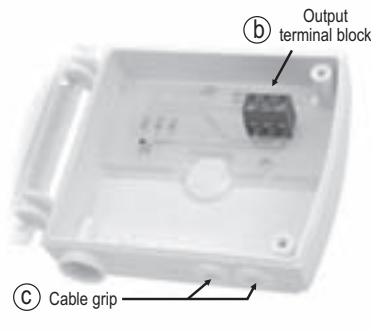
TM 50-B • Pt100 or Pt1000 input and output on terminal block



(c) Cable grip : to insert the cable, it is required to slightly cut the rubber.

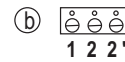
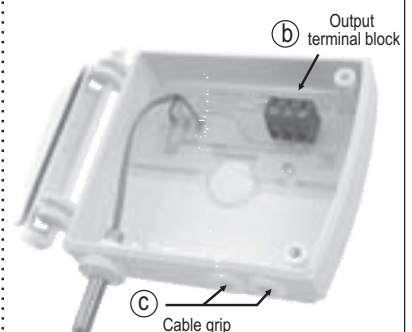
For the model

TM 50-A and TM 51-G • Pt100 output on terminal block
TM 51-A and TM 51-G • Pt1000 output on terminal block



For the model

TM 50-E • Pt100 output on terminal block
TM 51-E • Pt1000 output on terminal block

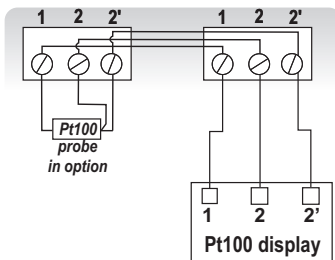


Pt 100 connections

⚠ This connection must be made by a qualified technician.

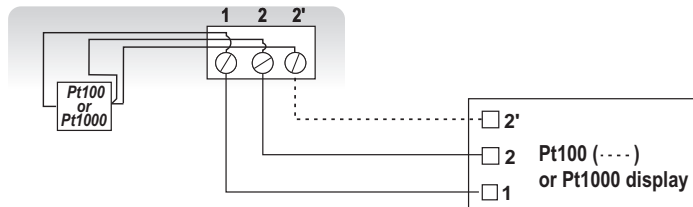
For the model

TM 50-B • Input and output Pt100 on terminal block



For the model

TM 50-A and TM 50-E • output Pt100* on terminal block
TM 51-A, TM 51-G and TM 51-E • output Pt1000* on terminal block



* Pt100 connection is usually made in 3 wires; the third wire is dedicated to resistance compensation of the connection cables.

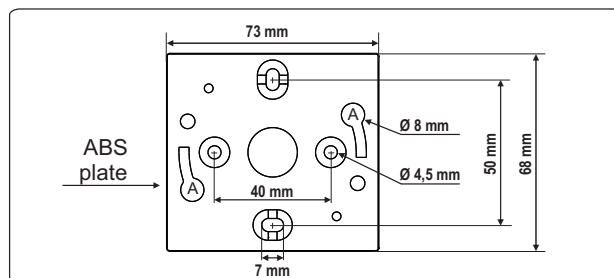
* With Pt1000, the resistance of connection cables has less influence on the measurement than with Pt100. Therefore, Pt1000 cabling is generally made with only 2 wires.

Mounting

Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter).

Drilling : $\varnothing 6$ mm with the screws and pins supplied with the transmitter.

Insert the transmitter into the plate (see points A of the drawing shown beside), by tilting it at 30° . Rotate the housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.



Maintenance

Please avoid any aggressive solvent.

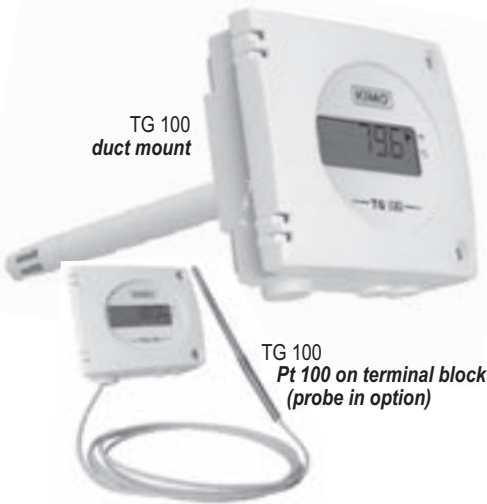
Please protect the transmitter and its probes from any cleaning product containing formol, that may be used for cleaning rooms or ducts.

Options

- Pt 100 or Pt1000 temperature probes



Ref. FT ang - TM 50 - 06/05 B - We reserve the right to modify the characteristics of our products without notice.

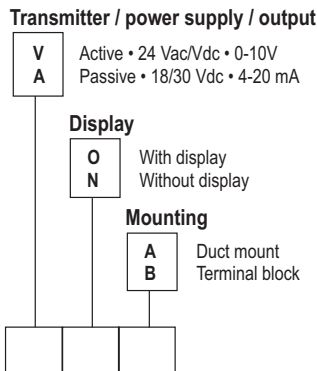


**Temperature transmitter
TG 100**

- Duct temperature transmitter, TG100 type
- Measuring ranges from 0 to +50°C, -20 to +80°C, -50 to +50°C, 0 to +100°C, 0 to 200°C, 0 to +300°C, 0 to +400°C (according to model, see "Configuration")
- 0-10 V output, active sensor, power supply 24 Vac/Vdc (3-4 wires) or 4-20 mA output, passive loop, power supply 18 to 30 Vdc (2 wires)
- ABS IP 65 housing, with or without display
- Quick and easy mounting "1/4 turn" system with wall-mount plate

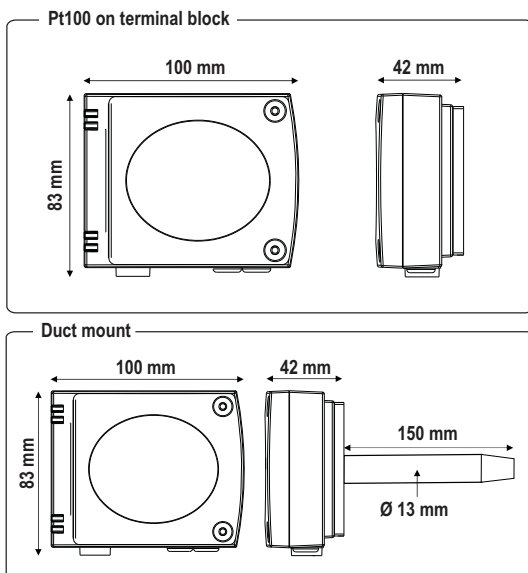
Part number

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



Example : TG100-VOA
Model : temperature transmitter TG 100 active sensor 0-10 V output, with display and duct mount probe.

Dimensions of the housing
(with wall-mount plate)



Features of the transmitter

Temperature

Working principle : Pt100 is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases.
Example : for 0°C \approx 100 Ω - for 100°C \approx 138,5 Ω

- Measuring rangesee chart "Configuration"
 Units of measurement °C, °F
 Accuracy * \pm 0,5% of reading \pm 0,4°C (duct mount probe) according to the probe (Pt 100 on terminal block)
 Response time1/e (63%) 5 sec. (duct mount probe) according to the probe (Pt 100 on terminal block)
 Resolution0,1°C
 Type of sensor.....Pt 100 class A as per DIN IEC751
 Type of fluid.....air et neutral gases

WITH or WITHOUT display

Features of the housing

- HousingABS
 Fire-proof classificationHB as per UL94
 Dimensionssee drawings beside
 ProtectionIP 65
 Display5- digit LCD. Dimensions 50 x 15 mm
 Height of the digits10 mm
 Cable gripfor cables \varnothing 7mm maxi.
 Weight.....145g (with display) - 110g (without display)

Technical Specifications

- Output / power supplyactive transmitter 0-10 V (power supply 24 Vac/Vdc \pm 10%), 3-4 wires
 passive loop 4-20 mA (power supply. 18/30 Vdc), 2 wires
 maximum load : 500 Ohms (4-20 mA)
 minimum load : 1 K Ohms (0-10 V)
 Consumption2 VA (0-10V) or max. 22 mA (4-20mA)
 Electro-magnetical compatibilityEN 61326
 Electrical connectionscrew terminal block for cables \varnothing 1.5 mm² max
 Communication to PCKimo RS 232 cable
 Working temperature (housing)0 to +50°C
 Working temperature (probe)-20 to +80°C (duct mount probe) according to the probe (Pt100 on terminal block)
 Storage temperature-10 to +70°C
 Environmentair and neutral gases

*All the accuracies indicated in this technical datasheet were stated in laboratories conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

PT 100

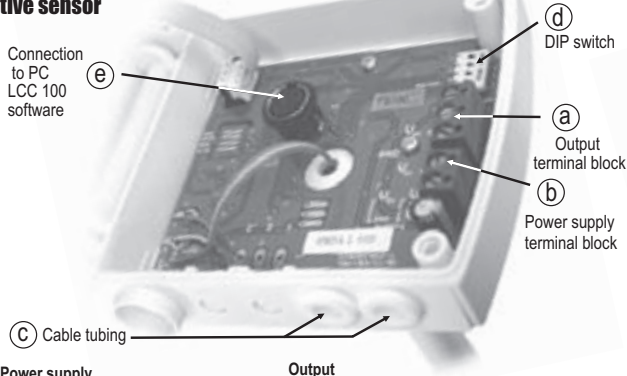
Connection



For the models

TG 100 - VOA, TG 100 - VNA • Output 0-10 V active sensor

Connection to PC LCC 100 software



Power supply

- (b) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ Vdc.....direct voltage
GND.....ground

OR

- (b) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ Vac.....alternative voltage (phase)
Vac.....alternative voltage (neutral)

Output

- (a) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ GND.....ground
Vdc T.....direct voltage (temperature)

(c) Cable grip : to insert the cable, it is required to slightly cut the rubber.

For the models

TG 100 - AOA, TG 100 - ANA Output 4-20 mA - passive loop

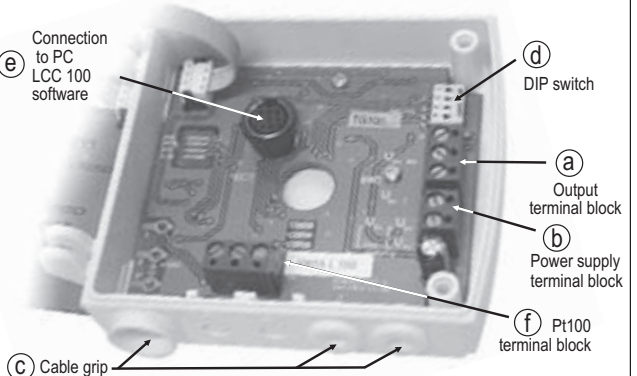
- (a) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ Vdc.....direct voltage
I_T.....direct current (temperature)

Terminal block

For the models

TG 100 - VOB, TG 100 - VNB • Output 0-10 V - active sensor

Connection to PC LCC 100 software



Power supply

- (b) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ Vdc.....direct voltage
GND.....ground

OR

- (b) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ Vac.....alternative voltage (phase)
Vac.....alternative (neutral)

For the models

TG 100 - AOB, TG 100 - ANB Output 4-20 mA - passive loop

- (a) $\begin{matrix} \text{Dc} \\ \text{Dc} \end{matrix}$ Vdc.....direct voltage
I_T.....direct current (temperature)

Pt100 terminal block

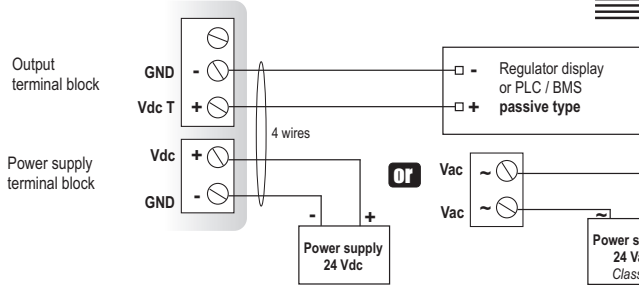
Electrical connection - as per norm NFC15-100

⚠ This connection must be made by a qualified technician. To make the connection, the transmitter must not be energized.

For the models

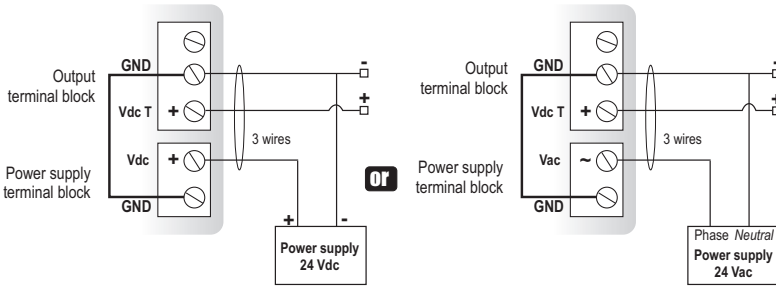
TG 100 - VOA, TG 100 - VNA, TG 100 - VOE, TG 100 - VNE • Output 0-10 V - active loop

4 wires



3 wires

⚠ To make a 3-wire connection, before powering up the transmitter, please connect the ground to the output of the input ground. See drawing below.

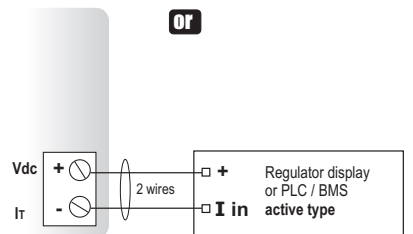
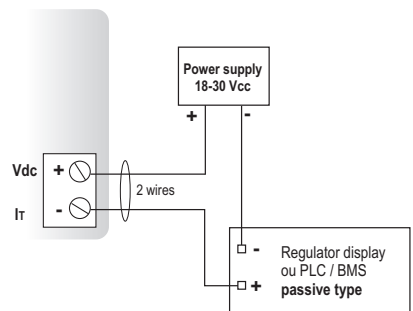


For the models

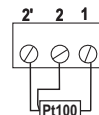
TG 100 - AOA, TG 100 - ANA, TG 100 - AOE, TG 100 - ANE

• Output 4-20 mA - passive loop

2 wires



Connection of the Pt100 probe for the models TG 100 - VOB, TG 100 - VNB, TG 100 - AOB, TG 100 - ANB

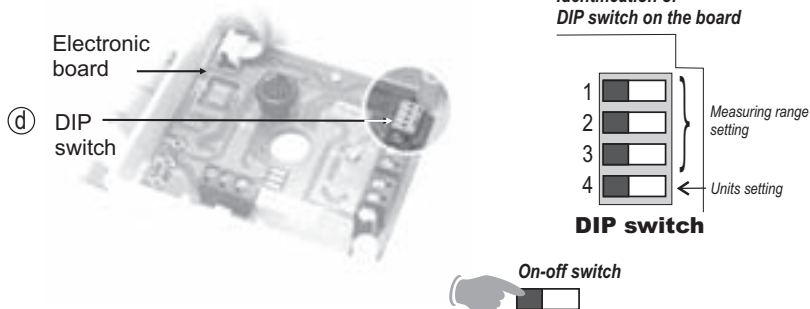


Configuration

It is possible to configure the measuring ranges, the units, the output of the transmitter (according to the model) either by **DIP switch** and/or via **software** (connections ③ and ④ on drawing "connection")

Configuration by DIP switch

To configure the transmitter, please unscrew the 2 screws from the housing, and then open it.



To configure the transmitter, **it must not be energized**. Then, you can make the settings required, with the DIP switches (as shown on the drawing beside). When the transmitter is configured, you can power it up.

Caution !

Please follow carefully the combinations beside with the DIP switch.

If the combinations are wrong, the following message will appear on the display of the transmitter "CONFERROR". In that case, you will have to unplug the transmitter, place the DIP switches correctly, and then power the transmitter up.

Units setting

To set the measuring unit, please put the on-off switch 4 of units, as shown beside.

Configurations	°C	°F
Combinations	1 <input type="checkbox"/>	1 <input type="checkbox"/>
	2 <input type="checkbox"/>	2 <input type="checkbox"/>
	3 <input type="checkbox"/>	3 <input type="checkbox"/>
	4 <input checked="" type="checkbox"/>	4 <input checked="" type="checkbox"/>

Measuring range setting

To set the measuring range, please put the on-off switches 1, 2 and 3 of the measuring range, as shown beside.

Configurations	Measuring range Pt 100 on terminal block							
	Measuring range duct mount							
	0 to 50 °C	-20 to 80 °C	-50 to 50 °C	0 to 100 °C	0 to 200 °C	0 to 300 °C	0 to 400 °C	
Combinations	1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	1 <input type="checkbox"/>	
	2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	2 <input type="checkbox"/>	
	3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	3 <input type="checkbox"/>	
	4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	4 <input type="checkbox"/>	

Initialization the transmitter

When the transmitter is powered up, it initializes and displays the digits $\overline{00000}$; and then its configuration including :
 - the measuring range
 - the analog output.

1- The measuring range

The following message is displayed : \overline{Lo} . This is the low value of the measuring range, and its digit value : **ex** : $\overline{0}$.
 The following message is displayed : \overline{Hi} . This is the high value of the measuring range and its digit value : **ex** : $\overline{400}$.
 The arrow displayed (at the bottom or on the right of the screen) is relative to the unit of measurement : **ex** : from 0 to 400 °C.

2- The analog output

If the analog output is in 4-20mA, then the following message will appear $\overline{4-20}$.
 If the analog output is 0-10 V, then the following message will appear $\overline{0-10}$.

After the display of the configuration, the transmitter displays $\overline{----}$, which confirms that the initialization is finished and you can start the measurements.

PT 100

■ Configuration via **software**

(with optional LCC100 software)



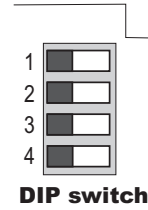
An easy and friendly configuration with the software !

You can configure your own intermediary ranges.

Example : for a transmitter with a range of -100 to +400°C, the minimum configurable range is 20°C. For example, you can configure your transmitter with a range from -20 to +380°C, or from +300 to +320°C...

• To access the configuration via software, you must first position the **DIP switches** as per the following picture (shown beside), and then connect the cable to the transmitter (see beside and see "Connection").

• Please refer to the user manual of the LCC 100 to make the configuration.



DIP switch

⚠ Caution !

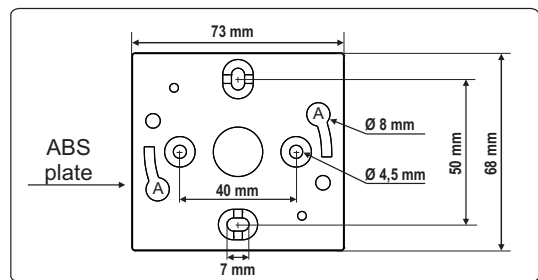
The configuration of the parameters can be done **either with the DIP switch, or via software** (you cannot combine both solutions).



■ Mounting

Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : \varnothing 6 mm (with the screws and pins supplied with the transmitter). Insert the transmitter on the plate (see A on the drawing beside) and rotate its housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.

For the model with duct mount, an additional drilling of \varnothing 14mm must be done before mounting the ABS plate.



■ Maintenance

Please avoid any aggressive solvent.

Please protect the transmitter and its probes from any cleaning product containing formol, that may be used for cleaning rooms or ducts.

■ Options

- Power supply class 2, input 230 Vac, output 24 Vac, ref.KIAL-100A
- Configuration LCC 100 software with RS 232 cable
- Temperature probes Pt100 3 wires (for model TG 100 on terminal block)



■ Accessories

- Connection tube
- Connection fittings
- Through-connections
- Straight connections
- Spherical coupling nut



New
CE



TM 100
ambient
IP30



TM 100
air tight
IP65

Temperature Transmitter TM 100

- Temperature transmitter type TM100.
- Measuring ranges from 0 to +50°C, -20 to +80°C, -50 to +50°C, 0 to 100°C (see "Configuration")
- 0-10 V or 4-20 mA output, active sensor, power supply 24 Vac/Vdc (3-4 wires) or 4-20 mA output, passive loop, power supply 18 to 30 Vdc (2 wires).
- ABS IP 65 and IP 30 housing, with or without display.
- Quick and easy mounting "1/4 turn" system on wall-mount plate.

Features of the transmitter

Temperature

Working principle: Pt100 is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases.
Example : for 0°C \simeq 100 Ω - for 100°C \simeq 138,5 Ω

Measuring range	.....0 to +50°C, -20 to +80°C, -50 to +50°C, 0 to +100°C
Units of measurement	.....°C, °F
Accuracy *	.....\pm0,5% of reading \pm 0,4°C
Response time	.....1/e (63%) 5 sec. (ambient) 1/e (63%) 20 sec. (air tight)
Resolution	.....0,1°C
Type of sensor	.....Pt 100 class A as per DIN IEC751
Type of fluid	.....air and neutral gases

Part number

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

Transmitter / Power supply / Output

V	Active • 24 Vac/Vdc • 0-10V
A	Passive • 18/30 Vdc • 4-20 mA
AC	Active • 24 Vac/Vdc • 4-20 mA

Display

O	With display
N	Without display

Housing

A	Ambient
E	Air tight

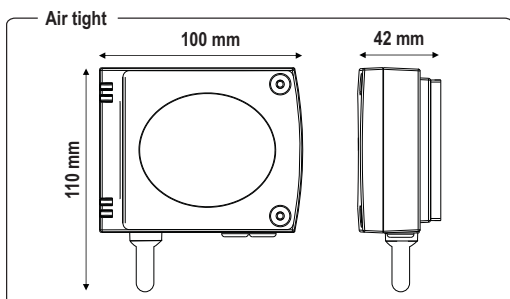
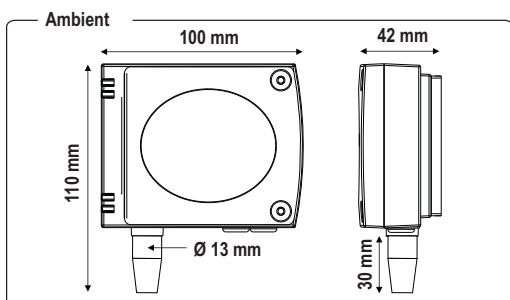
TM 100 - [] [] [] []

Example : TM100-AOA

Model : temperature transmitter TM 100, passive loop 4-20 mA, with display and ambient housing.

Dimensions of the housing

(including the wall-mount plate)



Features of the housing

WITH or WITHOUT display

Housing	.....ABS
Fire-proof classification	.....HB as per UL94
Dimensions	.....see drawing shown beside
Protection	.....IP30 (ambient model) or IP65 (air tight model)
Display	.....5-digit LCD. Dimensions 50 x 15 mm
Height of the digits	.....10 mm
Cable grip	.....for cables \varnothing 7 mm max.
Weight	.....145 g (with display) - 110 g (without display)

Technical Specifications

Output / Power supply	...active sensor 0-10 V or 4-20 mA (power supply 24 Vac/Vdc) \pm 10%, 3-4 wires passive loop 4-20 mA (power supply 18/30 Vdc), 2 wires maximum load : 500 Ohms (4-20 mA) minimum load : 1 K Ohms (0-10 V)
Consumption	.....2 VA (0-10V) or max. 22 mA (4-20 mA passive) max. 35 mA (4-20 mA active)
Electro-magnetical compatibility	.....EN 61326
Electrical connection	.....screw terminal block for cables \varnothing 1.5 mm ² max.
Communication to PC	.....Kimo RS 232 cable
Working temperature	.....+10 to +40°C (ambient model) -10 to +50°C (air tight model) -20 to +50°C (air tight model with no display)
Storage temperature	.....-10 to +70°C
Environment	.....air and neutral gases

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

PT 100

Connection

For the models

**TM 100 - VOA,
TM 100 - VNA,
TM 100 - VOE,
TM 100 - VNE**

• Output 0-10 V - **active**

(f) Connection to PC
LCC 100 software

(b) Power supply
terminal block

(c) Cable grip

(a) Output
terminal block (d) DIP Switch

Output

(a)

⊖	GND	.....ground
⊕	Vdc T	.....direct voltage (temperature)

Power supply

(b)

⊖	Vdc	.....direct voltage
⊕	GND	.....ground

OR

(b)

~	Vac	.....alternative voltage (phase)
~	Vac	.....alternative voltage (neutral)

(c) Cable grip : to insert the
cable, it is required to slightly
cut the rubber.

For the models

**TM 100 - ACOA, TM 100 - ACNA,
TM 100 - ACOE, TM 100 - ACNE**

• Output 4-20 mA - **active**

(d) and (e) Switches

For the models

**TM 100 - AOA, TM 100 - ANA,
TM 100 - AOE, TM 100 - ANE**

• Output 4-20 mA - **passive**

(a) Terminal
block

(a)

⊖	Vdc	.....direct voltage
⊕	It	.....direct current (temperature)

Electrical connection - as per norm NFC15-100

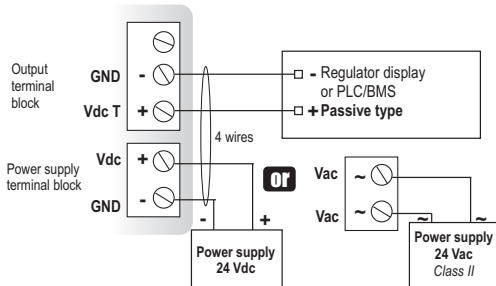
⚠ This connection must be made by qualified technician. To make the connection, the transmitter must not be energized.

For the models

TM 100 - VOA, TM 100 - VNA, TM 100 - VOE, TM 100 - VNE

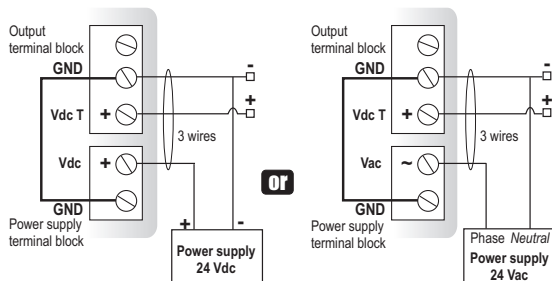
• Output 0-10 V - **active**

≡≡≡ 4 wires



≡≡≡ 3 wires

⚠ To make a 3-wire connection, **before powering up the transmitter**, please connect the output to the input ground. See drawing shown beside.

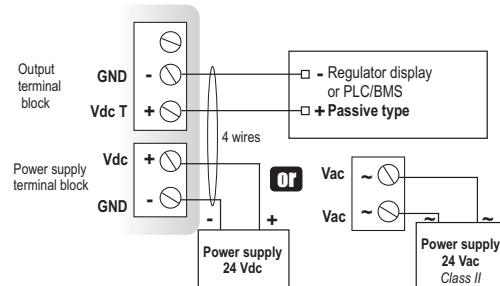


For the models

TM 100 - ACOA, TM 100 - ACNA, TM 100 - ACOE, TM 100 - ACNE

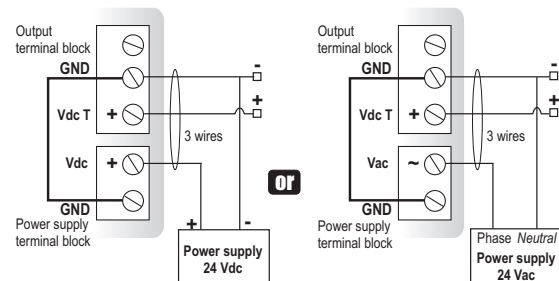
• Output 4-20 mA - **active**

≡≡≡ 4 wires



≡≡≡ 3 wires

⚠ To make a 3-wire connection, **before powering up the transmitter**, please connect the output to the input ground. See drawing shown beside.



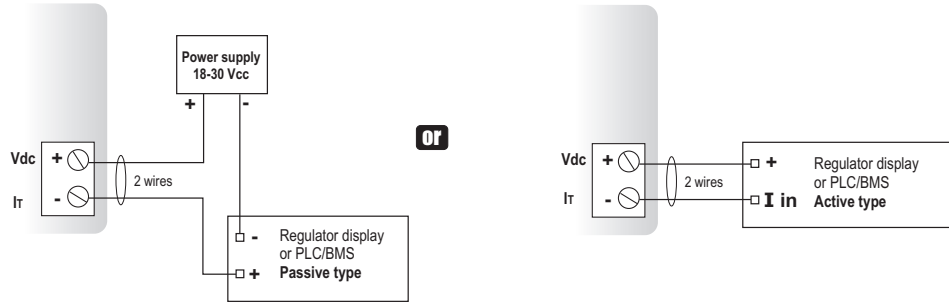
Electrical connection

For the models

TM 100 - AOA, TM 100 - ANA, TM 100 - AOE, TM 100 - ANE

• Output 4-20 mA - **passive**

== 2 wires

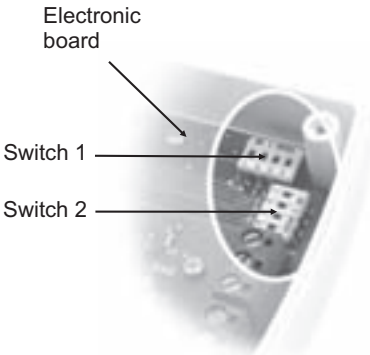


Configuration

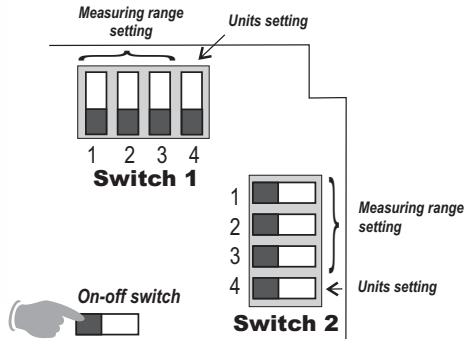
It is possible to configure the measuring ranges, the units, the output of the transmitter (according to the model) either by DIP switch and/or via software (connections ④ / ⑤ and ⑥ on drawing "connection").

Configuration by DIP switch

To configure the instrument, please unscrew the 2 screws from the housing.



Identification of the DIP switch on the electronic board



To configure the transmitter, it **must not be energized**. Then, you can make the settings required, with the DIP switches (as shown on the drawing beside). When the transmitter is configured, you can power it up.

Caution!

Please follow carefully the combinations beside with the DIP switch.

If the combinations are wrong, the following message will appear on the display of the transmitter "CONF ERROR". In that case, you will have to unplug the transmitter, replace the DIP switches correctly, and then power the transmitter up.

Units setting

To set the measuring unit, put the on-off switch 4 of units as shown beside.

Configurations	Switch 1 TM100 AC - Output 4-20mA - Active		Switch 2 TM 100V - Output 0-10V - Active TM 100 A - Output 4-20mA - Passive	
	°C	°F	°C	°F
Combinations	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4

Measuring range setting

To set the measuring range, put the on-off switches 1, 2 and 3 of the units, as shown beside.

Configurations	Switch 1 TM100 AC - Output 4-20mA - Active				Switch 2 TM 100V - Output 0-10V - Active TM 100 A - Output 4-20mA - Passive			
	0 to 50°C	-20 to 80°C	-50 to 50°C	0 to 100°C	0 to 50 °C	-20 to 80 °C	-50 to 50 °C	0 to 100 °C
Combinations	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4

■ Initialization of the transmitter

When the transmitter is powered up, it initializes and displays the digits $\boxed{00000}$, and then its configuration including :

- The measuring range.
- The analog output

1- The measuring range.

The following message is displayed : \boxed{Lo} . This is the low value of the measuring range, and its digit value : eg : $\boxed{0}$

The following message is displayed : \boxed{Hi} . This is the high value of the measuring range and its digit value eg : $\boxed{50}$.
The arrow displayed (at the bottom or on the right of the screen) is relative to the unit of measurement : eg : from 0 to 50 °C.

2 - The analog output.

If the analog output is in 4-20 mA, then the following message will appear : $\boxed{4-20mA}$.

If the analog output is 0-10V, then the following message will appear : $\boxed{0-10V}$.

After the display of the configuration, the transmitter displays $\boxed{----}$, which confirms that the initialization is finished and you can start the measurements.

■ Configuration via software

(with optional LCC100 software)



Switch 1



Switch 2

An easy and friendly configuration with the software !

You can configure your own intermediary ranges, the offset....

Example : for a transmitter with a range of 0-100°C, the minimum delta of the range is 20°C. You can also configure your transmitter from 0 to +70°C, or from -10 to +10°C...

- To access the configuration via software, you must first position the **DIP switches** as per the following picture (shown beside), and then connect the cable to the transmitter (see beside and see "Connection").

- Please refer to the user manual of the LCC100 to make the configuration.

⚠ Caution !

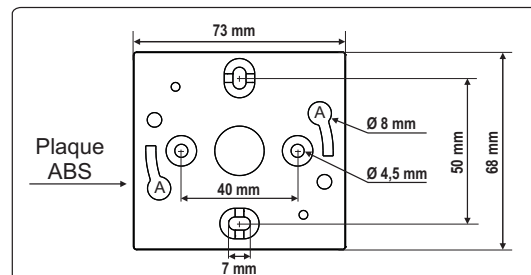
The configuration of the parameters can be done **either by DIP switch, OR via software** (you cannot combine both solutions).



■ Mounting

Installation: mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : $\varnothing 6$ mm (with the screws and pins supplied with the transmitter).

Insert the transmitter at 30 ° on the plate (see A on the drawing beside) and rotate its housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.



■ Maintenance

Please avoid any aggressive solvent.

Please protect the transmitter and its probes from any cleaning product containing formol, that may be used for cleaning rooms or ducts.

■ Options

- Power supply class 2, input 230 Vac, output 24 Vac, ref.KIAL-100A
- Configuration software LCC 100 with RS 232 cable.
- Temperature probes Pt100 3 wires

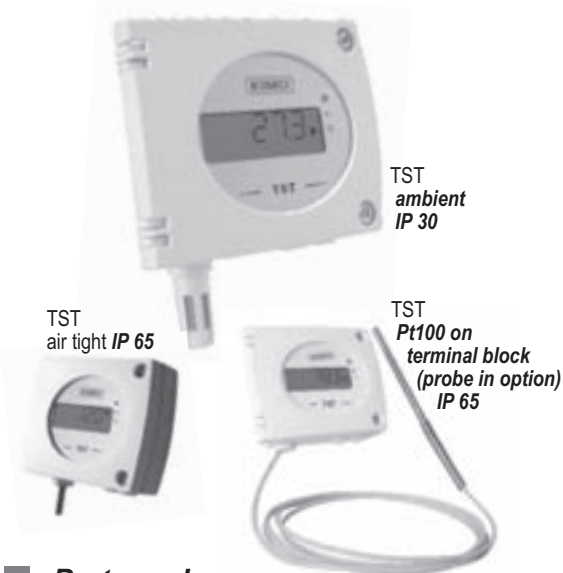


New

CE

Thermostats TST

- Measuring ranges from 0 to +50°C, -20 to +80°C, -100 to +400°C
- RCR relay output 3A/230Vac. Power supply 24Vac/Vdc
- Visual alarm, red LED in front
- ABS IP 65 and IP 30 housing, with display
- Quick and easy mounting with the "1/4 turn" system with wall-mount plate



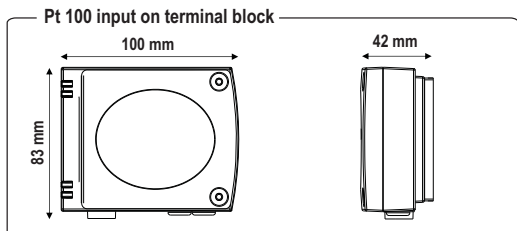
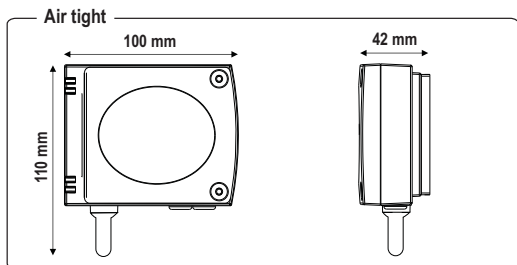
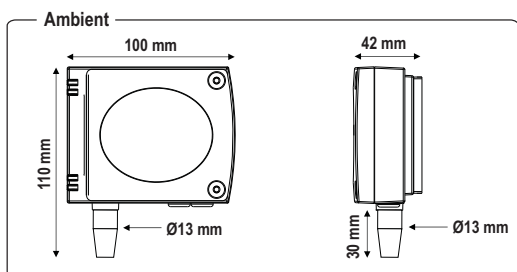
Part number

To order, just add the code to complete the part number :

Probe	
M	Ambient
E	Air tight
B	Pt100 input, on terminal block

TST - []

Example : TST-B corresponds to a TST thermostat with Pt 100 input on terminal block (probe in option).



