KIMO INSTRUMENTS

Technical Data Sheet

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

CE

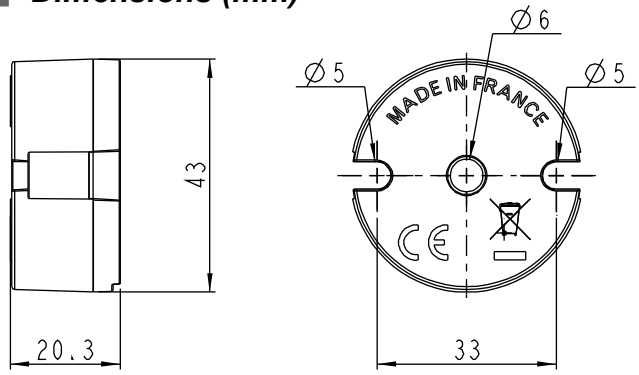
Pt100 temperature transmitter

CO-P

Description

CO-P transmitter is a **Pt100** temperature transmitter into a **4-20 mA (or 20-4 mA)** electric signal at adjustable microprocessor.
It allows to convert variations of temperature reported by a standard Pt100 sensor **(100Ω at 0 °C)** for a measuring range going from **-200 to +850 °C** into an electric linear signal at 2 wires in the 4-20 mA range.
Configuration of the transmitter is simply made through a configuration button. It is also possible to use the **LCC101** configuration software to configure the transmitter. A led warms when an alarm situation appears (out of range or short-circuit).
The transmitter is protected against inversions of polarity and has been designed to be placed in **DIN B** head probe.

Dimensions (mm)



Output current with relation to temperature (on range from 0 to +100 °C)

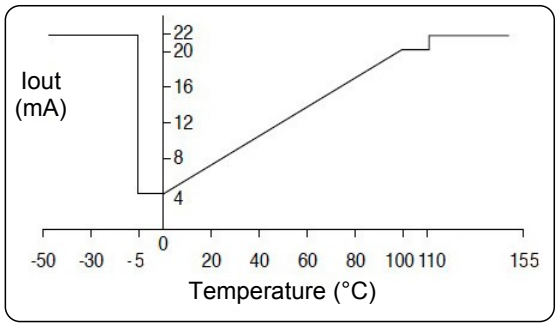


Fig.1

Technical features of the transmitter

(at 20 °C and for a power supply voltage of 24 Vdc)

• Input

Sensor.....Pt100 (100Ω at 0 °C)
Mounting of the element.....2 or 3 wires
Linearization.....EN60751, IEC 751
Current in the sensor.....<1 mA
Measuring range.....from -200 to +850 °C
Range by default.....from 0 to 100 °C
Minimum measuring range.....25 °C
Influence of connection wires.....negligible with coupled wires
Speed conversion.....2 measurements per second
Accuracy.....from -100 to + 500 °C : ±0.1 °C ±0.1% of reading
beyond : ±0.2 °C ±0.2% of reading
Sensitivity to variations of feeding voltage.....0.01 °C/°C
Sensitivity to variations of voltage supply.....0.005% FC / Vdc
Storage temperature.....from -40 to +80 °C
Working temperature.....from 0 to +70 °C

• Output

Output.....4-20 mA (or 20-4 mA), 22 mA in case of programming error or temperature out of range* (fig1)
Resolution.....2 µA
Power supply voltage.....7-30 Vdc (protection against inversions of polarity)
Load resistance.....$R_{Lmax} = \frac{Vdc - 7}{0.022}$
=>R_{Lmax} = 770 Ω @ Vcc = 24 Vdc
Red led.....lights up during the programming phase and when the measured temperature is outside the set range

* If the measured temperature T is outside the set range T1...T2 (T1<T2), the transmitter maintains 4 mA fot T<T1 and 20 mA for T>T2 for a dead band of 5 °C before going into error status at 22 mA.

Connection

Figure 2 shows the wiring diagram of the converter in the current loop. To get a better accuracy, use 3 wires with the same diameter to plug to the Pt100, this allows to guarantee the same impedance to each branch. A device can be introduced in the current loop such as a display, a controller or a data logger.

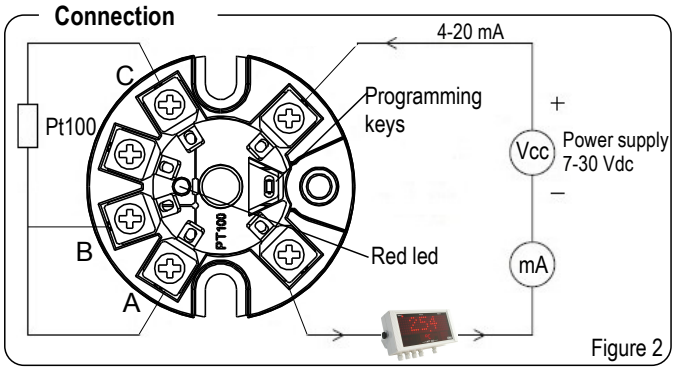


Figure 2

Programming

It is possible to set different measuring ranges using the following accessories :

① Continuous power source 7-30 Vdc

② Precision ammeter with minimum range of 0 to 25 mA

③ Pt100 calibrator

Procedure :

- Connect the converter to set to the power supply, to the ammeter and to the Pt100 calibrator (see figure 2). Then make a long press on the configuration button. The led blinks twice during the push. When blinks become faster, release the button : programming mode is active.

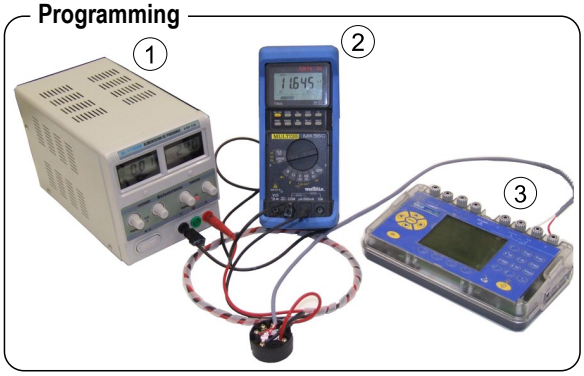
a – Configuration of T1 point

- Led blinks 1 time at regular intervals : set the required temperature for the 4 mA output.
- Validate instructions with a brief press on the programming key. Led stays on then blinks 4 times quickly : temperature for 4 mA output is recorded.

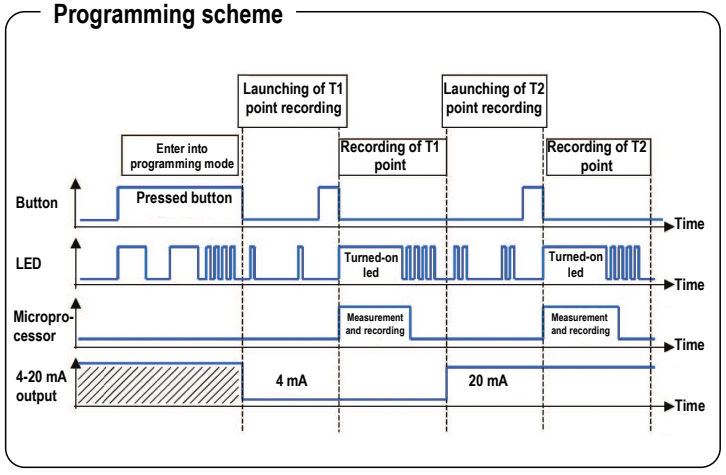
b – Configuration of T2 point

- Led blinks 2 times faster at regular intervals : set the required temperature for 20 mA output.
- Validate instructions with a brief press on the programming key. Led stays on then blinks 4 times quickly : temperature for 20 mA output is recorded.

In case error whilst programming, if temperature is out of range or in alarm situation, led blinks 6 times quickly.



NOTE Programming of the temperature range can be made using resistances of precision with a fixed value which simulate values of Pt100 sensor (see table below of Pt100 values).



Pt100 values in ohms compared to measured temperature

Temp °C	Pt100 value (Ω)
-200	18.52
-150	39.72
-100	60.26
-50	80.31
0	100.00
50	119.40
100	138.51
150	175.86

Temp °C	Pt100 value (Ω)
200	175.86
250	194.10
300	212.05
350	229.72
400	247.09
450	264.18
500	280.98
550	297.49

Temp °C	Pt100 value (Ω)
600	313.71
650	329.64
700	345.28
750	360.64
800	375.70
850	390.48

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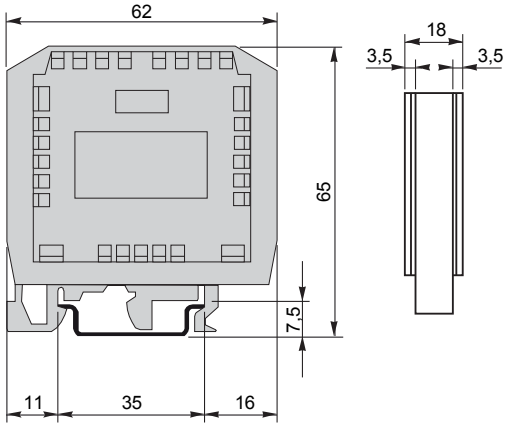
CE

DIN rail Pt100 temperature transmitter
CORD-P

Description

CORD-P transmitter is a **Pt100** temperature transmitter into a **4-20 mA (or 20-4 mA)** electrical signal at adjustable microprocessor.
It allows to convert variations of temperature reported by a standard Pt100 sensor (**100 Ω at 0 °C**) for a measuring range going from **-200 to +850 °C** into an electrical linear signal at 2 wires in the **4-20 mA** range.
Configuration of the transmitter is simply made through a configuration button. It is also possible to use the **LCC101** configuration software to configure the transmitter. A led warms when an alarm situation appears (out of range or short-circuit).
The transmitter is protected against inversions of polarity.

Dimensions (mm)



Output current with relation to temperature (on range from 0 to +100 °C)

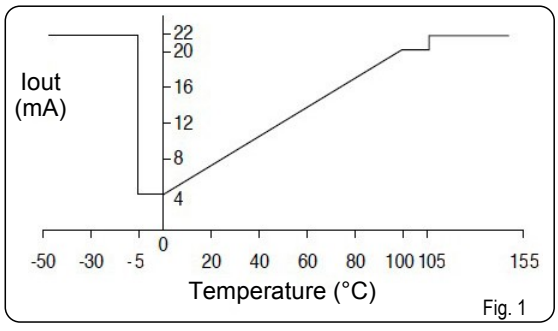


Fig. 1

Technical features of the transmitter

(at 20 °C and for a power supply voltage of 24 Vdc)

• Input

Sensor.....Pt100 (100Ω at 0 °C)
Mounting of the element.....2 or 3 wires
Linearization.....EN60751, IEC 751
Current in the sensor.....<1 mA
Measuring range.....from -200 to +850 °C
Range by default.....from 0 to +100 °C
Minimum measuring range.....25 °C
Influence of connection wires.....negligible with coupled wires
Speed conversion.....2 measurements per second
Accuracy.....from -100 to +500 °C : ±0.1 °C ±0.1% of reading.
Beyond : ±0.2 °C ±0.2% of reading
Sensitivity to variations of ambient temperature.....0.01 °C/°C
Sensitivity to variations of voltage supply.....0.005% FC / Vdc (FC : full scale)
Storage temperature.....from -40 to +80 °C
Working temperature.....from 0 to +70 °C

• Output

Output.....4-20 mA (or 20-4 mA), 22 mA in case of programming error or temperature out of range* (fig1)
Resolution.....2 µA
Power supply voltage.....7-30 VDC (protection against inversions of polarity)
Load resistance.....$R_{Lmax} = \frac{Vdc-7}{0,022}$

$=>R_{Lmax} = 770\ \Omega$ @ Vdc = 24 Vdc

Red led.....lights up during the programming phase and when the measured temperature is outside the set range.

* If the measured temperature T is outside the set range T1...T2 (T1<T2), the transmitter maintains 4 mA for T<T1 and 20 mA for T>T2 for a dead band of 5 °C before going into error status at 22 mA.

Connection

Figure 2 shows the wiring diagram of the transmitter in the current loop. To get a better accuracy, use 3 wires with the same section to plug to the Pt100, this allows to guarantee the same impedance to each branch. A device can be introduced in the current loop such as a display, a controller or a data logger.

Connection

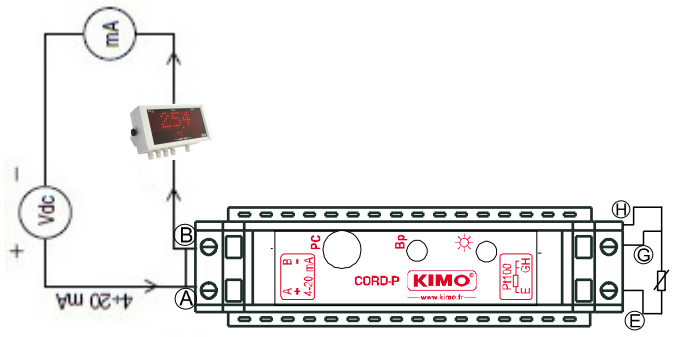


Figure 2

Configuration

It is possible to set different measuring ranges using the following accessories :

1. Continuous power source 7-30 Vdc
2. Precision ammeter with minimum range of 0 to 25 mA
3. Pt100 calibrator

Procedure :

- Connect the converter to set to the power supply, to the ammeter and to the Pt100 calibrator (see figure 2). then make a long press on the configuration button. The led blinks twice during the push. When the blinks become faster, release the button : programming mode is active.

a – Configuration of T1 point

- Led blinks one time at regular intevals : set the required temperature for the 4 mA output.
- Validate instructions with a brief press on the programming key. Led stays on then blinks 4 times quickly : temperature for 4 mA output is recorded.

b – Configuration of T2 point

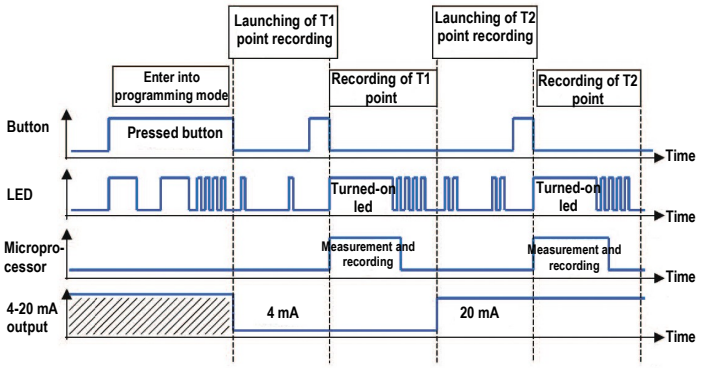
- Led blinks 2 times faster at regular intervals : set the required temperature for 20 mA output.
- Validate instructions with a brief press on the programming key. Led stays on then blinks 4 times quickly : temperature for 20 mA output is recorded.

In case of error whilst programming, if temperature is out of range or in alarm situation, led blinks 6 times quickly.

Programming

NOTE Programming of the temperature range can be made using resistances of precision with a fixed value which simulates values of Pt100 sensor (see table below of Pt100 values).

Programming scheme



Pt100 values in ohms compared to measured temperature

Temp °C	Valeur Pt100 (Ω)
-200	18.52
-150	39.72
-100	60.26
-50	80.31
0	100.00
50	119.40
100	138.51
150	175.86

Temp °C	Valeur Pt100 (Ω)
200	175.86
250	194.10
300	212.05
350	229.72
400	247.09
450	264.18
500	280.98
550	297.49

Temp °C	Valeur Pt100 (Ω)
600	313.71
650	329.64
700	345.28
750	360.64
800	375.70
850	390.48

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CE

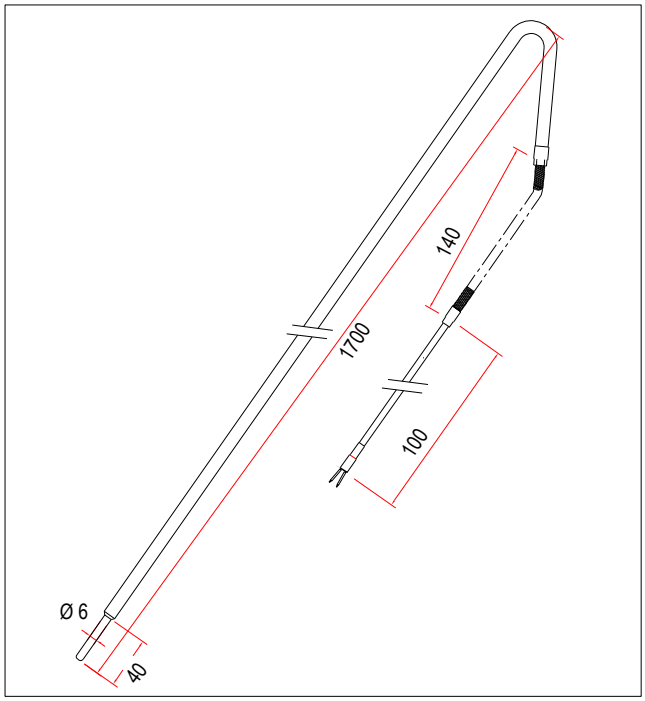
Temperature sensor
PT 100 with grip handle

Special Fermenting room

CROS - R - 1700

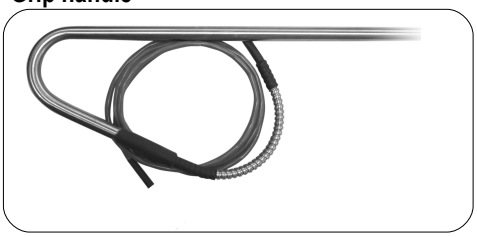
- Class A Pt 100
- Measuring range **from -50°C to +250°C**
- Length of 1700 mm, others on request
- Stainless steel protection sheath
- Stainless steel grip handle
- Tip with shrink for a very fast response time
- Probes compatible with KISTOCK temperature dataloggers and portable thermometers

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



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

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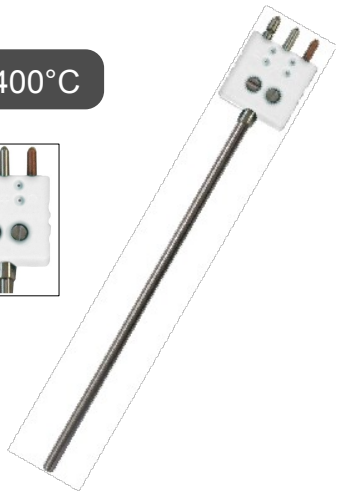
+400°C

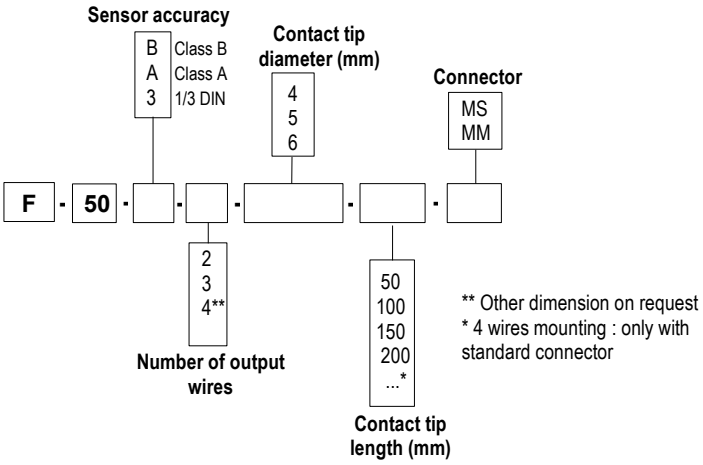


*Temperature probe with **resistive element** and output on **DIN connector***

F 50 – FD 50

Part numbers

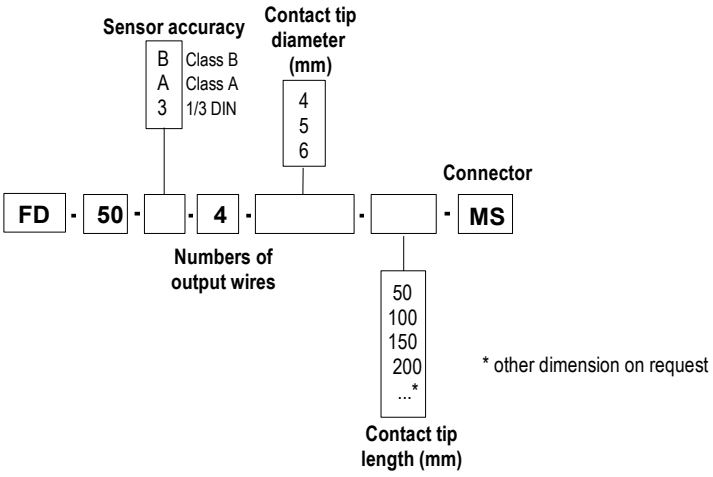
• F 50



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

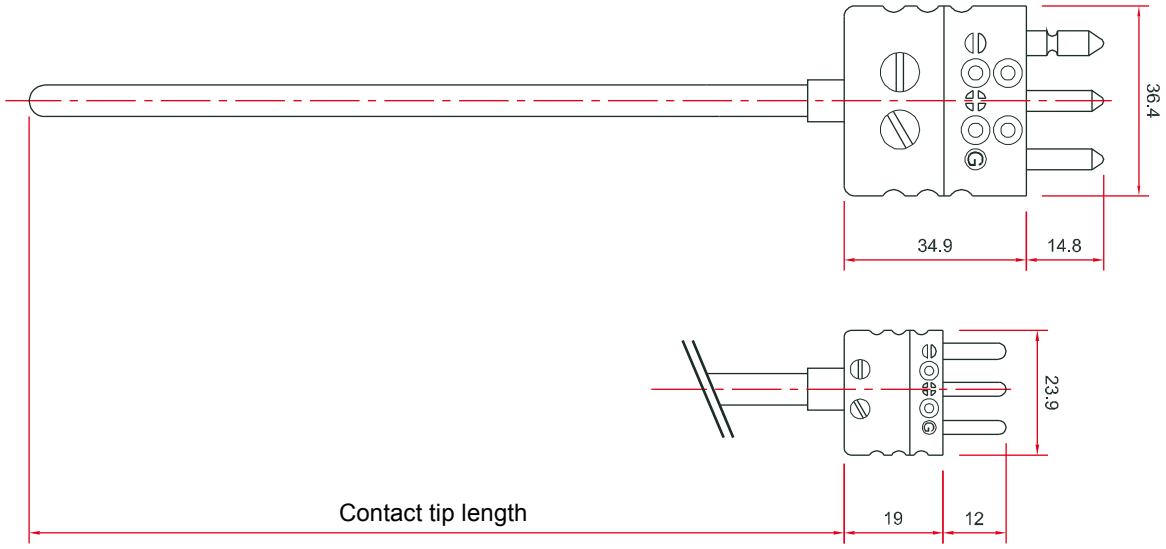
As per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980) norms.

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

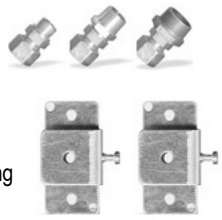
* Performed in laboratory conditions, the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

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 ½" G female)
- Stainless steel junction fitting
- ½ gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell

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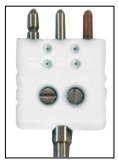
+550°C

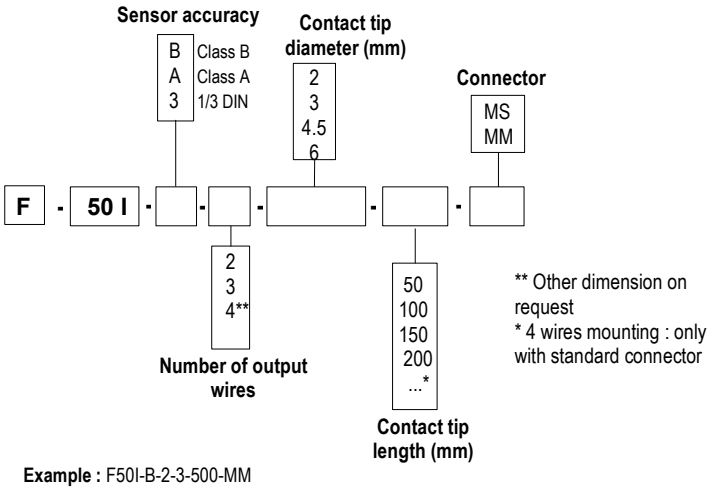


Temperature probe at resistive element ***with collapsible contact tip*** *and output on* ***Din connector***

F 50 I – FD 50 I

Part numbers

• F 50 I

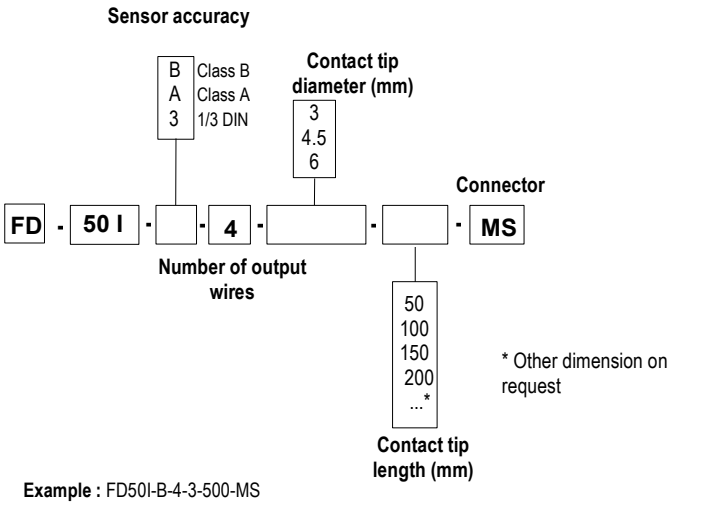


Example : F50I-B-2-3-500-MM

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

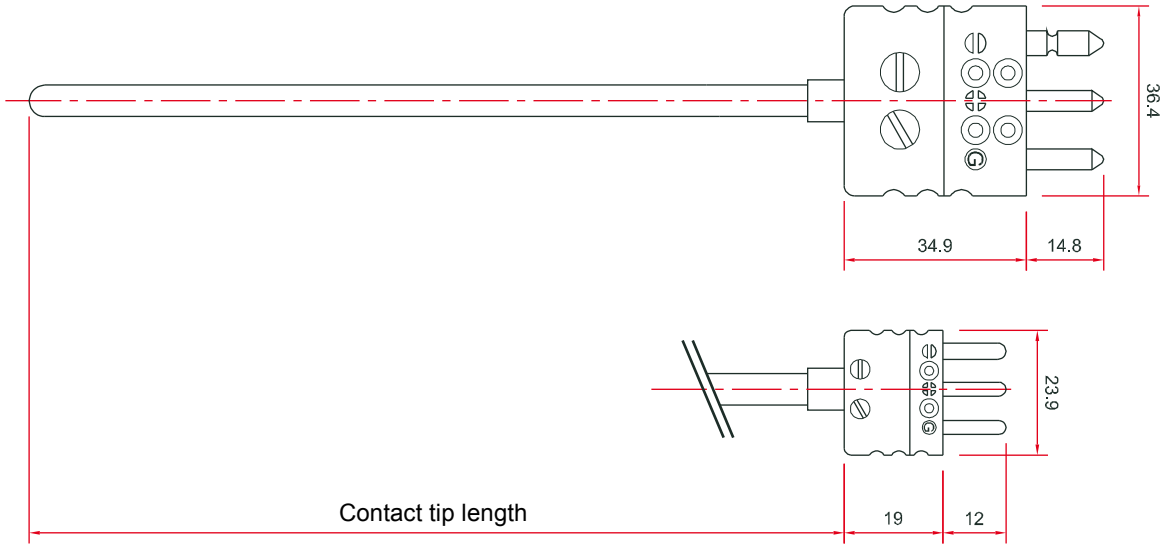
Non-collapsible zone on 25 mm at the end of the contact tip

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.