Features of the transmitter

Temperature

A Pt100 is a resistance with a positive temperature coefficient which varies according to the temperature. The higher the temperature is, the more the value of the resistance increases.

Example : for 0°C \simeq 100 Ω - for 100°C \simeq 138,5 Ω

Measuring ranges 0 to +50°C (ambient model)
 -20 to +80°C (air tight model)
 according to the probe : -100 to +400°C
 (Pt100 input on terminal block)

Unit of measurement °C, °F

Accuracy * \pm 1% of reading \pm 0,4°C

Operating time 1/e (63%) 5 sec. (ambient model)
 1/e (63%) 20 sec. (air tight model)
 according to probe (Pt100 input on terminal block)

Resolution 0,1°C

Type of transmitter Pt 100 class A as per DIN IEC 751

Type of fluid air and neutral gases

Features of the housing

Housing ABS

Fire-proof classification HB as per UL94

Dimensions see drawing beside

Protection IP30 (ambient model)
 IP65 (air tight and Pt100 on terminal block models)

Display 5-digit LCD. Dimensions 50 x 15 mm

Height of the digits 10 mm

Cable grip for cables \varnothing 7 mm max.

Weight 145 g

Technical specifications

Output 1 RCR relay 3A/230 Vac

Relay and alarm status red LED in front

Set point 1 configurable set point

Power supply 24 Vac/Vdc \pm 10%

Consumption 2 VA

Electromagnetic compatibility EN 61326

Electrical connection screw terminal block for cable \varnothing 1.5 mm² max.

Communication to PC Kimo RS 232 cable

Working temperature +10 to +40°C (ambient model)

-10 to +50°C (air tight model)

according to probe (Pt100 input on terminal block)

Storage temperature -10 to +70°C

Environment air and neutral gases

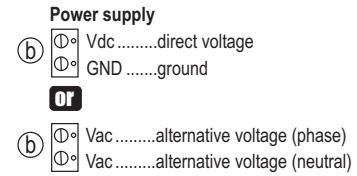
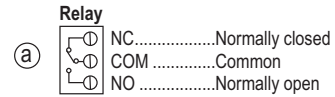
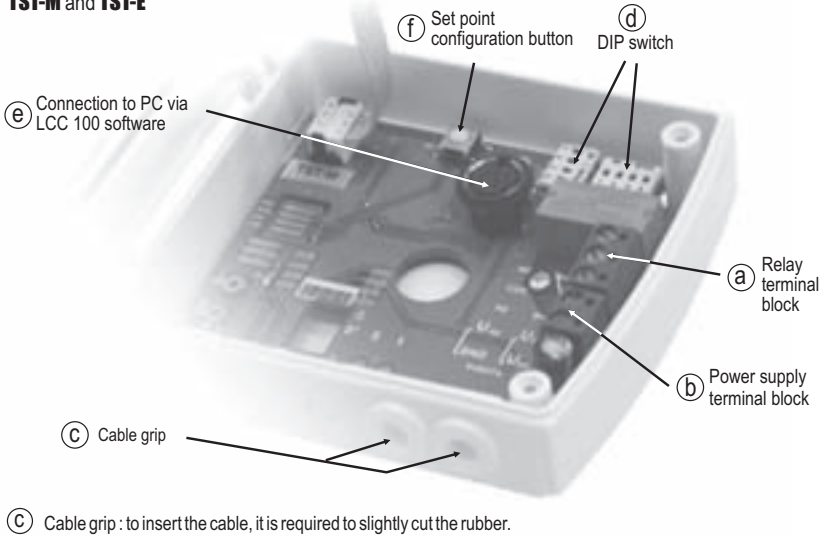
*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

PT 100

Connection



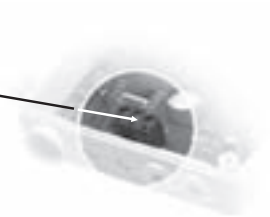
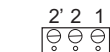
For models
TST-M and TST-E



For model

TST-B

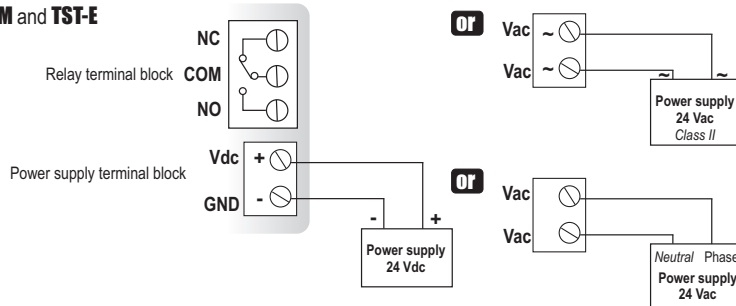
Pt100
terminal
block



Electrical connections - as per norm NFC15-100

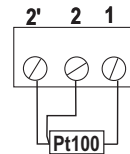
⚠ This connection must be made by a qualified technician. To make the connection, the transmitter must not be energized.

For models
TST-M and TST-E



Connection of the Pt100 probe

For model
TST-B

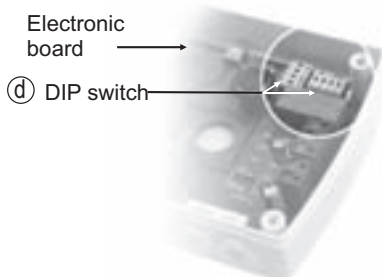


Configuration

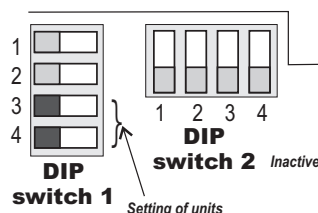
Configuration of measuring units, set points, can be carried out different ways : **DIP switch, push-button and/or software** (connections (e), (f) and (d) on drawing "connection").

Configuration of measuring units by **DIP switch**

To configure the transmitter, please unscrew the 2 screws from the housing, and then open it.



Identification of the DIP switches on the electronic board



To configure the transmitter, **it must not be energized**. Then, you can make the settings required, thanks to the DIP switches (as shown on the drawing beside). When the transmitter is configured, you can power it up.

⚠ Caution !

Please follow carefully the combinations beside with the **DIP switch**.

If the combination is wrongly done, the following message will appear on the display of the transmitter "**CONF ERROR**". In that case, you will have to unplug the transmitter, replace the DIP switches correctly, and then power the transmitter up.

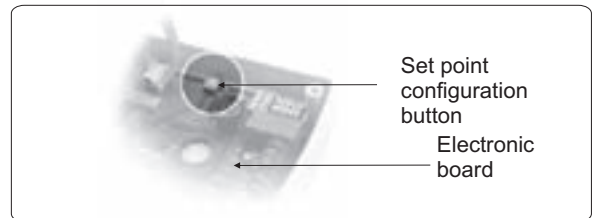
• Setting of units

To set the unit of measurement, please put the on-off buttons 3 and 4 of the units as shown beside.

Configurations	°C	°F
1		1
2		2
3		3
4		4

■ Set points configuration with the push-button

Power the transmitter up : it will then display its current configuration.
To modify the configuration, please proceed as follows :
Remove the 2 screws from the housing and open it.
The settings are done with the button located on the electronic board (see photo beside).



Principle :

- By pressing on this button for more than 3 seconds, you can validate the setting and go to the next setting.
- By pressing quickly on this button, you can increment a value and scroll down the different options or values.

This button enables :

- 1- to activate/deactivate an alarm (set point)
- 2- to program the action of the alarm (rising/falling/regulation action)
- 3- to set the set point value
- 4- to set the time-delay (temporisation)

To set the different options :

1- Activating/deactivating the alarm :

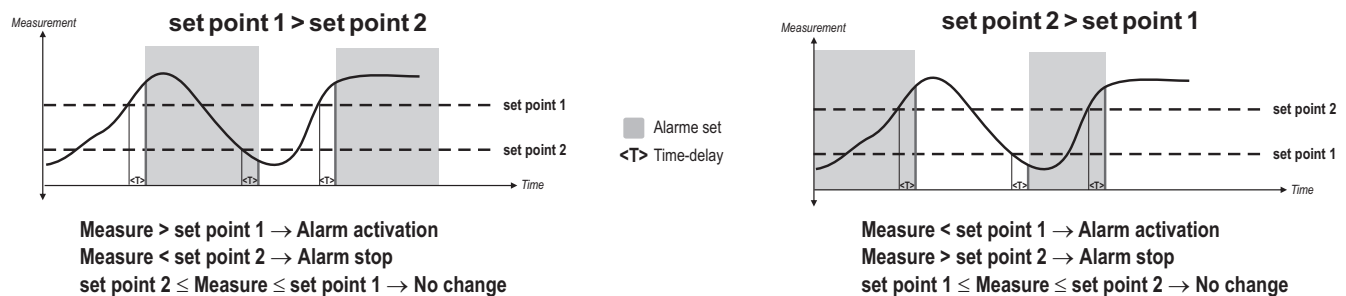
After pressing the set point configuration button for more than 3 seconds, **CONF.** will be displayed, then **AL.ON** or **AL.OFF** (depending on the last configuration of the transmitter).

Afterwards, by briefly pressing on this button, you can switch between **AL.ON** (alarm on) and **AL.OFF** (alarm off).

To validate your choice, press again for 3 seconds. If you chose **AL.OFF**, then you will exit the configuration mode and switch back to the measurement mode. If you chose **AL.ON**, you will move to the next parameter.

2- Programming the action of the alarm (rising/falling/regulation action) :

- Rising action (1 set point)** : the alarm will activate when the measure **exceeds** the set point and will stop when the measure goes **below** the set point.
- Falling action (1 set point)** : the alarm will activate when the measure goes **below** the set point and will stop when the measure goes **above** the set point.
- Regulation mode (2 set points)** : the set point values will determine the action type. Two possibilities are available:



Press the button for 3 seconds to confirm your choice. You will then move on to the last parameter.

3- Programming the set point value :

The set point is a limit which, when being reached and/or exceeded, activates the relay and the visual red LED alarm.

The first digit will start to blink, by briefly pressing on the button, you can choose if the set point will be either positive (0) or negative (-). Then press the button during 3 seconds to confirm your choice. The second digit will start to blink. Press the button briefly to change the value. Then press the button during 3 seconds to confirm your choice. Repeat this sequence until you have reached the last digit and then confirm the set point. If you selected regulation mode , you will program the second set point.

4- Setting of the time-delay (dead band temporisation 60 sec max) :

When the set point is reached and/or exceeded, the time-delay will wait the specified time before energizing the relay, if the set point is still reached and/or exceeded.

When the first digit starts blinking, press briefly on the button to change the value. Then press the button during 3 seconds to confirm your choice. Repeat the process until all digits have the desired value and press the button for 3 seconds to confirm your choice.

The programming is now done and the display switches back to the measurement mode.

■ Initialization of the transmitter

When the transmitter is powered up, it initializes and displays the digits $\boxed{00000}$, and then its configuration including :

- 1 - the measuring range
- 2 - the status of the alarm
- 3 - action of the alarm (rising, falling or regulation action)
- 4 - the set point
- 5 - time-delay (dead band temporisation)

1- The measuring range

The following message is displayed : \boxed{Lo} . This is the low value of the measuring range, and its digit value : **ex** : $\boxed{-500}$.

The following message is displayed : \boxed{Hi} . This is the high value of the measuring range and its digit value : **ex** : $\boxed{1000}$.

The arrow displayed (at the bottom or on the right of the screen) is relative to the unit of measurement : **ex** : from -500 to 1000 Pa.

2 - The status of the alarm

When the alarm is off, the following message is displayed : \boxed{ALOFF} .

When the alarm is on, the following message is displayed : \boxed{ALON} .

- When the alarm is off, the transmitter displays $\boxed{-----}$, which confirms the end of initialization and that you can start the measurements .
- When the alarm is on, the transmitter displays the parameters relative to the relay (set point, program of the alarm, time-delay).

3 - Action of the alarm (rising or falling action)

If the relay is programmed in rising action, the following message is displayed : $\boxed{--r--}$.

If the relay is programmed in falling action, the following message is displayed : $\boxed{--L-}$.

This message is displayed : **ex** : $\boxed{250}$, which means that the alarm

If the relay is programmed in regulation mode, the following message is displayed $\boxed{---}$.

■ Configuration via software

(with the optional LCC100 software)

An easy and friendly way to configure!

You can configure the measuring units, the set point, the time-delay...

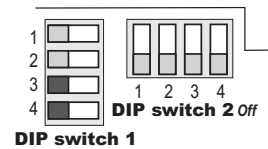
- To access the configuration via software, you must first position **the DIP switch**, as per the following picture (shown beside), and then connect the cable to the transmitter (see "connections" drawing).

- Please refer to the user manual of the LCC 100 to make the configuration.



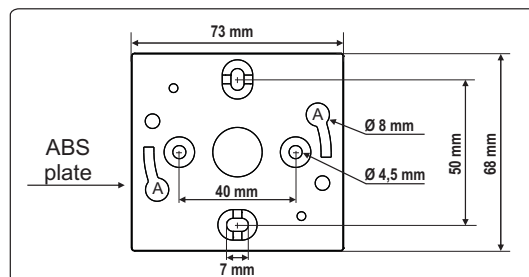
Caution !

The configuration can be made either by switch, or by software (you can not combine both solutions).



■ Mounting

Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : $\varnothing 6$ mm, with the screws and pins supplied with the transmitter. Insert the transmitter into the plate (see points A of the drawing beside), by tilting it at 30° . Rotate the housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.



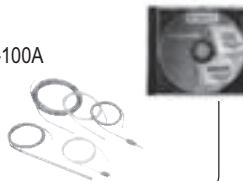
■ Maintenance

Please avoid any aggressive solvent.

Please protect the transmitter and its probes from any cleaning product containing formol, that may be used for cleaning rooms or ducts.

■ Options

- Power supply class 2, input 230 Vac, output 24 Vac, ref.KIAL-100A
- Configuration software LCC 100 with RS 232 cable
- Temperature probes Pt100 3 wires





RTD sensor with standard connection head

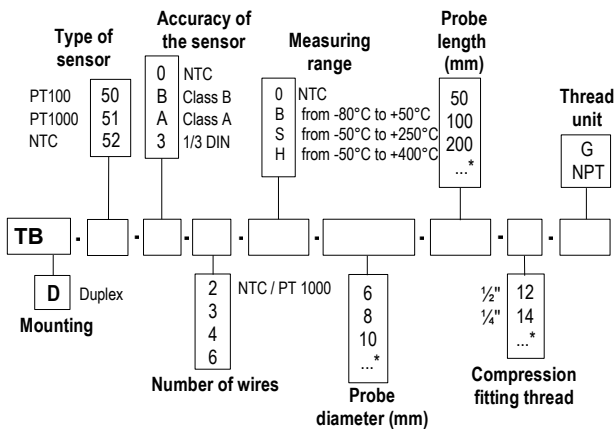
TB 50 / TBD 50

- Temperature sensor with stainless steel sheath, with or without compression fitting.
- Measuring range **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wires : **single pair** (2, 3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor types PT25, PT50, PT500, PT200 or NI, please contact us.

PT 100

Part numbers

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

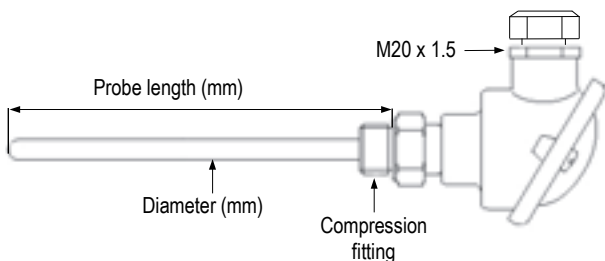


* Other dimensions on request

Example : TB-50-B-3-S-6-100-12G.

Model : Temperature sensor PT 100 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.

Dimensions



Technical features

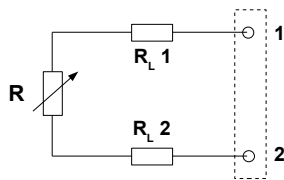
- Measuring range**.....from -80°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)
- Accuracy***.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3.695K ±1%

Mounting of wires.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6 mm Ø.
multipair 4 or 6 wires
For T>250°C use sheath from 8 mm Ø.

- Storage temperature**.....from -20°C to +80°C
- Sheath**.....316 L stainless steel, 3/4 to 4/4 hard, no welding
- Compression fitting**.....316 L stainless steel
- Thread**.....with or without, 1/4, 1/2, Gaz or NPT plug (other thread on request)
- Electrical connection**.....with or without terminal block transmitter 4/20mA 0/10V as option
- Connection head**.....Aluminium alloy
cable gland : M20 x 1.5
IP65 protection
- Adjustable mountings**.....compression fitting welded further along the sheath, flange, clamp, releacable probe insert, restricted end, ambient end. See datasheet.

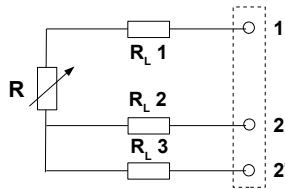
■ **Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .**

• **2-wire connection**



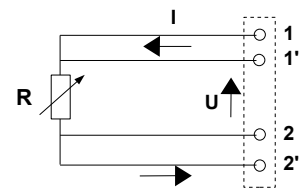
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• **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 2' 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.**

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

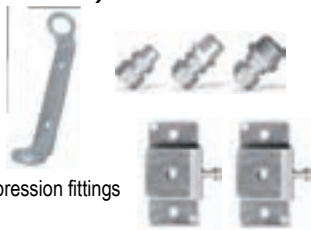
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

■ **Tolerances of NTC probes**

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

■ **Accessories (See Datasheet)**

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



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



Ref. FTang - TB50 - 03/08 B - We reserve the right to modify the characteristics of our product



-200°C

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

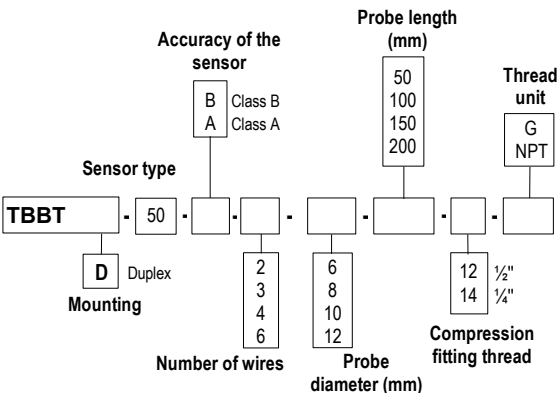
TBBT 50 / TBBTD 50

- 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).

PT 100

Part numbers

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



* Other dimension on request

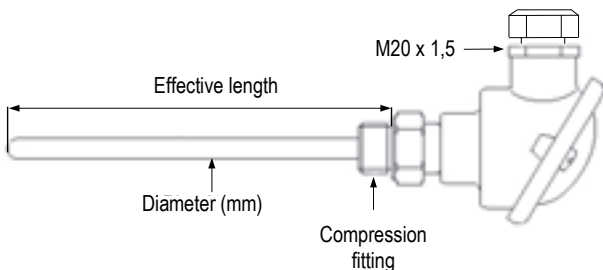
Example : TBBT-50-B-3-8-100-12G.

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.

Dimensions probe



Technical features

Working temperatures.....from -200°C to +80°C
(according to reference)

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 4/20mA 0/10V as option

Connection head.....Aluminium alloy
cable gland : M20 x 1,5
IP65 protection

Tolerances* of PT100 probes

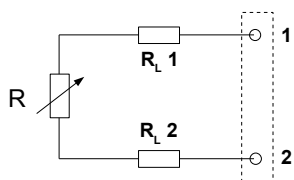
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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.

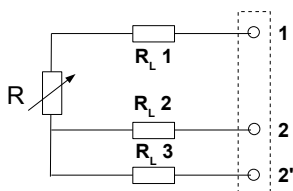
■ Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



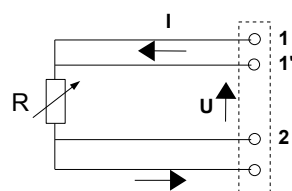
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of $RL1 + RL2$, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' terminals. This is the most common connection.

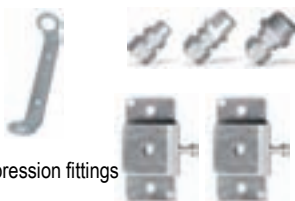
• 4-wire connection



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 data sheet)

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





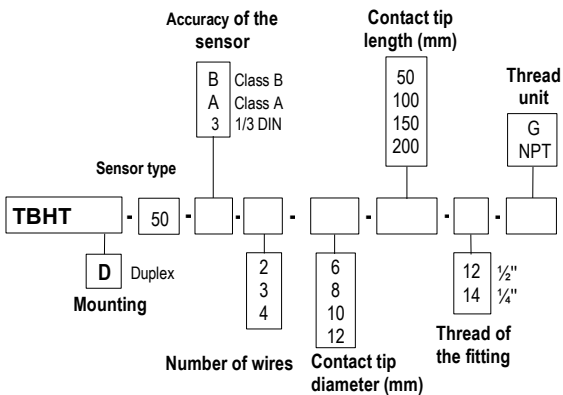
RTD sensor with standard head and resistive element for very high temperature use

TBHT 50 / TBHTD 50

- Temperature sensor with or without compression fitting and stainless steel contact tip.
- Measuring range (According to reference) : **from -50 to +550°C**
- Mounting of wire : **single pair** (2,3 or 4 wires).
multipair (4 wires).

Part numbers

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

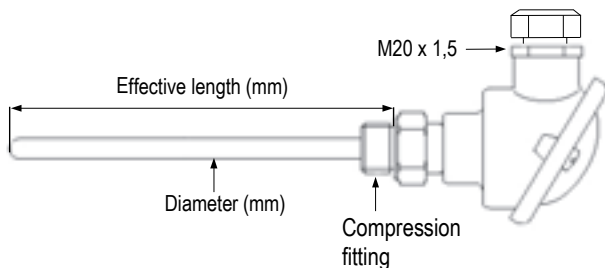


* Other dimension on request

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

Model : PT 100 temperature probe, class B, 3 wires diameter 8 mm and length including thread 100 mm. With compression fitting 1/2 G. Standard measuring range from -50°C to + 550°C.

Dimensions



Technical features

- Working temperature.....from -50°C to +550°C
(According to reference)
- Accuracy.....PT100 : see "Tolerances" table
- Type of sensor.....PT100 : Class B, Class A, 1/3 DIN
As per DIN IEC751
- Mounting of wire.....single pair 2, 3 or 4 wires
multi pair only 2x2 wires
- Storage temperature.....from -20°C to +80°C
- Contact tip.....316 L stainless steel, no welding, 3/4 to 4/4 hard
- Compression fitting.....316 L stainless steel
- Thread.....with or with out, 1/4, 1/2, male au pas Gas or NPT plug (other tread on request)
- Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

Tolerance of PT100 probes

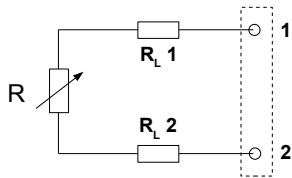
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

PT 100

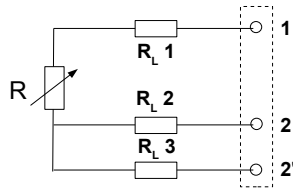
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



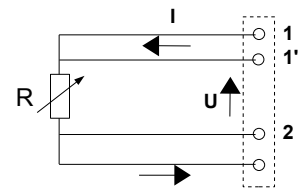
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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 data sheet)

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



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





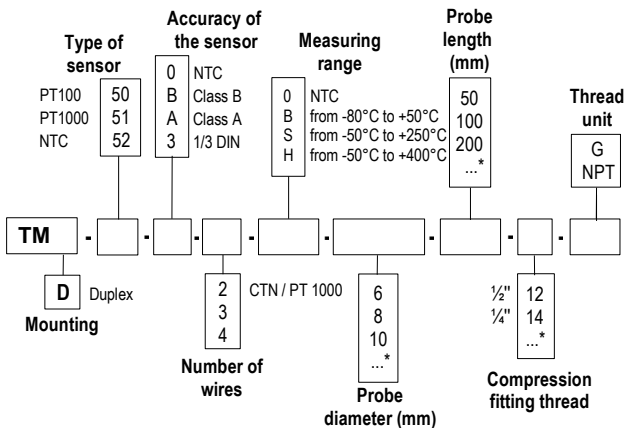
**RTD sensor with
miniature connection head**

TM 50 / TMD 50

- Temperature sensor with stainless steel sheath, with or without compression fitting.
- Measuring range **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wires : **single pair** (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

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

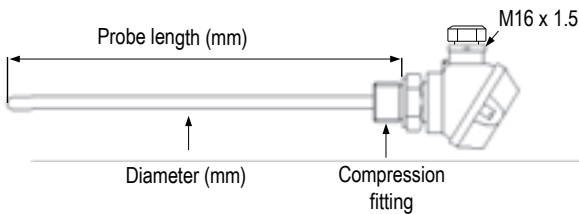


* Other dimensions on request

Example : TM-50-B-3-S-6-100-12G.

Model : Temperature sensor PT 100 class B, with 3 wires in a sheath of 6 mm diameter and 100 mm length, and with a 1/2"G thread plug. Measuring range from -50°C to 250°C.

Dimensions



Technical features

- Measuring range**.....from -80°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)
- Accuracy***.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3.695K ±1%

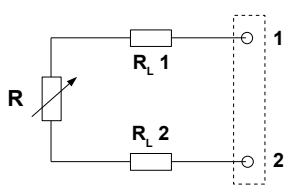
Mounting of wires.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6mm Ø.
multipair 4 wires only
For T>250°C use sheath from 8mm Ø.

- Storage temperature**.....from -20°C to +80°C
- Sheath**.....316 L stainless steel, 3/4 to 4/4 hard,
no welding
- Compression fitting**.....316 L stainless steel
- Thread**.....with or without, 1/4, 1/2, Gaz or NPT plug
(other thread on request)
- Electrical connection**.....with or without terminal block
transmitter 4/20mA 0/10V as option
- Connection head**.....Aluminium alloy
cable gland : M16 x 1.5
IP65 protection
- Adjustable mountings**.....compression fitting welded further along the
sheath, flange, clamp, replaceable probe
insert, restricted end, ambient end.
See datasheet.

PT 100

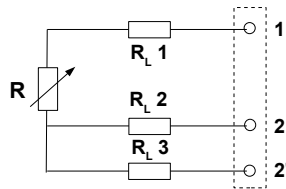
■ **Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .**

• **2-wire connection**



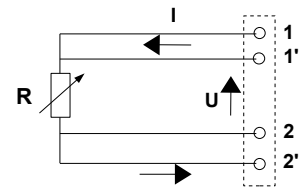
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• **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 2' 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.**

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

■ **Tolerances of NTC probes**

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

■ **Accessories (See Datasheet)**

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



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



Ref. FTang - TM - 03/08 B - We reserve the right to modify the characteristics of our product.

IP 68



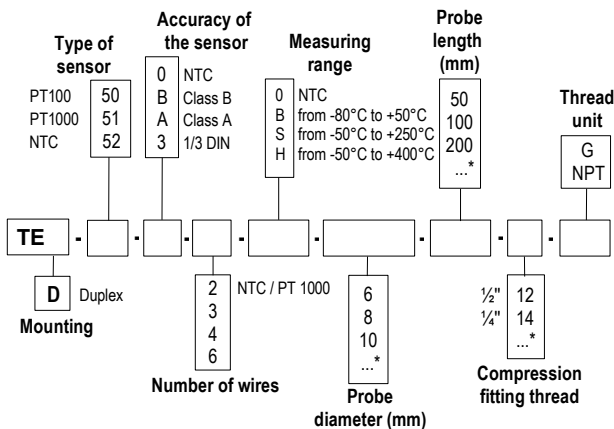
RTD sensor with waterproof connection head

TE 50 / TED 50

- Temperature sensor with stainless steel sheath, with or without compression fitting.
- Measuring range **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wires : **single pair** (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

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

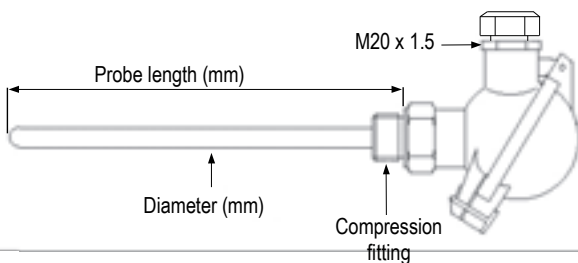


* Other dimensions on request

Example : TE-50-B-3-S-6-100-12G.

Model : Temperature sensor PT 100 class B, with 3 wires in a sheath of 6 mm diameter and 100 mm length, and with a 1/2"G thread plug. Measuring range from -50°C to 250°C.

Dimensions



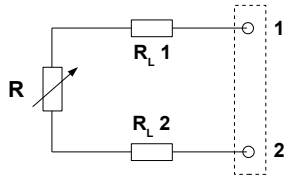
Technical features

- Measuring range**.....from -80°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)
- Accuracy***.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, $R_{25} = 10K\Omega$
Nominal Beta B25/85 value = 3.695K ±1%
- Mounting of wires**.....**single pair 2, 3 or 4 wires**
For $T > 250^\circ C$ do not use 4 wires in a sheath of 6 mm Ø.
multipair 4 or 6 wires
For $T > 250^\circ C$ use sheath from 8 mm Ø.
- Storage temperature**.....from -20°C to +80°C
- Sheath**.....316 L stainless steel, 3/4 to 4/4 hard, no welding
- Compression fitting**.....316 L stainless steel
- Thread**.....with or without, 1/4, 1/2, Gaz or NPT plug (other thread on request)
- Electrical connection**.....with or without terminal block
transmitter 4/20mA 0/10V as option
- Connection head**.....Aluminium alloy
cable gland : M20 x 1.5
IP68 protection
- Adjustable mountings**.....compression fitting welded further along the sheath, flange, clamp, replaceable probe insert, restricted end, ambient end. See datasheet.

PT 100

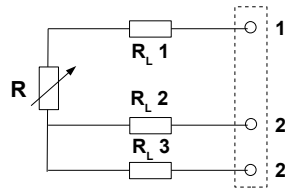
■ **Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .**

• **2-wire connection**



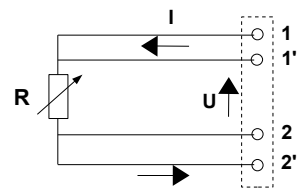
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• **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 2' 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.**

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

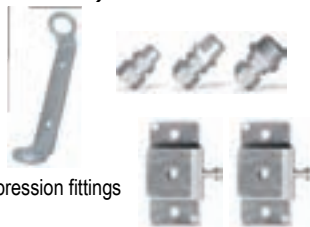
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

■ **Tolerances of NTC probes**

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

■ **Accessories (See Datasheet)**

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



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



Ref. FTang - TE50 - 03/08 B - We reserve the right to modify the characteristics of our product.



**RTD sensor with
noryl connection head
for chemical or food industry**



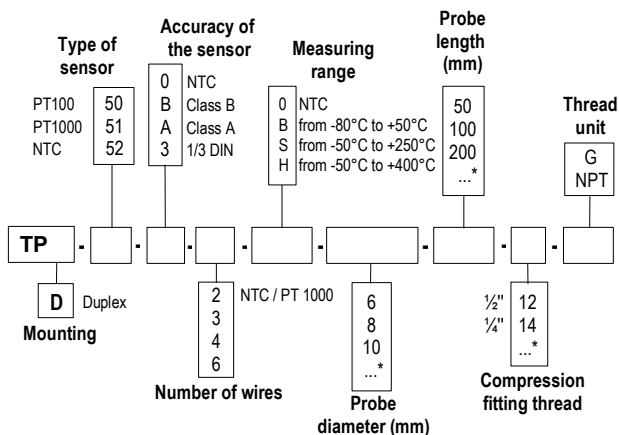
TP 50 / TPD 50

- Temperature sensor with stainless steel sheath, with or without compression fitting.
- Measuring range **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wires : **single pair** (2, 3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor types PT25, PT50, PT500, PT200 or NI, please contact us.

PT 100

Part numbers

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

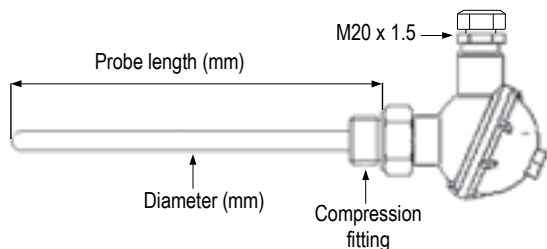


* Other dimensions on request

Example : TP-50-B-3-S-6-100-12G.

Model : Temperature sensor PT 100 class B, with 3 wires in a sheath of 6 mm diameter and 100 mm length, and with a 1/2"G thread plug. Measuring range from -50°C to 250°C.

Dimensions



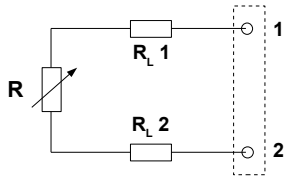
Technical features

- Measuring range**.....from -80°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)
- Accuracy***.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3.695K ±1%
- Mounting of wires**.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6 mm Ø.
multipair 4 or 6 wires
For T>250°C use sheath from 8 mm Ø.
- Storage temperature**.....from -20°C to +80°C
- Sheath**.....316 L stainless steel, 3/4 to 4/4 hard,
no welding
- Compression fitting**.....316 L stainless steel
- Thread**.....with or without, 1/4, 1/2, Gaz or NPT plug
(other thread on request)
- Electrical connection**.....with or without terminal block
transmitter 4/20mA 0/10V as option
- Connection head**.....Noryl resin
cable gland : M20 x 1.5
IP65 protection
- Adjustable mountings**.....compression fitting welded further along the
sheath, flange, clamp, replaceable probe
insert, restricted end, ambient end.
See datasheet.



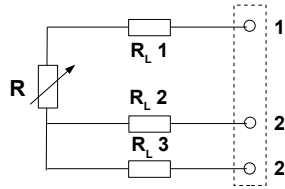
■ **Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .**

• **2-wire connection**



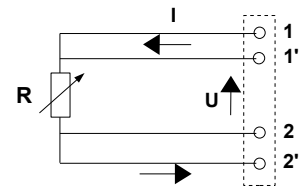
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• **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.**

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

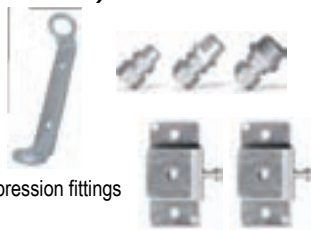
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

■ **Tolerances of NTC probes**

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2°C
from +70°C to +100°C	± 0.5°C

■ **Accessories (See Datasheet)**

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



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



Ref. FTang - TP50 - 03/08 B - We reserve the right to modify the characteristics of our products without notice.