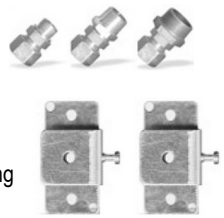
Temp °C	Tolerances					
	Class B		Class A		1/3 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-100	0.8	0.32	0.35	0.14	0.27	0.11
-50	0.55	0.22	0.25	0.1	0.19	0.08
0	0.3	0.12	0.15	0.06	0.1	0.04
100	0.8	0.3	0.35	0.13	0.27	0.1
200	1.3	0.48	0.55	0.2	0.44	0.16
300	1.8	0.64	0.75	0.27	0.6	0.21
400	2.3	0.79	0.95	0.33	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 ½" G female)
- Stainless steel junction fitting
- ½ gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell

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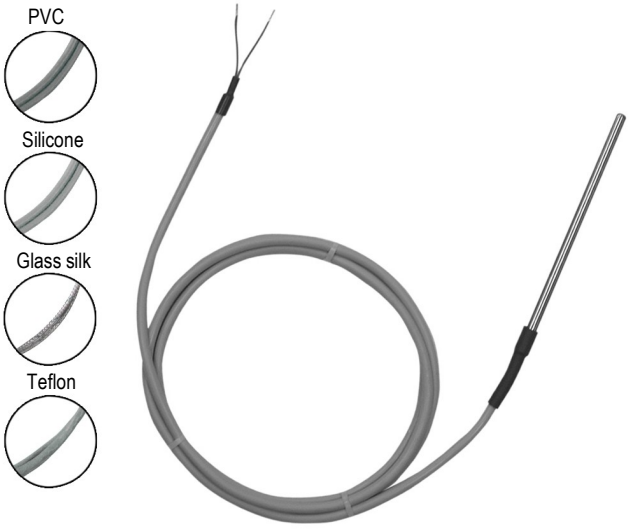


*Temperature probe with **cable***

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.

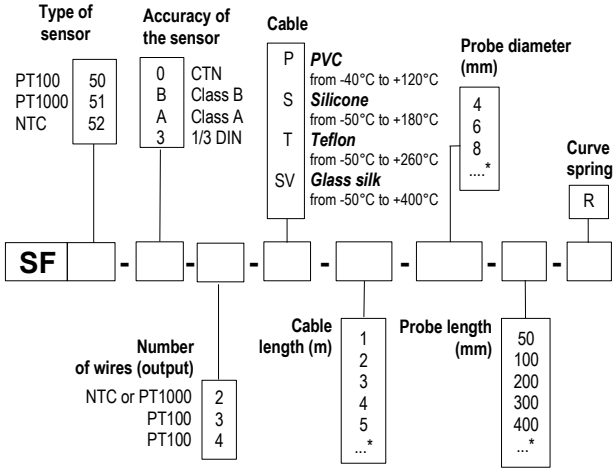
Transmitter features

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, R_{25} = 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 guaranted for measurements carried out in the same conditions, or carried out with calibration compensation.

Part numbers

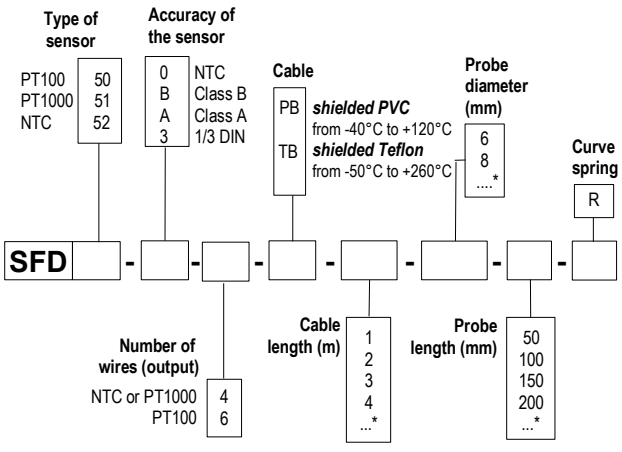
• SF 50 – Single pair probe -



* 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.

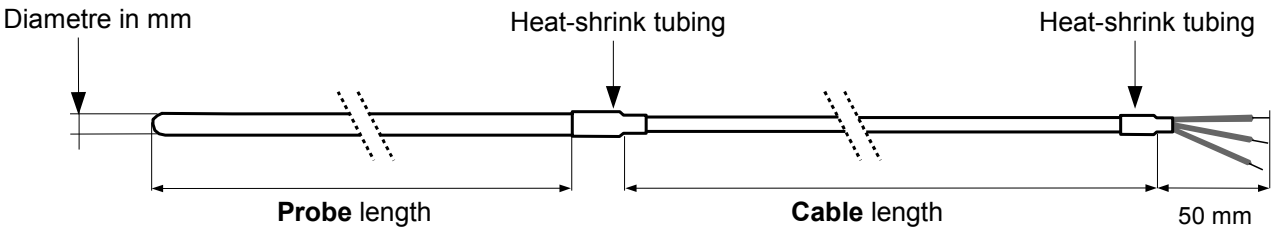
• SFD 50 – Multipair Probe -



* 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.

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

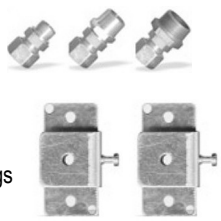
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

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

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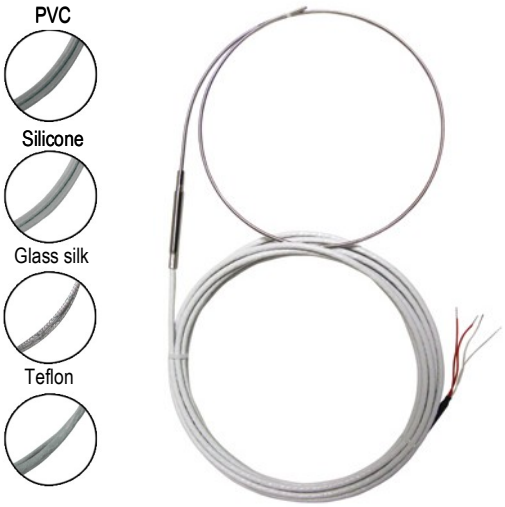
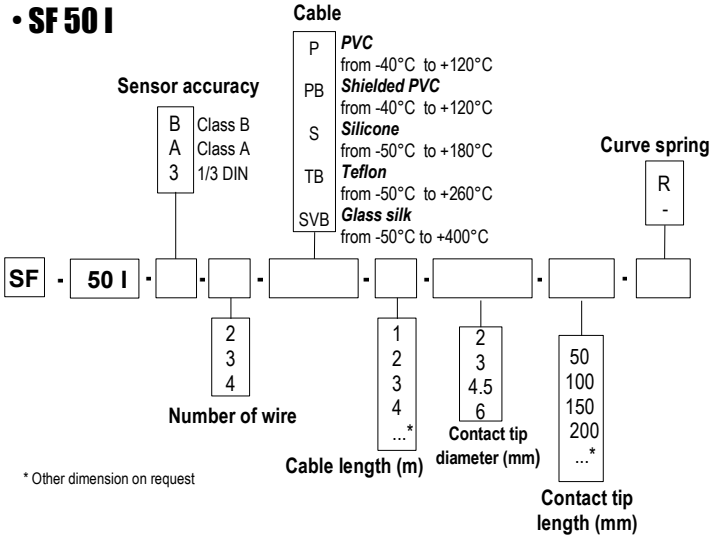


Cable temperature probe at resistive element ***and collapsible contact tip***

SF 50 I – SFD 50 I

Part numbers

• SF 50 I



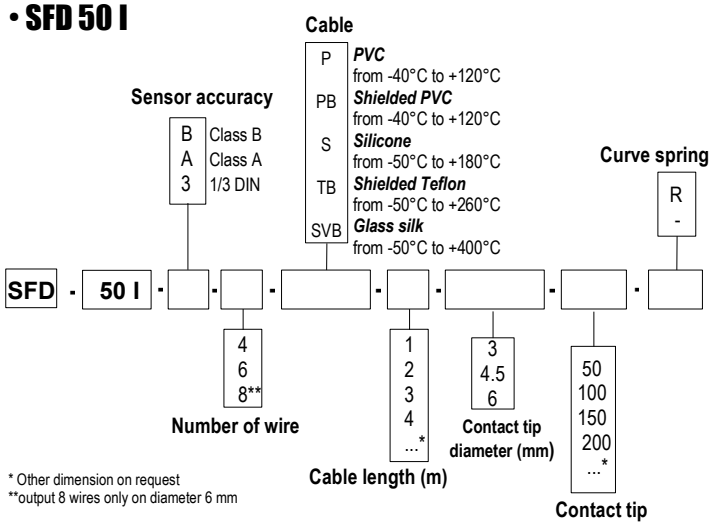
* Other dimension on request

Example : SF50I-B-4-P-3-2-500-R

Model : PT 100 temperature sensor class B, 4 wires, PVC cable of 3 m length. Contact tip of 2 mm diameter and 500 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-3-6-800-R

Model : PT 100 temperature sensor class B, 6 wires, PVC cable of 3 m length. Contact tip of 6 mm diameter and 800 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

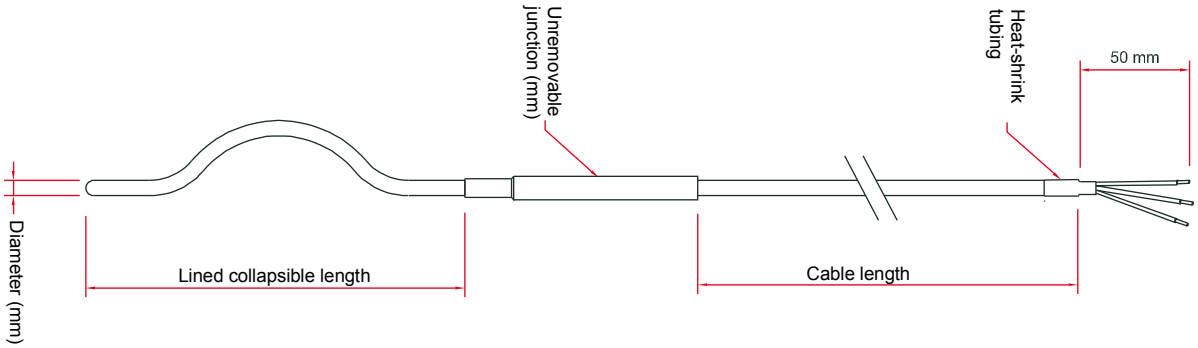
Contact tip.....lined collapsible (semi-rigid)
Stainless steel 316 L without welding

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.

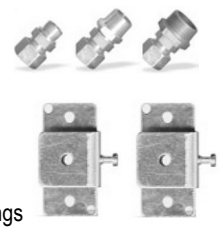
Norms as per IEC 751 (1993).

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

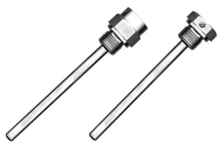
*all accuracies indicated in this technical data sheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

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



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CE

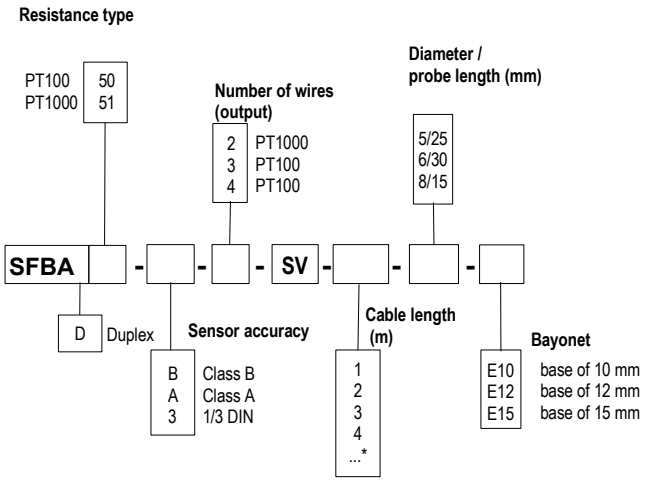
Wire temperature probe with resistive element and bayonet

SFBA 50 / SFBAD 50

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

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.

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

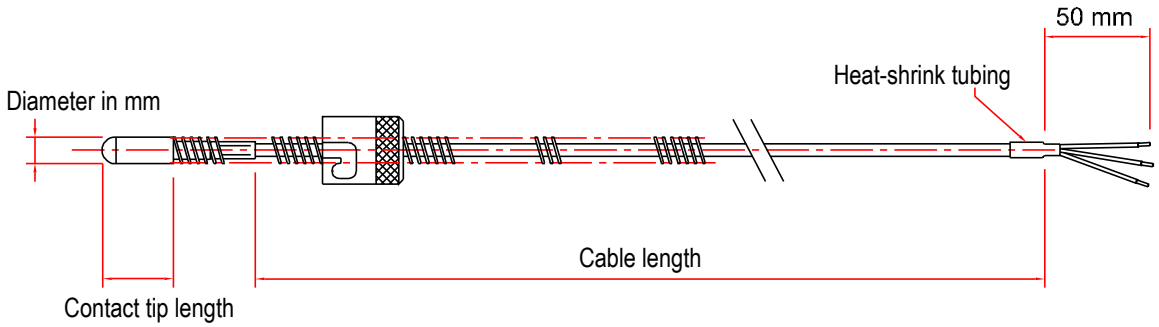
Probe.....316 L stainless steel.
5/25 : Ø 5 mm and length 25 mm
6/30 : Ø 6 mm and length 30 mm
8/15 : Ø 8 mm and length 15 mm

Cable.....output on glass silk cable, stainless steel armoured.
2, 3 or 4 conductors 0,22 mm^2.
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

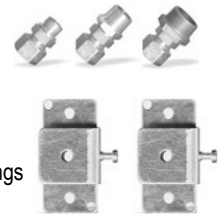
Tolerances of NTC resistive probe*

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 ½" G female)
- Stainless steel union fitting
- ½ gas or NPT thread cut
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell

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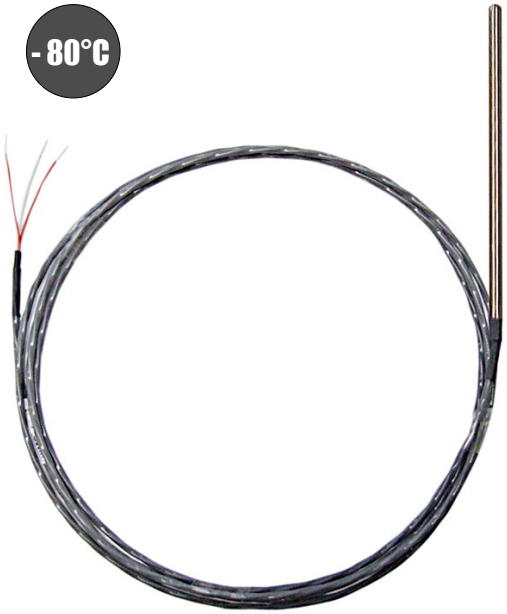


RTD sensor with cable for very low temperature

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.

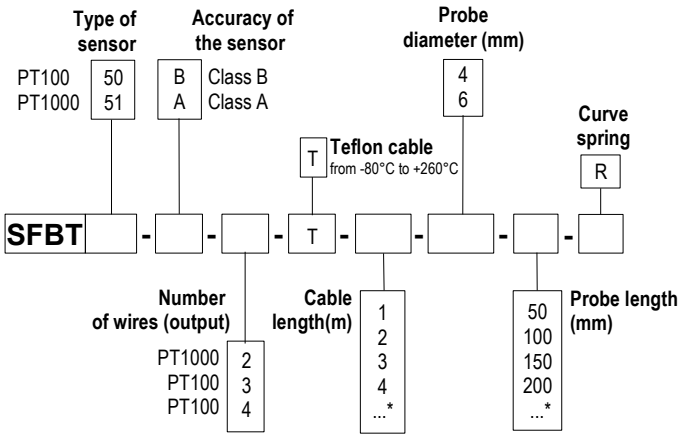
Technical features

Working temperature.....from -80°C to +50°C (PT100 and PT1000)
Accuracy *.....**PT100 or PT1000 :** see "Tolerances" table
Type of sensor.....**PT100** : Class B, Class A.
PT1000 : Class B only.
Storage temperature.....from -20°C to +80°C
Working temperature
of the cable.....**Teflon (PFA)** : from -50°C to +260°C
Mounting.....**4 mm Ø probe** for **2** or **3 wires** only
6 wires mounting from **6 mm Ø.**
Sheath.....316 L stainless steel, watertight crimping.
Curve spring as option.

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

Part numbers

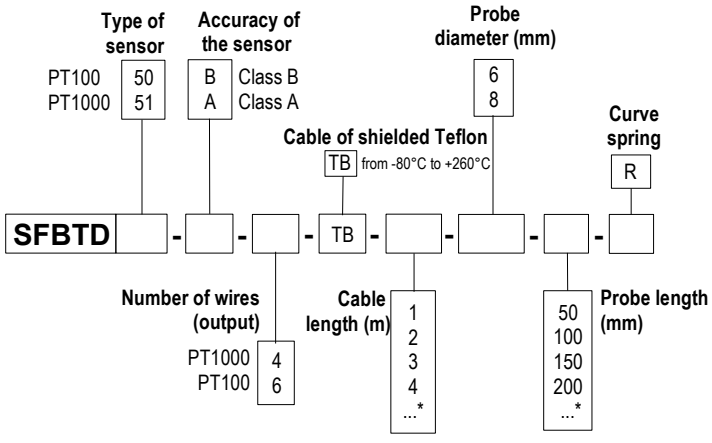
• SFBT 50 - Single pair -



* 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.

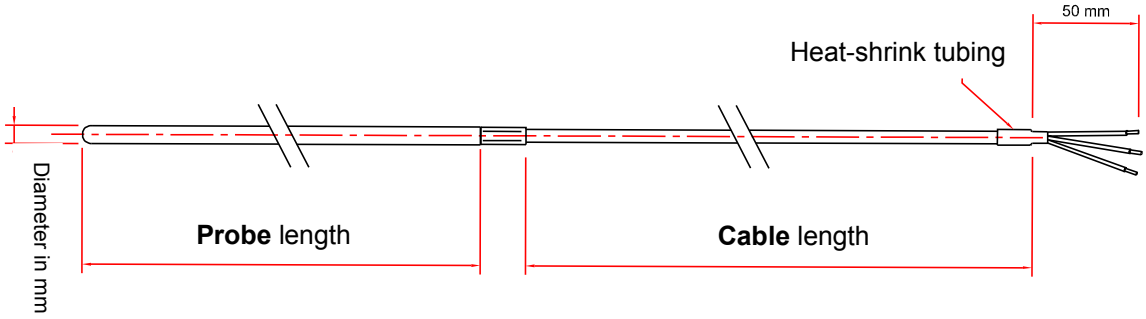
• SFBTD 50 - Multipair -



* 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

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*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

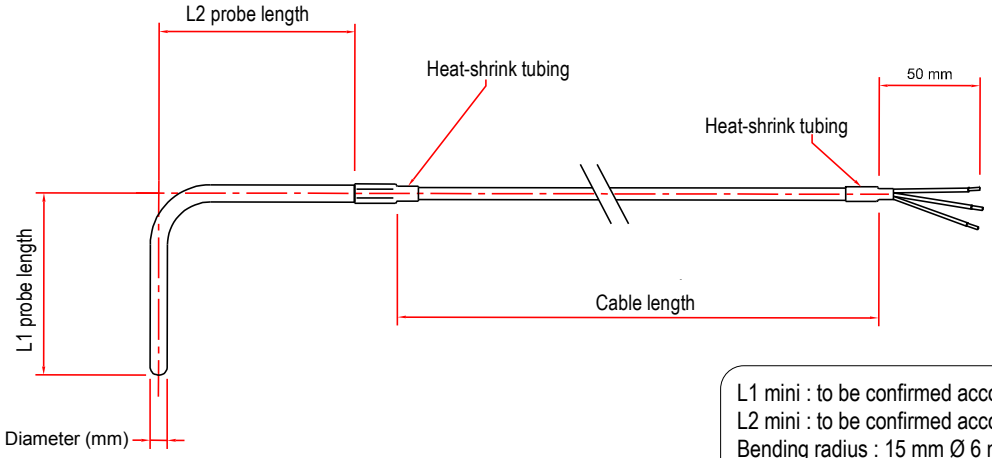
Operating temperature.....from -50°C to +400°C (PT100 and PT1000)
(according to cable) from -20°C to +120°C (NTC)
Accuracy *.....**PT100 or PT1000 :** see "Tolerances" table
NTC : see "Tolerances" table
Sensor type.....**PT100 or PT1000** : class B, class A, 1/3 DIN,
as per DIN IEC751
NTC : resistance 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

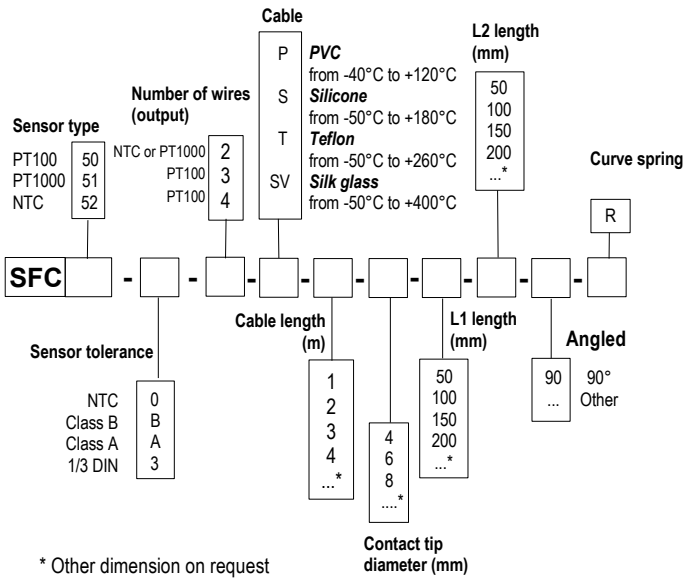
Dimensions



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 and 10 mm

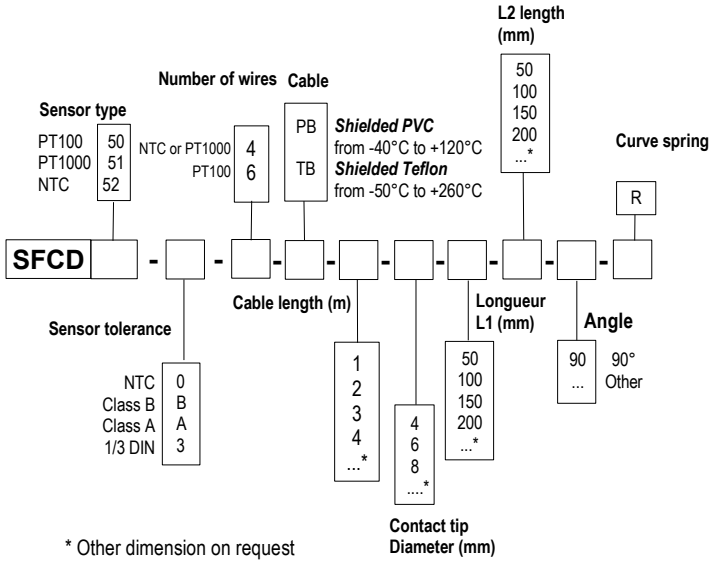
Part numbers

• 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 -



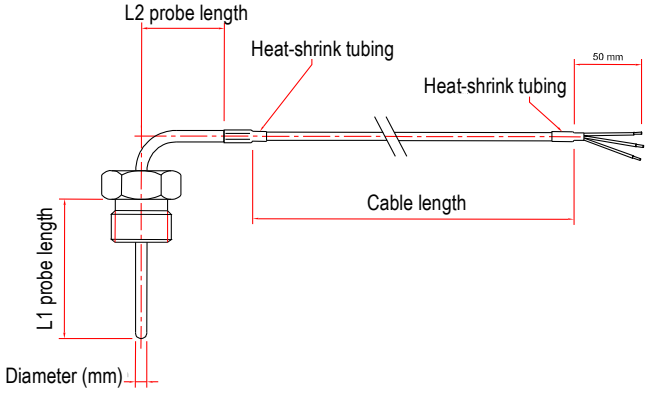
Example : SFCD-51-B-4-PB-1-6-100-100-90-R
Model : PT1000 temperature probe class B, 4 wires, shielded PVC cable of 1m length. Stainless steel contact tip Ø 6 mm angled at 90° and L1 and L2 lengths of 100 mm, with curve spring. **Measuring range from -40 to +120°C.**

SFCR 50 & SFCRD 50

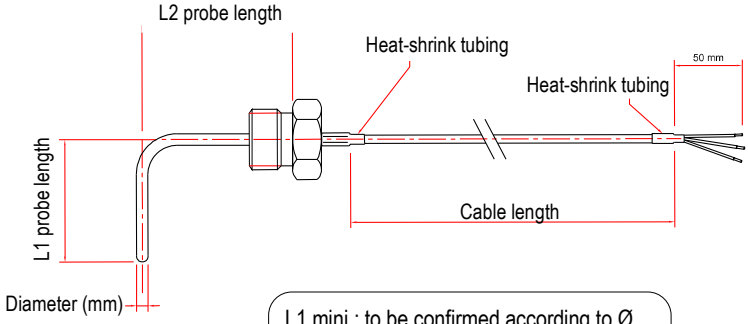
Angled cable probe with fitting
in simple pair or multipair mounting

Dimensions

- With fitting on L1



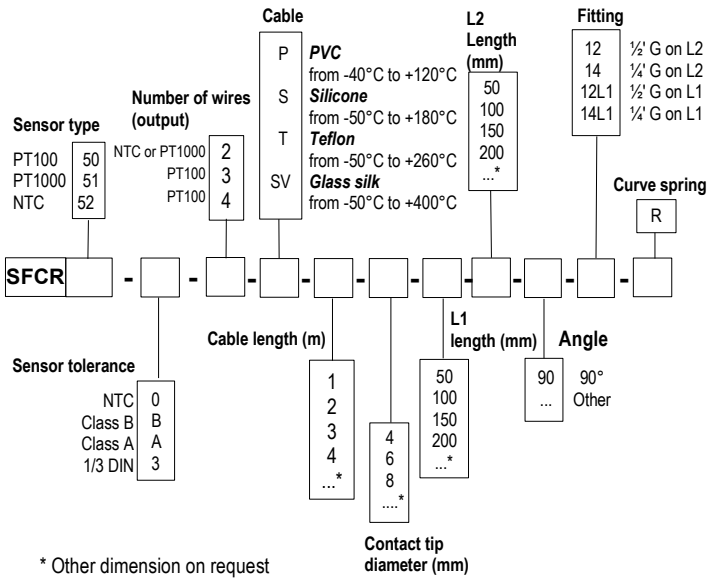
- With fitting on L2



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

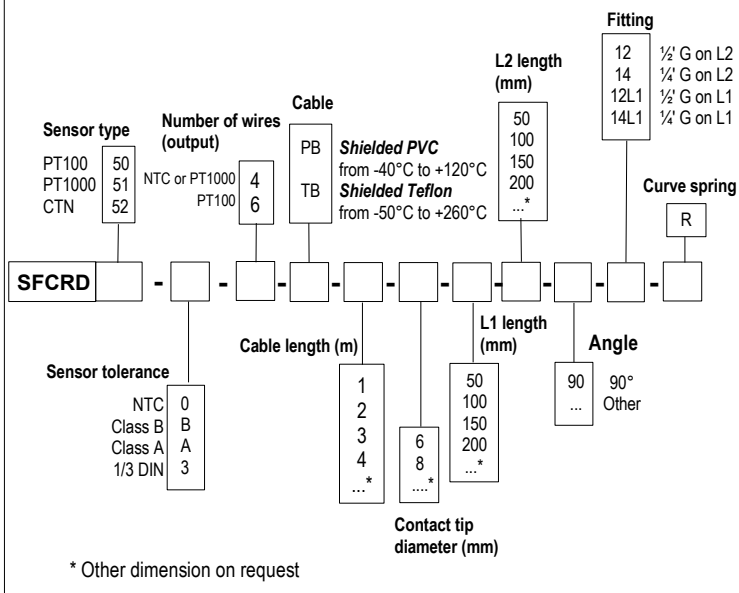
• SFCR 50 - Single pair probe -



* Other dimension on request

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 -



* Other dimension on request

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

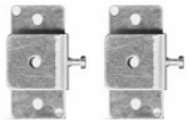
Tolerances of NTC probes*

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 ½" G female)
- Stainless steel junction fitting
- ½ gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