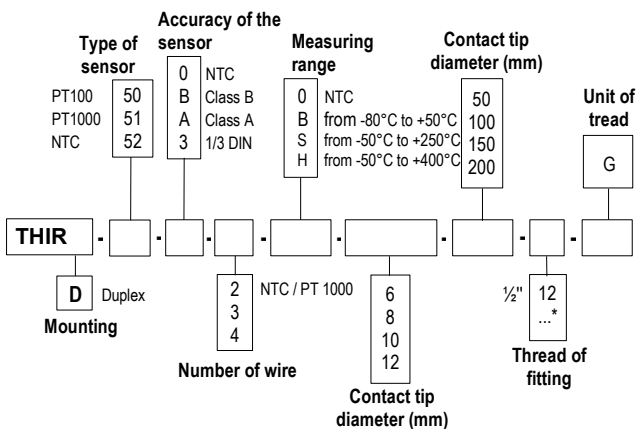
**RTD sensor
with DIN 43650 head and
resistive element
THIR 50 / THIRD 50**

- Temperature sensor with or without compression fitting and stainless steel contact tip.
- Measuring range (According to references) **from -80°C to +400°C** (PT100 and PT1000)
from -20°C to +120°C (NTC)
- Mounting of wire : **single pair** (2,3 or 4 wires).
multipair (2x2 wires only).
- For other type of resistance PT25, PT50, PT500, PT200 or NI, please contact us.

PT 100

Part numbers

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

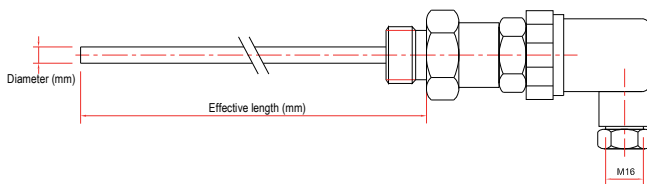


* Other dimensions on request

Example : THIR-50-B-3-S-6-100-12G.

Model : PT 100 temperature sensor, class B, 3 wires with 6 mm diameter and length including thread of 100 mm.
With 1/2" G compression fitting.
Standard measuring range from -50°C to 250°C.

Dimensions



Technical features

Working temperature.....from -80°C to +400°C (PT100 and PT1000)
(According to reference) from -20°C to +120°C (NTC)

Accuracy.....**PT100 or PT1000** : See "Tolerances" table
NTC : See "Tolerances" table

Type of sensor.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance à 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

Mounting of wire.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6mm Ø.
multipair 4 wires only
For T>250°C use sheath from 8 mm Ø.

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

Contact tip.....316 L stainless steel, no welding, 3/4 to 4/4 hard

Compression fitting.....stainless steel 316 L

Thread.....with or without, 1/2" G in standard
other on request

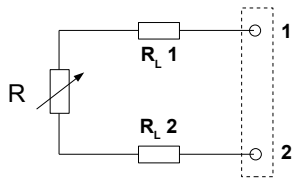
Electrical connection.....Attached tinned brass eyelet on flange

Connection head.....rectangular in glass fibre reinforced plastic
cable gland : P G11 or M16
IP65 protection (with seal)
working temperature : from -40°C to +125°C

Adjustable mountings.....on request

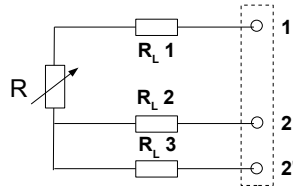
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



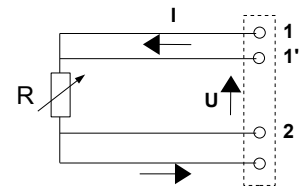
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' terminals. This is the most common connection.

• 4-wire connection



Regulated current is going through 1' and 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) et DIN 43760 (1980).

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

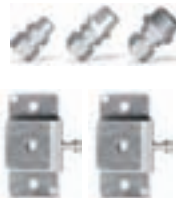
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

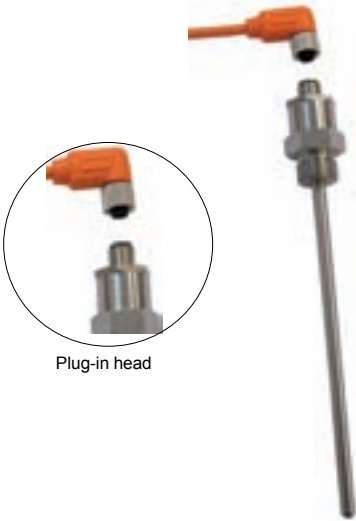
Accessories (See data sheet)

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



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





Plug-in head

RTD sensor CE
with plug-in connection head and at resistive element

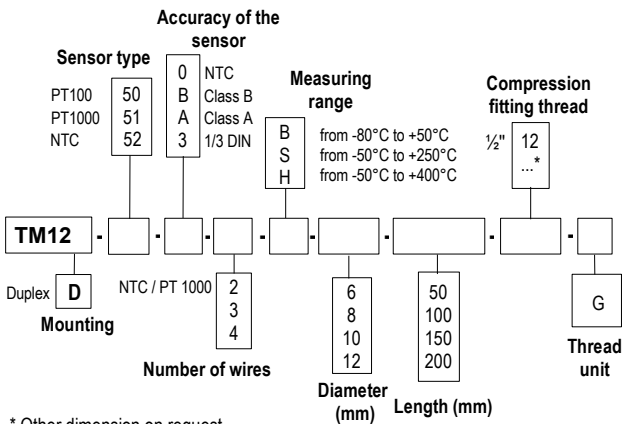
TM 12 50 / TM 12 D 50

- Temperature sensor with or without compression fitting et stainless steel contact tip.
- Measuring range (according to reference) : **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC)
- Mounting of wires : **simple** (2, 3 or 4 wires).
multipair (4, 6 or 8 wires).
- For other resistor types PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers

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

• TM 12

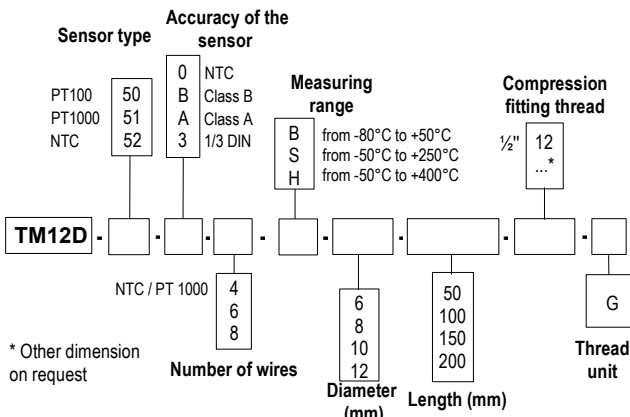


* Other dimension on request

Example : TM12-50-B-3-S-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 1/2" G. Measuring range **from -50°C to 250°C.**

• TM 12 D



* Other dimension on request

Example : TM12D-50-B-6-S-8-100-12G.

Model : PT 100 temperature sensor class B, multipair mounting, 6 wires with 8 mm diameter and length with thread of 100 mm. With compression fitting 1/2" G. Measuring range **from -50°C to 250°C.**

Technical features

Operating temperatures.....from -80°C to +400°C (PT100 and PT1000)
(according to reference) from -20°C to +120°C (NTC)

Accuracy.....PT100 or PT1000 : see "Tolerances" table
NTC : see "Tolerances" table

Sensor type.....PT100 or PT1000 : Class B, Class A,
1/3 DIN as per DIN IEC 751
NTC: resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta value B25/85 = 3,695K ±1%

Mounting of wire.....single pair 2, 3 or 4 wires
For T>250°C do not use 4 wires in a sheath of 6mm Ø.
multipair 4, 6 or 8 wires
8 wires mounting from 8 mm.



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

Contact tip.....316 L stainless steel, without welding, from 3/4 to 4/4 hard
Other on request

Compression fitting.....316 L stainless steel

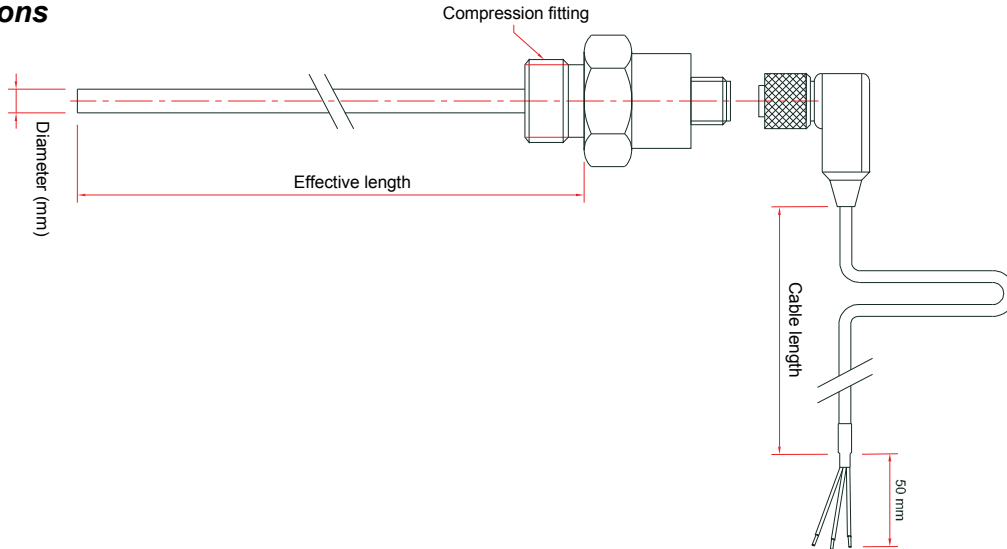
Thread.....with or without, 1/2" G in standard
Other on request

Electrical connection.....shielded PVC cord of 2 metres
knurled head screw
Protection : IP 67 only for a screwed state
Contact : nicked CuZn with gilding of 0.8 µm

Adjustable mountings.....flange, offset fitting, perforated, etc...

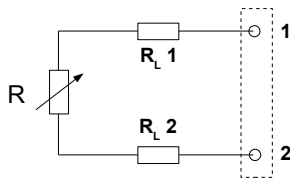
PT 100

Dimensions



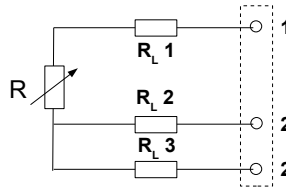
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



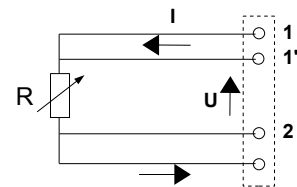
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' terminals. This is the most common connection.

• 4-wire connection



Regulated current is going through 1' and 2' 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.

Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

Tolerance* of PT100 and PT1000 probes.

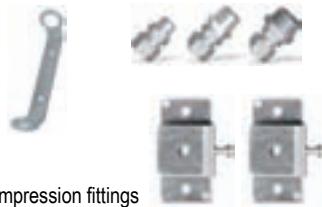
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

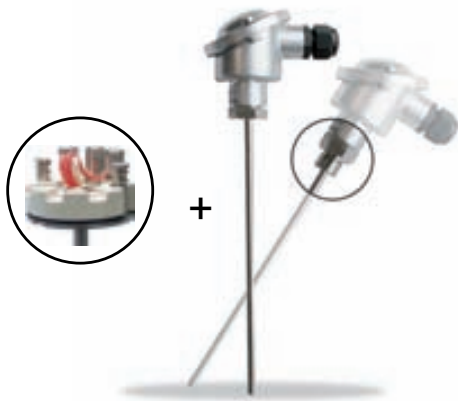
Accessories (See data sheet)

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



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



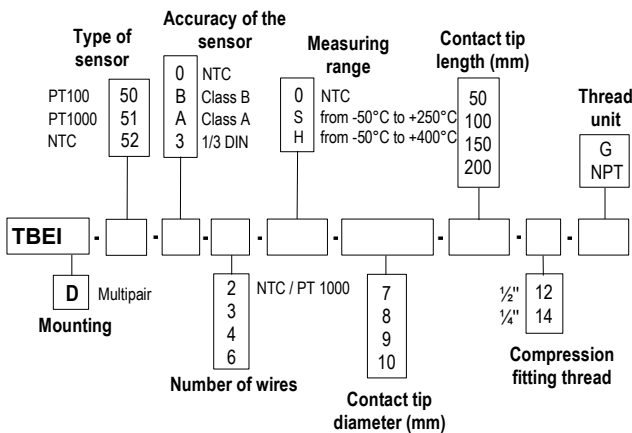


**RTD sensor with standard head
and with resistive element
with interchangeable mountings**

TBEI 50 – TBEID 50

- Temperature sensor with or without compression fitting and stainless steel contact tip.
- Measuring range (According to reference) **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wire : **single pair** (2,3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers



* Other dimensions on request

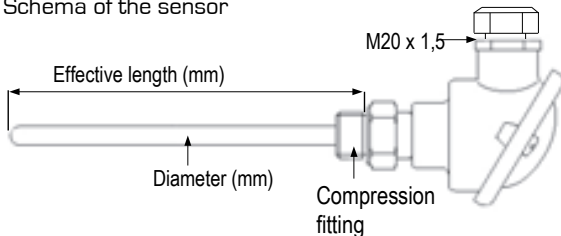
Example : TBEI-50-B-3-S-7-100-12G.

Model : PT 100 temperature sensor class B, with 3 wires in a sheath of 7 mm diameter and 100 mm length (including thread), with a 1/2 "G thread plug and with interchangeable element of 4 mm Ø and 140 mm length.

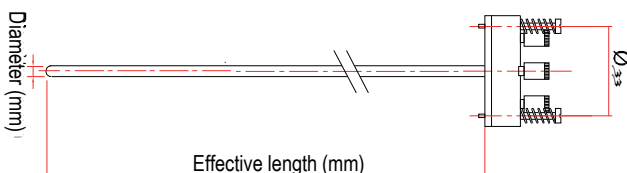
Standard measuring range from -50°C to 250°C.

Dimensions

- Schema of the sensor



- Internal interchangeable element schema



Technical features

Working temperature.....from -80°C to +400°C (PT100 and PT1000)
(According to reference) from -20°C to +120°C (NTC)

Accuracy.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table

Type of sensor.....**PT100 or PT1000** : Class B, Class A, 1/3 DIN as per DIN IEC751
CTN : resistance à 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

Mounting of wire.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6mm Ø.
multipair 4 or 6 wires
For T>250°C use sheath from 8 mm Ø.

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

Contact tip.....316 L stainless steel, no welding, 3/4 to 4/4 hard

Interchangeable element.....316 L stainless steel
Diameter : according to contact tip outer diameter

Interchangeable element Ø	Contact tip minimum Ø
4 mm	7 mm
5 mm	8 mm
6 mm	9 mm
7 mm	10 mm

LU length : contact tip length + 40 mm

Compression fitting.....316 L stainless steel

Thread.....with or with out, 1/4, 1/2, male au pas Gas or NPT plug (other tread on request)

Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

Connection head.....Aluminium alloy
cable gland : M20 x 1,5
IP65 protection

Adjustable mountings.....compression fitting welded further along the sheath, flange, clamp, replacable probe insert, restricted end, ambient end.
See data sheet.

PT 100

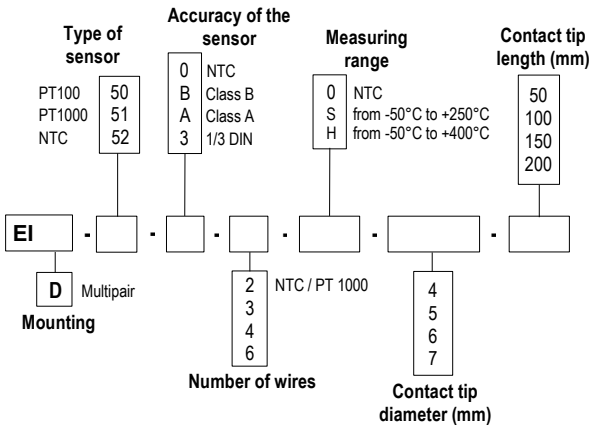


Interchangeable element at resistive element

EI 50 – EID 50

- Measuring range (according to reference) **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wire : **simple** (2,3 or 4 wires).
duplex (4 or 6 wires).
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers



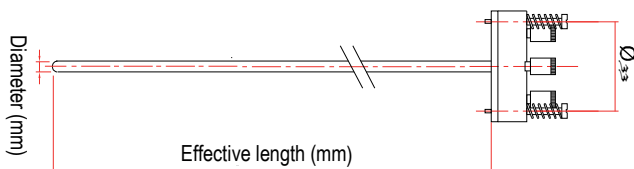
* Other dimension on request

Length LU : contact tip length + 40 mm

Example : EI-50-B-3-S-7-100.

Model : Interchangeable element PT 100 class B, 3 wires diameter 7mm and thread length included of 100 mm.
Standard measuring range from -50°C to 250°C.

Dimensions



Technical features

Working temperature.....from -80°C to +400°C (PT100 and PT1000)
(According to reference) from -20°C to +120°C (NTC)

Exactitudes.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table

Type of sensor.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, $R_{25} = 10K\Omega$
Nominal Beta B25/85 value = 3,695K ±1%

Mounting of wire.....**single pair 2, 3 or 4 wires**
For $T > 250^\circ C$ do not use 4 wires in a sheath of 6mm Ø.
multipair 4 or 6 wires
For $T > 250^\circ C$ use sheath from 8 mm Ø.



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

Contact tip.....316 L stainless steel, no welding, 3/4 to 4/4 hard

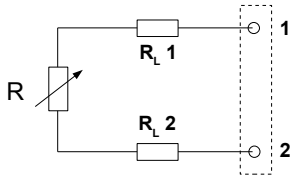
Interchangeable element.....316 L stainless steel
Diameter : according to contact tip outer diameter

Interchangeable element Ø	Contact tip minimum Ø
4 mm	7 mm
5 mm	8 mm
6 mm	9 mm
7 mm	10 mm

LU Length : contact tip length + 40 mm
Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option
with or without terminal block put on DIN 42 mm Ø kit
Pitch 33 mm.

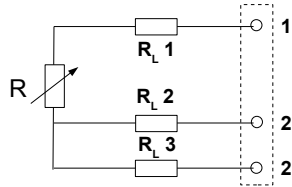
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



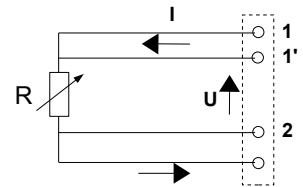
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) et DIN 43760 (1980).

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 data sheet)

- Transmitter output 4/20 mA or 0/10V
- Wall fixing support
- Stainless steel mounting brackets
- ¼" or ½" Gas screw nut
- Stainless steel compression fitting
- Teflon or stainless steel ferrule for compression fittings
- Sleeve to weld for food industry
- Stainless steel union fitting
- ½" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell





RTD sensor with standard head, resistive element and offset fitting

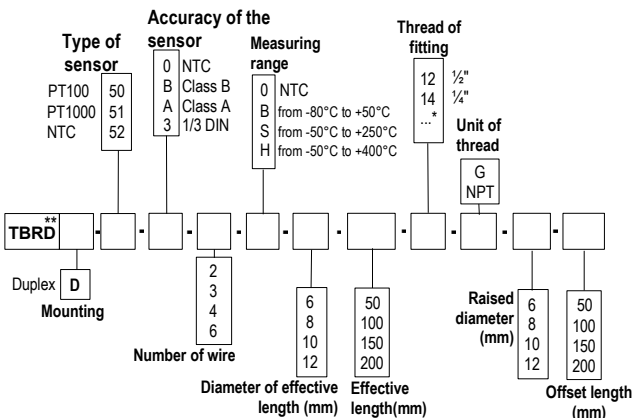
TBRD 50 / TBRDD 50

- Temperature sensor with stainless steel contact tip and offset compression fitting.
- Measuring range (According to reference) **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wire : **single pair** (2,3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

PT 100

Part numbers

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

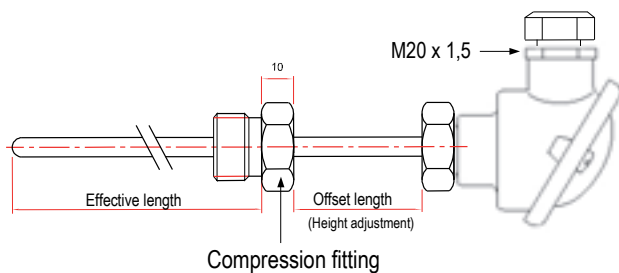


* Other dimension on request
** Other head on request

Example : TBRD-50-B-3-S-6-100-12-G-6-50.

Model : PT 100 temperature sensor, class B, 3 wires mounted on contact tip an effective length of 100 mm and 6 mm Ø and with a raised length of 50 mm and 6 mm Ø. Contact tip with 1/2 gas fitting. **Standard measuring range from -50°C to 250°C.**

Dimensions



Technical features

Working temperature.....from -80°C to +400°C (PT100 and PT1000)
(According to reference) from -20°C and +120°C (NTC)

Accuracy.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table

Type of sensor.....**PT100 or PT1000** : Class B, Class A, 1/3 DIN as per DIN IEC751
NTC : resistance à 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

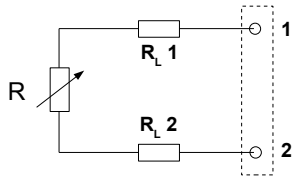
Mounting of wire.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6mm Ø.
multipair 4 or 6 wires
For T>250°C use sheath from 8 mm Ø.



- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....316 L stainless steel, no welding, 3/4 to 4/4 hard
- Compression fitting**.....stainless steel 316 L
- Thread**.....1/4, 1/2, male Gas or NPT plug (other tread on request)
- Electrical connection**.....with or without terminal block
Transmitter 4/20mA 0/10V as option
- Connection head**.....Aluminium alloy
cable gland : M20 x 1,5
IP65 protection
- Adjustable mountings**.....interchangeable element

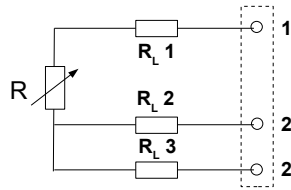
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



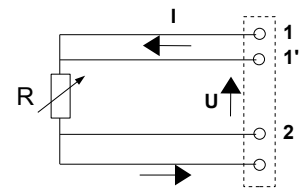
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) et DIN 43760 (1980).

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

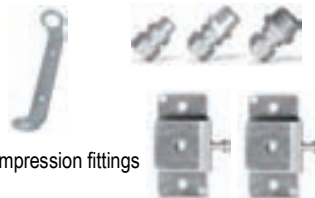
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

Accessories (See data sheet)

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



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



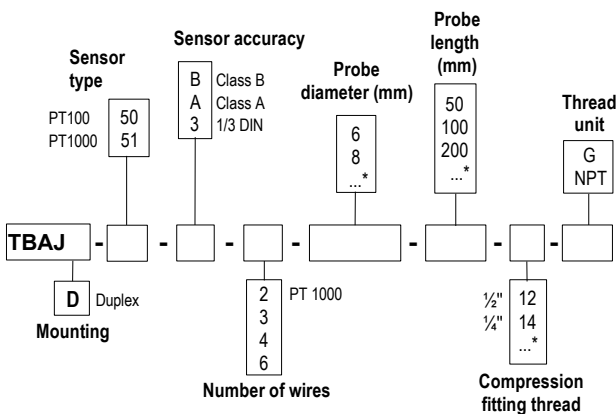


RTD sensor with standard connection head and ambient tip

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.

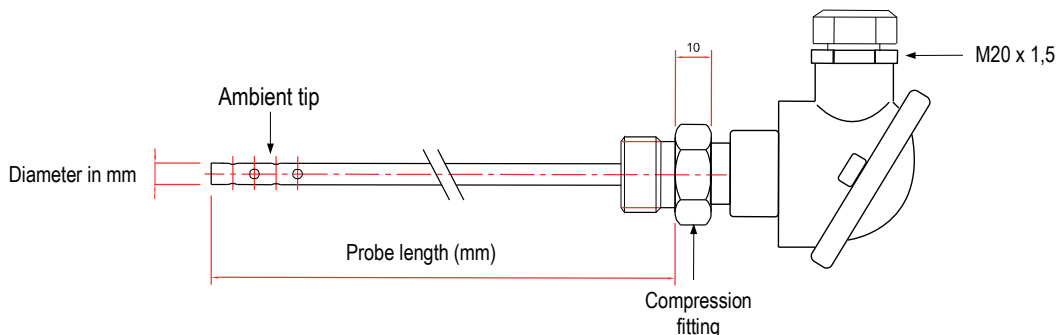
Model : Pt 100 temperature sensor, Class B, 3 wires in a sheath of 6 mm diameter and 100 mm length, and with a 1/2" thread plug.

Measuring range from -50°C to 250°C.

Transmitter features

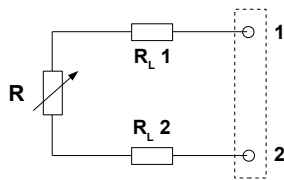
- Operating temperature**.....from 0°C to +250°C (PT100 and PT1000)
- Accuracy**.....**PT100 or PT1000** : see table "Tolerances"
- Sensor type**.....**PT100 or PT1000** : Class B, Class A, 1/3 DIN as per DIN IEC751
- Wire mounting**.....single pair 2, 3 or 4 wires
multipair 4 or 6 wires
- Storage temperature**.....from 0°C to +80°C
- Sheath**.....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
- Electrical connection**.....with or without terminal block transmitter 4/20mA 0/10V as option
- Connection head**.....Aluminium alloy
cable gland : M20 x 1.5
IP65 protection
- Adjustable mountings**.....compression fitting welded further along the sheath, flange, clamp, interchangeable probe system, restricted tip, ambient tip. See datasheet.

Dimensions



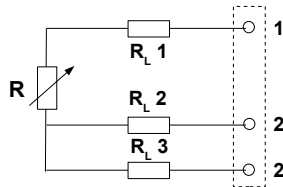
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



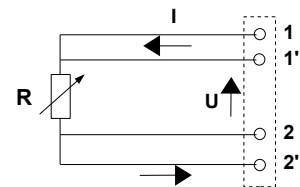
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' terminals. This is the most common connection.

• 4-wire connection



Regulated current is going through 1' and 2' 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.

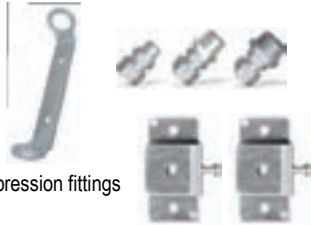
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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 0/10V
- Wall mounting support
- Stainless steel mounting brackets
- ¼ " or ½ " Gas screw nut
- Stainless steel compression fitting
- Teflon 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





Bent RTD sensor with standard head and at resistive element with or without fitting

Type TBC 50 et TBCR 50

TBC 50 – TBCD 50 - TBCR 50 – TBCRD 50

■ Probe features

- Temperature sensor with bent stainless steel contact tip with or without fitting.
- Measuring range (according to reference) **from -80°C to +400°C** (PT100 et PT1000).
from -20°C to +120°C (NTC).
- Mounting of wires : **single pair** (2,3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

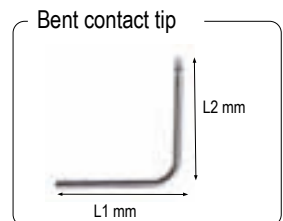
■ Transmitter features

Working temperature.....from -80°C to +400°C (PT100 and PT1000)
(according to reference) from -20°C to +120°C (NTC)

Accuracy.....PT100 or PT1000 : see "Tolerances" table
NTC : see "Tolerances" table

Type of sensor.....PT100 or PT1000 : Class B, Class A 1/3 DIN as per DIN IEC751
CTN : resistance at 25°C, $R_{25} = 10K\Omega$, Nominal Beta B25/85 value = 3,695K ±1%

Mounting of wires.....single pair 2, 3 or 4 wires
For $T > 250^\circ C$ do not use 4 wires in a sheath of 6 mm \varnothing
multipair 4 or 6 wires
For $T > 250^\circ C$ use sheath from 8mm.



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

Contact tip.....316 L stainless steel, no welding, 3/4 to 4/4 hard. 90° bent.

Compression fitting.....316 L stainless steel
Smooth mounting without fitting : do anything
Mounting with fitting on L2 (See schema) : 12 or 14 corresponding to 1/2"G et 1/4"G fittings.
Mounting with fitting on L1 (See schema) : 12L1 or 14L1 corresponding to 1/2"G et 1/4"G fittings.



No 4 wires mounting for contact tip 4mm \varnothing .

Thread.....1/4, 1/2, male Gas or NPT plug (other thread on request)

Electrical connection.....with or without terminal block, 4/20mA 0/10V transmitter as option

Connection head.....Aluminium alloy, cable gland : M20 x 1,5, IP65 protection

Adjustable mounting.....See catalogue or data sheet of related mountings.

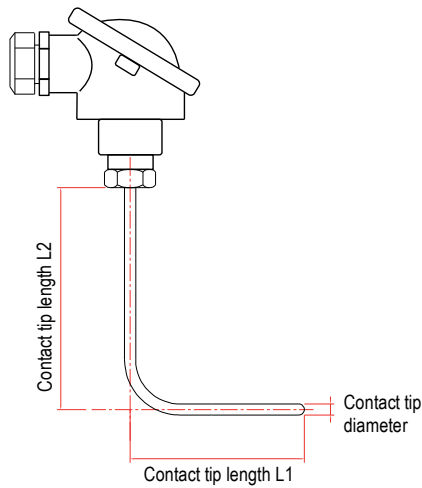
TBC 50

Stainless steel bent sensor
with or without multipair mounting

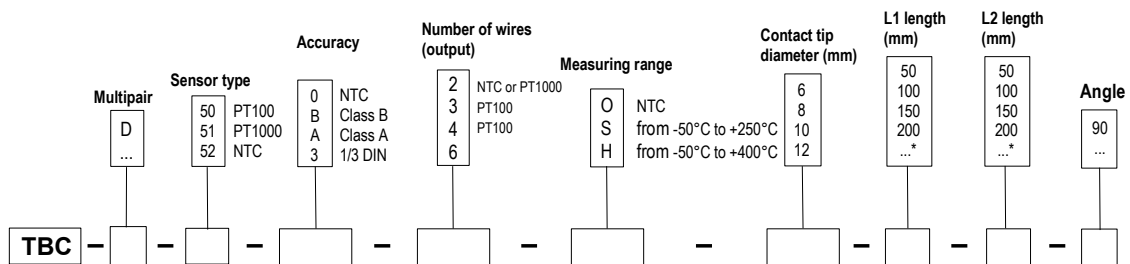


Dimensions probe

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



Part numbers



* Other dimension on request

Example : TBC-51-B-2-S-8-100-100-90

Model : PT1000 temperature sensor Class B, 2 wires, stainless steel contact tip 8 mm Ø bent at 90° and lengths L1 and L2 of 100 mm.

Measuring range from -50 to +250°C.

TBCR

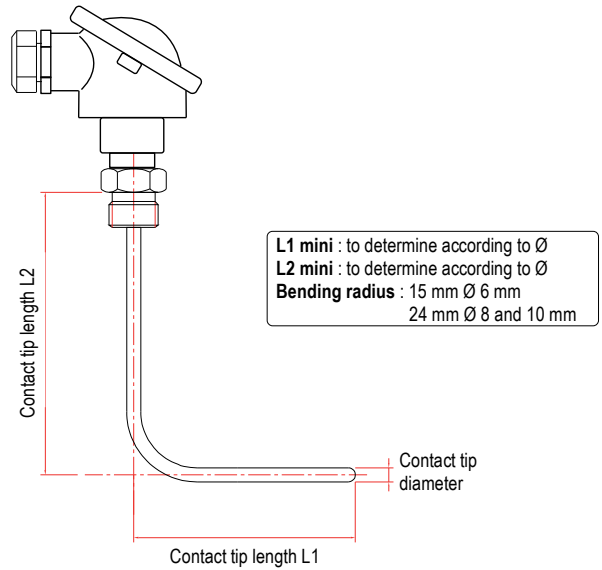
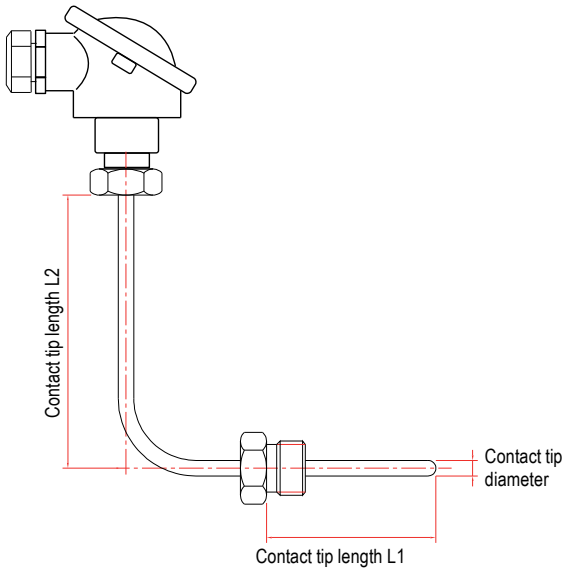
*Bent sensor with fitting
and with or without multipair mounting*



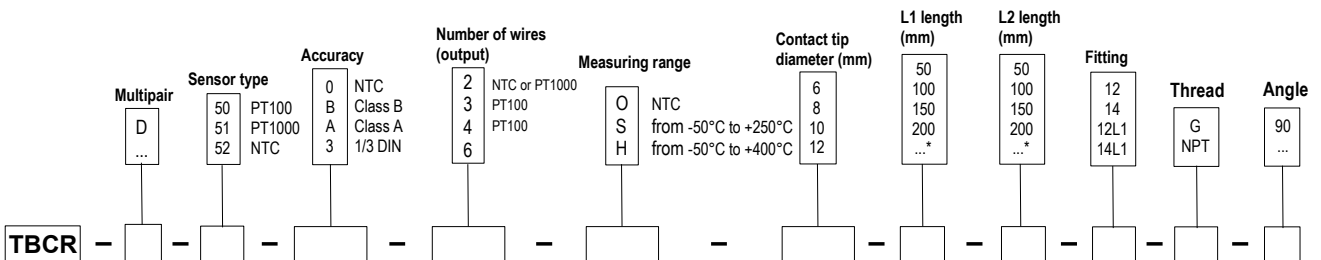
■ Dimensions probe

• With fitting on L1

• With fitting on L2



■ Part numbers



* Other dimension on request

Example : TBCR-51-B-2-S-8-100-100-12-G-90

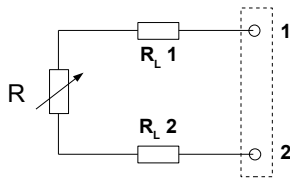
Model : PT1000 temperature sensor Class B, 2 wires, stainless steel contact tip 8 mm Ø bent at 90° and lengths L1 and L2 of 100 mm. With 1/2" G fitting on L2.

Measuring range from -50 to +250°C.