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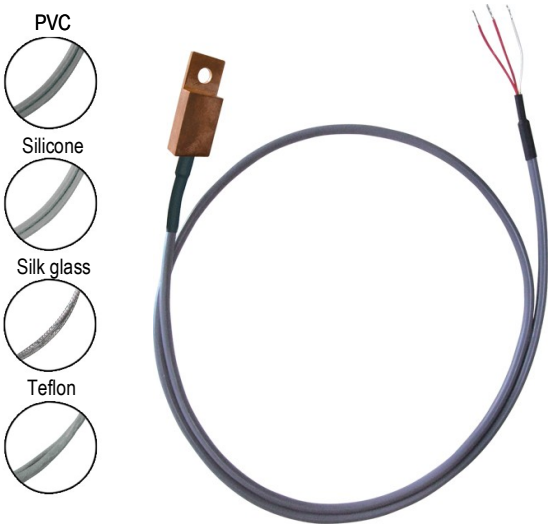


Surface contact wire temperature probe

SFCS 50 / SFCSD 50

- 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)

Part numbers

• SFCS – Single pair probe -

	Sensor type	Sensor accuracy	Cable	Curve spring	Number of wires (output)	Cable length (m)
SFCS -	PT100 50 PT1000 51 NTC 52	0 NTC B Class B A Class A 3 1/3 DIN	P *PVC* from -40°C to +120°C S *Silicone* from -50°C to +180°C T *Teflon* from -50°C to +260°C SV *Silk glass* from -50°C to +400°C	R -	NTC or PT1000 2 PT100 3 PT100 4	2 3 4 ... *

* Other length available on request

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.**

• SFCSD – Multipair probe -

	Sensor type	Sensor accuracy	Cable	Curve spring	Number of wires (output)	Cable length (m)
SFCSD -	PT100 50 PT1000 51 NTC 52	0 NTC B Class B A Class A 3 1/3 DIN	PB *Shielded PVC* from -40°C to +120°C TB *Shielded Teflon* from -50°C to +260°C	R -	NTC or PT1000 4 PT100 6	2 3 4 ... *

* Other length available on request

Example : SFCSD50-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 SFCSD 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, R_{25} = 10KΩ
Nominal Beta value B25/85 = 3,695K ±1%

Wire mounting ..... **single pair, 2, 3 or 4 wires**
multipair 4 or 6 wires

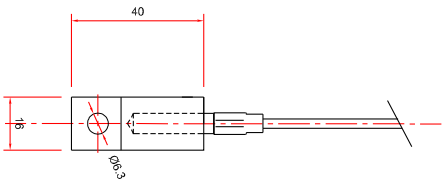
Storage temperature ..... from -20°C to +80°C

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

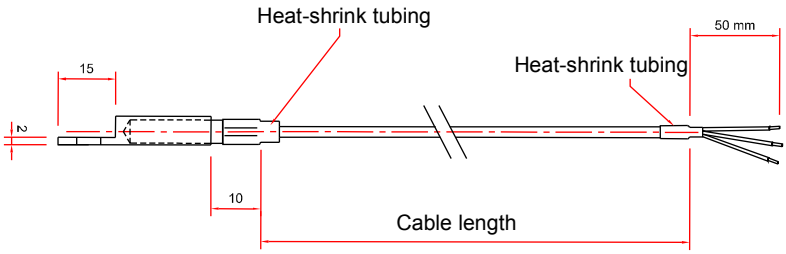
Operating temperature for cable ..... **PVC** : from -40°C to +120°C
Silicone: from -50°C to +180°C
Teflon (PFA): from -50°C to +260°C
Silk glass: from -50°C to +400°C

Dimensions

Front view



Side view



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

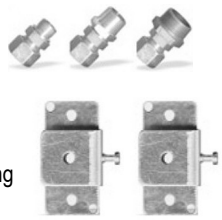
Tolerances* of NTC probes

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 ½" G female)
- Stainless steel junction fitting
- ½ gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell

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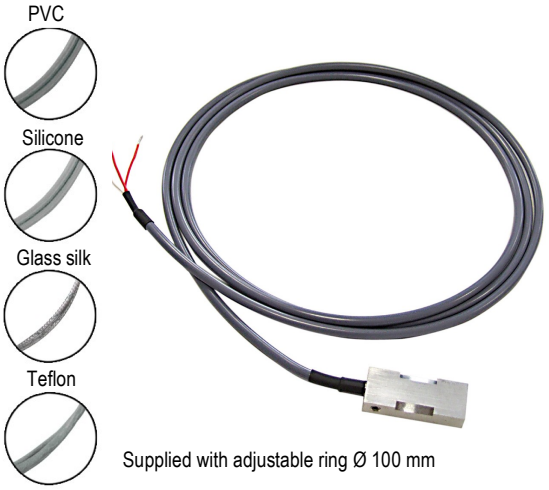


Supplied with adjustable ring Ø 100 mm

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 -

	Sensor type		Sensor accuracy		Cable		Curve spring
	PT100 PT1000 NTC	50 51 52	0 B A 3	NTC Class B Class A 1/3 DIN	P S T SV	***PVC*** from -40°C to +120°C ***Silicone*** from -50°C to +180°C ***Teflon*** from -50°C to +260°C ***Glass silk*** from -50°C to +400°C	R

SFCT - - - - -

Number of wires (output)

NTC or PT1000	2
PT100	3
PT100	4

Cable length (m): 2, 3, 4, ... *

* Other length available on request

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 -

	Sensor type		Sensor accuracy		Cable		Curve spring
	PT100 PT1000 NTC	50 51 52	0 B A 3	NTC Class B Class A 1/3 DIN	PB TB	***Shielded PVC*** from -40°C to +120°C ***Shielded Teflon*** from -50°C to +260°C	R

SFCTD - - - - -

Number of wires (output)

NTC or PT1000	4
PT100	6

Cable length (m): 2, 3, 4, ... *

* Other length available on request

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 ***(According to cable)*** ..... for *SFCT type*
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 ype of sensor ..... **PT100 or PT1000** : Class B, Class A and 1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R_{25} = 10KΩ Nominal
Beta value B25/85 = 3.695K ±1%

Wire mounting ..... **single pair 2, 3 or 4 wires**
multipair 4 or 6 wires

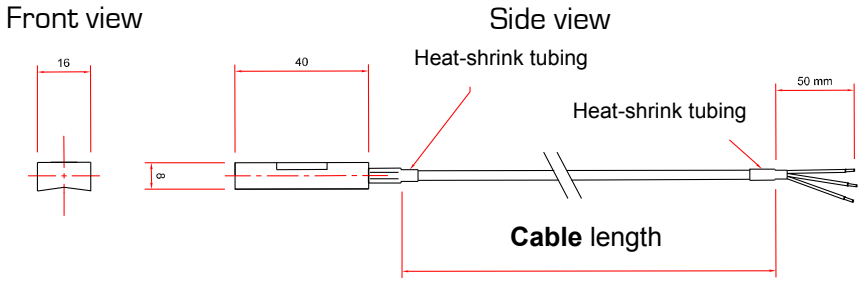
Storage temperature ..... from -20°C to +80°C

Contact tip ..... 40 x 16 x 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

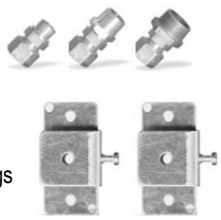
*Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

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

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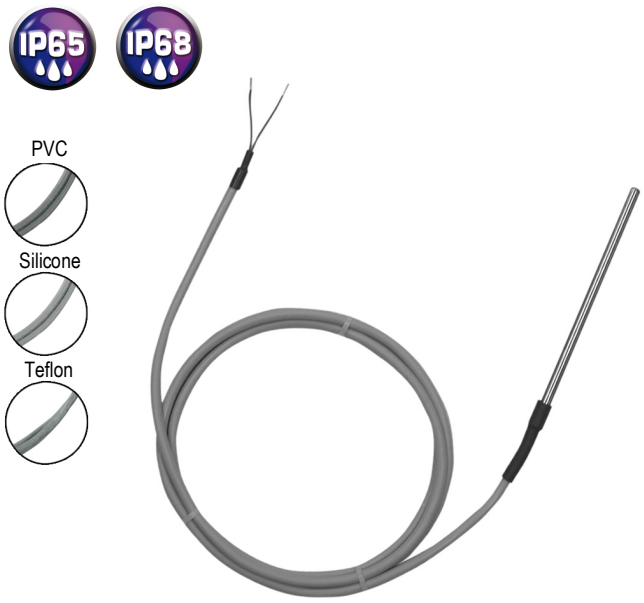


*Temperature probe with **cable** and **resistive element** **IP65 and IP68 watertight****

SFE 50 / SFED 50

Probe features

- Temperature probe mounted on conductive cable with stainless steel contact tip.
- Measuring range (according cable) **:**
  from -50°C to +260°C (PT100 and PT1000).
  from -20°C to +120°C (NTC).
- 2 wires (SFE) or 4 wires (SFED) for NTC and PT1000 output.
  3 - 4 wires (SFE) or 6 wires (SFED) for PT100 output.
- For other resistance type PT25, PT50, PT500, PT200 or NI, please contact us.

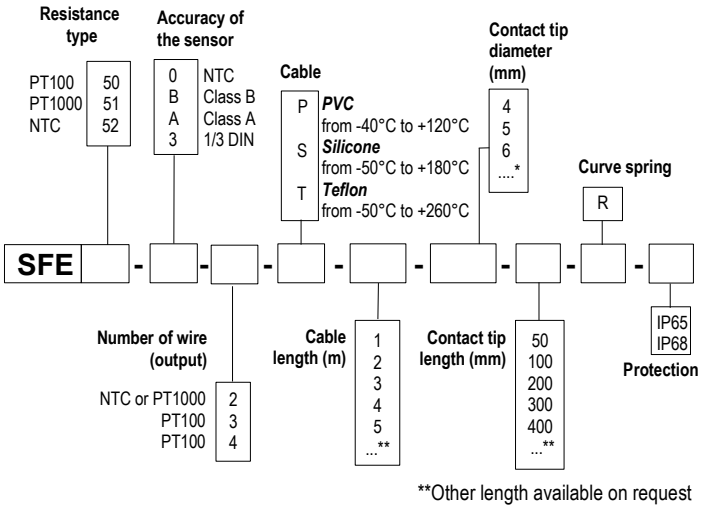
Technical feature

Working temperature.....from -50°C to +260°C (PT100 and PT1000)
(According cable) from -20°C to +120°C (NTC)
Accuracy**.....**PT100 or PT1000 :** see "Tolerances" table
NTC **:** see "Tolerances" table
Type de capteur.....**PT100 or PT1000** : class B, class A, 1/3 DIN as per DIN IEC751
CTN : resistance at 25°C, R_{25} = 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
Contact tip.....316 L stainless steel, watertight crimping with heat shrink tubing.
Optional : curve spring
Protection.....**IP65** : protection against water jets from any directions
(As per CEI 60529) **IP68** : protection against continuous immersion

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

Part numbers

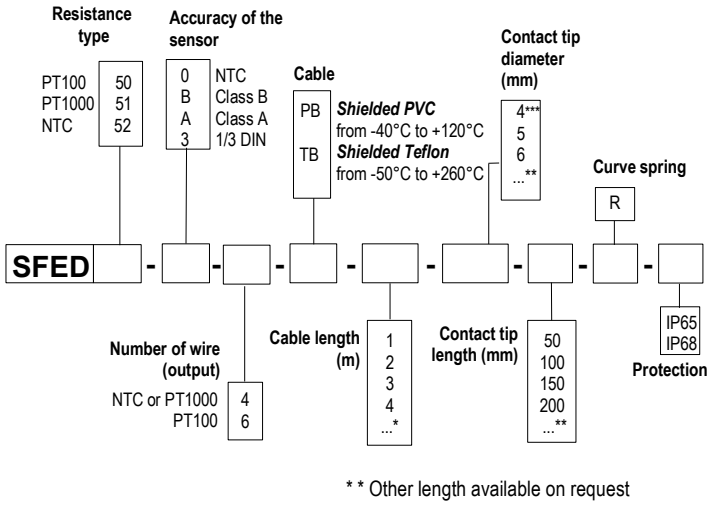
• SFE 50 – Single pair probe -



**Other length available on request

Exemple : SFE51-B-2-P-1-4-100-IP68
Model : Temperature probe PT1000 Class B, 2 wires, PVC cable of 1 m length. Stainless steel contact tip 4 mm Ø, length100 mm, without curve spring, IP68 watertight.
Measuring range from -40 to +120°C.

• SFED 50 – Multipair probe -



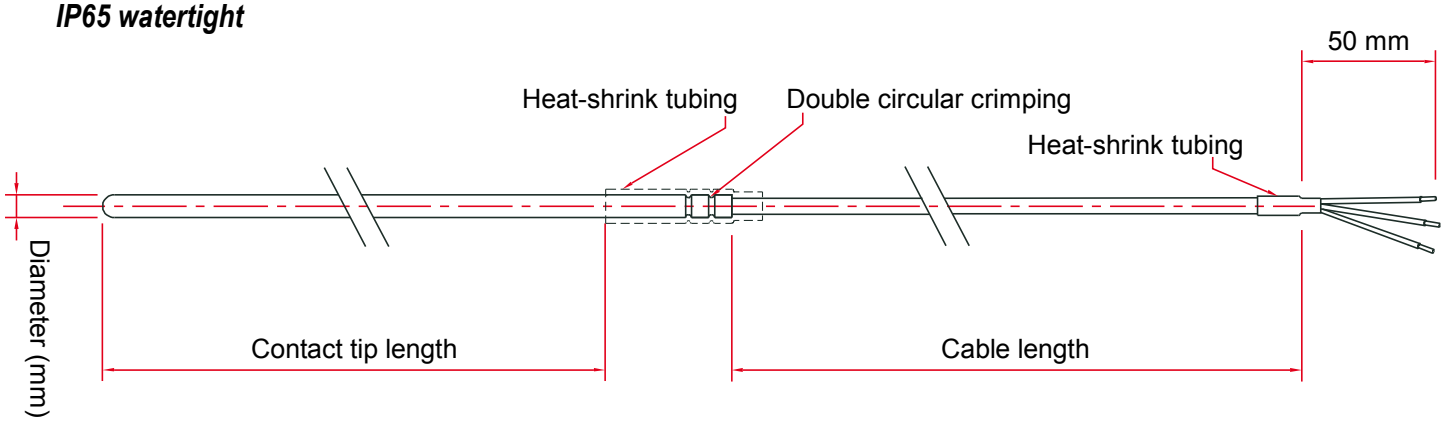
* * Other length available on request
*** Multipair 2 x 2 wires only

Exemple : SFED51-B-4-PB-1-6-100-IP68
Model : Temperature probe PT1000 Class B, 4 wires, shielded PVC cable of 1 m length. Stainless steel contact tip 6 mm Ø , 100 mm length, without curve spring, IP68 watertight.
Measuring range from -40 to +120°C.

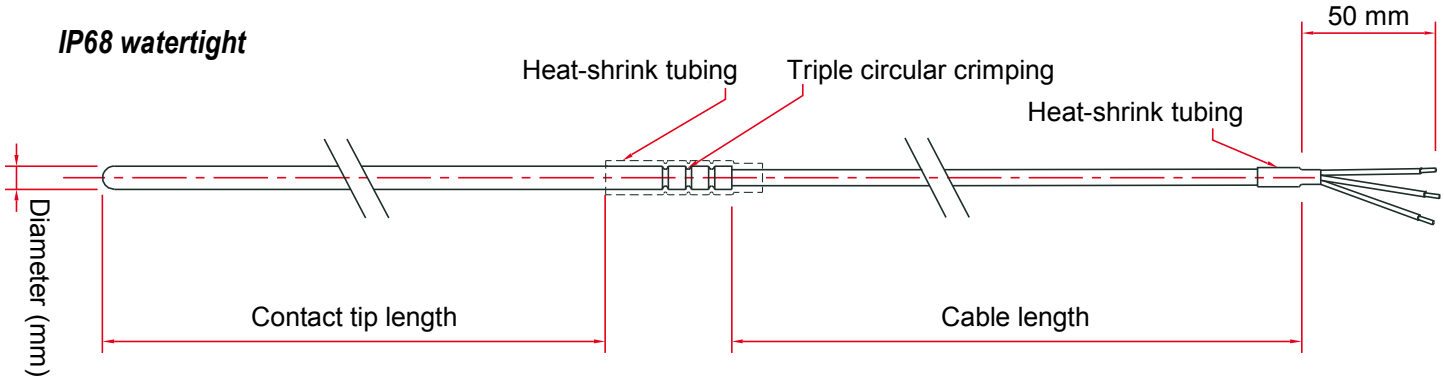
*According mounting type. See the following pages.

Probe dimensions

IP65 watertight



IP68 watertight



Mountings with IP65 protection

With Ø 4 mm contact tip

Type of cable	Mounting			
	2 wires	3 wires	4 wires	6 wires
PVC	✓	✓	✓	x
Silicone	✓	✓	x	x
Pfa	✓	✓	✓	x

✓ : feasible mounting **X** : mounting not available

With Ø 5 mm contact tip

Type of cable	Mounting			
	2 wires	3wires	4 wires	6 wires
Silicone	✓	✓	✓	x
Pfa	✓	✓	✓	✓

✓ : feasible mounting **X** : mounting not available

With Ø 6 mm contact tip

Type of cable	Mounting			
	2 wires	3wires	4 wires	6 wires
PVC	✓	✓	✓	✓
Silicone	✓	✓	✓	✓
Pfa	✓	✓	✓	✓

✓ : feasible mounting **X** : mounting not available

Mountings with IP68 protection

With Ø 4 mm contact tip

Type of cable	Mounting			
	2 wires	3 wires	4 wires	6 wires
PVC	✓	✓	✓	x
Silicone	✓	✓	x	x
Pfa	✓	✓	x	x

✓ : feasible mounting **X** : mounting not available

With Ø 5 mm contact tip

Type of cable	Mounting			
	2 wires	3 wires	4 wires	6 wires
Silicone	✓	✓	✓	x
Pfa	✓	✓	✓	✓

✓ : feasible mounting **X** : mounting not available

With Ø 6 mm contact tip

Type of cable	Mounting			
	2 wires	3 wires	4 wires	6 wires
PVC	✓	✓	✓	✓
Silicone	✓	✓	✓	✓
Pfa	✓	✓	✓	✓

✓ : feasible mounting **X** : mounting not available

Tolerances* of PT100 and PT100 probes.

Norms as per IEC 751 (1993).

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

Resistance value for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C).Ie. at 0°C for class B PT1000 ± 0,3°C → ± 1,2 Ω

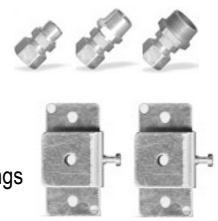
Tolerances* of NTC probes

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 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

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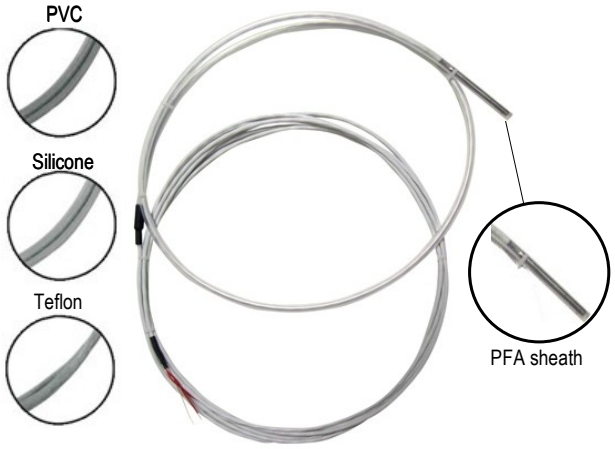
CE



*Cable temperature probe at resistive element for **aggressive environment***

SF GT 50 – SFGTD 50

Part numbers

• SFGT

SFGT - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Position	Accuracy of the sensor	Cable	Sheath length (mm)
	0 NTC	P *PVC* from -40°C to +120°C	100
	B Class B	S *Silicone* from -50°C to +180°C	500
	A Class A	T *Teflon* from -50°C to +260°C	1000
	3 1/3 DIN		...*

Sensor type	Number of wire	Cable length (m)	Sheath diameter (mm)	Contact tip diameter (mm)
PT100 50	2	1	6	50
PT1000 51	3	2	8	100
NTC 52	4	3	10	150
		4	...*	200
		...*		...*

* Other dimension on request

Example : SFGT50-B-3-P-3-6-500-100

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 and a contact tip of 100 mm length.

Measuring range : from -40 to +120 °C

• SFGTD

SFGTD - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Position	Accuracy of the sensor	Cable	Sheath length (mm)
	0 NTC	PB *Shielded PVC* from -40°C to +120°C	100
	B Class B	TB *Shielded Teflon* from -50°C to +260°C	500
	A Class A		1000
	3 1/3 DIN		...*

Sensor type	Number of wire	Cable length (m)	Sheath diameter (mm)	Contact tip diameter (mm)
PT100 50	4	1	6	50
PT1000 51	6	2	8	100
NTC 52	**	3	10	150
		4	...*	200
		...*		...*

* Other dimension on request

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

Example : SFGTD50-B-6-PB-3-8-500-100

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 and a contact tip of 100 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 (*According to cable*): 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

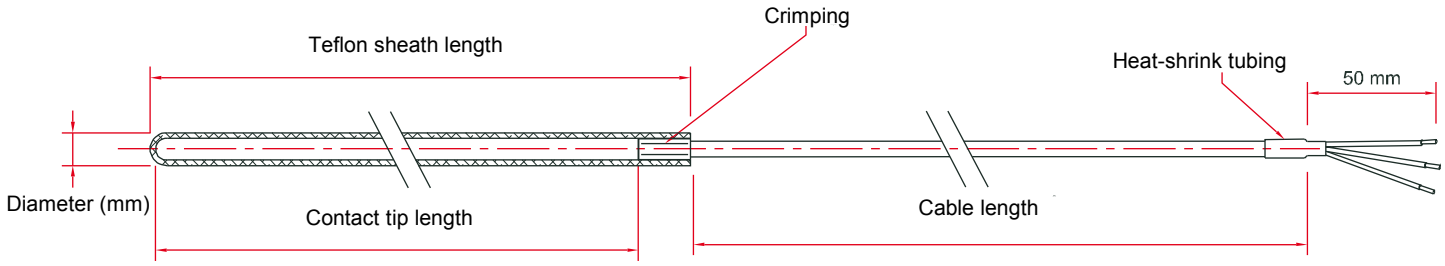
Type of sensor: **PT100 or PT1000** : Class B, Class A, 1/3 DIN as per DIN IEC751
NTC : resistance at 25°C, R_{25} = 10KΩ
Nominal Beta B25/85 value = 3,695K ±1%

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

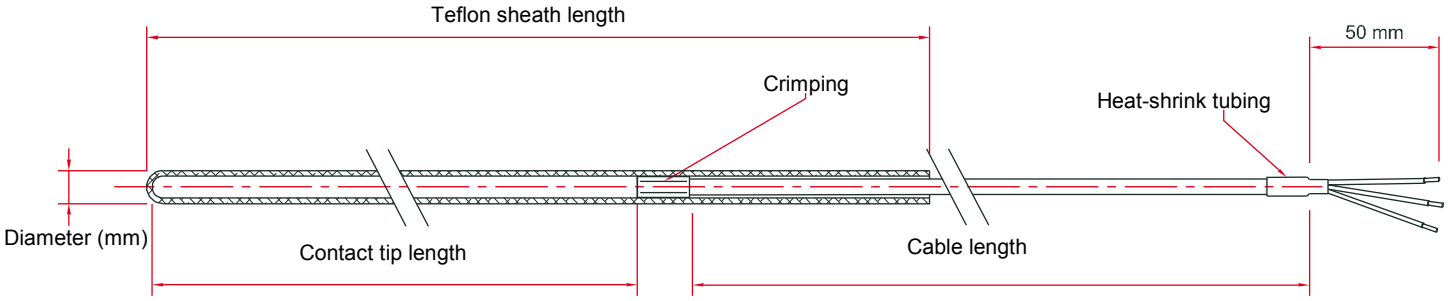
Operating temperature: **PVC :** from -40 to +120 °C
Silicone : from -50 to +180 °C
Teflon (PFA) : from -50 to +260 °C

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

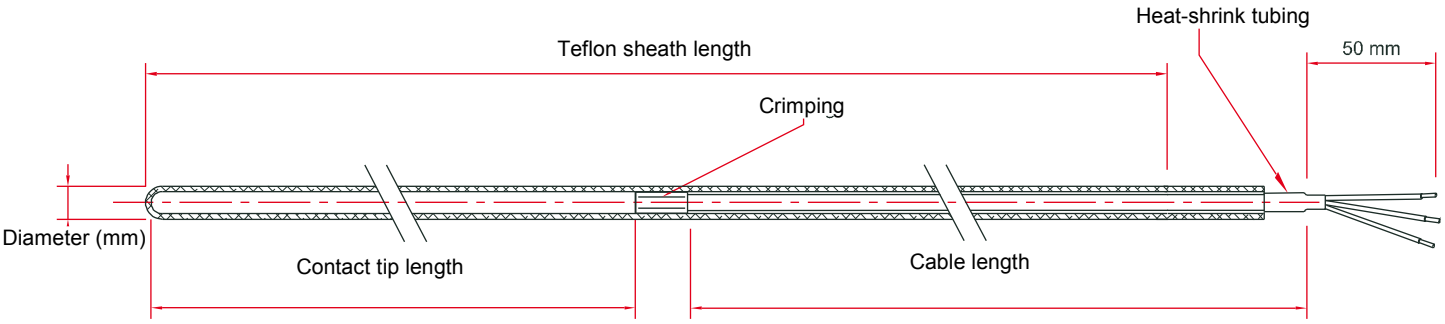
Dimensions



Teflon sheath length = Contact tip length



Teflon sheath length > Contact tip length



Teflon sheath length = Contact tip length + cable length

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).