PT 100

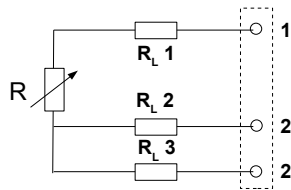
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



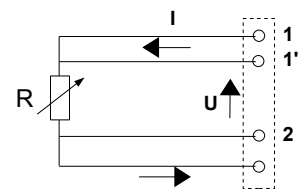
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

Accessories (See data sheet)

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



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



*RTD sensor with head
for contact duct*



Supplied with clip for DN 100 duct

**TBCT 50 / TBCTD 50
TMCT 50 / TMCTD 50**

PT 100

■ **Probe features**

- Temperature sensor with base for all diameters ducts
- Measuring range (according to reference)
 - from **-50°C to +400°C** (PT100 et PT1000).
 - from **-20°C to +120°C** (NTC).
- Mounting of wires : **single pair** (2,3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

■ **Transmitter features**

Working temperature.....*for mounting TBCT type*
(according to reference) from -50°C to +400°C (PT100 and PT1000)
from -20°C to +120°C (NTC)
for mounting TMCT type
from -50°C to +250°C (PT100 and PT1000)
from -20°C to +120°C (NTC)

Accuracy.....PT100 or PT1000 : see "Tolerances" table
NTC : see "Tolerances" table

Type of sensor.....PT100 or PT1000 : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

Mounting of wires.....*for mounting TBCT type*
single pair 2, 3 or 4 wires
or multipair 4 or 6 wires
No 6 wires for H mounting (+400°C)
for mounting TMCT type
single pair 2, 3 wires
or multipair 4 wires only



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

Height of clearance.....45 mm

Duct base.....40 x 16 x 8,5 mm

V-section
Fixing by needle screw
AU4G material (aluminium)

Fitting.....supplied with stainless steel clip for DN 100
other clip on request

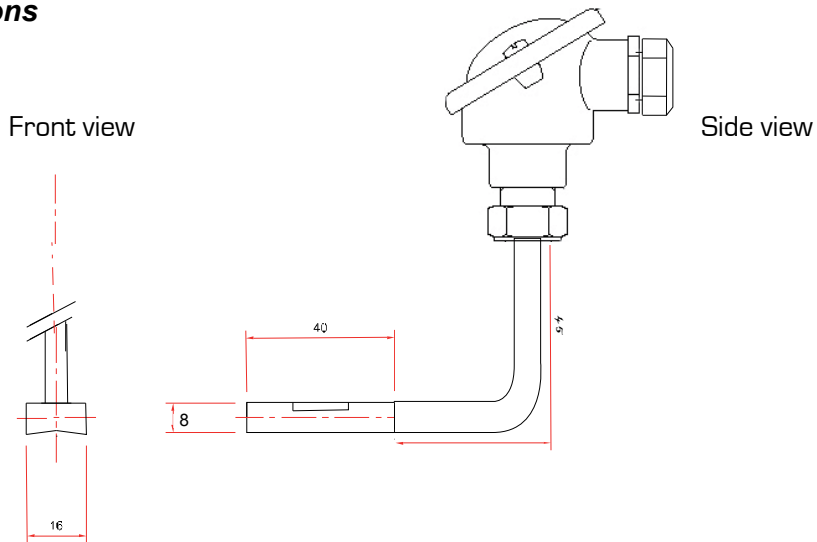
Electrical connection.....with or without terminal block
4/20 mA transmitter as option

Connection head.....Aluminium alloy
cable gland : M20 x 1,5
IP65 protection

TBCT 50 & TBCTD 50

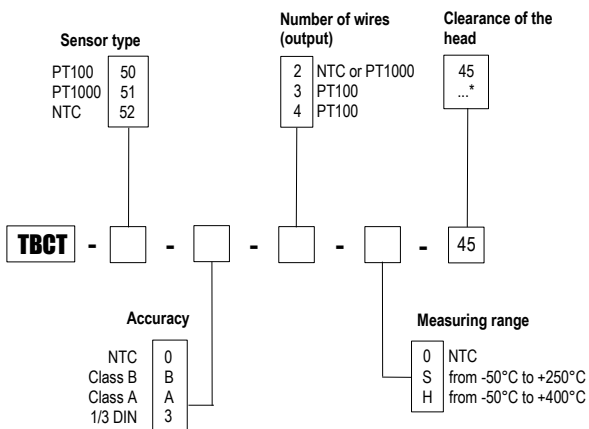
Temperature sensor with standard head and with contact for duct

Probe dimensions



Références

• Single pair sensor – Ref. TBCT 50

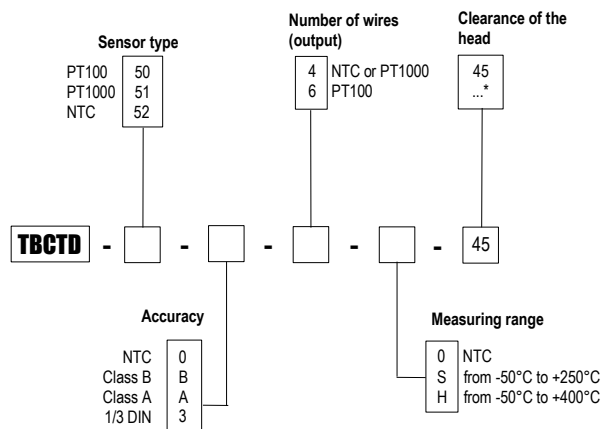


* Other on request

Example : TBCT51-B-2-S-45

Model : PT1000 temperature sensor Class B, 2 wires, clearance of the head at 45°. Measuring range from -50 à +250°C.

• Multipair sensor – Ref. TBCTD 50



* Other on request

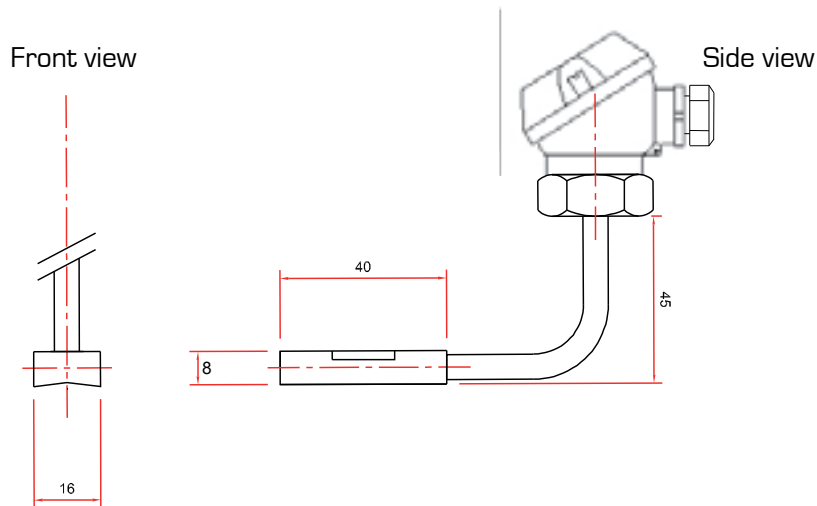
Example : TBCTD51-B-4-S-45

Model : PT1000 temperature sensor Class B, 4 wires, clearance of the head at 45°. Measuring range from -50 à +250°C.

TMCT 50 & TMCTD 50

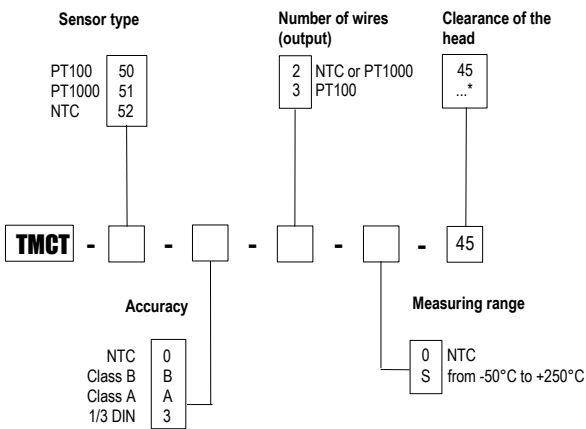
Temperature sensor with miniature head and with contact for duct

■ Dimensions probe



■ Part numbers

• Single pair sensor – Ref. **TMCT 50**

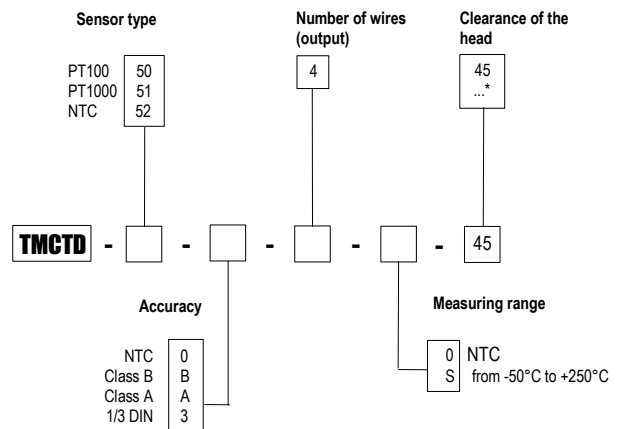


* Other on request

Example : **TMCT51-B-2-S-45**

Model : PT1000 temperature sensor Class B, 2 wires, clearance of the head at 45°. Measuring range from -50 à +250°C.

• Multipair sensor – Ref. **TMCTD 50**



* Other on request

Example : **TMCTD51-B-4-S-45**

Model : PT1000 temperature sensor Class B, 4 wires, clearance of the head at 45°. Measuring range from -50 à +250°C.

PT 100

■ Tolerance* of PT100 and PT1000 probes.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

■ Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

■ Accessories (See data sheet)

- Transmitter output 4/20 mA or 0/10V
- Wall fixing support
- Stainless steel mounting brackets
- ¼" or ½" Gas screw nut
- Stainless steel compression fitting
- Teflon or stainless steel ferrule for compression fittings
- Sleeve to weld for food industry
- Stainless steel union fitting
- ½" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell





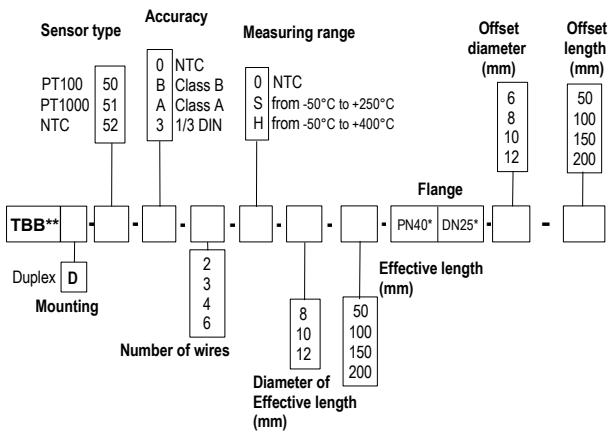
RTD sensor with standard head, with resistive element and mounting flange

TBB 50 / TBBD 50

- Temperature sensor with stainless steel contact tip and mounting flange.
- Measuring range (according to reference) **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wires : **single pair** (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

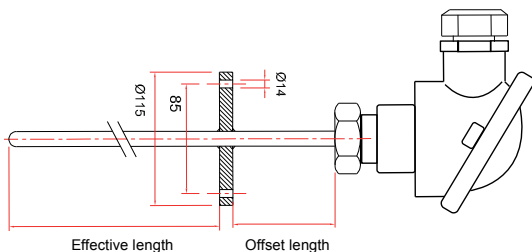
To order, just add the codes to complete the part number.



* Other dimension on request
** Other head on request

Example : TBB-50-B-3-S-8-100-PN40DN25-8-50.
Model : PT 100 temperature probe, class B, 3 wires mounted on contact tip with an effective length of 100 mm and 8 mm Ø and with an offset length of 50 mm and 8 mm Ø. Mounting flange type PN40 DN25.
Measuring range from -50°C to 250°C.

Probe dimensions



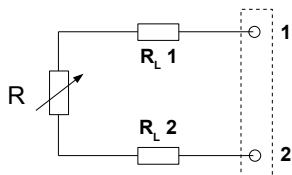
Technical features

- Working temperature**.....from -80°C to +400°C (PT100 and PT1000)
(according to reference) from -20°C to +120°C (NTC)
- Accuracy**.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Sensor type**.....**PT100 or PT1000** : Class B, Class A
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%
- Mounting of wires**.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in 6mm Ø.
multipair 4 or 6 wires
For T>250°C use sheath from 8 mm.
- 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 flange welded on contact tip
PN and DN to be specified according to application
PN 40 DN 25 standard.
- Electrical connection**.....with or without terminal block
4/20mA 0/10V transmitter as option
- Connection head**.....Aluminium alloy
Cable gland : M20 x 1,5
IP65 protection
- Adjustable mountings**.....replaceable element

PT 100

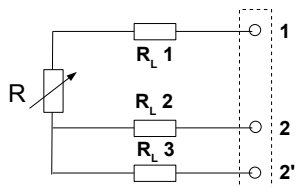
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



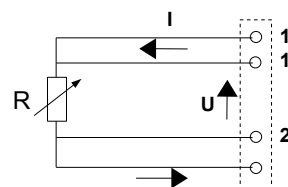
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

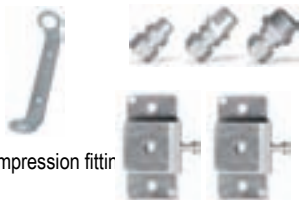
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

Accessories (See data sheet)

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



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





**RTD sensor
with standard head, resistive
element and clamp fitting**

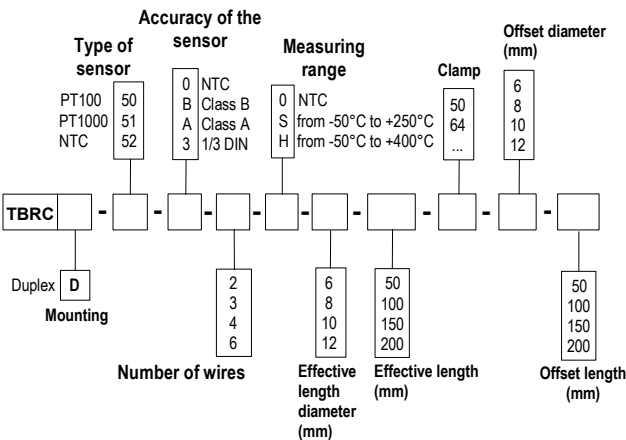


TBRC 50 / TBRCD 50

- Temperature sensor with stainless steel contact tip and clamp fitting.
- Measuring range (According to reference) **from -80°C to +400°C** (PT100 and PT1000).
from -20°C to +120°C (NTC).
- Mounting of wire : **single pair** (2,3 or 4 wires).
multipair (4 or 6 wires).
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

Part numbers

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



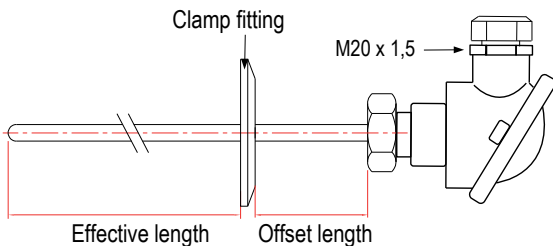
* Other dimensions on request

Example : TBRC-50-B-3-S-6-100-50-6-50.

Model : PT 100 temperature sensor, class B, 3 wires mounted on contact tip with an effective length of 100 mm and 6 mm Ø and with an offset length of 50 mm and 6 mm Ø. Contact tip with clamp fitting of 50,5 mm Ø for a ferrule DN from 25 to 42,4 mm.

Standard measuring range from -50°C to 250°C.

Dimensions



Technical features

- Working temperature**.....from -80°C to +400°C (PT100 and PT1000)
(According to reference) from -20°C to +120°C (NTC)
- Accuracy**.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

Mounting of wire.....**single pair 2, 3 or 4 wires**
For T>250°C do not use 4 wires in a sheath of 6mm Ø.
multipair 4 or 6 wires
For T>250°C use sheath from 8 mm Ø.

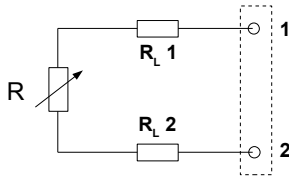


- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....316 L stainless steel, no welding, 3/4 to 4/4 hard
- Clamp fitting**.....stainless steel 316 L
- **Standard**
50 : Solid end caps 50,5 mm Ø for ferrules DN 25 at 42,4mm
64 : Solid end caps 64 mm Ø for ferrule DN 48,3 at 51mm
(other clamp solid end caps on request)
- **Accessories**
Ferrule and clamp on request
- Thread**.....1/4, 1/2, male Gas or NPT plug
(other tread on request)
- Electrical connection**.....with or without terminal block
Transmitter 4/20mA 0/10V as option
- Connection head**.....aluminium alloy
cable gland : M20 x 1,5
IP65 protection
- Adjustable mountings**.....See catalogue or data sheet of specific mountings.

PT 100

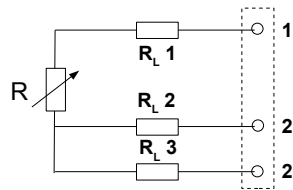
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



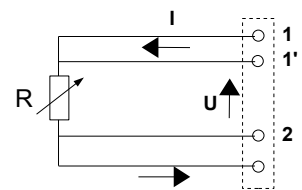
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Norms as per IEC 751 (1993), BS 1904 (1984) et DIN 43760 (1980).

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

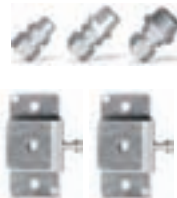
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0,5°C
from 0°C to +70°C	± 0,2 °C
from +70°C to +100°C	± 0,5 °C

*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.

Accessories (See data sheet)

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



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





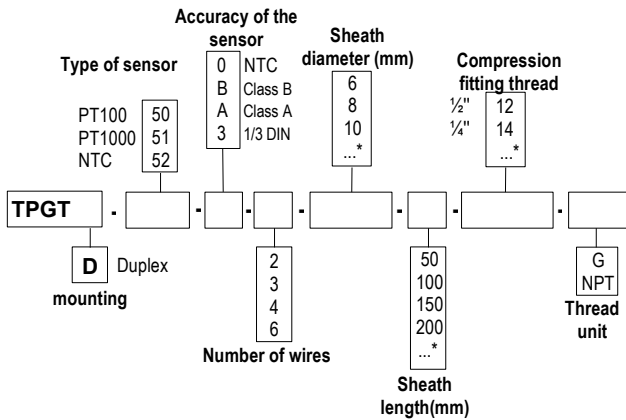
*Temperature probe
at resistive element for
aggressive environment*

TPGT 50 – TPGTD 50

- Temperature sensor with or without compression fitting and contact tip covered with a PFA sheath
- Measuring range from **-50°C to +250°C (PT100 and PT1000)**
from **-20 °C to +120 °C (NTC)**
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

PT 100

Part numbers



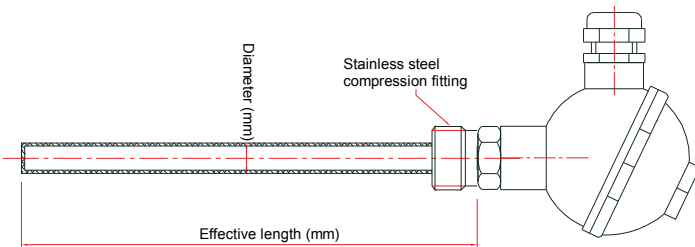
* Other dimension on request

Example : TPGT50-B-3-6-500

Model : PT 100 temperature sensor class B, 3 wires, contact tip diameter 6 mm and length 500 mm with a PFA sheath of 500 mm length.

Measuring range : from -40 to +120 °C

Dimensions

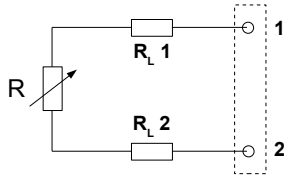


Technical features

- Operating temperature**.....from -50°C to +250°C (PT100 and PT1000)
(other on request)
from -20°C to +120°C (NTC)
- Accuracy**.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R₂₅ = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%
- Mounting of wire**.....simple pair 2, 3 or 4 wires
multipair : 4 or 6 wires
- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....stainless steel 316 L covered with PFA
(perfluoroalkoxy) sheath
Max. temperature at short term use : 280 °C
Softening at +/- 327 °C
- Compression fitting**.....stainless steel 316 L
- Thread**.....1/4, 1/2, male Gas or NPT plug
(other tread on request)
- Electrical connection**.....with or without terminal block
Transmitter 4/20mA 0/10V as option
- Connection head**.....noryl resin (phenyl polyoxyd)
Cable gland : M20 x 1,5
temperature : from -40 to +135 °C
IP 65 protection
- Adjustable mountings**.....angled probe, interchangeable element,
Offset head

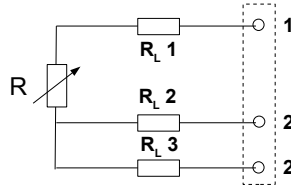
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



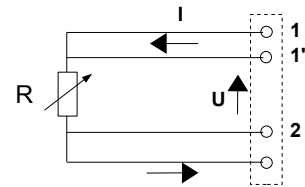
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Tolerances* of PT100 and PT1000 probes

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

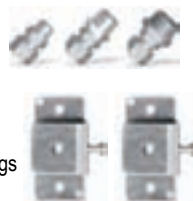
Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

*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.

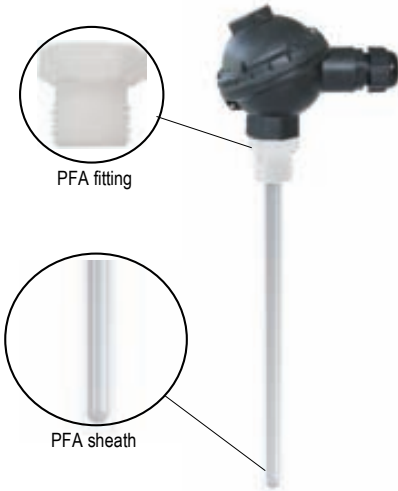
Accessories (See data sheet)

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



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





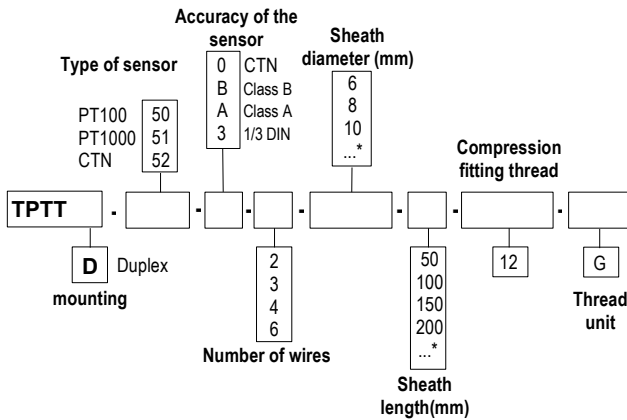
*Temperature probe
at resistive element for
aggressive environment*

TPTT 50 – TPTTD 50

- Temperature probe with PFA compression fitting and contact tip
- Measuring range from **-50°C to +250°C (PT100 and PT1000)**
from **-20 °C to +120 °C (NTC)**
- For other resistor type PT25, PT50, PT500, PT200 or NI, please contact us.

PT 100

Part numbers



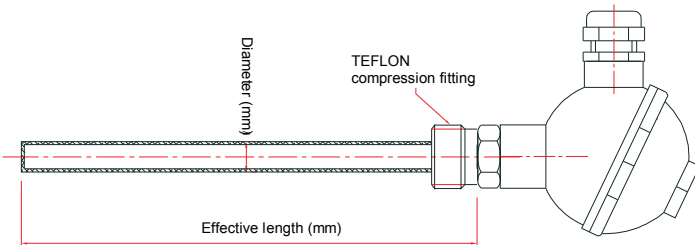
* Other dimension on request

Example : TPTT50-B-3-6-500

Model : Temperature probe PT100 Class B, 3 wires, contact tip diameter 6 mm and length 500 mm PFA sheath of 500 mm length.

Measuring range : from -40 to +120 °C

Dimensions

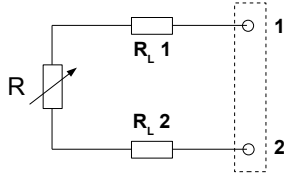


Technical features

- Operating temperature**.....from -50°C to +250°C (PT100 and PT1000)
(other on request)
from -20°C to +120°C (NTC)
- Accuracy**.....**PT100 or PT1000** : see "Tolerances" table
NTC : see "Tolerances" table
- Type of sensor**.....**PT100 or PT1000** : Class B, Class A,
1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, $R_{25} = 10K\Omega$
- Mounting of wire**.....simple pair 2, 3 or 4 wires
multipair : 4 or 6 wires
- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....stainless steel 316 L covered with PFA
(perfluoralkoxy) sheath
Max. temperature at short term use : 280 °C
Softening at +/- 327 °C
- Compression fitting**.....polytetrafluorethylene PTFE
- Thread**.....1/4, 1/2, male Gas or NPT plug
(other tread on request)
- Electrical connection**.....with or without terminal block
Transmitter 4/20mA 0/10V as option
- Connection head**.....noryl resin (phenyl polyoxyd)
Cable gland : M20 x 1,5
temperature : from -40 to +135 °C
IP 65 protection
- Adjustable mountings**.....angled probe, interchangeable element,
Offset head

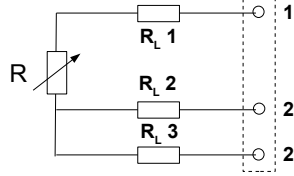
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



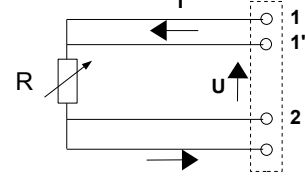
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 2' 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.

Tolerances* of PT100 and PT1000 probes

Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

Tolerances* of NTC probes

Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

*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.

Accessories (See data sheet)

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



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



*Temperature probe at
resistive element for wine application*

TM 50 / TPV 50 / SF 50

TPV 50



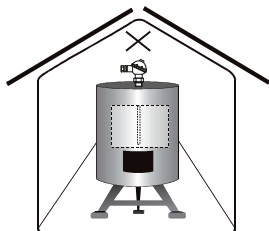
SF 50



TM 50

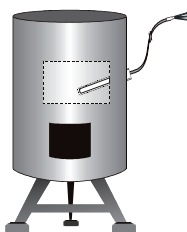


A installation



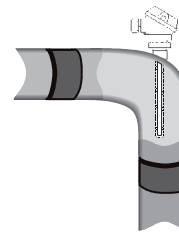
Head probe mounted vertically in the tank with removable head connection

D installation



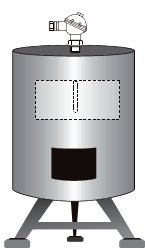
Cable probe mounted in a thermowell on the side of the tank

E installation



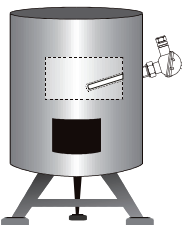
Head probe for measuring temperature on a water pipeline

B installation



Head probe mounted vertically in the tank

C installation



Head probe mounted in a thermowell on the side of the tank

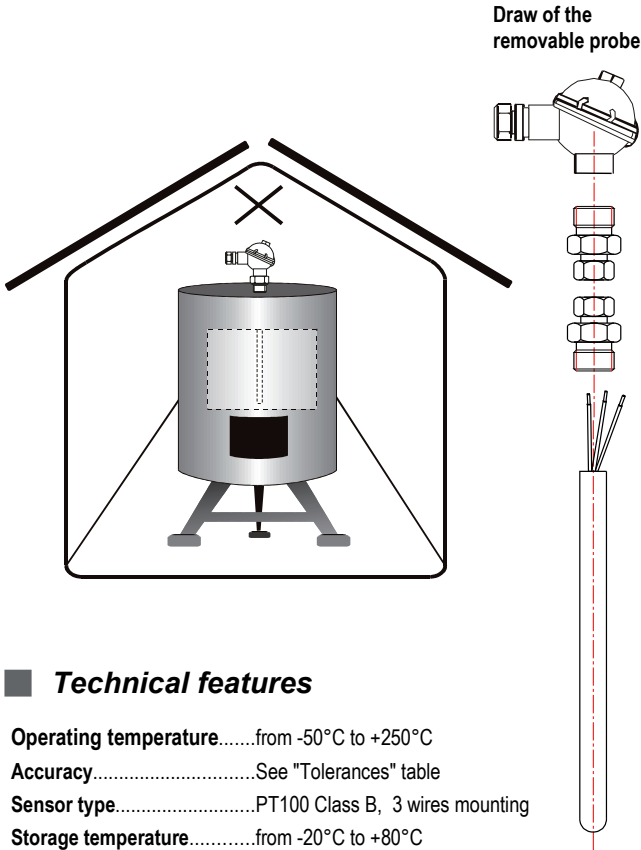
- Head or wire temperature probe with or without compression fitting and stainless steel contact tip
- **Probe with** aluminium head (TM 50) or noryl resin (TPV 50), PT 100 Class B, IP65.
- **Wire probe** PT 100 or PT 1000 Class B with Contact tip mounted on PVC cable
- Measuring range
from **-50°C to +250°C** (TM 50 and TPV 50).
from **-40°C to +120°C** (SF 50).
- Mounting of element : **simple** (2 or 3 wires).

PT 100

TPVD 50

Installation A

Head probe mounted vertically in the tank with **removable** head connection



Technical features

- Operating temperature**.....from -50°C to +250°C
- Accuracy**.....See "Tolerances" table
- Sensor type**.....PT100 Class B, 3 wires mounting
- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....stainless steel 304 L, 14 mm diameter
Defining length according to mounting on tank
- Connection**.....Stainless steel fitting removable to the 1/2"G male thread
Teflon clamp ring
- Thread**.....with or without, 1/4, 1/2, Gas or NPT plug
(other thread on request)
- Connection head**.....noryl resin
IP65 protection
Removable head mounted on 1/2"G male thread
stainless steel connection
- Electrical connection**.....terminal block with 3 screws
- Accessories**.....connection cable (lyflex 3 x 0,75 mm²)
Welding sleeve

Part numbers

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

Contact tip length (mm)	1000
	1250
	1500
	2000
	...*

TPVD - 50 - B - 3 - S - 14* -

* Other dimension on request

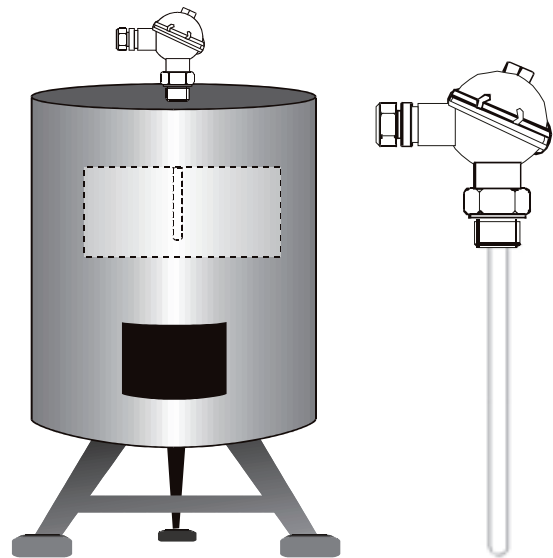
Example : TPVD-50-B-3-S-14-1000.

Model : PT 100 temperature probe class B, 3 wires with diameter of 14 mm and contact tip length of 1000 mm .
Standard measuring range **from -50°C to 250°C.**

TPV 50

Installation B

Head probe mounted vertically in the tank



Technical features

- Operating temperature**.....from -50°C to +250°C
- Accuracy**.....See "Tolerances" table
- Sensor type**.....PT100 Class B, 3 wires mounting
- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....stainless steel 304 L, 14 mm diameter
Defining length according to mounting on tank
- Connection**.....Stainless steel fitting to the 1/2"G male thread
- Connection head**.....noryl resin
IP65 protection
- Electrical connection**.....terminal block with 3 screws
- Accessories**.....connection cable (lyflex 3 x 0,75 mm²)
Welding sleeve

Part numbers

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

Contact tip length (mm)	1000
	1250
	1500
	2000
	...*

TPV - 50 - B - 3 - S - 14* - - 12*

* Other dimension on request

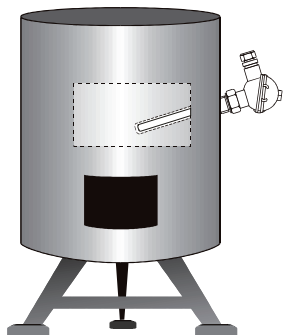
Example : TPV-50-B-3-S-14-1000.

Model : PT 100 temperature probe class B, 3 wires with diameter of 14 mm and contact tip length of 1000 mm .
Standard measuring range **from -50°C to 250°C.**

TPV 50

Installation C

Head probe mounted in a thermowell on the side of the tank



Technical features

- Operating temperature.....from -50°C to +250°C
- Accuracy.....See "Tolerances" table
- Sensor type.....PT100 Class B, 3 wires mounting
- Storage temperature.....from -20°C to +80°C
- Contact tip.....stainless steel 304 L, diameter 6 mm
Defining length according to mounting on tank
- Connection.....Stainless steel connection to 1/2G male thread
- Connection head.....noryl resin
IP65 protection
- Electrical connection.....terminal block with 3 screws
- Accessories.....connecting cable (lyflex 3 x 0,75 mm²)

Thermowell features

- Contact tip.....stainless steel 304 L, diameter of 21,3 mm
Defining length according to mounting on tank
- Connection.....Connection to weld on the tank
Probe side : 1/2G female thread
- Optional.....shrink at 8 mm at the end of the thermowell

Part numbers

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

490	Contact tip length (mm)
590	
650	
...*	

TPV - 50 - B - 3 - S - 6* - []

* Other dimension on request

Example : TPV-50-B-3-S-14-1000.

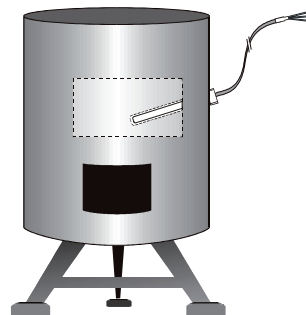
Model : PT 100 temperature probe class B, 3 wires with Ø 6 mm and contact tip length of 1000 mm.

Standard measuring range from -50°C to 250°C.

SF 50

Installation D

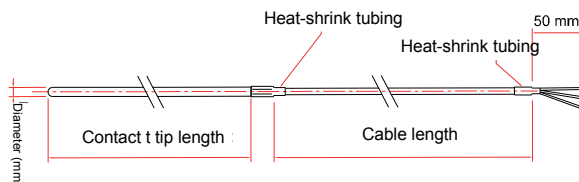
Cable probe mounted in a thermowell on the side of the tank



Technical features

- Operating temperature.....from -40°C to +120°C
- Accuracy.....See "Tolerances" table
- Sensor type.....PT100 or PT1000
- Storage temperature.....from -20°C to +80°C
- Working temperature of cable.....PVC : from -40°C to +120°C
- Contact tip.....stainless steel 316 L, waterproof crimping with heat-shrink tubing

Dimensions



Part numbers

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

Sensor type	Number of wire	Cable length (m)	Contact tip diameter (mm)	Contact tip length (mm)
PT100	50	1	4	50
PT1000	51	2	6	100
PT100	2	3	8	200
	3	4	...	300
		5	...	400
		...*

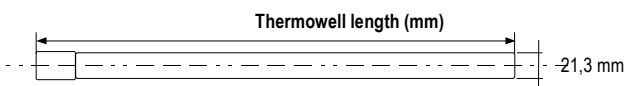
* Other dimension on request

Example : SF51-B-2-P-1-4-100

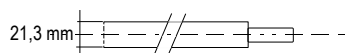
Model : PT1000 temperature probe class B, 2 wires, PVC cable of 1 m length. Stainless steel contact tip of Ø 4 mm and length of 100 mm. Measuring range from -40 to +120°C.

Wine growing thermowell

- Standard model



- Model with shrink



- Part numbers

Thermowell length (mm)	500	600	660	RT	Shrink
DG	M	213	[]	[]	[]

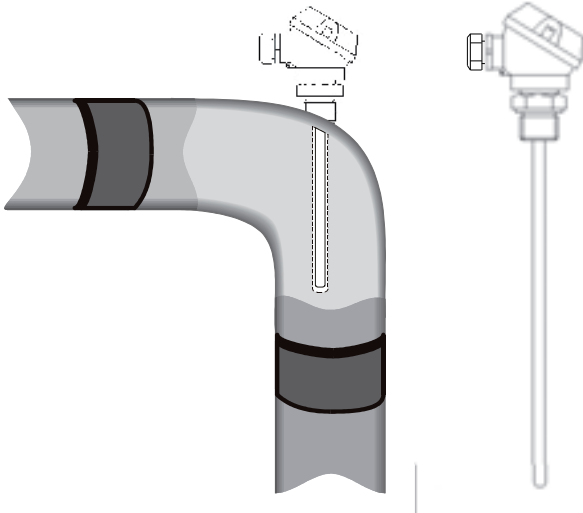
Example : DG-M-213-500-RT.