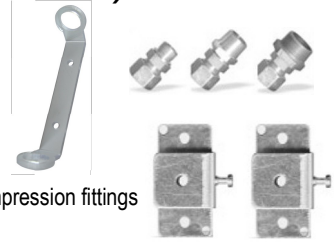
Temp °C	Tolerances					
	Class B		Class A		1/3 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-100	0.8	0.32	0.35	0.14	0.27	0.11
-50	0.55	0.22	0.25	0.1	0.19	0.08
0	0.3	0.12	0.15	0.06	0.1	0.04
100	0.8	0.3	0.35	0.13	0.27	0.1
200	1.3	0.48	0.55	0.2	0.44	0.16
300	1.8	0.64	0.75	0.27	0.6	0.21
400	2.3	0.79	0.95	0.33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

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PVC
Silicone
Glass silk
Teflon

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

CE

SFO 50 / SFOD 50

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.

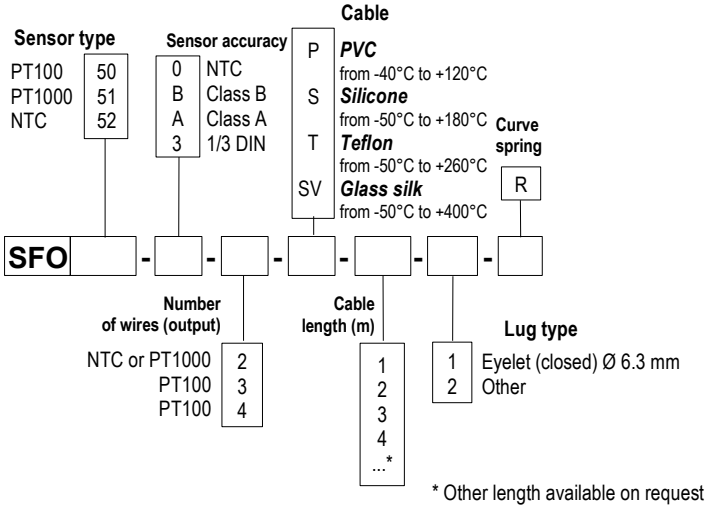
Transmitter features

Operating temperature.....from -50°C to +400°C (PT100 et 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.....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 (Optional : shield)
Glass silk with stainless steel sheath : from -50°C to +400°C
Contact tip.....Copper eyelet 14 x 12 mm, hole fixing of Ø 6.3 mm.
Output stainless steel 316 L tube of 10mm with Ø 4.5 mm (SFO) or 5 mm (SFOD).
Waterproof crimping with heat-shrink tubing.
(unless glass silk cable with simple crimping on stainless steel sheath)
Optional : curve spring

*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.

Part numbers

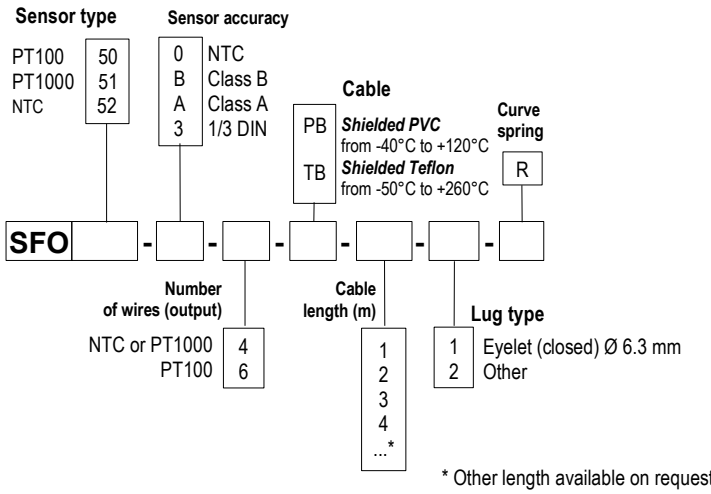
• SFO 50 - Single pair probe -



* Other length available on request

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 -

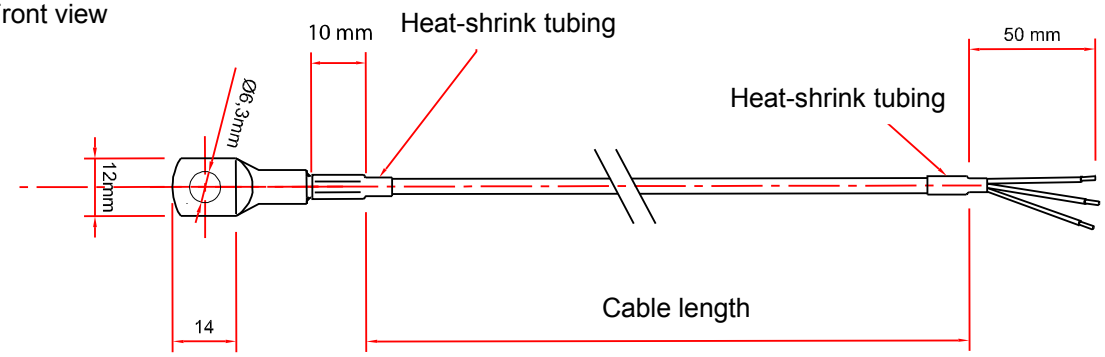


* Other length available on request

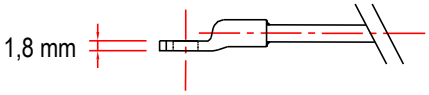
Example : SFOD51-B-4-P-1-2
Model : Pt 1000 temperature sensor, 4 wires, shielded Teflon cable of 1m length.
Stainless steel contact tip 5 mm Ø , length 60 mm, with a copper eyelet perforated Ø 6.3 mm, without curve spring. **Measuring range from -40 to +120°C.**

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.

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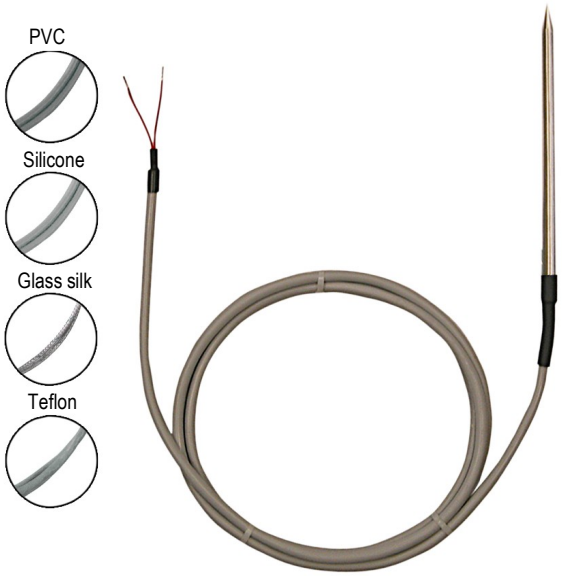


Penetration probe with cable

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.

Transmitter 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.....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)

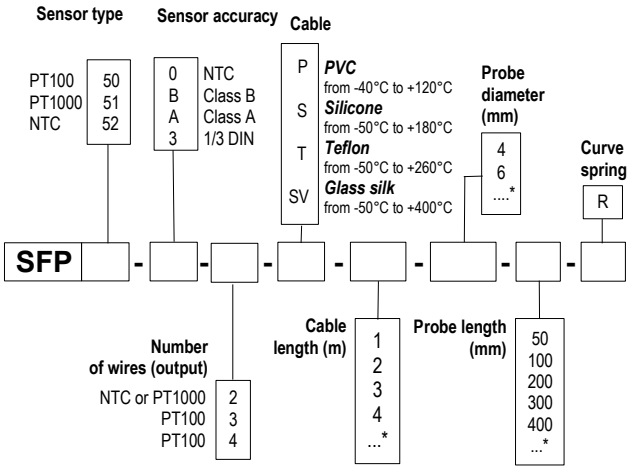
Wire mounting.....**single pair 2, 3 or 4 wires**
- *4 wires inside 4mm Ø available for PVC only.*
- *4 silicone wires inside 6mm Ø not available.*

multipair 4 or 6 wires
- *2x2 wires for NTC and PT1000*
- *2x3 wires for PT100*

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

Part numbers

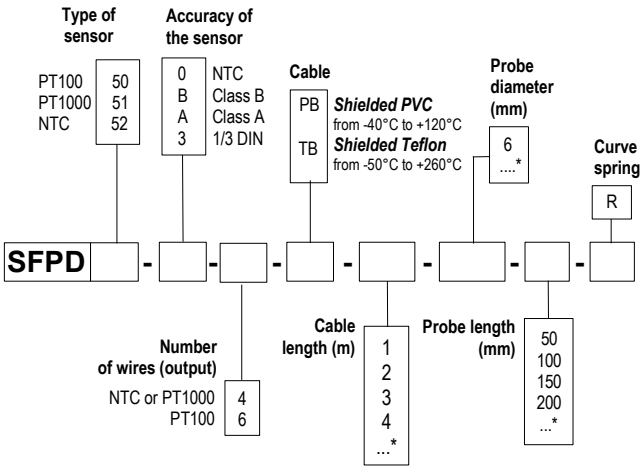
• SFP 50 – Single pair probe -



* 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.

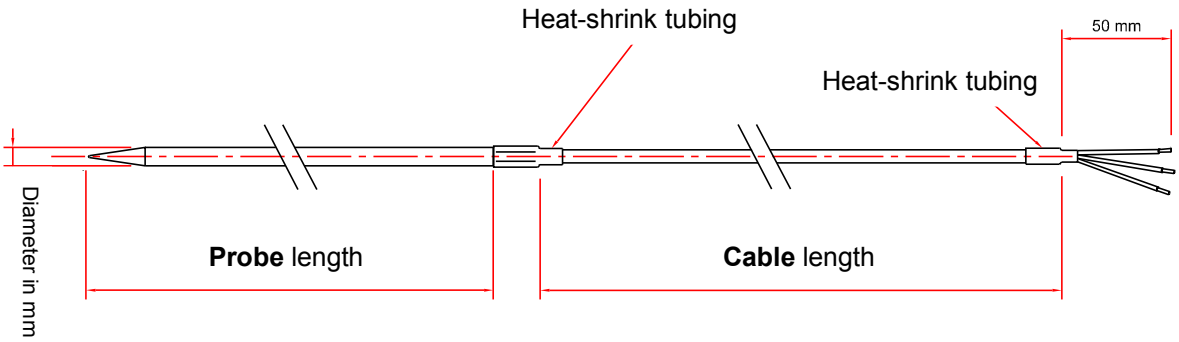
• SFPD 50 – Multipair Probe -



* 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).

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

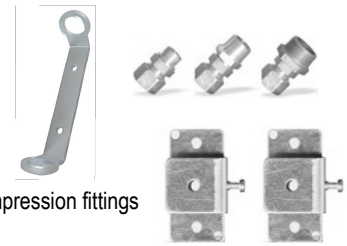
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

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

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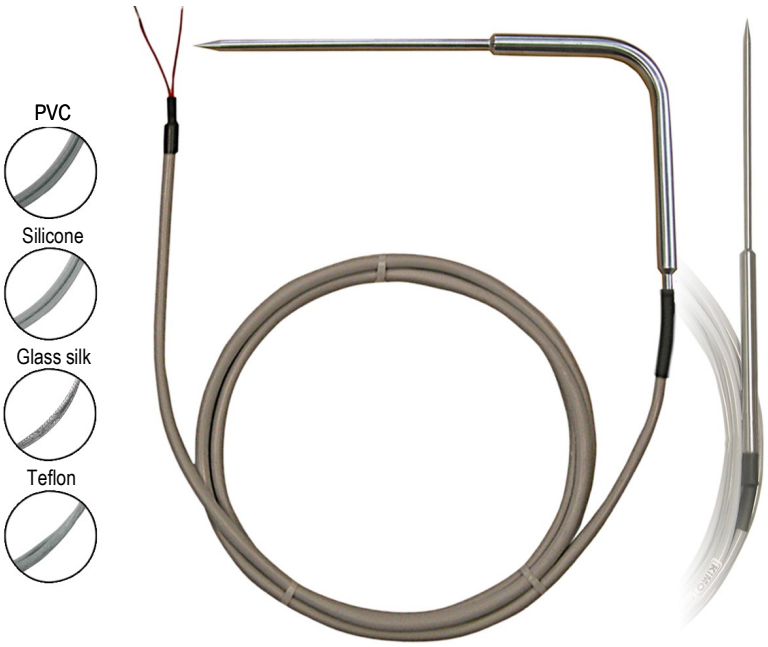
Temperature probe with needle ended tip ***at resistive element***



Type SFPP 50

SFPP 50 - SFPPD 50 /
SFPPC 50 - SFPPCD 50

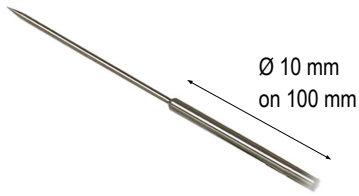
Probe features

- 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.

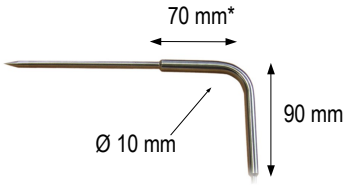
Transmitter features

Working temperature.....from -50°C to +400°C (PT100 and PT1000)
(According to cable) 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} = 10KΩ 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.