Model : thermowell with sleeve weld on the tank. Contact tip diameter of 21,3 mm and length of 500 mm with shrink of 8 mm.

TM 50

Installation E

Head probe for measuring temperature on a water pipeline

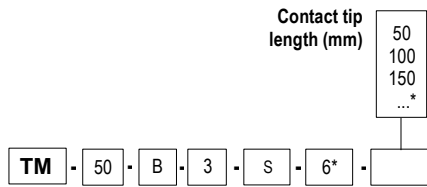


Technical features

- Operating temperature.....from -50°C to +250°C
- Accuracy.....See "Tolerances" table
- Sensor type.....PT100 Class B, 3 wires mounting
- Storage temperature.....from -20°C to +80°C
- Contact tip.....stainless steel 316 L, diameter of 6 mm
Optional : Welding sleeve
- Connection.....Stainless steel fitting to the ½G male thread
- Connection head.....miniature head in aluminium alloy
IP65 protection
- Electrical connection.....terminal block with 3 screws
- Accessories.....connection cable (lyflex 3 x 0,75 mm²)
Welding sleeve

Part numbers

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



* Other dimension on request

Example : TM-50-B-3-S-6-50.

Model : PT 100 temperature probe class B, 3 wires with diameter of 6 mm and contact tip length of 50 mm.

Standard measuring range from -50°C to 250°C.

Tolerances* of Pt100 and Pt1000 resistive probes

As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms

Temp °C	Tolerances	
	Class B	
	± °C	± Ohms
-100	0,8	0,32
-50	0,55	0,22
0	0,3	0,12
100	0,8	0,3
200	1,3	0,48
300	1,8	0,64
400	2,3	0,79

Resistance values for Pt1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). For example: at 0°C for Class B Pt1000 ± 0,3°C → ± 1,2 Ω

*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.

Ref. FT - wine-application - 03/07 A - RCS (24) Péjigueux B349 282 095 Non-contractual document - We reserve the right to modify the characteristics of our products without prior notice.

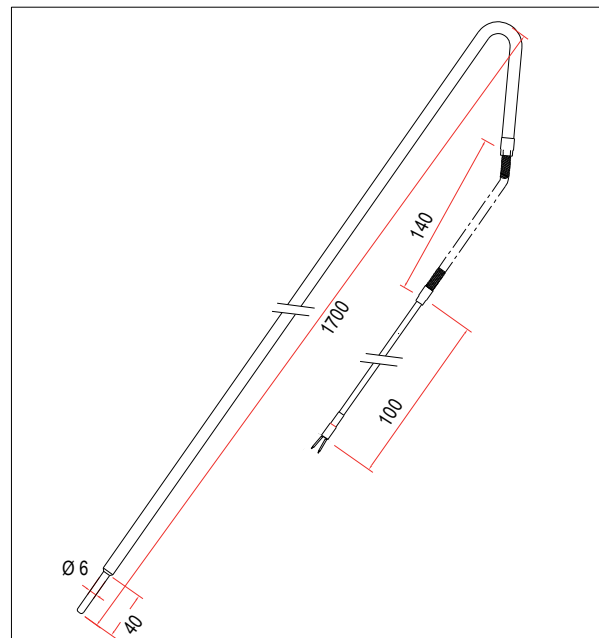
*Temperature sensor
PT 100 with grip handle*
Special Fermenting room

CROS - R - 1700



- Class A Pt 100
- Measuring range from **-50°C to +250°C**
- Length of 1700 mm, others on request
- Stainless steel protection sheath
- Stainless steel grip handle
- Tip with shrink for a very fast response time
- Probes compatible with KISTOCK temperature dataloggers and portable thermometers

Special probes **Fermenting room** allow to measure temperature in the specific conditions of wine-making process.



PT 100

■ Description

Grip handle



Reinforced cable output with flexible
Shielded Teflon cable

Shrink



Protection sheath in food-
industry stainless steel 316 L
Ø 10 mm, shrink in 6 mm

■ Specifications

Probe	Length	Range	Accuracy	Compatible with...
CROS-R-1700	1700 mm	from -50 to +250°C	±0.4% of reading* or ±0.3°C	Portable thermometers : TR100

*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation. The accuracy is expressed either by a deviation in °C, or by a percentage of the value concerned. Only the bigger value is considered.

■ Optional

- Protection cover IP65.
- Calibration certificate.
- Portable thermometers .
- Temperature datalogger

With KISTOCK temperature datalogger



With portable thermometers



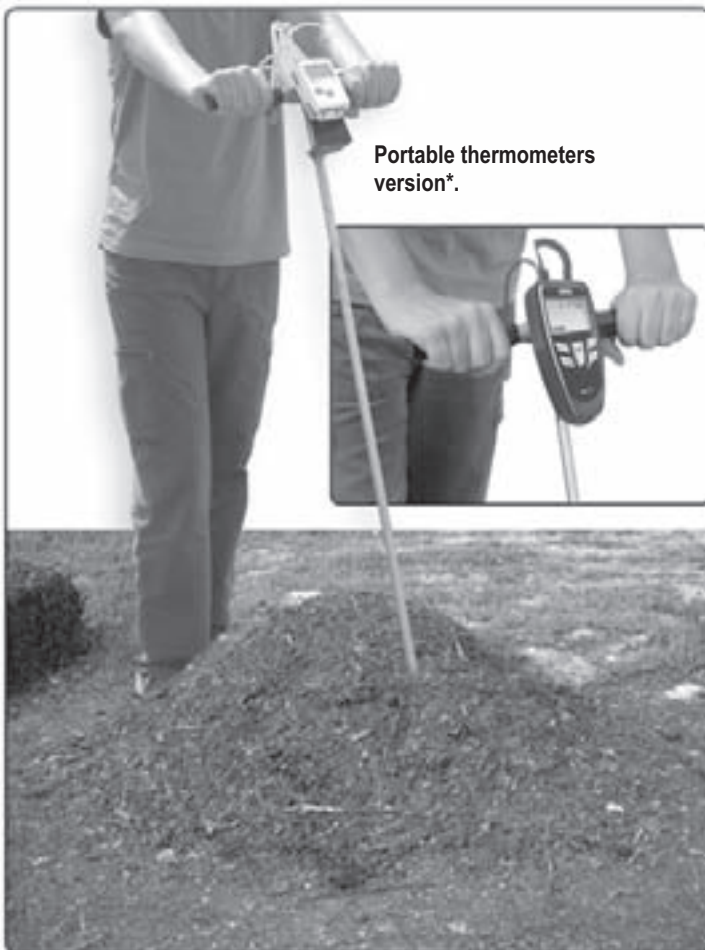
Temperature probes

thermocouple K / NTC / PT100

Special compost

- Measuring ranges from -50°C to +400°C
- Lengths from 1000 mm to 2000 mm
- Protection sheath made in stainless steel, perpendicular handle and bevel-edged tip
- Robust and hard-wearing
- Probes compatible with temperature dataloggers and with portable thermometers

Temperature dataloggers version*.

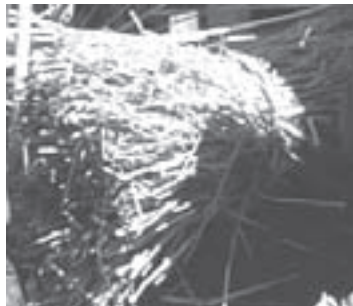


Portable thermometers version*.

*Sold separately.

The “**Special compost**” temperature probes allow measurement in specific environments such as:

Compost



Straw



Grain elevator

PT 100

Description

Perpendicular handle
2 x 150 mm, Ø 21,3 mm



Bevel-edged tip



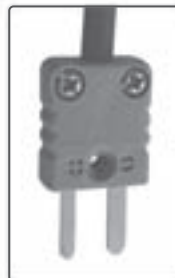
NTC plug



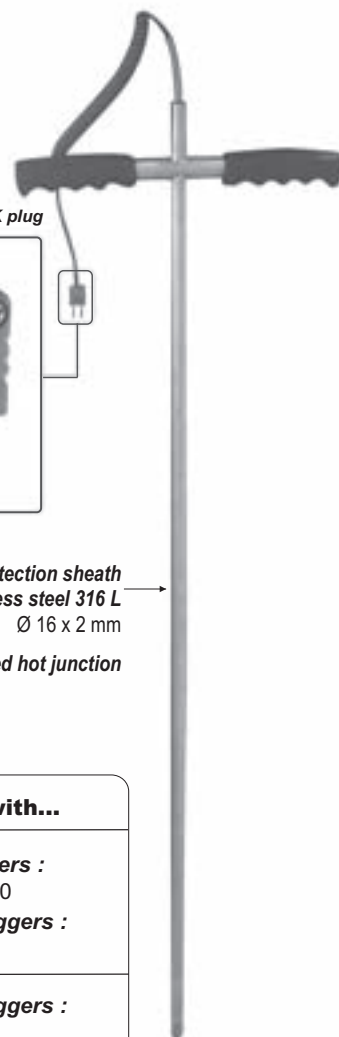
PT100 plug



Thermocouple K plug



Protection sheath
stainless steel 316 L
Ø 16 x 2 mm
Grounded hot junction



Specifications

Probe	Length	Measuring range	Accuracy	Compatible with...
STKP 1000 STKP 1500 STKP 2000	1000 mm 1500 mm 2000 mm	de -50°C à +400°C	± 1.1°C ± 0.4% of value displayed	Portable thermometers : TK50 / TK100 / TM200 Temperature dataloggers : KTT300
KCC 1500 I (CTN)	1500 mm	de -40°C à +120°C	± 0.3°C (-25°C < T < +70°C) ± 0.5°C above	Temperature dataloggers : Classes 100 / 200
KRCI 1500 (PT100)	1500 mm	de -50°C à +400°C	± 0.3°C ± 0.4% of value displayed	Temperature dataloggers : Class 300

Options

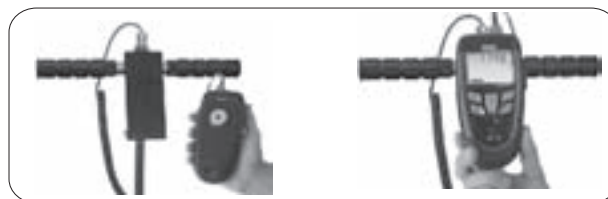
The **KSP** stand allows you to fasten temperature devices (portable or datalogger) to the probe, making measuring campaigns easier.



Fastening on stand with temperature datalogger



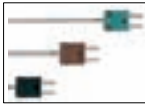
Fastening on stand with portable thermometers



Part 3 : Wire thermocouple



F
with visible welding.....p 113



F KI
mineral insulated thermocouple.....p 115



SF K - SF KI
thermocouple with cable.....p 117



SFR K
with fitting of fixation.....p 119



SFC K
with angled or lined inconel thermocouple.....p 121



SFP K
penetration probe.....p 125



SFPP K
with handle to prick.....p 127



SFPPT K
with T handle.....p 131



SFAI K
with magnetic mounting.....p 133



SFO K
for measurement of contact by eyelet.....p 135



SFCT K
with cable for pipe.....p 137



SFCS K
for surface contact.....p 139



SFBA K
with bayonet.....p 141



SFCS M
for moving parts.....p 143

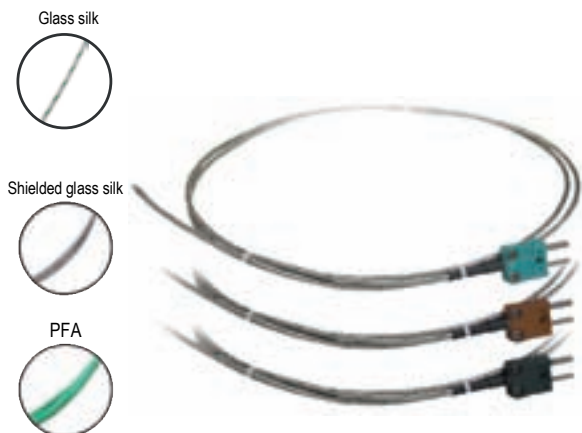




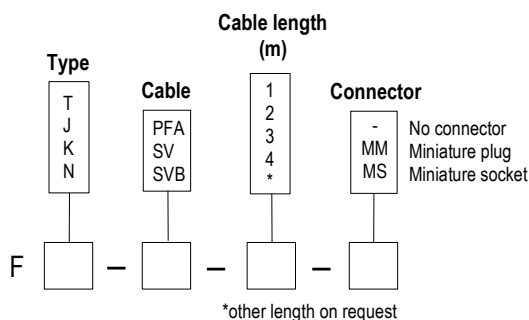
**Thermocouple probe
with cable and visible welding**

FT / FJ / FK

- Thermocouple types T, J, K or N.
- Thermocouple with short response time.
- Measuring range **from -40°C to +400°C**.
- Singlepair mounting with choice of cable.

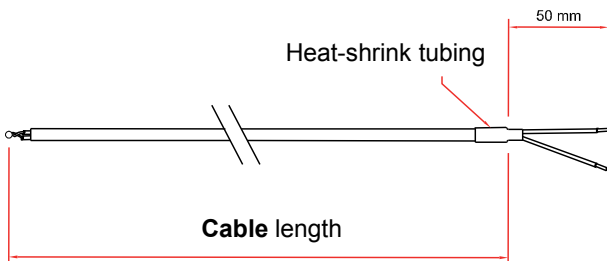


Part number



Example : FT-PFA-2-MM
Model : Thermocouple type T with glass silk cable, 2m long and with a miniature plug output.

Probe dimensions



Technical feature

Operating temperature..... PFA cable : from -40°C to +250°C
 (TCK / TCJ / TCT / TCN)
 Glass silk cable : from -40°C to +400°C
 (For TCT : from -40°C to +350°C)

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

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

Class 1 thermocouple..... PFA cable : Teflon[®]
 SV cable : Glass silk
 SVB cable : Shielded glass silk

Output stripped wire, miniature plug or standard on request.

Tolerances

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°

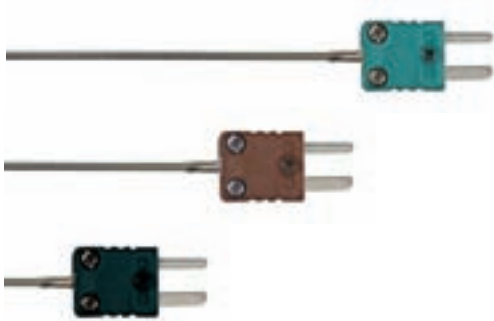


■ Most common thermocouple types

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



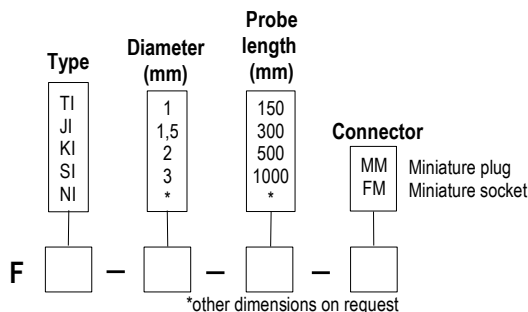
Mineral insulated thermocouple with miniature or standard connectors

FKI

- Thermocouple types T, J, K, S or N.
- Mineral insulated sheath to be formed to shape and terminated in a miniature or standard connector.

Part numbers for miniature connector output

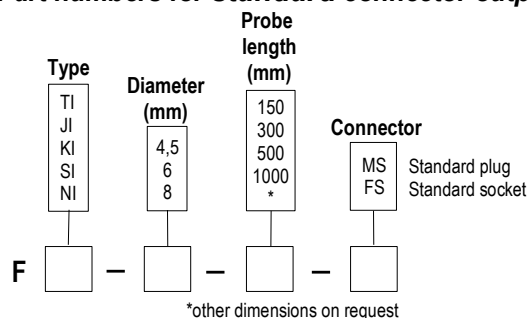
To order, just add the codes to complete the part number.



Example : FTI-15-150-MM

Model : Thermocouple type T with mineral insulated sheath, length 150 mm and 1.5 mm Ø. Sheath terminated in a miniature plug.

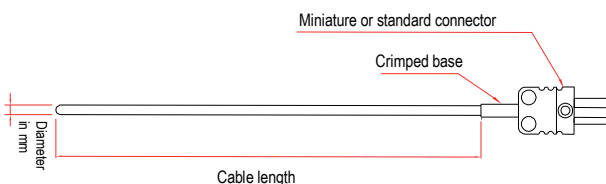
Part numbers for standard connector output



Example : FTI-45-150-FS

Model : Thermocouple type T with mineral insulated sheath, length 150 mm and 4.5 mm Ø. Sheath terminated in a miniature plug.

Dimensions



Technical feature

Working temperature..... 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
from -40°C to +1000°C for Tc N
from 0°C to +1100°C for Tc S

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

Mounting..... Ungrounded or grounded hot junction.
Inconel 600 Mineral insulated or 326 L stainless steel according to thermocouple type.

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

Connector output..... Miniature from 0.5 to 3 mm Ø
Standard from 4.5 to 8 mm Ø
Or other on request.

Connector rated up to..... 135°C

Tolerances

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°
S	From 0°C to +1600°C	From 0 to +1100°C ± 1°C From 1100°C to 1600°C ± (1 + 0.003*(T°-1100))

Thermocouple

■ 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



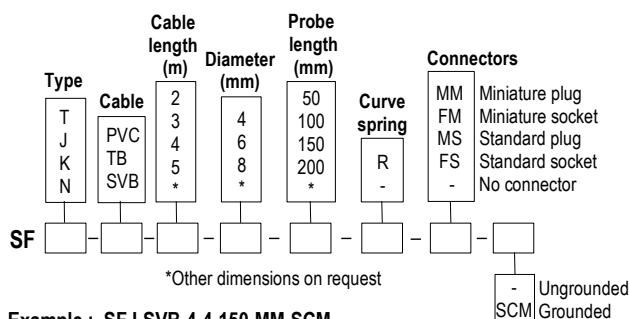
Mineral insulated or stainless steel sheathed thermocouple with cable

SFK / SFKI

- Thermocouple types T, J, K, N or S.
- Measuring range from **-40°C to +1000°C**
- Sheath of 316 L Stainless steel or Inconel 600

Part numbers for stainless steel sheath 550°C max.

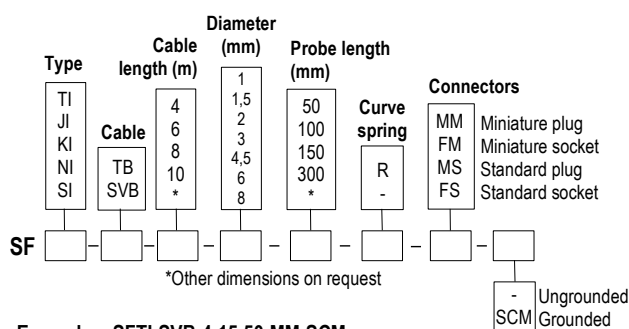
To order, just add the codes to complete the part number.



Example : SFJ-SVB-4-4-150-MM-SCM

Model : Thermocouple type J with grounded hot junction. Stainless steel protective sheath 4 mm Ø, length 150 mm without curve spring. Glass silk cable terminated in a miniature plug.

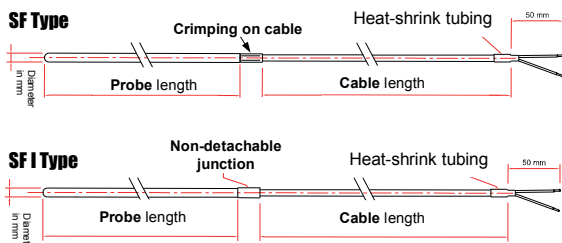
Part numbers for mineral insulated sheath 1000°C max.



Example : SFTI-SVB-4-15-50-MM-SCM

Model : Thermocouple type T with grounded hot junction. Inconel 600 protective sheath 1.5 mm Ø, length 150 mm without curve spring. Glass silk cable terminated in a miniature plug.

Dimensions



Technical feature

Working temperature..... For **SF** category
 from -40°C to +105°C for PVC cable
 from -40°C to +260°C for TB cable
 from -40°C to +400°C for SVB cable (Tc J)
 from -40°C to +550°C for SVB cable (Tc K and N)



See pot seal below

For **SF-I** category (mineral insulated)
 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
 from -40°C to +1000°C for Tc N
 from 0°C to +1000°C for Tc S

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

Type of welding..... Default ungrounded hot junction
 For grounded hot junction, SCM must be added at the end of the part number.

Pot seal mounting..... 5 mm Ø, length 50 mm, non-detachable for SF-I category with PVC cable shielded Teflon or glass silk.
 Max. temperature : 200°C

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

Output stripped wires, miniature or standard plugs available on request.

Tolerances

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°
S	From 0°C to +1600°C	From 0 to +1100°C ± 1°C From 1100°C to 1600°C ± (1 + 0.003*(T°-1100))

Thermocouple

■ 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



Cable thermocouple temperature sensor with fitting of fixation

SFR K / SFR KI

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

Stainless steel contact tip 550 °C max part numbers

Type	Cable	Cable length (m)	Diameter (mm)	Contact tip length (mm)	Fitting	Connector
T	1	2	4	50		MM Male miniature
J	2	3	6	100	12 ½ G male	FM Female miniature
K	3	4	8	150	14 ½ G male	MS Male standard
N	4	*	*	200	Other	FS Female standard
	SVB			*		- Without connector

SFR [] [] [] [] [] [] [] [] [] []

*other dimension on request

Curve spring [R] Insulated To earth [SCM]

Example : SFRJ-SVB-4-4-150-12-R-MM-SCM
Model : J type thermocouple temperature probe welded to earth with contact tip of 150 mm and 4 mm Ø mounted on shielded glass silk cable of 4 m with a male miniature connector on the end . ½ G male compression fitting and curve spring.

Lined contact tip 1000°C max. part numbers

Type	Cable	Cable length (m)	Diameter (mm)	Contact tip length (mm)	Fitting	Connector
TI	1	2	4,5	50		MM Male miniature
J	2	3	6	100	12 ½ G male	FM Female miniature
K	3	4	8	150	14 ½ G male	MS Male standard
NI	4	*	*	200	Other	FS Female standard
	SVB			*		- Without connector

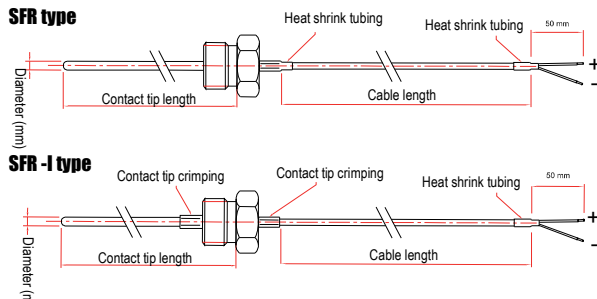
SFR [] [] [] [] [] [] [] [] [] []

*other dimension on request

Curve spring [R] Insulated To earth [SCM]

Example : SFRJI-SVB-4-45-150-12-R-MM-SCM
Model : J type thermocouple temperature probe in inconel welded to earth with contact tip of 150 mm, 4,5 mm Ø mounted on shielded glass silk cable of 4 m with a male miniature connector on the end . ½ G male compression fitting and curve spring.

Dimensions



Technical features

Working temperature.....For SFR series
 from -40°C to +105°C for PVC output
 from -40°C to +260°C for TB output
 from -40°C to +400°C for SVB output
 from -40°C to +550°C for SVB (Tc K) output

For SFR-I series, lined mountings
 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
 from -40°C to +1000°C for Tc N

Recommended temperature...According to inconel 600 contact tip Ø
 from 0.5 to 1 mm Ø : until 300°C
 from Ø1.5 to 2 mm Ø : until 750°C
 3 mm Ø : until 900°C
 from 4.5 to 8 mm Ø : until 1000°C



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

Mounting of welding.....Insulated hot welding in standard
 Add SCM to part number for a mounting with hot welding to earth.

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

Output.....stripped wires, male miniature connector or standard on request.

Compression fitting.....316 L stainless steel

Thread.....½ or ¼ au pas gaz

Contact tip.....316 L stainless steel or inconel 600
 Curve spring as option

Tolerances of the probe

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

Thermocouple

■ 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 connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters

Wire and angled or lined inconel thermocouple temperature sensor with or without fitting



Type SFC K et SFCR K

SFC K – SFCD K – SFCR K – SFCRD K

■ **Sensor features**

- Temperature sensor mounted on conductor cables with angled contact tip with or without stainless steel compression fitting.
- Thermocouple types T, J, K and N
- Measuring range from -40°C to +1000°C
- Mounting with 316 L stainless steel contact tip or inconel 600

■ **Technical features**

Working temperature.....*For SFCK and SFCRK series*
(According to cable) from -40°C to +105°C for PB output
from -40°C to +260°C for TB output
from -40°C to +400°C for SVB output
from -40°C to +550°C for SVB (Tc K) output

For SFCKI and SFCRKI series
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 Ø 0.5 to 1 mm : until 300°C
from Ø 1.5 to 2 mm : until 750°C
Ø 3 mm : until 900°C
from Ø 4.5 to 8 mm : until 1000°C



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

Mounting of the welding.....Insulated hot welding in standard
Add SCM to part number for a mounting at hot welding to earth.

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

Output.....stripped wires, male miniature connector or standard on request

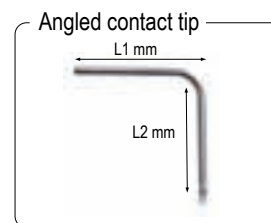
Contact tip and fitting.....*For SFCK and SFCRK series*
316 L stainless steel
Angled at 90° (Other on request)
Waterproof crimping with heat-shrink tubing
(Unless glass silk cable with single crimping on stainless steel sheath)
Curve spring as option

For SFCKI and SFCRKI series
Inconel contact tip 600 T max. 1000°C
Stainless steel compression fitting 316L T max. 800°C
Angled at 90° (Other on request)

Thread of the fitting.....**1/2" or 1/4" au pas Gaz**

Mounting of the fitting.....**On L2 length (See schema)** : 12 or 14 corresponding to 1/2" G and 1/4" G compression fitting
On L1 length (See schema) : 12L1 or 14L1 corresponding to 1/2" G et 1/4" G compression fitting

T° maxi of L2 : 800 °C for this specific case



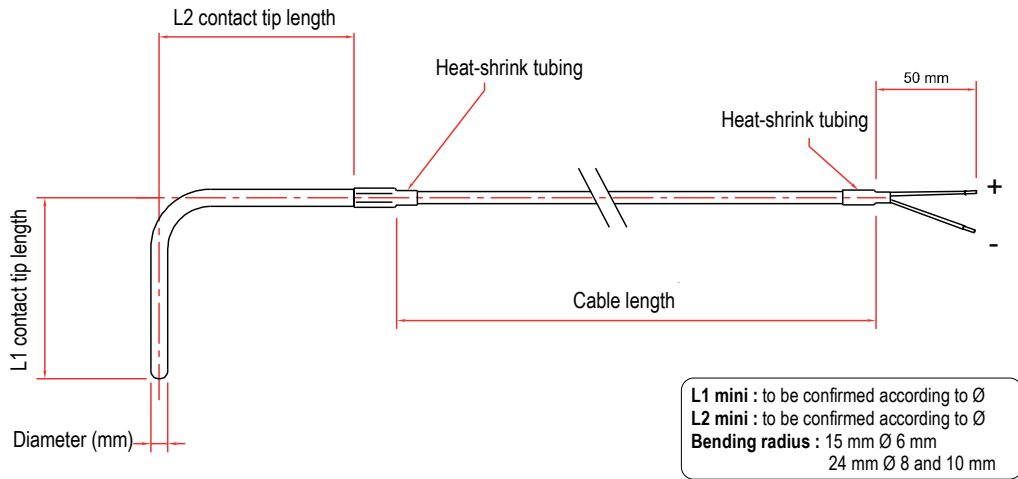
Thermocouple

SFC & SFC-I

Angled wire probe or lined inconel



Dimensions



Part numbers

• SFC - Stainless steel contact tip -

Type	Cable	Cable length (m)	Diameter (mm)	L1 contact tip (mm)	L2 contact tip (mm)	Angle	Curve spring	Connector
T	PB	1	4	50	50	90	R	MM Male miniature
J	TB	2	4	100	100		-	FM Female miniature
K	SVB	3	6	150	150		-	MS Male standard
K		4	8	200	200		-	FS Female standard
N	*	*	*	200*	200*		-	- Without connector

*other on request

- Insulated
SCM To earth

Example : SFCJ-SVB-4-4-100-100-90-MM-SCM

Model : J thermocouple sensor welded to earth with stainless steel contact tip Ø 4 mm angled at 90° and L1 and L2 lengths of 100 mm, without curve spring and mounted on shielded glass silk cable ended by a male miniature connector.

• SFC-I – Inconel contact tip -

Type	Cable	Cable length (m)	Diameter (mm)	L1 contact tip (mm)	L2 contact tip (mm)	Angle	Curve spring	Connector
J	PB	1	6	50	50	90	R	MM Male miniature
K	TB	2	6	100	100		-	FM Female miniature
K	SVB	3	8	150	150		-	MS Male standard
N	*	*	*	200	200		-	FS Female standard
				200*	200*		-	- Without connector

*other on request

- Insulated
SCM To earth

Example : SFCJI-SVB-4-6-100-100-90-MM

Model : J thermocouple sensor, insulated welding with lined inconel contact tip of 6 mm Ø angled at 90° and L1 and L2 lengths of 100 mm, without curve spring and mounted on shielded glass silk cable ended by a male miniature connector.

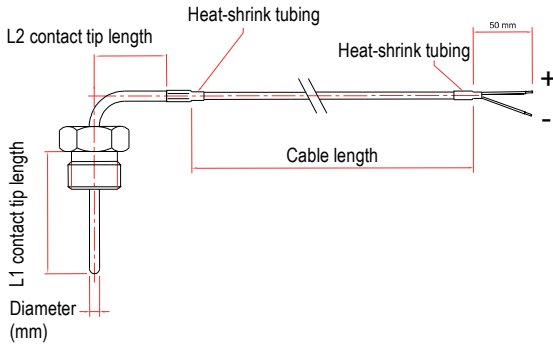
SFCR & SFCR-I

Angled wire probe or lined inconel with fitting

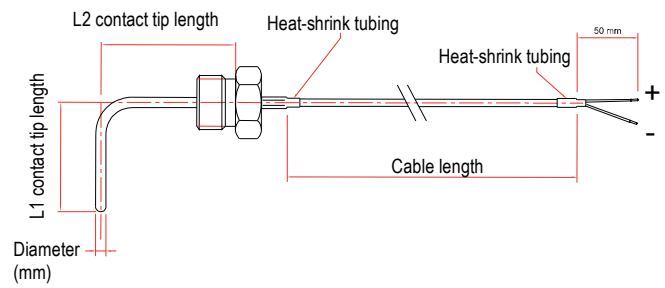


Dimensions

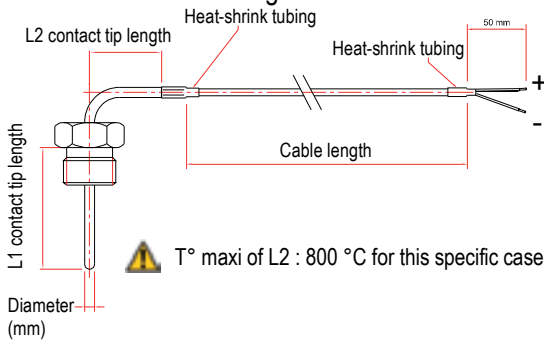
Stainless steel with fitting on L1



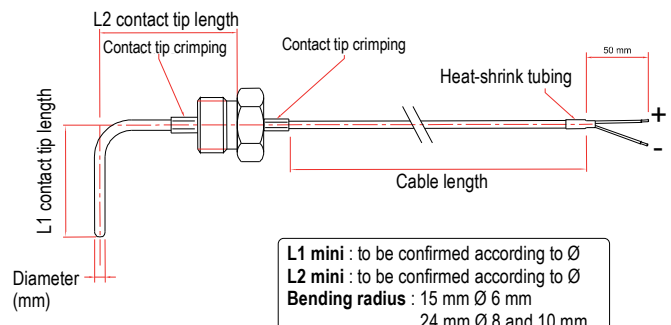
Stainless steel with fitting on L2



Lined inconel with fitting on L1



Lined inconel with fitting on L2



Part numbers

SFCR - Stainless steel contact tip -

Type	Cable length (m)	Diameter (mm)	L1 contact tip (mm)	L2 contact tip (mm)	Fitting	Angle	Connector
T	1	4	50	50	12	90	MM Male miniature
J	2	4	100	100	14	12L1	FM Female miniature
K	3	6	150	150	14	12L1	MS Male standard
N	4	8	200	200	14L1	FS Female standard	- Without connector

Example part number: SFCR-J-SVB-4-4-100-100-90-12-MM

*other on request

Curve spring: R

Insulated To earth: - SCM

Example : SFCRJ-SVB-4-4-100-100-90-12-MM

Model : J thermocouple sensor, insulated hot welding with stainless steel contact tip of 4 mm Ø angled at 90° and L1 and L2 lengths of 100 mm, without curve spring with ½G thread union fixed on L2. Contact tip mounted on shielded glass silk cable ended by a male miniature connector.

SFCR-I - Inconel contact tip -

Type	Cable length (m)	Diameter (mm)	L1 contact tip (mm)	L2 contact tip (mm)	Fitting	Angle	Connector
J	1	6	50	50	12	90	MM Male miniature
K	2	6	100	100	14	12L1	FM Female miniature
N	3	6	150	150	14	12L1	MS Male standard
NI	4	6	200	200	14L1	FS Female standard	- Without connector

Example part number: SFCRJI-SVB-4-6-100-100-90-12-MM

*other on request

Curve spring: R

Insulated To earth: - SCM

Example : SFCRJI-SVB-4-6-100-100-90-12-MM

Model : J thermocouple sensor, insulated hot welding with lined inconel contact tip of 6 mm Ø angled at 90° and L1 and L2 lengths of 100 mm, without curve spring with ½G thread union fixed on L2. Contact tip mounted on shielded glass silk cable ended by a male miniature connector.

Thermocouple

■ Tolerances of the probe

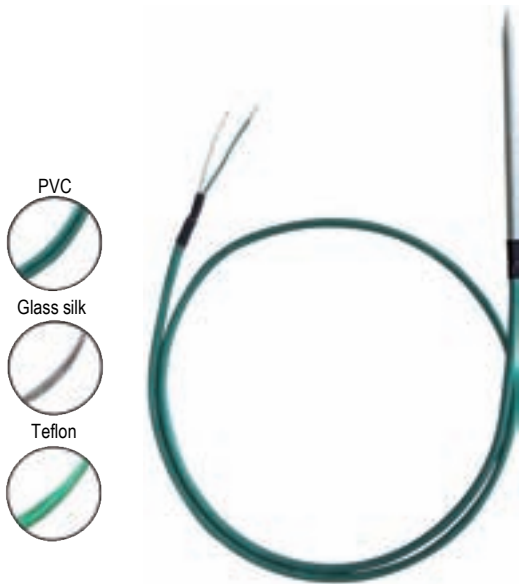
TC	Measuring range Class 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

■ Most common thermocouple types

THERMOCOUPLE TYPES	+ 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 connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters



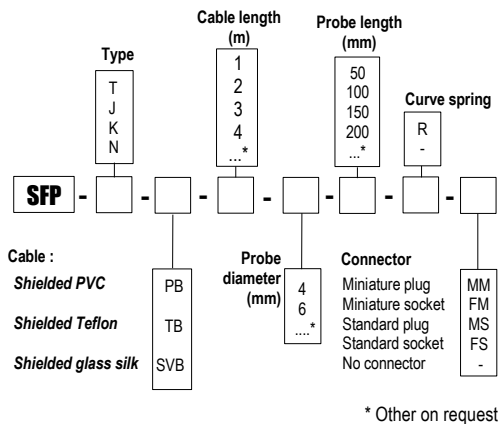
Thermocouple penetration probe with cable

SFP K

Probe features

- Thermocouple types T, J, K and N.
- Measuring range from **-40°C to +550°C**
- 316 L stainless steel sheath

Part numbers

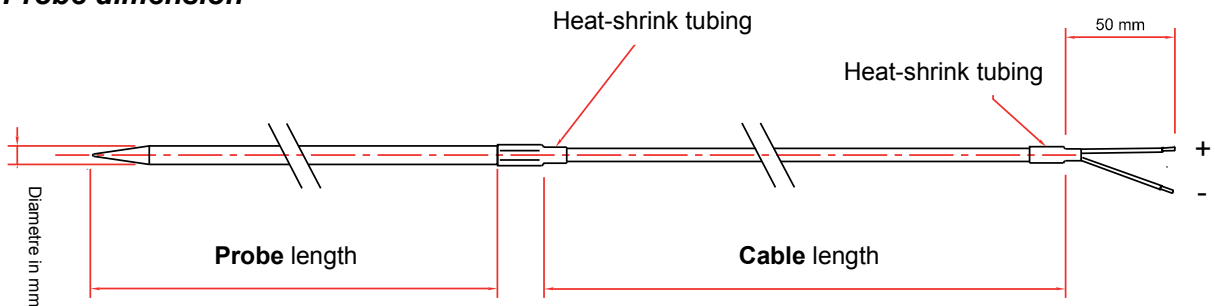


Example : SFPK-PB-1-4-100-R-MM
 Model : Thermocouple type K. Stainless steel protective sheath 4 mm diameter, 100mm length with a shielded PVC cable, 1m long, with curve spring and miniature plug connector.
 Measuring range from -40 to +105°C.

Technical features

- Operating temperature**..... from -40°C to +105°C for shielded PVC cable
 from -40°C to +260°C for shielded T cable
 from -40°C to +400°C for shielded SV cable
 from -40°C to +550°C for shielded SV cable (Tc K only)
- Accuracy for class 1**..... See "Tolerances" table
- Welding type**..... Ungrounded hot junction.
- Storage temperature**..... from -20°C to +80°C
- Output** stripped wire, miniature plug or standard on request.
- Sheath**..... 316 L stainless steel, optional curve spring.

Probe dimension



Tolerances

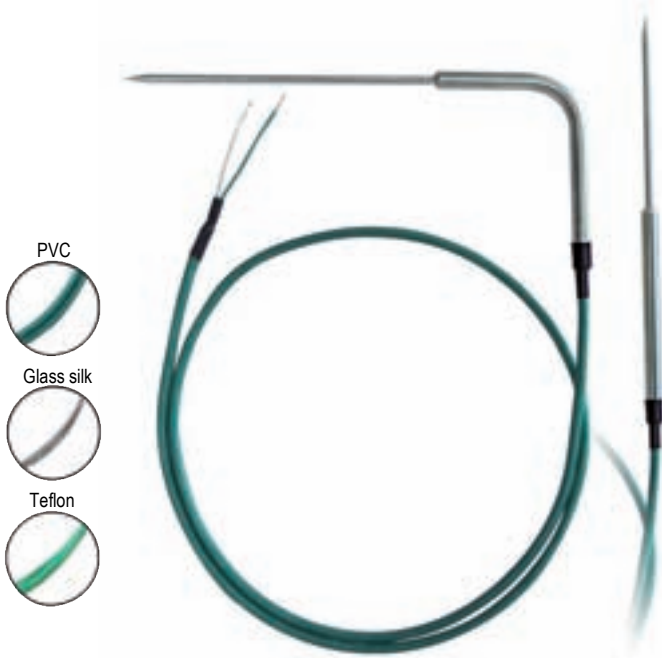
TC	Measuring range CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ$

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



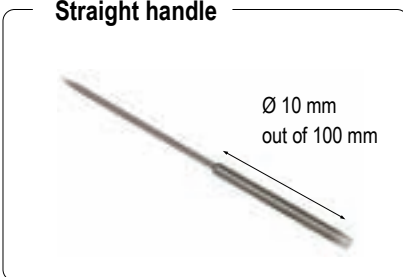
Thermocouple temperature probe with handle to prick

**SFPP K / SFPPC K
SFPPD K / SFPPCD K**

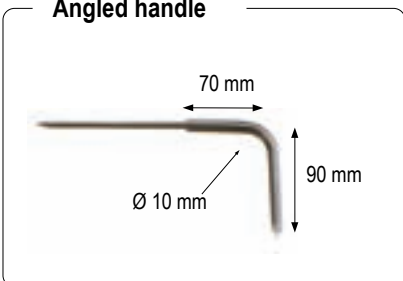
■ **Probe features**

- Pricking temperature probe mounted on straight or angled handle
- Thermocouple types T, J, K and N.
- Measuring range from **-40°C to +550°C**

Straight handle



Angled handle



■ **Technical features**

- Working temperature**.....from -40°C to +105°C for shielded PVC output
from -40°C to +260°C for TB output
from -40°C to +400°C for SVB output
from -40°C to +550°C for SVB (Tc K only) output
- Accuracy for 1**.....See "Tolerances"
- Mounting of welding**.....Insulated hot welding
- Storage temperature**.....from -20°C to +80°C
- Output**stripped wires, miniature male connector or standard on request.
- Mounting of cable output**.....Output on cable or with stainless steel flexible 7 mmØ .
Water-resistant flexible on request as option.
Curve spring as option (unless stainless steel flexible output)
- Contact tip**.....4.5 or 6 mm Ø in 316 L stainless steel
Tapered tip
Handle : **Straight** 10 mm Ø and 100 mm length
Angled at 90° and 90 mm length
Other on request.

Water-resistant as option for use in wet or submerged places.

Thermocouple

SFPPK & SFPPKD

Pricking cable probe with handle

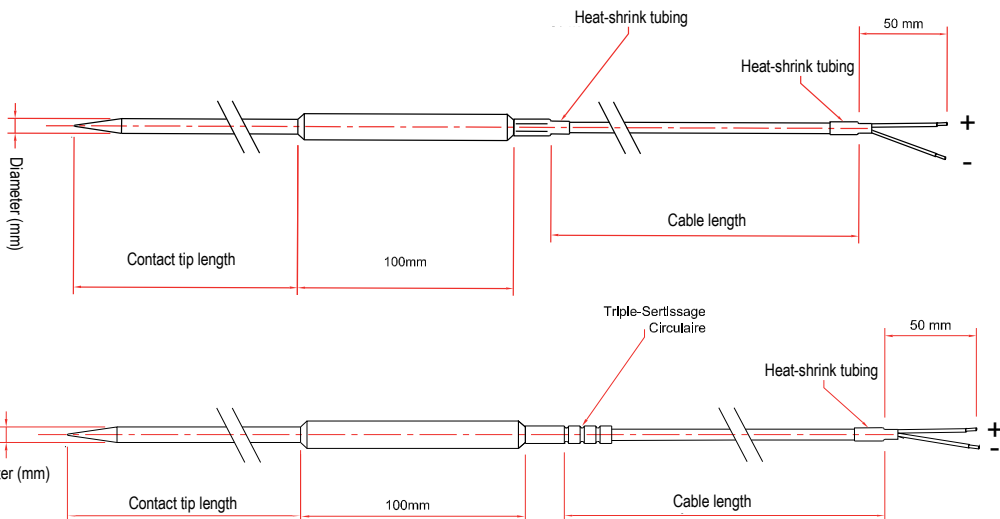
• Probe with straight handle on cable



• Probe with straight handle on flexible

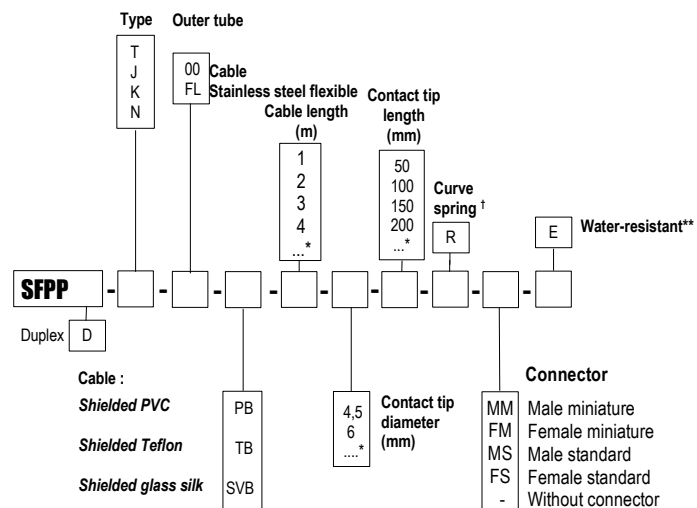


■ Dimensions



Optional :
water-resistant

■ Part numbers



Example : SFPPK-00-TB-1-45-100-MM

Model : Thermocouple type K temperature probe, Outer tube in shielded Teflon cable of 1 m length. Stainless steel contact tip 4,5 mm Ø, to prick with straight handle of 100 mm length, without curve spring. Measuring range from -40 to +105°C.

* Other dimension on request

† No curve spring on flexible output FL

** E for submerged use according to use rules

SFPPCK & SFPPCKD

Pricking cable probe with angled handle

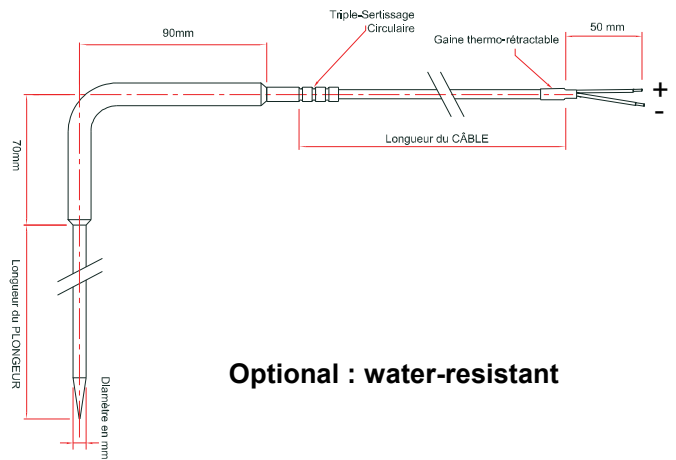
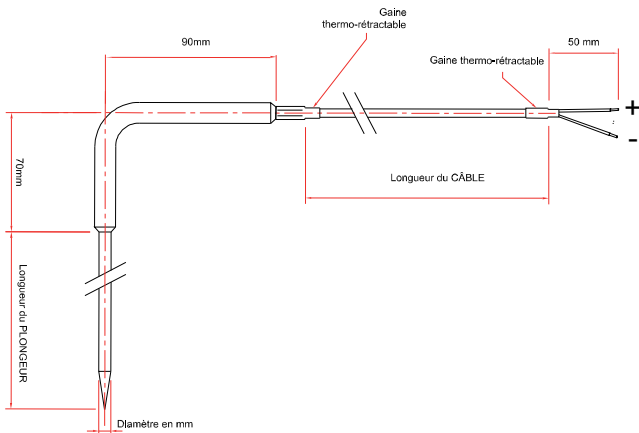
• Probe with angles handle on cable



• Probe with angled handle on flexible

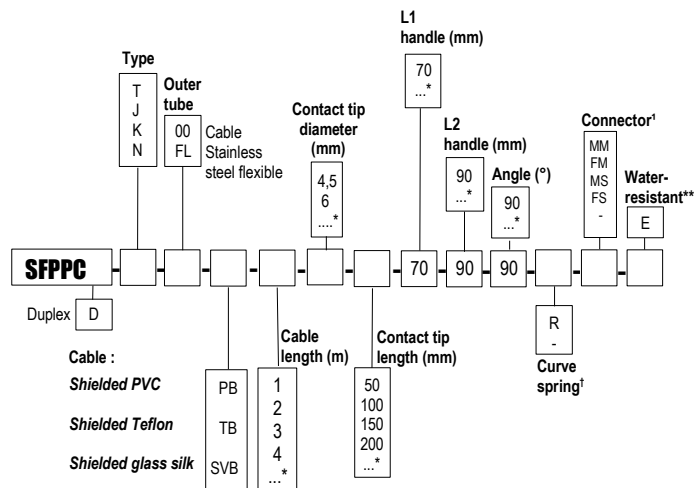


Dimensions



Optional : water-resistant

Part numbers



Example : SFPPCK-00-TB-1-45-100-70-90-90-R-MM

Model : Thermocouple type K temperature probe, outer tube in shielded Teflon cable of 1 m length with male miniature connector. Stainless steel contact tip 4,5 mm Ø and 100 mm length to prick with angled handle of L1 length 70mm and L2 length 90 mm, angle of the handle at 90°, with curve spring.

Measuring range from -40 to +105°C.

* Other dimension on request

† No curve spring on flexible output FL

** E for submerged use according to use rules

¹ MM: Male miniature
FM: Female miniature
MS: Male standard
FS: Female standard
-: Without connector

■ Tolerances of the probe

TC	MEASURING RANGE CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

■ 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 connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters



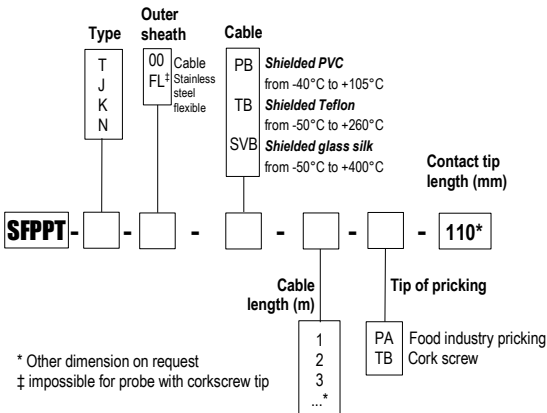
Thermocouple temperature sensor with T handle

SFPPT K

Probe features

- Thermocouple types T, J, K and N.
- Pricking temperature probe mounted on T handle.
- Measuring range (according to cable) : from **-40°C to +400°C**

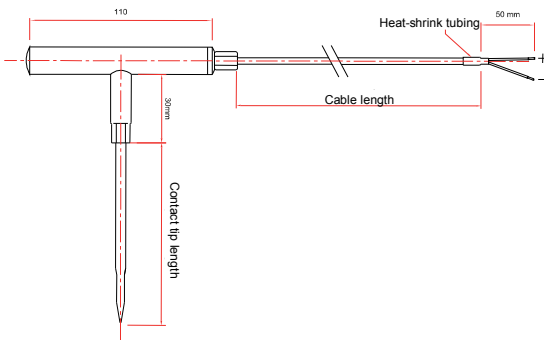
Part numbers



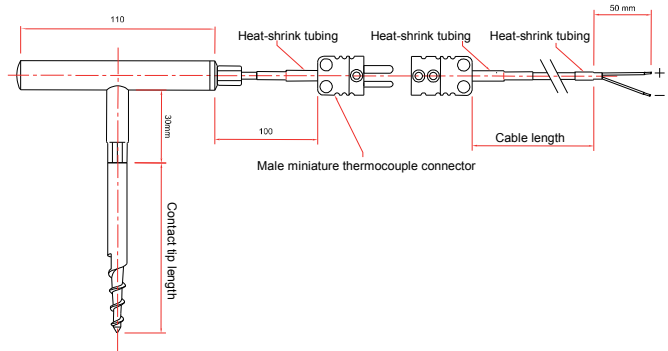
Example : SFPPTK-00-P-2-PA-110
 Model : Type K thermocouple probe with insulated hot welding, outer sheath in PVC cable of 2 m length. Stainless steel contact tip Ø 4,5 mm for food industry pricking of 110 mm length with penetration tip of tube sinking type. **Measuring range from -40 to +105°C.**

Dimensions

Food industry pricking probe



Cork screw tip probe



Technical features

Working temperature.....from -40°C to +105°C for shielded PVC output
 from -40°C to +260°C for TB output
 from -40°C to +400°C for SVB (Tc J) output
 from -40°C to +550°C for SVB (Tc K and N) output

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

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

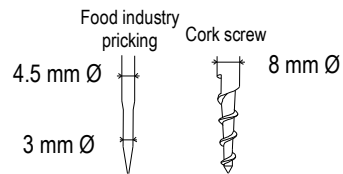
Mounting of cable output.....Insulated hot welding mounting
 With tip of food industry pricking, PE output unremovable.
 With tip of cork screw pricking : compensated mini connector output .

Contact tip.....110 mm length in standard
 4.5 or 8 mm Ø in 316 L stainless steel, selective length

Tip of pricking

Cork screw (to screw) : only 8 mm diameter for contact tip
 Food industry pricking : contact tip diameter : 4.5 mm
 Tube sinking diameter : 3 mm

Tip of pricking



Thermocouple

■ Tolerances of the probe

TC	Measuring range Class 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

■ Most common thermocouple types

TYPE DE THERMOCOUPLE	+ 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 connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters



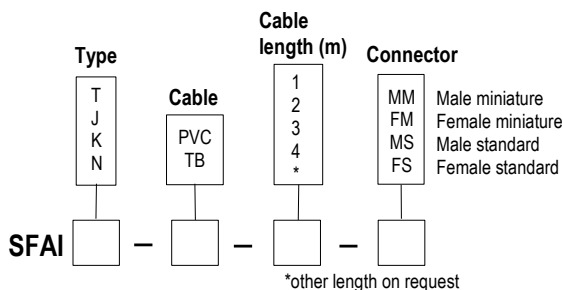
Thermocouple probe with magnetic mounting and cable output.

SFAI K

- Thermocouple types T, J, K or N.
- Measuring range : from -40°C to +220°C.
- Mounting with magnet.

Part number

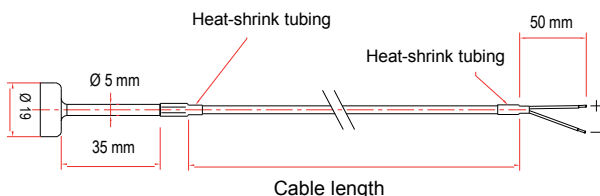
To order, just add the codes to complete the part number.



Example : SFAIK-PVC-1-MM

Model : Thermocouple type K with shielded PVC cable, 1m length finished with a miniature male connector.

Probe dimensions



Technical feature

Working temperature.....*For shielded PVC cable*
from -40°C to +105°C

For shielded Teflon cable
from -40°C to +220°C

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

Welding mounting.....Hot welding to the earth.

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

Response time.....52 sec.

Magnet.....19 mm Ø, 8 mm height
maximal traction : 3 kg
other on request

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

Output.....stripped wire, miniature plug or standard

Tolerances of the probe

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
S	From 0°C to +1600°C	From 0°C to +1100°C ± 1°C From 1100°C to 1600°C ± (1 + 0.003*(T°-1100))

Thermocouple

■ Most common thermocouple types

THERMOCOUPLE TYPES	+ 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	Fer	Copper-Nickel	Ext. color + = BLACK, - = WHITE
N	Nickel 84,4% Chrome 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

**Thermocouple cable
temperature sensor
for measurement of contact by
eyelet**

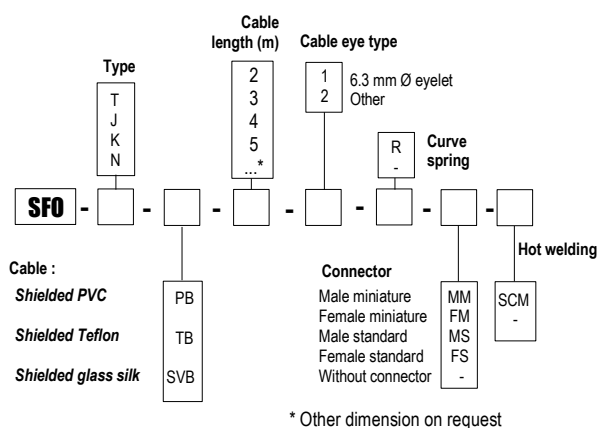
SFO K



Probe features

- Thermocouple types T, J, K and N.
- Measuring range from **-40°C to +550°C**

Part numbers



Technical features

- Working temperature**.....from -40°C to +105°C for shielded PVC output
from -40°C to +260°C for TB output
from -40°C to +400°C for SVB output
from -40°C to +550°C for SVB (only Tc K) output
- Accuracy for class 1**.....See "Tolerances" table
- Mounting of welding**Insulated hot welding in standard
Add SCM to part number for a mounting with hot welding to earth.
- Storage temperature**.....from -20°C to +80°C
- Output**stripped wire, miniature male connector or standard on request.
- Contact tip**.....14 x 12 mm copper eyelet, fixing by 6.3 mm Ø hole.
316 L stainless steel tube output of 10 mm and 4,5 mm diameter.
Water-resistant crimping with heat-shrink tubing (unless glass silk cable with simple crimping on stainless steel tube)
Curve spring as option

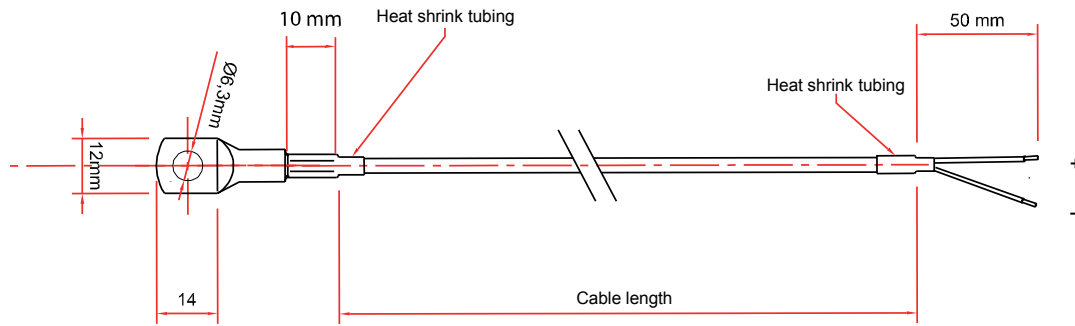
Tolerances of the probe

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

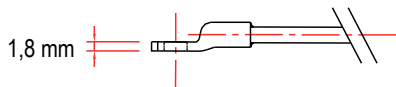
Thermocouple

■ Dimensions

• Front view



• Side view

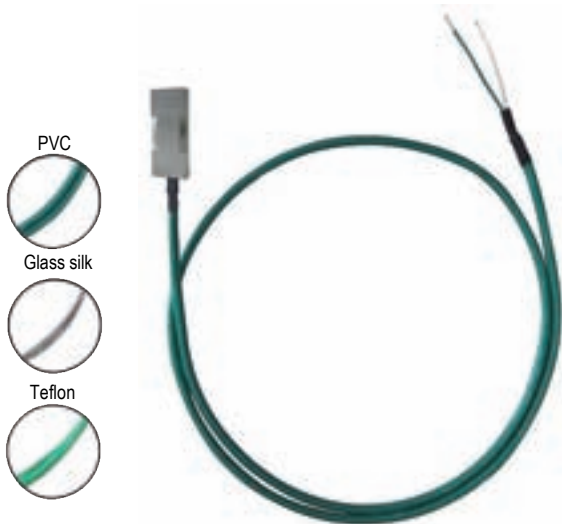


■ Most common thermocouple types

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

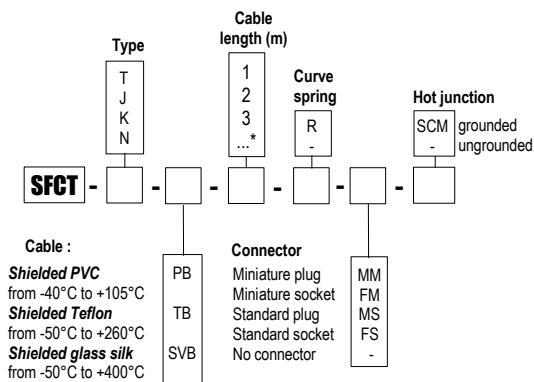
■ Accessories (See data sheet)

- Extension cable
- Compensating cable
- Standard or miniature connector
- Cable seal for plug and socket connector
- Miniature or standard connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters



Supplied with adjustable ring of 100 mm Ø

■ **Part numbers**



* Other dimensions available on request

Example : SFCTK-P-3-R-MM

Model : Thermocouple type K with ungrounded hot junction. Contact probe on PVC cable, 3m long, with curve spring and miniature plug connector. Measuring range from -40 to +105°C.

■ **SFCT K**

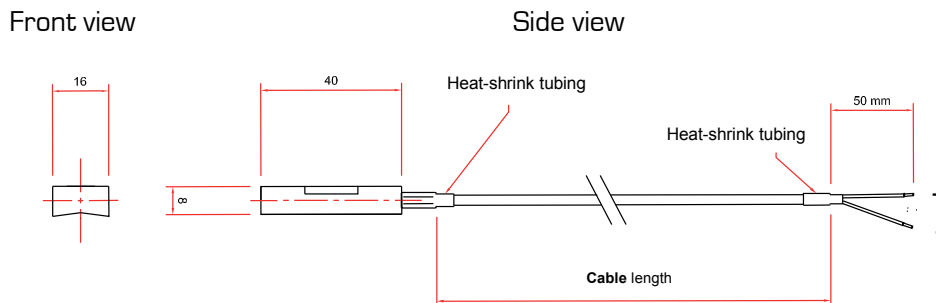
■ **Probe feature**

- Thermocouple types T, J, K and N.
- Measuring range from **-40°C to +550°C**
- With contact end for pipe (all diameters)

■ **Technical feature**

- Operating temperature**..... from -40°C to +105°C for shielded PVC cable
 from -40°C to +260°C for shielded T cable
 from -40°C to +400°C for shielded SV cable
 from -40°C to +550°C for shielded SV cable (Tc K only)
- Accuracy for class 1**..... See "Tolerances" table
- Welding type**..... Default ungrounded hot junction
 For grounded hot junction, SCM must be added at the end of the part number.
- Storage temperature**..... from -20°C to +80°C
- Contact tip**..... 40 x 16 x 8,5 mm
 V shape
 screw fastener
 made of AU4G (aluminium)
- Connection**..... supplied with stainless steel adjustable ring for DN 100. Other adjustable ring available on request

■ **Probe dimensions**



Thermocouple

■ Tolerances

TC	Measuring range CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ$

■ 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



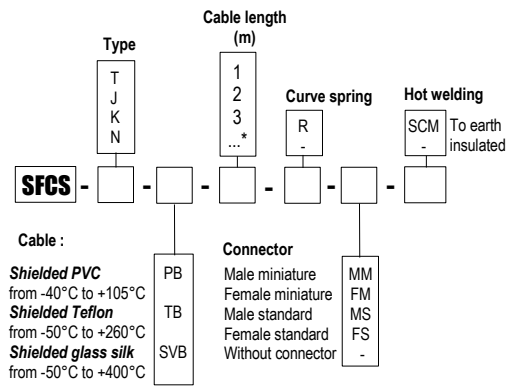
Cable thermocouple temperature sensor for surface contact



SFCS K

Part numbers

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



* Other dimension on request

Example : SFCSK-P-3-R-MM

Model : K type thermocouple temperature probe with insulated hot welding. Contact tip mounted on PVC cable 3m length with a curve spring and with male miniature connector on the end.

Measuring range from -40 to +105°C.

Probe features

- Thermocouple types T, J, K and N.
- Measuring range from **-40°C to +550°C**
- Mounting with base of surface.

Technical features

Working temperature.....from -40°C to +105°C for PB output
from -40°C to +260°C for TB output
from -40°C to +400°C for SVB output
from -40°C to +550°C for SVB (Tc K) output

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

Mounting of welding.....Insulated hot welding in standard
Add SCM to part number for a mounting with hot welding to earth.

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

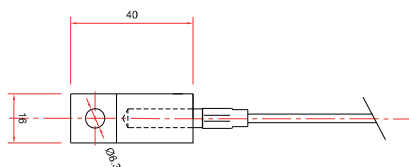
Output.....stripped wires, male miniature connector or standard. Other on request.

Base.....40 x 16 x 7,5 mm
hole of 6,3 mm Ø
Copper matter

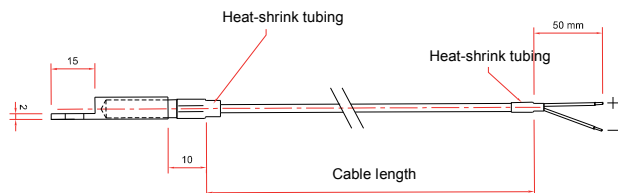
Thermocouple

Dimensions

Top view



Side view



■ Tolerances of the probe

TC	Measuring range Class 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

■ Most common thermocouple types

THERMOCOUPLE TYPES	+ 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 connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters

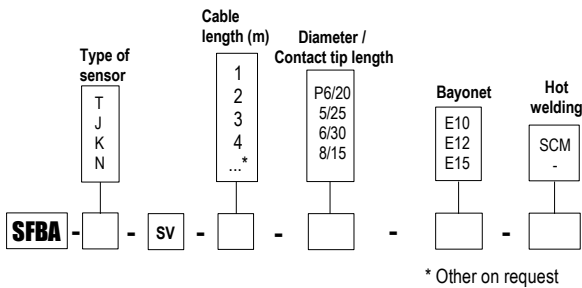


Cable thermocouple temperature sensor at bayonet

SFBA K

Part numbers

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

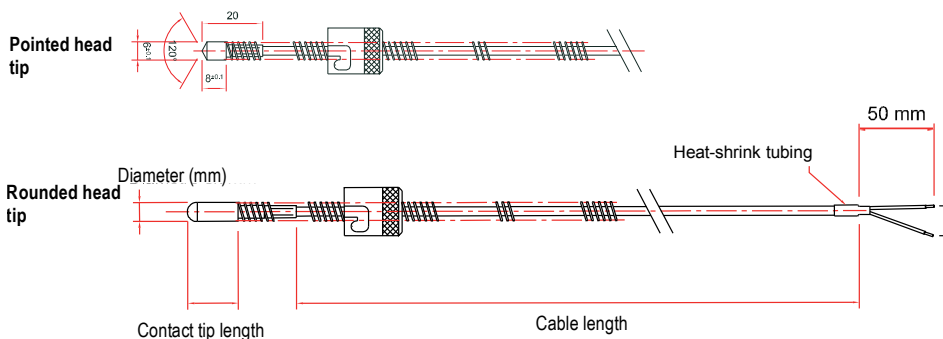


Example : SFBAK-SV-3-630-E12-SCM

Model : Thermocouple type K temperature sensor at bayonet welded to earth. Contact tip 6mm Ø and 30mm length mounted on glass silk cable 3 m length. Bayonet for 12 mm base.

Measuring range from -50 to +400°C.

Dimensions



Sensor features

- Thermocouple types T, J, K, N and S.
- Measuring range from **-50°C to +400°C**
- Mounting stainless steel contact tip 316 L

Technical features

Working temperature.....from -40°C to +350°C for Tc T
from -40°C to +400°C for Tc J
from -40°C to +550°C for Tc K

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

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

Contact tip.....316 L stainless steel.
5/25 : 5 mm Ø and 25 mm length
6/30 : 6 mm Ø and 30 mm length
8/15 : 8 mm Ø and 15 mm length
P6/20 : 6 mm Ø and 8 mm length

Cable.....output by shielded stainless steel glass silk cable.
2 conductors of 0,22 mm².
Measuring range : from -50°C to +400°C

Bayonet.....bayonet fitting (2 spins)
Nickel faced brass , for base of 10, 12 or 14 mm Ø
To screw on spring of 200 mm.

Thermocouple

■ Tolerances of the probe

TC	Measuring range Class 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

■ Most common thermocouple types

THERMOCOUPLE TYPES	+ 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)

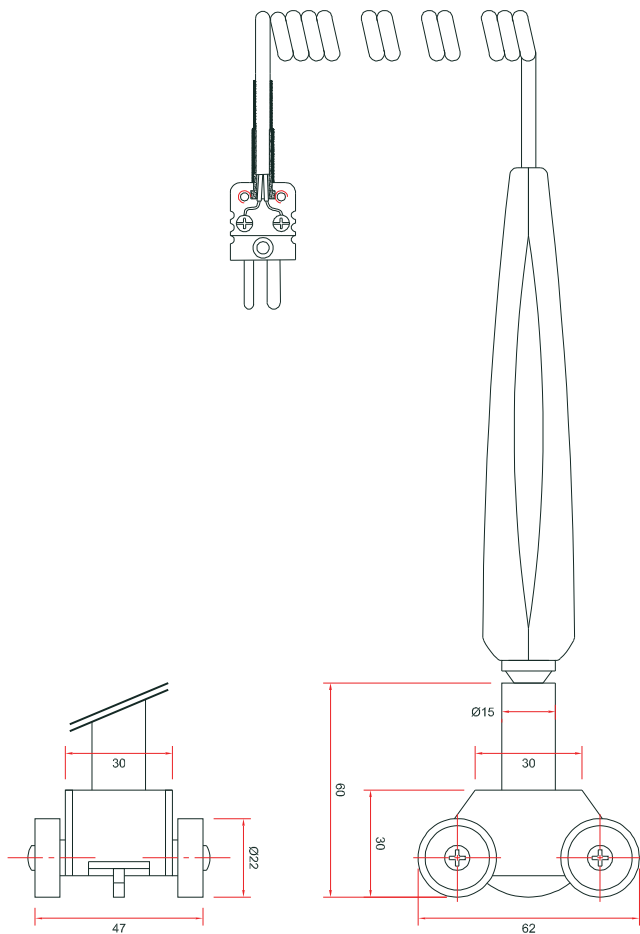
- Extension cable
- Compensating cable
- Standard or miniature connector
- Cable seal for plug and socket connector
- Miniature or standard connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters



K thermocouple temperature sensor for measurement of surface with moving parts

SFCSM K

■ **Dimensions**



■ **Probe features**

- Thermocouple type K.
- Measuring range from **-40°C to +500°C**
- Response time very fast.

■ **Technical features**

- Working temperature**.....from -40°C to +500°C (only for the trolley)
- Accuracy for class 1**.....See "Tolerances" table
- Mounting of welding**.....Insulated hot welding in standard
- Storage temperature**.....from -20°C to +80°C
- Handle**.....ABS, 141 mm length, from -40 °C to +85 °C
- Output**by PVC coiled cable , 200 mm length
1800 mm length stretched
Temperature maxi 105 °C
Male miniature connector (in standard)

■ **Tolerances of the probe**

TC	MEASURING RANGE CLASS 1	TOLERANCE
K	From -40 °C to +500 °C	From -40°C to +375°C ± 1.5°C From 375°C to 500°C ± 0.004 x T°abs

Thermocouple

Part 4 : Head thermocouple



TB K
with aluminium connection head.....p 147



TBEI K
with interchangeable probe system.....p 149



TBAJ K
with ambient tip.....p 151



TBRD K
with offset fitting.....p 153



TBC K
with aluminium connection head.....p 155



TBCT K/TMCT K
for contact duct.....p 159



TBAL K
for high temperature.....p 163



TBAL S
for high temperature.....p 164



TBAR K
with heat-resisting steel protector.....p 165



TBB K
with mounting flange.....p 167



TBRC K
with clamp fitting.....p 169



Fermenting room
grip handle thermocouple probe.....p 171



Compost
thermocouple probe.....p 173





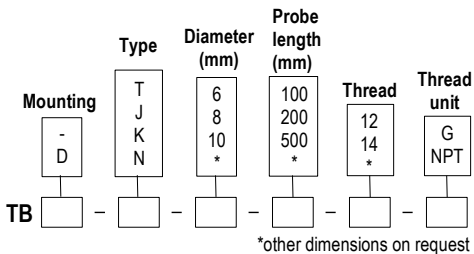
Thermocouple with aluminium connection head

TBK/ TBKI – TBDK / TBDKI

- Thermocouple type T, J, K or N.
- Measuring range from **-40°C** to **+1000°C**
- With or without compression fitting

Part numbers stainless steel sheath 400°C max.

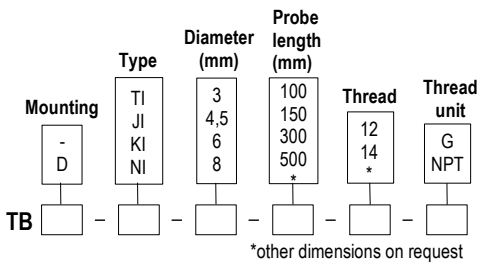
To order, just add the codes to complete the part number.



Example : TBD-T-6-100-12-G

Model : Thermocouple type T with connection head. Sheath of 100 mm and 6 mm Ø with compression fitting ½" G. Mounting of multipair wires.

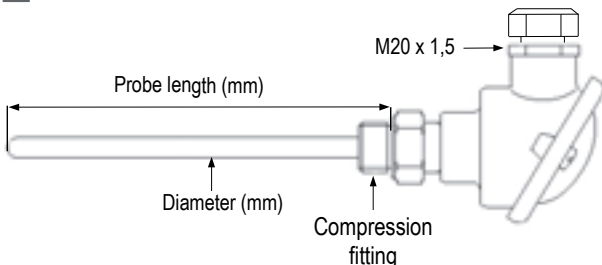
Part numbers mineral insulated sheath 1000°C max.



Example : TBD-TI-6-100-12-G

Model : Thermocouple type T with connection head. Mineral insulated sheath of 100 mm and 6 mm Ø with compression fitting ½" G. Mounting of multipair wires.

Dimensions



Technical features

- Working temperature**..... For **TBK** category
from -40°C to +350°C for Tc T
from -40°C to +400°C for J, K and N
For **TBKI** category
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
- Accuracy for class 1**..... See "Tolerances" table
- Type of welding**..... Ungrounded or grounded hot junction
Single pair or multipair wires (2 x 2 wires).
- Sheath**..... Inconel 600 mineral insulated or 316 L stainless steel for TB-I and TBD-I category
316 L stainless steel probe sheathed magnesium oxide construction for TB and TBD category
- Compression fitting**..... 316 L stainless steel
- Thread**..... With or without compression 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

Tolerances

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°

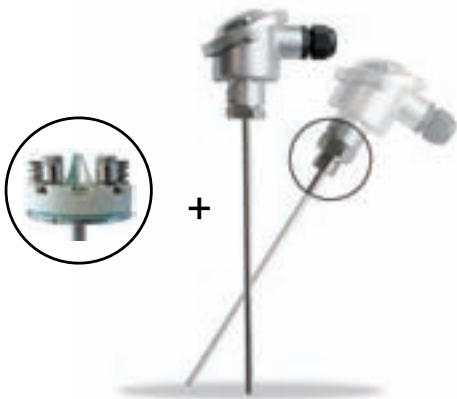
Thermocouple

■ 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

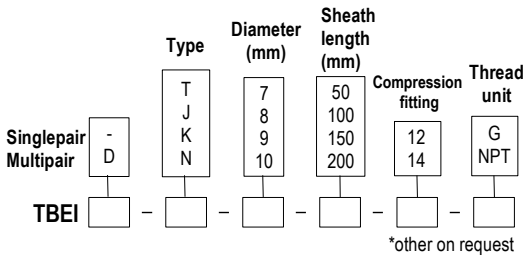


Thermocouple sensor with standard connection head with interchangeable probe system

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.

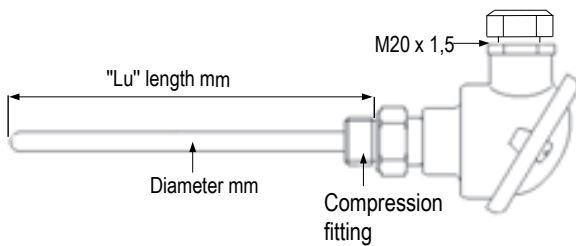


Example : TBEID-T-7-100-12-G

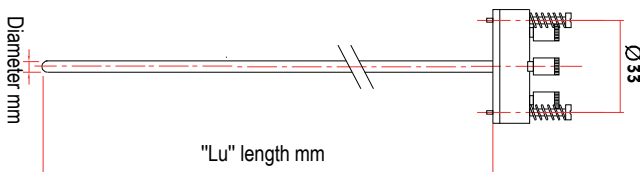
Model : Thermocouple T with a sheath of 100 mm length and 7 mm Ø. Compression fitting 1/2 G. Measurement insert 4 mm Ø and 140 mm length with multipair wires.

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

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°

Thermocouple

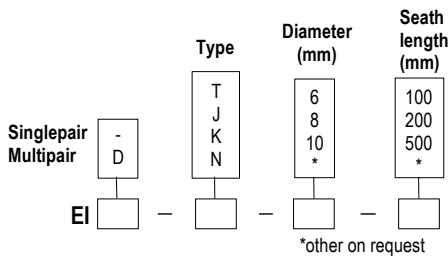


Thermocouple interchangeable probe system

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.

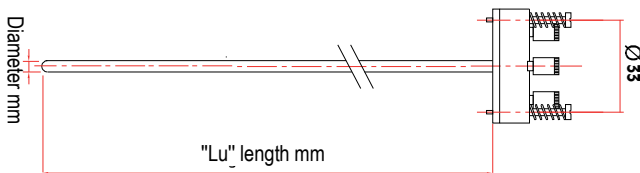


LU length : length of sheath + 40 mm

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 Ø 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

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°

Ref. FTang – TBEIK - 11/07 A – We reserve the right to modify the characteristics of our products without notice.

For most common thermocouple types and accessories, See page 152

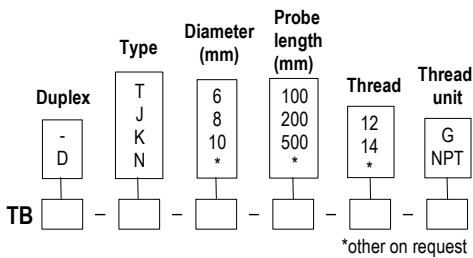


Thermocouple sensor with standard connection head and ambient tip

TBAJ K/ TBAJ KI

- Thermocouple types T, J, K and N.
- Measuring range from **0°C to +400°C**
- With or without compression fitting

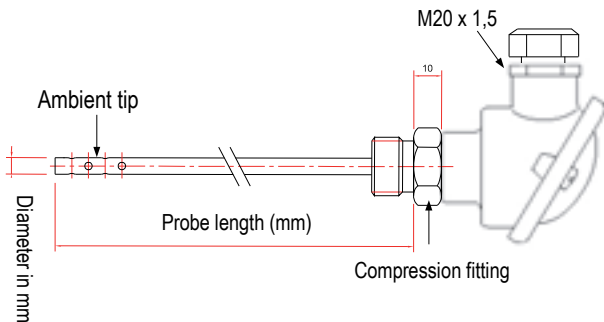
Part numbers



Example : TBD-T-6-100-12-G

Model : Thermocouple T in a sheath of 6 mm Ø and 100 mm length with a ½G compression fitting. Wire multipair mounting.

Dimensions



Transmitter features

- Operating temperature**..... For **TBK** type
from 0°C to +350°C for Tc T
from 0°C to +400°C for J, K and N
- Accuracy for class 1**..... See "Tolerances" table
- Welding type**..... Ungrounded hot junction.
Singlepair or 2x2 multipair.
- Sheath**..... 316 L stainless steel. Ambient end of 20 mm.
6 or 8 mm Ø or other on request
- Compression fitting**..... 316 L stainless steel
- Thread**..... With or without ½, ¾,
Gaz or NPT plug
- Electrical connection**..... with or without terminal block
transmitter 4/20mA 0/10V as option
- Connection head**..... Aluminium alloy
cable gland : M20 x 1.5
IP65 protection
- Storage temperature**..... from 0°C to +80°C

Tolerances

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°

Thermocouple

■ 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



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)
-	T J K N	6 8 10 *	50 100 150 200 *	12 14 *	G NPT	6 8 10 12	50 100 150 200

TBRD [] - [] - [] - [] - [] - [] - [] - []

*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)
-	TI JI KI NI	3 4,5 6 8	150 300 500 *	12 14 *	G NPT	6 8 10 12	50 100 150 200

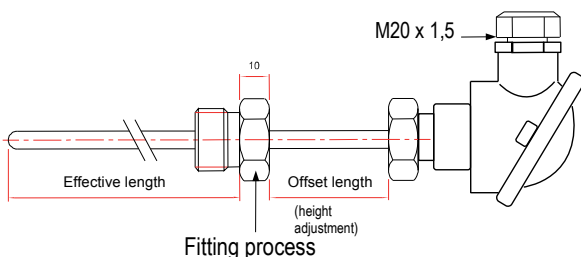
TBRD [] - [] - [] - [] - [] - [] - [] - []

*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

Thermocouple

Tolerances

TC	MEASURING RANGE CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

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



**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**

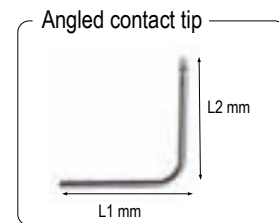
■ General features

- 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

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.....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 1/2"G and 1/4"G.

Mounting with fitting on L2 (See schema) : 12L1 or 14L1 corresponding to fitting 1/2"G and 1/4"G.



No 4 wires mounting for contact tip 4mm ø.

Thread.....With or without fitting 1/2", 1/4" 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

Thermocouple

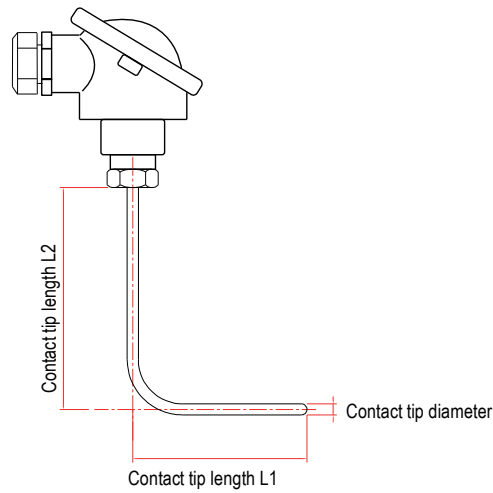
TBC K & TBC KI

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
D	T J K N	6 8 10 12	50 100 150 200*	50 100 150 200*	90	- Insulated SCM 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
D	TI JI KI NI	3 4.5 6 8	50 100 150 200*	50 100 150 200*	90	- Insulated SCM 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.

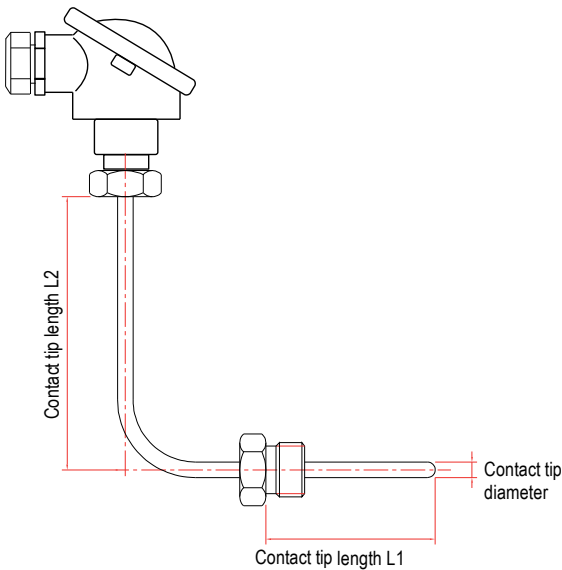
TBCR K & TBCR KI

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

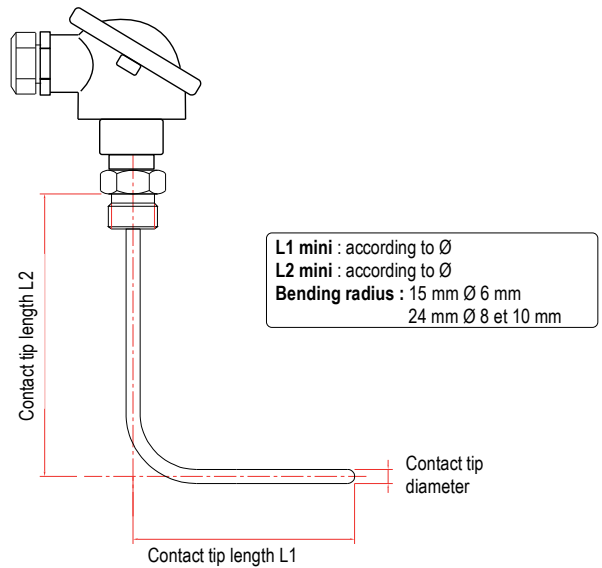


Dimensions

• With fitting on L1



• With fitting on L2



Part numbers

• TBCR K - Stainless steel contact tip -

Duplex	Type	Diameter (mm)	Contact tip (mm)		Fitting	Thread	Angle	Welding
			L1	L2				
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

TBCR [] - [] - [] - [] - [] - [] - [] - [] - []

*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 ½G on L2.

• TBCR KI - Inconel contact tip -

Duplex	Type	Diameter (mm)	Contact tip (mm)		Fitting	Thread	Angle	Welding
			L1	L2				
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

TBCR [] - [] - [] - [] - [] - [] - [] - [] - []

*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 ½G on L2.

Thermocouple

■ Tolerances

TC	MEASURING RANGE CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

■ 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

*Temperature sensor
with head for contact duct*



Supplied with securing band for DN 100 duct

**TBCT K / TBCTD K
TMCT K / TMCTD K**

■ **General features**

- Thermocouple types T, J, K and N.
- Measuring range **from -40°C to +400°C**
- Mounting with base for all diameter pipes.

■ **Technical features**

Working temperature	from -40°C to +350°C for Tc T from -40°C to +400°C for J, K et N
Accuracy	See "Tolerances" table
Mounting of welding	Insulated or to earth hot welding Single pair or 2x2 wires multipair mounting
Duct base	40 x 16 x 8,5 mm V-section Fixing by needle screw AU4G material (aluminium)
Fitting	supplied with a stainless steel collar for DN 100 Other collar on request
Electrical connection	with or without terminal block transmitter 4/20 mA as option
Connection head	Aluminium alloy Cable gland : M20 x 1,5 IP protection
Height of clearance	45 mm
Storage temperature	from -20°C to +80°C

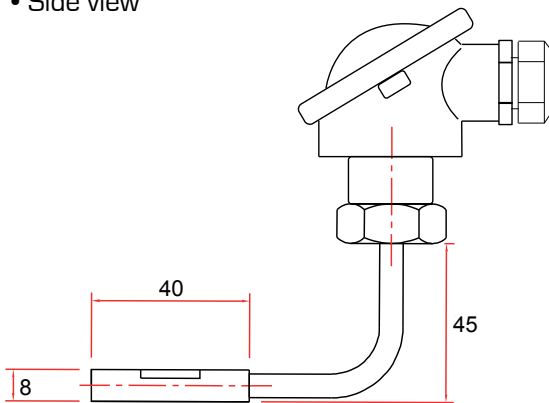
Thermocouple

TBCT K & TBCTD K

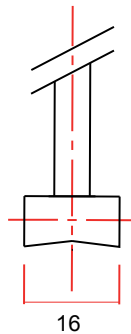
Temperature sensor with **standard** head and contact for pipes

■ Dimensions

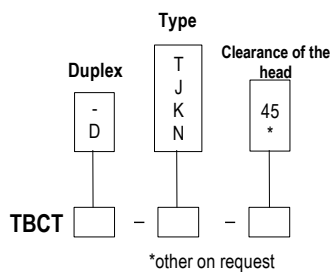
- Side view



- Front view



■ Part numbers



Example : TBCTD-T-45

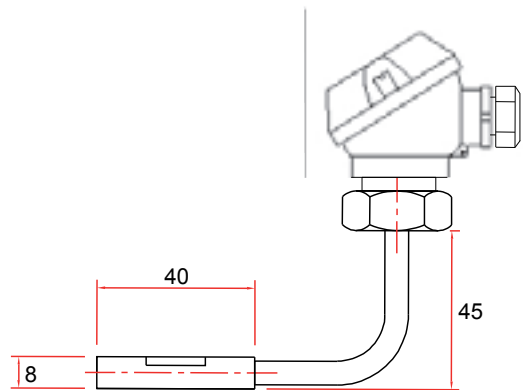
Model : Thermocouple sensor type T, clearance of the head at 45°. Mounting of wires in multipair.

TMCT K & TMCTD K

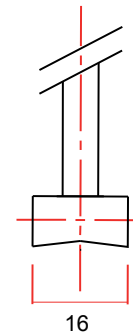
Temperature sensor with **miniature** head and contact for pipes

■ Dimensions

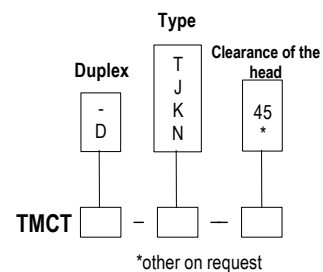
- Side view



- Front view



■ Part numbers



Example : TMCT-T-45

Model : Thermocouple sensor type T, clearance of the head at 45°.

Tolerances

TC	MEASURING RANGE CLASS 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

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



1150°C

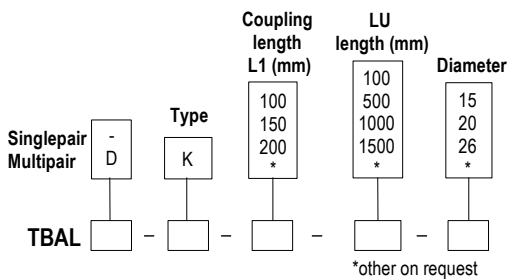


**Thermocouple K sensor
for high temperature
with ceramic protection .**

TBAL K / TBALD K

- Thermocouple K.
- Working temperature : up to +1150°C.
- Mounting with ceramic sheath.

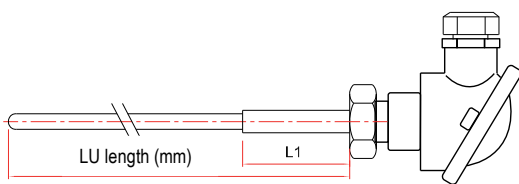
Part numbers



Example : TBAL-K-100-500-15

Model : Thermocouple type K, sheath of 15 mm Ø with a coupling of 100 mm length and a ceramic of 400 mm length. LU is 500 mm.

Dimensions



Accessories (See related FT)

- 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

Technical features

Maximum operating temperature ..+1150°C

Accuracy..... ± 0,0075 l t l

Sheath..... Coupling 21,3 mm Ø
(Customized length)

Watertight refractory ceramic sheath
(CRE 610)

Standard 15 mm Ø (Other on request)
(Customized length)

Mounting..... Wires in ceramic pearls

couple of wires Ø 2.9 mm (singlepair)
or Ø 2.3 mm (multipair)
(Other on request)

Connection head..... Aluminium alloy (120°C max)
steel cable gland : M20 x 150
IP54 protection

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

Tolerances

TC	Measuring range Class 1	Tolerance
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

Most common thermocouple types

Thermocouple type	+ conductor	- conductor	Color of compensating cable
K	Chromel	Alumel	Ext. color += green, - = white



1600°C



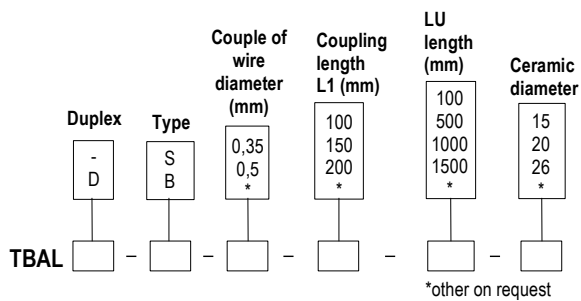
Thermocouple S or B sensor for high temperature with ceramic protection.

TBAL S / TBALD S

- Thermocouple S or B.
- Measuring range : up to +1600°C.
- Mounting with alumina sheath

Part numbers

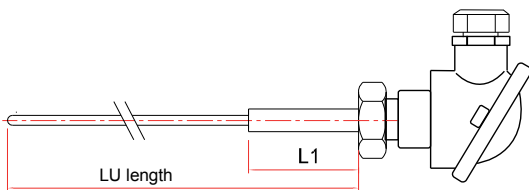
To order, just add the codes to complete the part number.



Example : TBAL-S-35-100-500-15

Model : Thermocouple type S, with a couple of wire of 0.35 mm Ø. Contact tip diameter 15 mm with coupling of 100 mm length and ceramic of 400 mm length. LU is 500 mm.

Dimensions



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

Technical features

Maximum operating temperature...+1600°C

Accuracy.....± 0,0025 | t |

Contact tip.....Coupling Ø according to ceramic sheath (customized length)
Pure APF 710 sintered alumina sheath
Customized Ø according to application
Couple of wires 0,35 or 0,5 mm Ø

Connection head.....Aluminium alloy (120°C max)
Steel cable gland : M20 x 150
IP 54 protection

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

Tolerances of the probe

TC	Measuring range Class1	Tolerance
S	From 0°C to +1600°C	From 0 to +1100°C ± 1°C From 1100°C to 1600°C ± (1+0.003*(T°-1100))
B	From 0°C to +1700°C	From 600°C to 1700°C ± 0.0025 x T° abs

Most common thermocouple types

Thermocouple type	+ conductor	- conductor	Color of compensating cable
S	Platinum- Rhodium 10%	Platinum	Ext. color + = orange, - = white
B	Platinum- Rhodium 30%	Platinum- Rhodium 6%	Ext color + = grey, - = white

Ref. FTang - TBALS - 11/07 A - RCS (24) Périgueux B349 282 095 Non-contractual document - We reserve the right to modify the characteristics of our products without prior notice.

1150°C



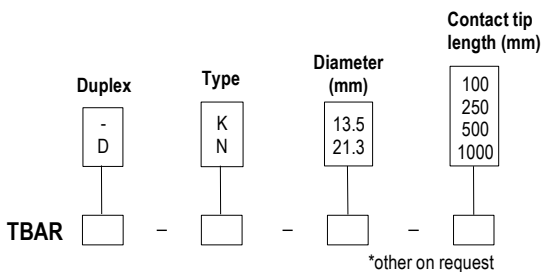
Thermocouple temperature sensor with heat-resisting steel protector

TBAR K / TBARD K

- Thermocouple K and N.
- Maximal temperature +1150°C

Part numbers

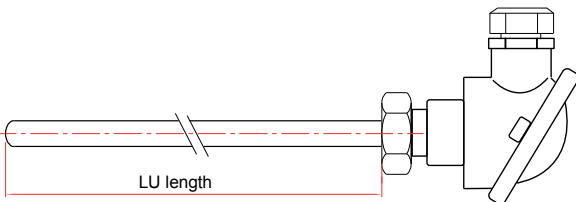
To order, just add the codes to complete the part number.



Example : TBARD-K-213-100

Model : Head thermocouple type K with contact tip of 100 mm length and 21.3 mm Ø. Multi pair mounting of wires.

Dimensions



Technical features

- Maximal operating temperature**.....+1150°C
- Accuracy for class 1**.....See "Tolerances" table
- Mounting of welding**.....Insulated hot welding
Simple pair or 2x2 wires multi pair mounting .
- Contact tip**.....Stainless steel sheath 310 (heat-resisting steel)
Ø 13,5 x 2,35 mm or 21,3 x 2.65 mm in standard
- Compression fitting**.....Stainless steel 316 L
- Electrical connection**.....ceramic terminal block 2 or 4 contacts.
Transmitter as option.
- Connection head**.....Aluminium alloy (120°C max)
Cable gland : M20/150
IP65 protection .
- Storage temperature**.....from -20°C to +80°C

Tolerances

TC	MEASURING RANGE CLASS 1	TOLERANCE
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

Thermocouple

■ 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



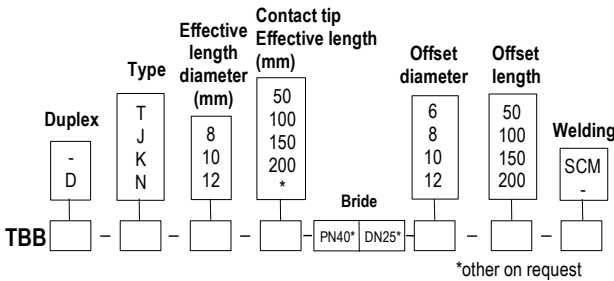
Thermocouple temperature sensor with standard head and mounting flange

TBB K / TBB KI - TBBD K / TBBD KI

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

Stainless steel contact tip max 400°C part numbers

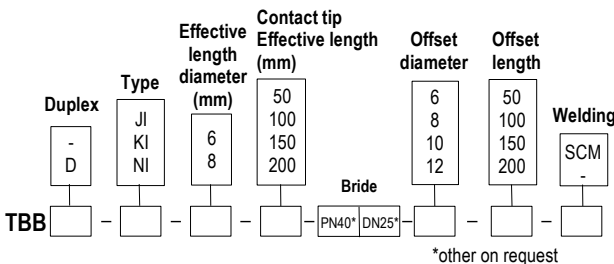
To order, just add the codes to complete the part number.



Example : TBB-T-8-100-PN40DN25-8-50

Model : Thermocouple sensor type T, insulated welding. Stainless steel contact tip with an effective length of 100 mm and 8 mm Ø and with an offset length of 50 mm and 8 mm Ø. Mounting flange type PN40 DN25. **Standard measuring range from -40°C to 350°C.**

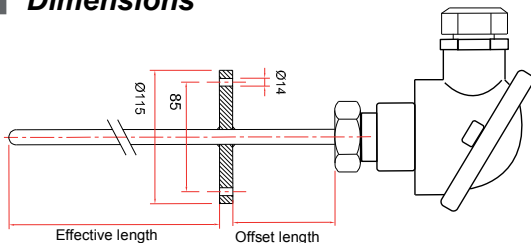
Lined contact tip max 1000°C part numbers



Example : TBB-JI-8-100-PN40DN25-8-50

Model : Thermocouple sensor type T, insulated welding. Inconel contact tip with an effective length of 100 mm and 8 mm Ø and with an offset length of 50 mm and 8 mm Ø. Mounting flange type PN40 DN25. **Standard measuring range from -40°C to 400°C.**

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 +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.....Stainless steel 316 L or lined inconel 600 for I series
Compacted magnesia and stainless steel 316 L for TBB and TBBD series

Compression fitting.....stainless steel 316 L flange welded on contact tip
PN and DN have to be specify according to use
PN 40 DN 25 in standard.

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

Tolerances

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

Thermocouple

■ 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



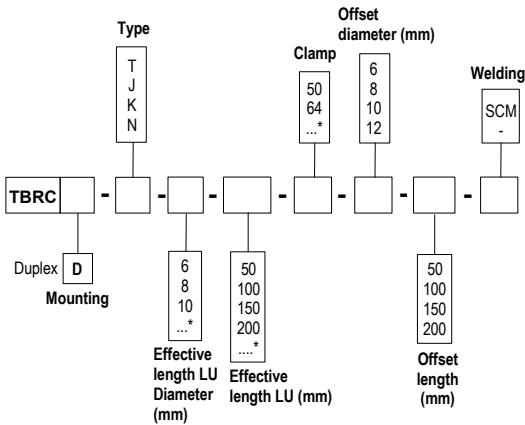
Thermocouple temperature sensor with standard head and clamp fitting

TBRC K / TBRC D K

- Thermocouple types T, J, K and N.
- Measuring range (according to part number) from **-40°C to +400°C**
- Mounting with clamp fitting.

Part numbers

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



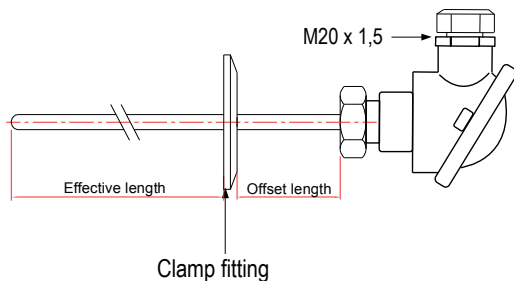
* Other dimension on request

Example : TBRC6-100-50-6-50-SCM.

Model : Thermocouple sensor type K welded to earth. Contact tip effective length of 100 mm and 6 mm Ø with an offset length of 50 mm and 6 mm Ø. Contact tip with clamp fitting of 50,5 mm Ø for a DN ferrule from 25 to 42,4 mm.

Measuring range from -40°C to 400°C.

Dimensions



Technical features

- Working temperature**.....from -40°C to +350°C for Tc T
from -40°C to +400°C for J, K et N
- Accuracy for class 1**.....See "Tolerances" table
- Mounting of welding**.....Insulated or to earth hot welding
Single pair or 2x2 wires multipair mounting
- Storage temperature**.....from -20°C to +80°C
- Contact tip**.....stainless steel 316 L
- Clamp fitting**.....stainless steel 316 L
- **In standard**
50 : 50,5 mm Ø cap for DN ferrules from 25 to 42,4mm
64 : 64 mm Ø cap for DN ferrules from 48,3 to 51mm
(Other cap for clamp on request)
- **Accessories**
Ferrule and collar on request
- Electrical connection**.....with or without terminal block
Transmitter 4/20mA 0/10V as option
- Connection head**.....Aluminium alloy
Cable gland : M20 x 1,5
IP65 protection
- Adjustable mounting**.....See catalogue or data sheet of related mounting

Tolerances

TC	MEASURING RANGE CLASS 11	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

■ 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

*Temperature sensor
K thermocouple with grip handle*

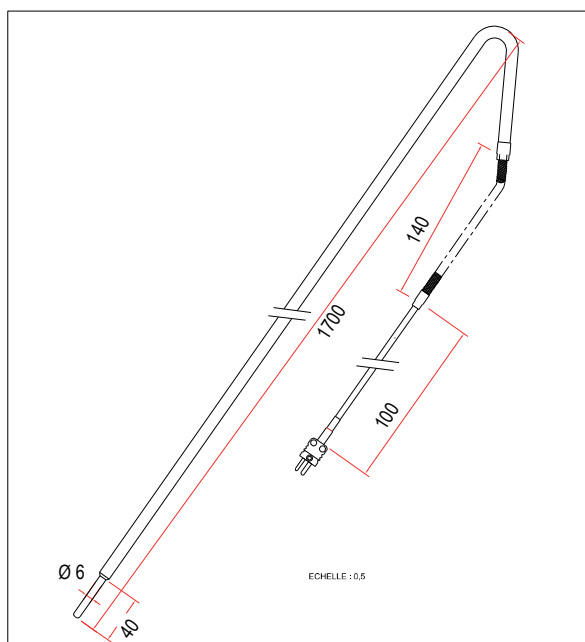
Special Fermenting room

CROS - K - 1700



- K thermocouple
- Measuring range from **-50°C to +250°C**
- Length of 1700 mm, others on request
- Stainless steel protection sheath
- Stainless steel grip handle
- Tip with shrink for a very fast response time
- Probes compatible with KISTOCK temperature dataloggers and portable thermometers

Special probes **Fermenting room** allow to measure temperature in the specific conditions of wine-making process.



Thermocouple

■ Description

Grip handle



Reinforced cable output with flexible.
K thermocouple miniature male connector .

Shrink



Protection sheath in food-
industry stainless steel 316 L
Ø 10 mm, shrink in 6 mm
Hot welding on the earth

■ Specifications

Probe	Length	Range	Accuracy	Compatible with...
CROS-K-1700	1700 mm	from -50 to +120°C	±1,1°C or ±0,4% of reading*	Portable thermometers : TK100 / TM200 / TKA Temperature dataloggers : KTT300

*All accuracies indicated in this document were stated in laboratory conditions and can be guaranteed for measurements carried out in the same conditions, or carried out with required compensation. The accuracy is expressed either by a deviation in °C, or by a percentage of the value concerned. Only the bigger value is considered.

■ Optional

Protection cover IP65.
Calibration certificate.

Portable thermometers .
Temperature datalogger

With KISTOCK temperature datalogger



With portable thermometers



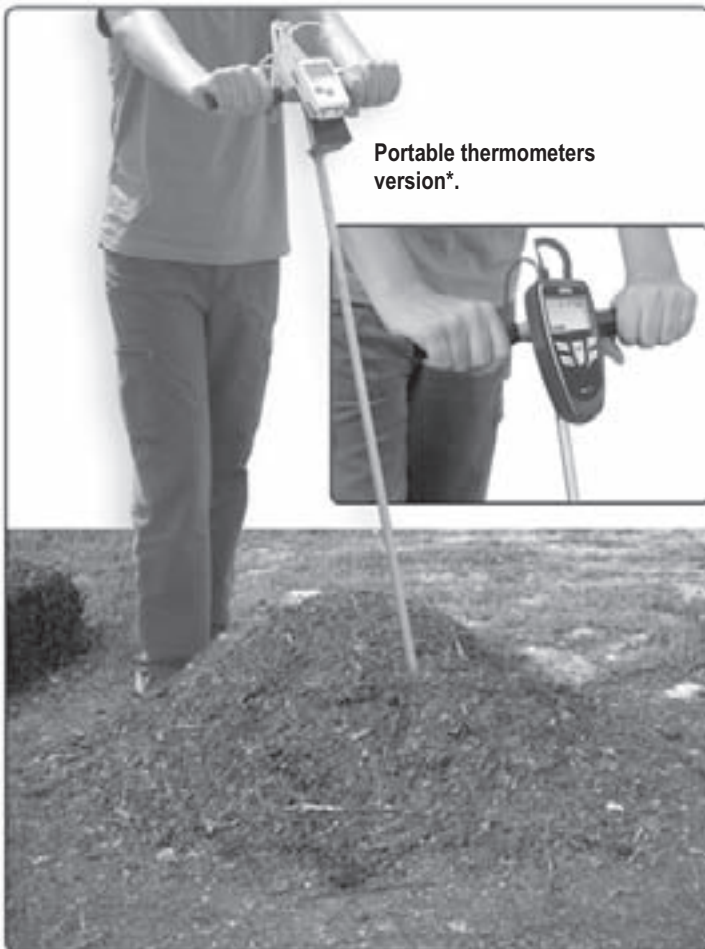
Temperature probes

thermocouple K / NTC / PT100

Special compost

- Measuring ranges from -50°C to +400°C
- Lengths from 1000 mm to 2000 mm
- Protection sheath made in stainless steel, perpendicular handle and bevel-edged tip
- Robust and hard-wearing
- Probes compatible with temperature dataloggers and with portable thermometers

Temperature dataloggers version*.

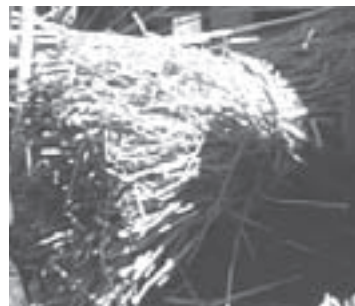


Portable thermometers version*.

*Sold separately.

The “**Special compost**” temperature probes allow measurement in specific environments such as:

Compost



Straw



Grain elevator

Description

Perpendicular handle
2 x 150 mm, Ø 21,3 mm



Bevel-edged tip



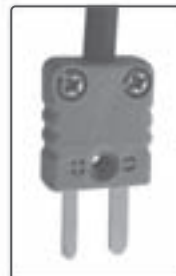
NTC plug



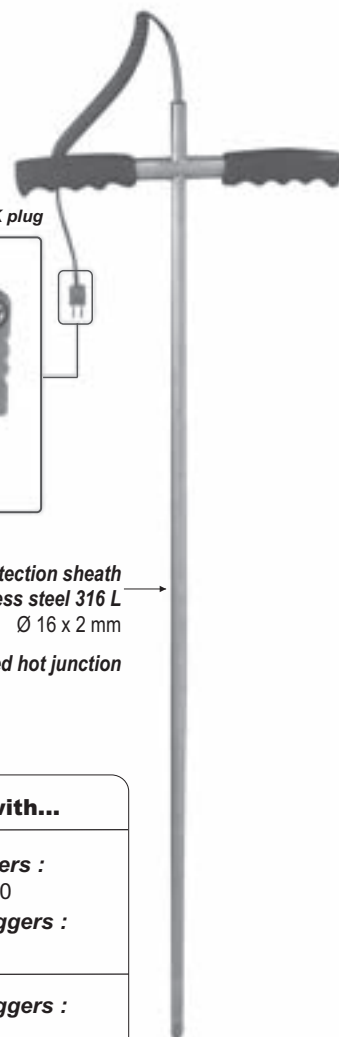
PT100 plug



Thermocouple K plug



Protection sheath
stainless steel 316 L
Ø 16 x 2 mm
Grounded hot junction



Specifications

Probe	Length	Measuring range	Accuracy	Compatible with...
STKP 1000 STKP 1500 STKP 2000	1000 mm 1500 mm 2000 mm	de -50°C à +400°C	± 1.1°C ± 0.4% of value displayed	Portable thermometers : TK50 / TK100 / TM200 Temperature dataloggers : KTT300
KCC 1500 I (CTN)	1500 mm	de -40°C à +120°C	± 0.3°C (-25°C < T < +70°C) ± 0.5°C above	Temperature dataloggers : Classes 100 / 200
KRCI 1500 (PT100)	1500 mm	de -50°C à +400°C	± 0.3°C ± 0.4% of value displayed	Temperature dataloggers : Class 300

Options

The **KSP** stand allows you to fasten temperature devices (portable or datalogger) to the probe, making measuring campaigns easier.



Fastening on stand with temperature datalogger



Fastening on stand with portable thermometers



Part 5 : Accessories

PT 100/PT 1000/CTN Accessories



Watertight connections.....p 177



Thermowells.....p 178



Connectors.....p 179



Bases.....p 179



Fixations.....p 180



Cords & cables.....p 181



Converters.....p 183



Miscellaneous.....p 184

Thermocouple Accessories



Watertight connections.....p 185



Thermowells.....p 186



Fixations.....p 187



Connectors.....p 187



Bases & panels.....p 190



Cords & cables.....p 192



Converters.....p 193



Miscellaneous.....p 194

Accessories for RTD temperature sensors

— Connections —

■ Watertight connections

This stainless steel compression fitting allows watertight connection of a temperature sensor using a stainless steel not adjustable ferrule or a teflon adjustable ferrule.



• Technical features

Working temperature :

Stainless steel ferrule (316L).....from -50°C to +400°C (Not adjustable)

Teflon ferrule (PTFE).....from -50°C to +250°C (Adjustable)



• Part numbers

Probe Ø (mm)	Cylindrical gas	Stainless steel ferrule	Teflon ferrule
3	1/8"	RCI-3/18	RCT-3/18
3	1/4"	RCI-3/14	RCT-3/14
4	1/8"	RCI-4/18	RCT-4/18
4	1/4"	RCI-4/14	RCT-4/14
4	3/8"	RCI-4/38	RCT-4/38
6	1/8"	RCI-6/18	RCT-6/18
6	1/4"	RCI-6/14	RCT-6/14
6	3/8"	RCI-6/38	RCT-6/38
6	1/2"	RCI-6/12	RCT-6/12
8	1/4"	RCI-8/14	RCT-8/14
8	1/2"	RCI-8/12	RCT-8/12
10	1/2"	RCI-10/12	RCT-10/12
12	1/2"	RCI-12/12	RCT-12/12
14	1/2"	-	RCT-14/12

Stainless steel thermowells

• Technical features

Working temperature.....from -80°C to +400°C
Protective duct.....stainless steel 316 L, Ø 9x1 or Ø 6x1 mm.
Mounting.....welded
Contact tip.....stainless steel 316L, no welding
Process connection.....stainless steel ½" G male (other connection on request)
Probe connection.....stainless steel ½" G female (other connection on request) OR or fixing screw.

Options :

- Treatment with teflon, halar etc...
- Swaging

Accessories :

Thermo – conducting silicone grease 200g (Part number GST)

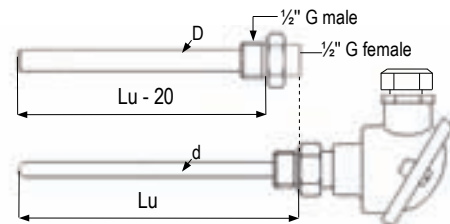


Working temperature : from -60°C to +200°C
Storage : >1 year at room temperature (< 50°C)
Solvent : trichlorethane

Threaded thermowell



• Determination of thermowell length

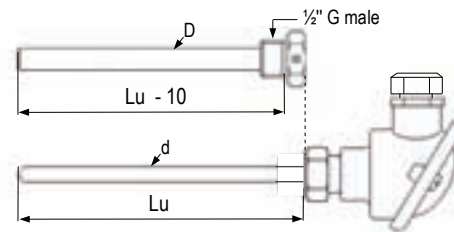


$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 20\text{mm}$$

Thermowell with screw connection



• Determination of thermowell length



$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 10\text{mm}$$

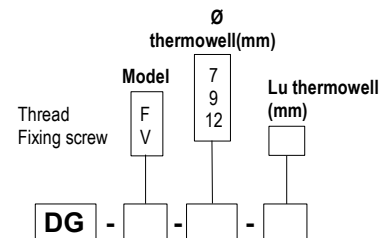
• Determination of thermowell diameter

Informative table :

Probe Ø in mm	Thermowell Ø in mm
4	7
6	9
8	12
10	14
12	21,3
14	21,3

For mounting gap of 3 mm or more, the use of thermo-conducting grease is recommended (GST)

• Thermowell part numbers



Connectors

Standard connector



Connector **three round pins** for the connexion of Pt 100 probe on cables or on mineral insulated cable. Polarized pins.

A system of locating pin prevents the inversion of polarity.

Material : glass silk filled thermoplastic

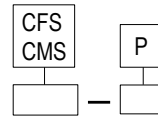
Temperature resistance : from -50°C to +210°C

For wire of diameter : 0.2 mm to 2.0 mm

Connection cable : 8.0 mm maxi.

Standard color : blanc

Connector
type



Part numbers :

Miniature connector



Connector **three flat pins** for the connexion of Pt 100 probe on cables or on mineral insulated cable. Polarized pins.

A system of locating pin prevents the inversion of polarity.

Material : glass silk filled thermoplastic

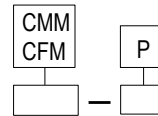
Temperature resistance : from -50°C to +210°C

For wire of diameter : 0.002 mm to 0.6 mm

Connection cable : 4.5 mm maxi.

Standard color : white

Connector
type



Part numbers :

Base

Standard base for panel



Connector **three round pins** for mounting on panel. Polarized pins. A system of locating pin prevents the inversion of polarity.

Material : glass silk filled thermoplastic

Temperature resistance : from -50°C to +210°C

For wire of diameter : 0.2 mm to 2.0 mm

Connection cable : 8.0 mm maxi.

Standard color : white

Part numbers : —

Miniature base for panel



Connector **three flat pins** for mounting on panel. Polarized pins. A system of locating pin prevents the inversion of polarity.

Material : glass silk filled thermoplastic

Temperature resistance : from -50°C to +210°C

For wire of diameter : 0.002 mm to 0.6 mm

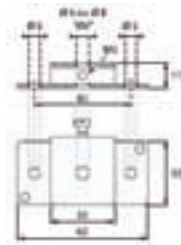
Connection cable : 4.5 mm maxi.

Standard color : white

Part numbers : —

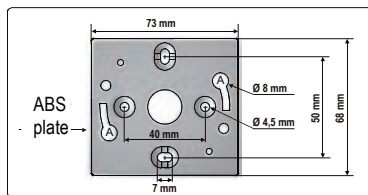
■ Fixations

Mounting brackets



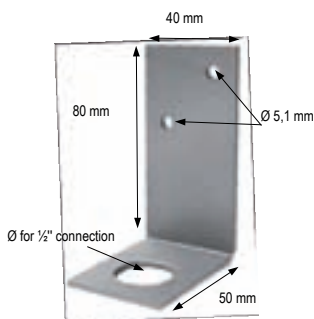
BF - 4 : Stainless steel (316L) mounting brackets for duct fixing of probes \varnothing 4 et 3mm.
BF - 6 : As above, \varnothing 6 mm.
BF - 8 : As above, \varnothing 8 mm.

Wall supports



PF - 100 : ABS wall-mount plate for **SG 50** and **SG 100** sensors.

Wall fixing support for probe with connection



BF-M : Stainless steel (316 L) wall fixing support. Delivered with a $\frac{1}{2}$ " G screw nut.

Wall fixing support for probe on cable

For **SF 50** with a probe of 100mm minimum length



SFM - 4 : Wall fixing support made of translucent polycarbonate for probe \varnothing 4 mm and with 100 mm minimum length.
SFM - 6 : As above, \varnothing 6 mm.
SFM - 8 : As above, \varnothing 8 mm.

■ Cord for resistive probe

Normal cord



Cord for probes connection. You have to determine cable selection, cable length and configuration : male / male or male / female

Cable		Cable length (m)	Connector	
PB	from -40°C to +105°C	1	CMM	CMM
TB	from -40°C to +260°C	2	CMF	CMF
		3	CSM	CSM
			CSF	CSF

Part numbers : CD - P - [] - [] - [] - []

Coiled cord



Cord for probes connection. You have to determine cable selection, cable length and configuration : male / male or male / female

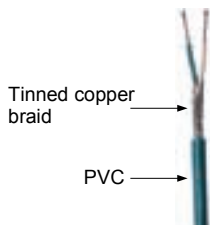
- Length at rest : 450 mm
- Developed length : 2000 mm
- Material : PVC
- Max. temperature : 105°C

Connector	
CMM	CMM
CMF	CMF
CSM	CSM
CSF	CSF

Part numbers : CDS - P - [] - []

■ Instrumentation cable for the link of resistive probe

PVC / Tinned copper braid / PVC



- Conductors section : 3 x 0,75 mm²
- Braid : Cu Sm 85% (tinned copper)
- Color : 2 red conductors
1 white conductor
- Max. temperature : 70°C

Cable length (m)
1
2
10
50
100

Part numbers : CI - P - []

■ Cable of resistive probe

Not shielded

Nature of the cable	Working temperature	Section of conductors	Number of conductors	Part numbers
PVC	From -40 to +105 °C	0.22 mm ²	3	CE-PVC-3
			4	CE-PVC-4
Silicone	From -60 to +180 °C	0.22 mm ²	3	CE-SIL-3
			4	CE-SIL-4
Teflon	From -190 to +260 °C	0.22 mm ²	3	CE-PFA-3
			4	CE-PFA-4

Shielded

Nature of the cable	Working temperature	Section of conductors	Number of conductors	Part numbers
PVC	From -40 to +105 °C	0.22 mm ²	3	CE-PB-3
			4	CE-PB-4
			6	CE-PB-6
Silicone	From -60 to +180 °C	0.22 mm ²	3	CE-SB-3
			4	CE-SB-4
			6	CE-SB-6
Teflon	From -190 to +260 °C	0.22 mm ²	3	CE-TB-3
			4	CE-TB-4
			6	CE-TB-6
Glass silk	From -60 to +400 °C	0.22 mm ²	3	CE-SvB-3
			4	CE-SvB-4
			6	CE-SvB-6

Convertors

CST transmitter

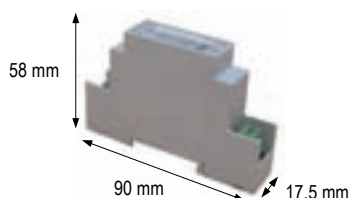


Mounting : connection head DIN "B"
Input : PT100 3 wires
Output : 4-20 mA 2 wires
Accuracy : $\pm 0.1^{\circ}\text{C} \pm 0.1\%$ of reading (-100 to $+500^{\circ}\text{C}$)
 $\pm 0.2^{\circ}\text{C} \pm 0.2\%$ of reading (-200 to $+650^{\circ}\text{C}$)
Linearisation : EN 60751, IEC 751, BS 1904 ($\alpha=0,00385$)
Operating voltage :
 7 to 30 VDC polarity protected
Power supply influence :
 $\pm 0.02\%$ /V gap in relation to 24 V
Resistance influence :
 0.4 $\mu\text{A/V}$

Temperature range to be specified

Working temperature : from 0 to $+70^{\circ}\text{C}$
Storage temperature : from -40 to $+70^{\circ}\text{C}$
Temperature dependence : $\pm 0.01^{\circ}\text{C}/^{\circ}\text{C}$
Measuring range : from -200 to 650°C
Measuring range minimale : 25°C
Safety : max 22 mA
Charge calculation according to power supply :
 $\text{RLmax} (\Omega) = (V - 9)/0,022 = 680 \Omega$ at 25 Vdc
Dimensions (mm) : Base \varnothing 43, height 20.5, pitch 33

CRD-P transmitter (Passive / 2 wires)



Mounting : rail DIN symetric or asymmetrical
Input : PT100 3 wires
Output : 4-20 mA 2 wires
Accuracy : $\pm 0.1^{\circ}\text{C} \pm 0.1\%$ of reading (-100 to $+500^{\circ}\text{C}$)
 $\pm 0.2^{\circ}\text{C} \pm 0.2\%$ of reading (-200 to $+650^{\circ}\text{C}$)
Linearisation : En 60751, IEC 751, BS 1904 ($\alpha=0,00385$)
Operating voltage : 7 to 30 VDC polarity protected
Power supply influence : $\pm 0.02\%$ /V in relation to 24 V
Resistance influence : 0.4 $\mu\text{A/V}$
Working temperature : from 0 to $+70^{\circ}\text{C}$
Storage temperature : from -40 to $+70^{\circ}\text{C}$
Temperature dependence : $\pm 0.01^{\circ}\text{C}/^{\circ}\text{C}$
Measuring range : from -200 to 650°C
Measuring range minimum : 25°C
Safety : max. 22 mA
Charge calculation according to power supply : $\text{RLmax} (\Omega) = (V - 9)/0.022 = 680 \Omega$ at 25 Vdc
Dimensions (mm) : depth 90, width 17,5, height 58

Temperature range to be specified

CRD-A transmitter (Active / 4 wires)



Mounting : rail DIN symetric or asymmetrical
Input : PT100 2, 3, 4 wires
Output : 4-20 mA or 0-10 V
Accuracy : $\pm 0,2\%$
Input resistance : 10 M Ω
Charge (min.) : 500 k Ω
Operating voltage : 230 Vac, 24 Vac, 24 Vdc and 110 Vac
Working temperature : from -20 to $+60^{\circ}\text{C}$
Storage temperature : from -20 to $+60^{\circ}\text{C}$

To be specified :

- Temperature range
- Power supply
- Output 4-20 mA
0-10 V

Options

Indicator / Programming front (IF-CRD)



- Communication interface for parameters modification
- Can be transferred from one transmitter to another one
- Display for data process and state

Accessories

Miscellaneous

Regulated power supply

• Alternating current



KI - AL - 100 A : Class 2 power supply for **SG100** sensors. Mounting with integrated brackets. Input voltage : 230 Vac, output voltage 24Vac, intensity 100mA.

• Direct current



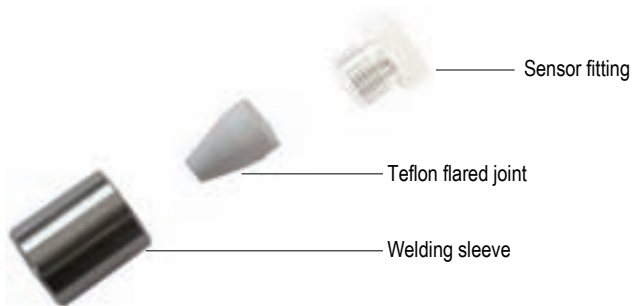
KI - AL - 100 C : Class 2 power supply for **SG100** sensors, Input voltage : 230 Vac, Output voltage : 24Vdc, intensity 250mA.

Configuration software (for SG 100)



LCC - 100 : Configuration software for **SG 100** sensors with user manual and RS 232 connection cable.

Soldering union



Stainless steel soldering union is for applications of type « hygienic » such as food stuffs industry, pharmaceutical... It is made of a welding sleeve and a Teflon flared seal.

Accessories for thermocouple sensors

— Connections —

■ Watertight connections

This stainless steel compression fitting allows watertight connection of a temperature sensor using a stainless steel not adjustable ferrule or a teflon adjustable ferrule.



• Technical features

Working temperature :

Stainless steel ferrule (316L).....from -50°C to +400°C (**Not adjustable**)

Teflon ferrule (PTFE).....from -50°C to +250°C (**Adjustable**)



• Part numbers

Probe Ø (mm)	Cylindrical gas	Stainless steel ferrule	Teflon ferrule
3	1/8"	RCI-3/18	RCT-3/18
3	1/4"	RCI-3/14	RCT-3/14
4	1/8"	RCI-4/18	RCT-4/18
4	1/4"	RCI-4/14	RCT-4/14
4	3/8"	RCI-4/38	RCT-4/38
6	1/8"	RCI-6/18	RCT-6/18
6	1/4"	RCI-6/14	RCT-6/14
6	3/8"	RCI-6/38	RCT-6/38
6	1/2"	RCI-6/12	RCT-6/12
8	1/4"	RCI-8/14	RCT-8/14
8	1/2"	RCI-8/12	RCT-8/12
10	1/2"	RCI-10/12	RCT-10/12
12	1/2"	RCI-12/12	RCT-12/12
14	1/2"	-	RCT-14/12

Stainless steel thermowells

• Technical features

Operating temperature.....from -80°C to +400°C

Protective duct.....316 L

Ø 9x1 or Ø 6x1 mm.

Mounting.....welded

Duct.....stainless steel 316L, no welding

Process connection.....stainless steel ½" G male (other connection on request)

Probe connection stainless steel ½" G female (other connection on request) or fixing screw.

Options :

- Treatment with teflon, halar etc...
- Swaging

Accessories :

Thermo - conducting silicone grease 200g (Part number GST)



Operating temperature : from -60°C to +200°C

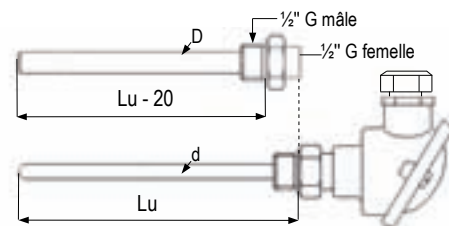
Storage : >1 year at room temperature (< 50°C)

Solvent : trichlorethane

Threaded thermowell



• Determination of thermowell length

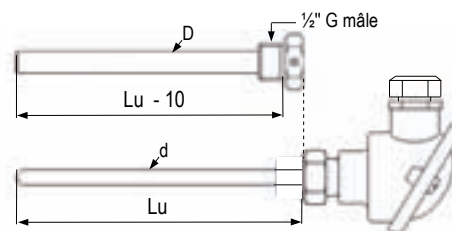


$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 20\text{mm}$$

Thermowell with screw connection



• Determination of thermowell diameter



$$Lu_{\text{thermowell}} = Lu_{\text{probe}} - 10\text{mm}$$

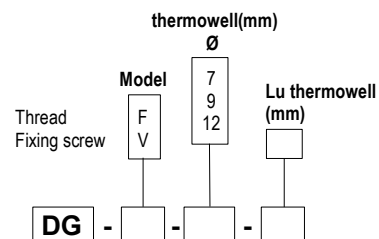
• Determination of thermowell diameter

Informative table :

Probe Ø in mm	Thermowell Ø in mm
4	7
6	9
8	12
10	14
12	21,3
14	21,3

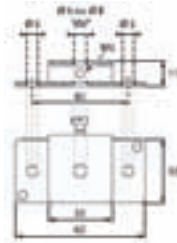
For mounting gap of 3 mm or more, the use of thermo-conducting grease is recommended (GST)

• Thermowell part numbers



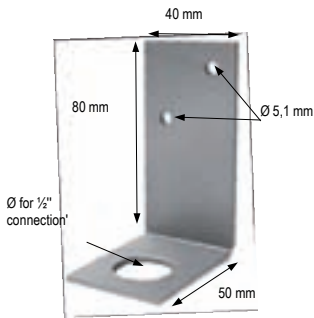
■ Fixations

Mounting brackets



- BF - 4** : Stainless steel (316L) mounting brackets for duct fixing of probes Ø 4 et 3mm.
- BF - 6** : As above, Ø 6 mm.
- BF - 8** : As above, Ø 8 mm.

Wall mounting support for probe with connection



BF-M : Stainless steel (316 L) wall mounting support. Delivered with a 1/2" G screw nut.

Wall mounting support for probe on cable

For a probe of 100mm minimum length



- SFM - 4** : Wall mounting support made of translucent polycarbonate for probe Ø 4 mm and with 100 mm minimum length.
- SFM - 6** : As above, Ø 6 mm.
- SFM - 8** : As above, Ø 8 mm.

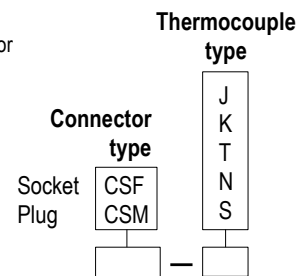
■ Connectors

Compensated standard connector



Round pin miniature connectors for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

Material : thermoplastic shielded with glass silk
Operating temperature : from -50°C to +210°C
Colour code : IEC 584-3

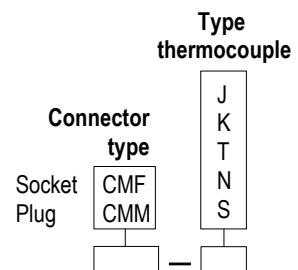


Compensated miniature connector



Flat pin miniature connectors for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

Material : thermoplastic shielded with glass silk
Operating temperature : from -50°C to +210°C
Colour code : IEC 584-3



Connectors

Compensated standard connector



Reinforced thermoplastic connector

Up to
+650°C



Ceramic connector

Connector two round pins for the connection of thermocouples and/or with compensating or extension cables.
A system of locating pin prevents the inversion of polarity.

Material : 35 : reinforced thermoplastic
65 : ceramic

Temperature resistance : 35 : 350 °C
65 : 650 °C

Standard color : IEC 584-3

Part numbers :

		Connector type	Temperature resistance	Thermocouple type
Female		CSF	35	J K T N S
Male		CSM	65	
		[]	[]	[]

Compensated miniature connector



Up to
+650°C



Connector two flat pins for the connection of thermocouples and/or with compensating or extension cables.
A system of locating pin prevents the inversion of polarity.

Material : 35 : reinforced thermoplastic
65 : ceramic

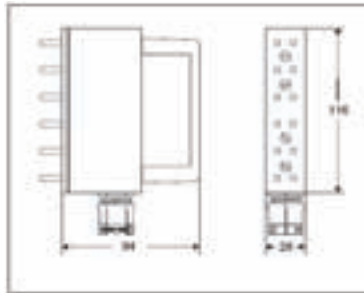
Temperature resistance : 35 : 350 °C
65 : 650 °C

Standard color : IEC 584-3

Part numbers :

		Connector type	Temperature resistance	Thermocouple Type
Female		CMF	35	J K T N S
Male		CMM	65	
		[]	[]	[]

Multiple connector with male standard connector



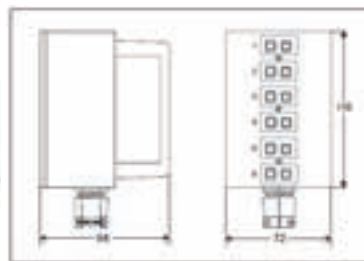
Multiple connector for thermocouple. Suitable for the simultaneous connection of 1 to 6 standard circuits.

- Housing in robust steel with epoxy coating.
- Handle in anodised aluminium for an easy grip.
- Cable gland PG 13 for 15 mm max. cable
- Screw terminal block for conductor 0.2 to 2 mm
- Compatible with standard base panel
- Temperature resistance : 200 °C max

T	1
J	2
K	3
N	4
S	5
	6

Part numbers : PM - [] - []

Multiple connector with female standard connector



Multiple connector for thermocouple. Suitable for the simultaneous connection of 1 to 6 standard circuits.

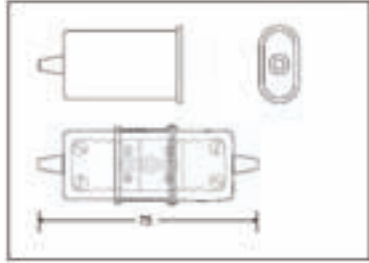
- Housing in robust steel with epoxy coating.
- Handle in anodised aluminium for an easy grip.
- Cable gland PG 13 for 15 mm max. cable
- Screw terminal block for conductor 0.2 to 2 mm
- Temperature resistance : 200 °C max

T	1
J	2
K	3
N	4
S	5
	6

Part numbers : PMF - [] - []

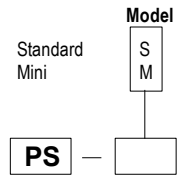
Connectors accessories

• Silicone rubber boot for connector



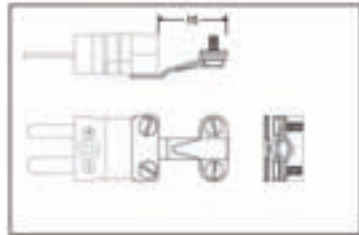
For wet use, good vibration resistance.
Temperature resistance : 200 °C

Delivered by two pieces, for male and female connectors.
 Appropriate for most of cable diameters.

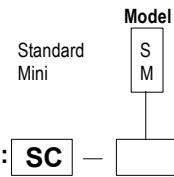


Part numbers : **PS** — □

• Wire clamp bracket



Stainless steel wire clamp bracket for miniature or standard connectors



Part numbers : **SC** — □

• Locking plate for miniature connector



The plate prevents the unwanted disunity of miniatures connectors.

Material : thermoplastic with glass silk

Temperature : 200 °C maxi

Can be placed and removed without any tools

Part numbers : **PV** — **CM**

■ Snap-on connectors

Standard snap-on connectors



Standard snap-on connectors with round pins for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

Material : thermoplastic glass silk shielded
Operating temperature : from -50°C to +210°C
Colour code : IEC 584-3

Thermocouple type

J
K
T
N
S

Part numbers : ES -

Miniature snap-on connectors



Standard snap-on connectors with flat pins for thermocouple sensors and extension or compensating cable connection. Connector is marked for pin polarity.

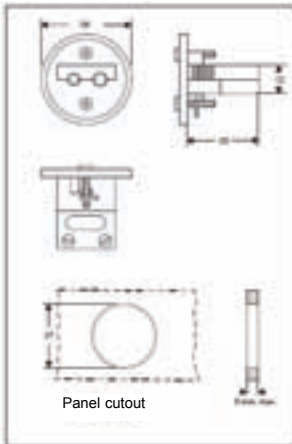
Material : thermoplastic glass silk shielded
Operating temperature : from -50°C to +210°C
Colour code : IEC 584-3

Thermocouple type

J
K
T
N
S

Part numbers : EM -

Round base for standard connector



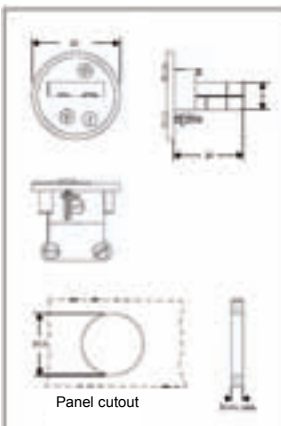
Round base for control panel.

Cutout : \varnothing 27 mm
Material : thermoplastic with glass silk
Temperature : 200 °C max
Fixing : 2 screws in front face
Connection for wire : from 0.2 to 2 mm

J
K
T
N
S

Part numbers : EC - S -

Round base for miniature connector



Round base for control panel.

Cutout : \varnothing 22.5 mm
Material : thermoplastic with glass silk
Temperature : 200 °C max
Fixing : 2 screws in front face
Connection for wire : from 0.002 to 0.6 mm

J
K
T
N
S

Part numbers : EC - M -

■ Connector panel

For standard snap-on connectors



Number of channels : 2, 4, 6, 8, 12 or 24
Anodised aluminium panel (width ≈ 2 mm)
Dimensions : according to number of channels
 (D = number of channel x 19 + 31 mm)
Supplied with snapped on connectors.

Thermocouple type	Connector number
J	1
K	6
T	12
S	

Part numbers : PES - -

For miniature snap-on connectors



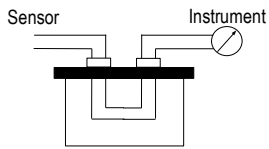
Number of channels : 2, 4, 6, 8, 12 or 24
Anodised aluminium panel (width ≈ 2 mm)
Dimensions : according to number of channels
 (D = number of channel x 19 + 31 mm)
Supplied with snapped on connectors.

Thermocouple type	Connector number
J	1
K	6
T	12
S	

Part numbers : PEM - -

*other on request

■ Control panel



The connector enables easy and quick access to thermocouple circuit in order to control sensor and instrument accuracies, circuit continuity and loop resistance.

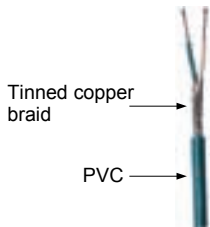
Thermocouple type
J
K

Part numbers : PEC -

Cables

Extension cable

• PVC / Tinned copper braid / PVC



Conductors section : 2 x 0,22 mm² (For Tc T, J and K)
Conductors composition : 2 x 7 strands Ø 0.2 mm
Operating temperature : from -40°C to +105°C, short time at +135°C
 Colour code IEC 584-3

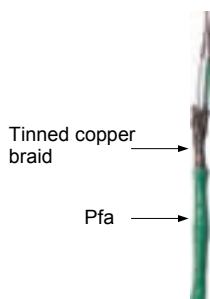
Thermocouple type **Cable length (m)**

J	1
K	2
T	3
N	...*

Part numbers : CE - - PB -

*other on request

• Pfa / Tinned copper braid / Pfa



Conductors section : 2 x 0,22 mm²
Conductors composition : 2 x 7 strands Ø 0.2 mm
Operating temperature : from -40°C to +250°C
 Colour code IEC 584-3

Thermocouple type **Cable length (m)**

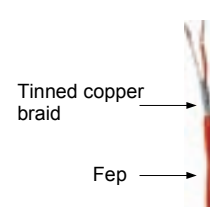
J	1
K	2
T	3
N	...*

Part numbers : CE - - TB -

*other on request

Compensating cable

• Fep / Tinned copper braid / Fep (For type S only)



Conductors section : 2 x 0,22 mm² (For Tc T, J and K)
Conductors composition : 2 x 7 strands Ø 0.2 mm
Operating temperature : from -40°C to +205°C, short time at +230°C
 Colour code IEC 584-3

Cable length (m)

1
2
3
...*

Part numbers : CP - S - TB -

*other on request

Extension lead

Lead with choice of connectors and cable



- Lead with miniature plug and socket connectors
- Lead with standard plug and socket connectors
- Other on request

Thermocouple type

J
K
T
N
S*

Cable

PB	from -40°C to +105°C
TB	from -40°C to +260°C
SV	from -40°C to +400°C

Cable length (m)

1
2
3
...*

Connector

CMM	CMM
CMF	CMF
CSM	CSM
CSF	CSF

Part numbers : CD - - - - -

*with shielded Fep cable only

Coiled extension leads



- Length 160 mm (1800 mm uncoiled)
- Lead with miniature plug and socket connectors
- Lead with standard plug and socket connectors
- Temperature max. 105°C
- Other on request

Connector

CMM	CMM
CMF	CMF
CSM	CSM
CSF	CSF

Part numbers : CDSK - -

Converters

CST-TC transmitter



Mounting : connection head DIN "B"

Input : Thermocouple J, K, T, N

Output : 4-20 mA 2 wires

Accuracy : $\pm 0.04\%$ FS ± 0.04 of reading or 0.5°C (the biggest)

Linearisation : EN 60584-1-2, ASTM E 230 – ANSI (MC96-1)

Default range : 0 to 1000°C

Power supply :

9 to 30 VDC polarity protected

Power supply influence :

$\pm 0,4\ \mu\text{A/V}$

Working temperature : from -30 to $+80^\circ\text{C}$

Storage temperature : from -40 to $+80^\circ\text{C}$

Minimum temperature range : 50°C

Conversion speed : 2 measurements per second

Charge calculation according to power supply :

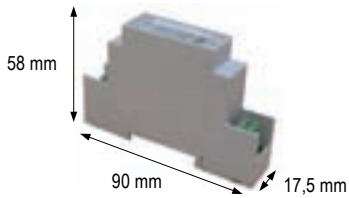
$RL_{\text{max}} (\Omega) = (V - 9)/0,022 = 680\ \Omega$ at 25 Vdc

Galvanic insulation : 50 Vdc

To be specified :

- Temperature range
- Thermocouple type

CRD-TC-P transmitter (Passive / 2 wires)



Mounting : rail DIN symmetric or asymmetrical

Input : Thermocouple J, K, T, N

Output : 4-20 mA, 2 wires

Accuracy : $\pm 0.04\%$ FS $\pm 0,04$ of reading or 0.5°C (the biggest)

Linearisation : EN 60584-1-2, ASTM E 230 – ANSI (MC96-1)

Power supply : 9 to 30 VDC

Default range : $T_c = K - \text{Rang} = 0$ to 1000°C

Working temperature : from 0°C to $+70^\circ\text{C}$

Storage temperature : from -40°C to $+80^\circ\text{C}$

Minimal measuring range : 50°C

Conversion speed : 2 measurements per second

Charge calculation according to power supply : $RL (W) = (V - 9)/0,02$

Galvanic insulation : 50 Vdc

Dimensions (mm) : depth 100, width 22, height 75

Temperature range to be specified

CRD-TC-A transmitter (Active / 4 wires)



Mounting : rail DIN symmetric or asymmetrical

Input : Thermocouple J, K, T, N

Output : 4-20 mA or 0-10 V

Accuracy : $\pm 0.1\%$ pe

Input resistance : 10 M Ω

Charge (min.) : 500 k Ω

Operating voltage : 230 Vac, 24 Vac, 24 Vdc and 110 Vac

Working temperature : from -20 to $+60^\circ\text{C}$

Storage temperature : from -20 to $+60^\circ\text{C}$

To be specified :

- Temperature range
- Power supply
- Output 4-20 mA
0-10 V

Optional

• Indicator / Programming front (IF-CRD)



- Communication interface for parameters modification
- Can be transferred from one transmitter to another one
- Display for data process and state

Accessories

Miscellaneous

Regulated power supply

• Alternating current



KI - AL – 100 A : Class 2 power supply for sensors. Mounting with integrated brackets. Input voltage : 230 Vac, output voltage 24Vac, intensity 100mA.

• Direct current



KI - AL – 100 C : Class 2 power supply for sensors, Input voltage : 230 Vac, Output voltage : 24Vdc, intensity 250mA.

Distributed by :



www.kimo.fr



KIMO - Export Department
Boulevard de Beaubourg - BP 48
Emerainville - F-77312 MARNE LA VALLEE
Tél. +33 (0)1 60 06 69 25 - Fax +33 (0)1 60 06 69 29
Email : export@kimo.fr

Distributed by :



www.kimo.fr



KIMO - Export Department
Boulevard de Beaubourg - BP 48
Emerainville - F-77312 MARNE LA VALLEE
Tél. +33 (0)1 60 06 69 25 - Fax +33 (0)1 60 06 69 29
Email : export@kimo.fr