Straight handle



Angled handle



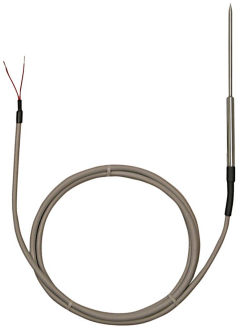
*L1 minimum length : 50 mm

Tightness is optional for use in wet or submerged places

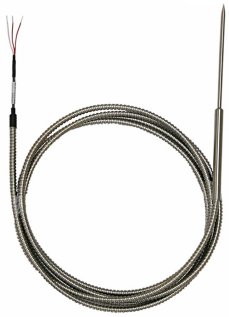
SFPP 50 & SFPPD 50

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

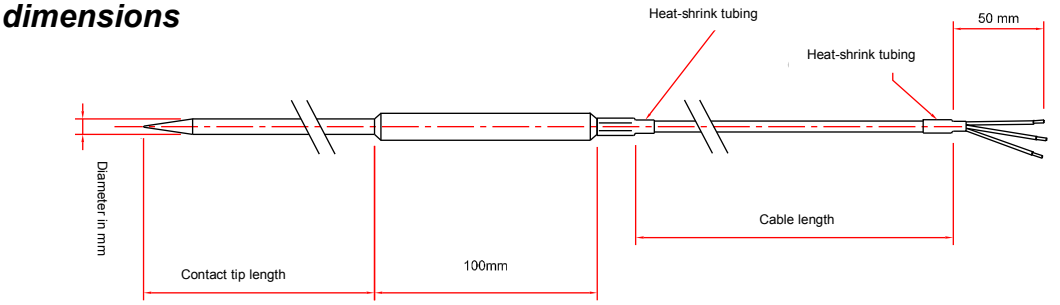
Straight handle probe on cable



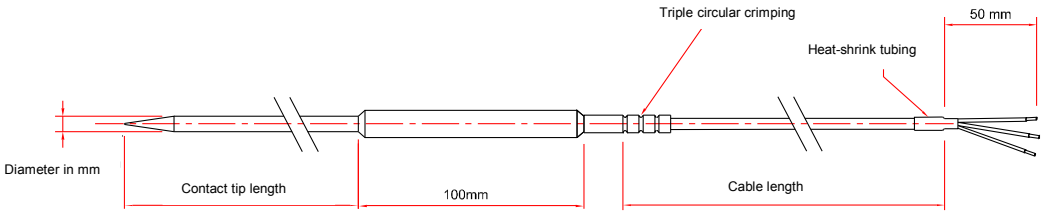
Straight handle probe on flexible



Probe dimensions



Optional : waterproof



Part numbers

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

Single pair probe – Ref. **SFPP 50**

Cable
- P — ***PVC*** from -40°C to +120°C
- S — ***Silicone*** from -50°C to +180°C
- T — ***Teflon*** from -50°C to +260°C
- SV — ***Glass silk*** from -50°C to +400°C

Sensor type
- PT100 / PT1000 / NTC — 50 / 51 / 52

Output wires number
- NTC or PT1000 — 2
- PT100 — 3
- PT100 — 4

Curve spring †
- R
- E — **Waterproof****

SFPP - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

Sensor accuracy
- NTC Class B / Class A / 1/3 DIN — 0 / B / A / 3

Outer sheath
- Cable Stainless steel Flexible — 00 / FL

Cable length (m)
- 1 / 2 / 3 / 4 / ...*

Contact tip length (mm)
- 4,5 / 6 / ....*

Contact tip length (mm)
- 50 / 100 / 150 / 200 / ...*

* 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**

Sensor type
- PT100 / PT1000 / NTC — 50 / 51 / 52

Output wires number
- NTC or PT1000 — 4
- PT100 — 6

Cable
- TB — ***Shielded Teflon*** from -50°C to +260°C

Curve spring †
- R
- E — **Waterproof****

SFPPD - [ ] - [ ] - [ ] - [ ] - [ ] - TB - [ ] - 6 - [ ] - [ ] - [ ]

Sensor accuracy
- NTC Class B / Class A / 1/3 DIN — 0 / B / A / 3

Outer sheath
- Cable Stainless steel Flexible — 00 / FL

Cable length (m)
- 1 / 2 / 3 / 4 / ...*

Contact tip length (mm)
- 6 / ....*

Contact tip length (mm)
- 50 / 100 / 150 / 200 / ...*

* 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.**

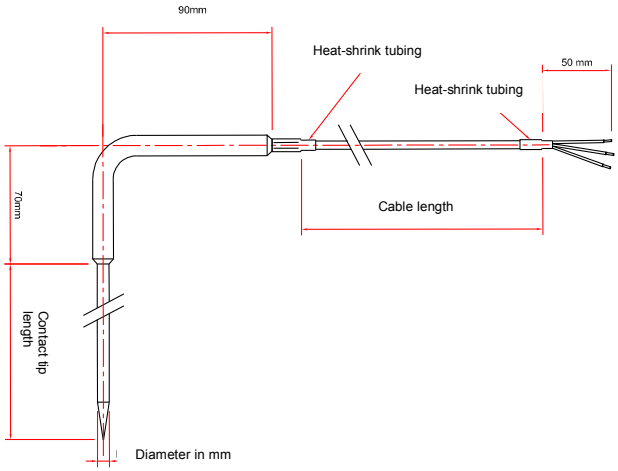
SFPPC 50 & SFPPCD 50

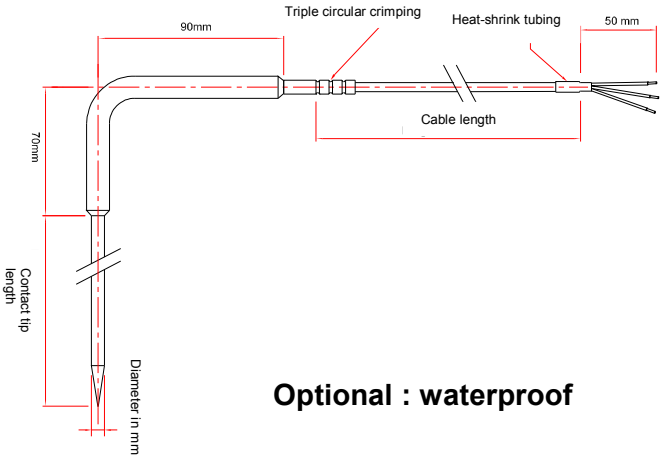
Angled handle tapping probe with cable in simple pair or multipair assembly

Angled handle probe on cable

Angled handle probe on flexible

Dimensions probe



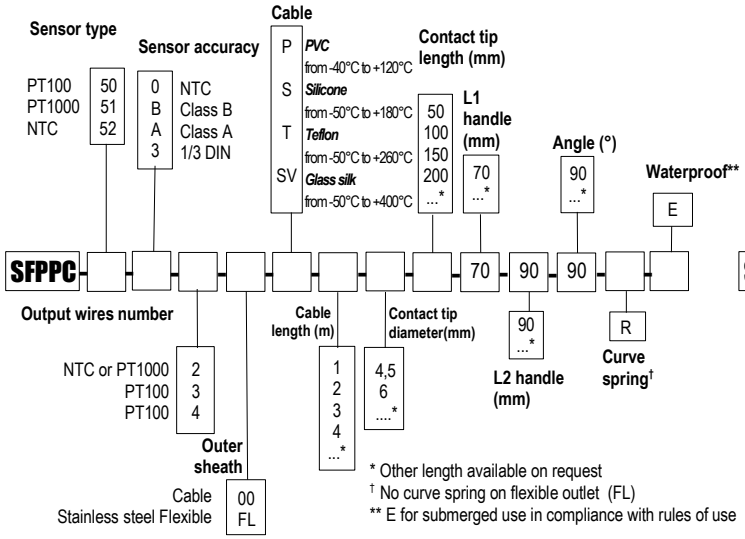


Optional : waterproof

Part numbers

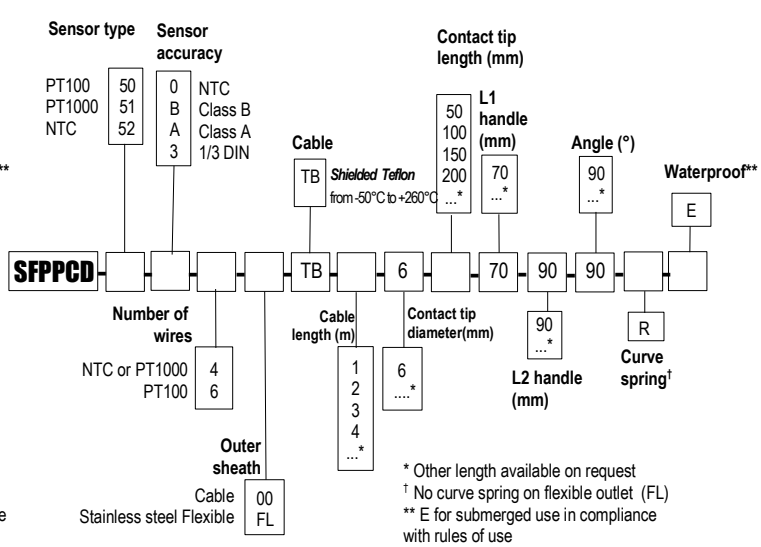
Angled handle probes are available with **simple pair or multipair electrical assembly :**

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.

Norm as per IEC 751 (1993).

Temp °C	Tolerances					
	Class B		Class A		1/3 DIN	
	± °C	± Ohms	± °C	± Ohms	± °C	± Ohms
-100	0,8	0,32	0,35	0,14	0,27	0,11
-50	0,55	0,22	0,25	0,1	0,19	0,08
0	0,3	0,12	0,15	0,06	0,1	0,04
100	0,8	0,3	0,35	0,13	0,27	0,1
200	1,3	0,48	0,55	0,2	0,44	0,16
300	1,8	0,64	0,75	0,27	0,6	0,21
400	2,3	0,79	0,95	0,33	0,77	0,26

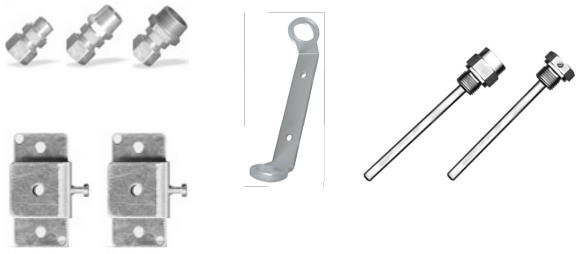
*all accuracies indicated in this technical data sheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

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
- ½" Gas or NPT thread cuff
- Thermo-conducting silicone grease
- Calibration certificate
- Thermowell



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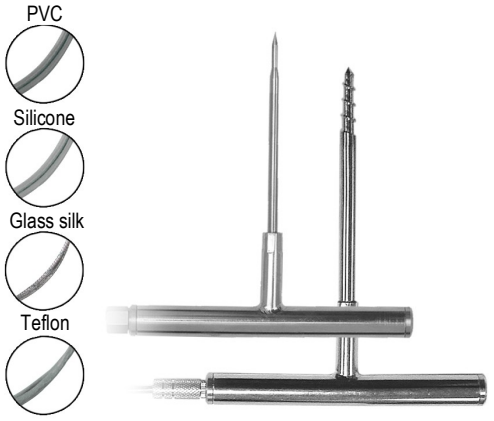


CE

*T handle temperature probe with **cable** at resistive element*

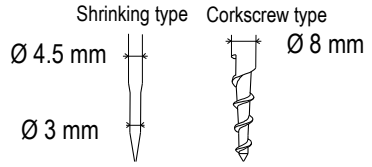
SFPPT 50 / SFPPTD 50

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



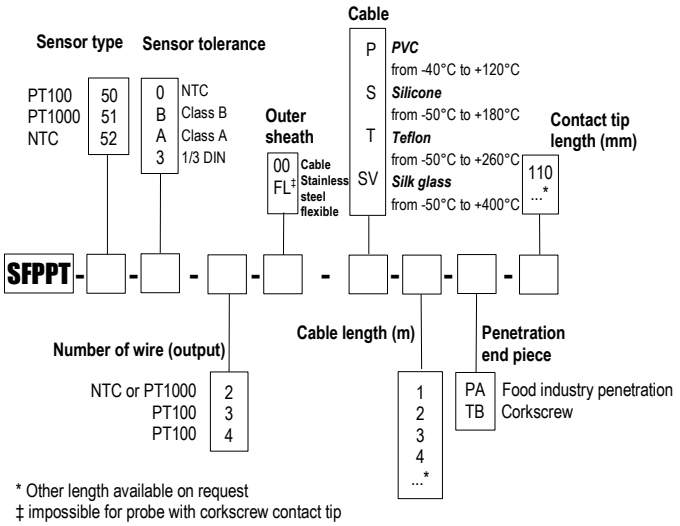
Technical features

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.....from -20°C to +80°C
Operating temperature of 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
Silk glass with stainless steel braid : from -50°C to +400°C
Mounting of cable outlet.....With shrinking type penetration end piece : unremovable PE output
With corkscrew type penetration end piece : detachable Jack output
Contact tip.....Ø 4.5 or 8 mm in stainless steel 316 L, choice of length
Sewing contact tip
corkscrew (to screw) : contact tip diameter 8 mm Ø only
Shrinking : contact tip Ø 4.5 mm and shrinking Ø 3 mm

Part numbers

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

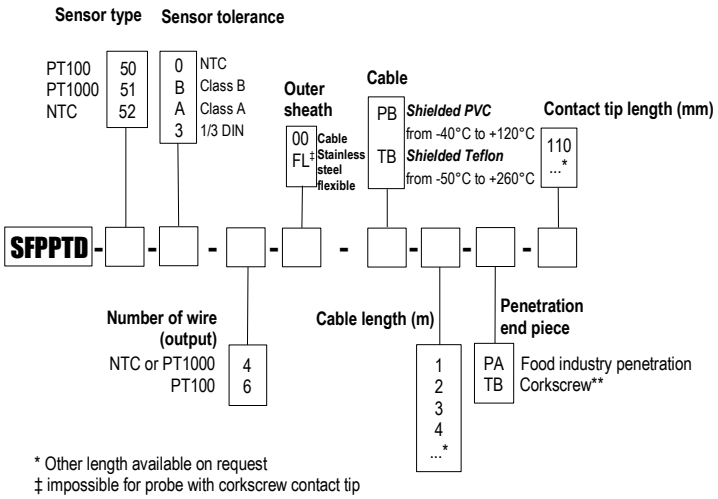
• Single pair probe – Ref. SFPPT 50



* Other length available on request
‡ impossible for probe with corkscrew contact tip

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

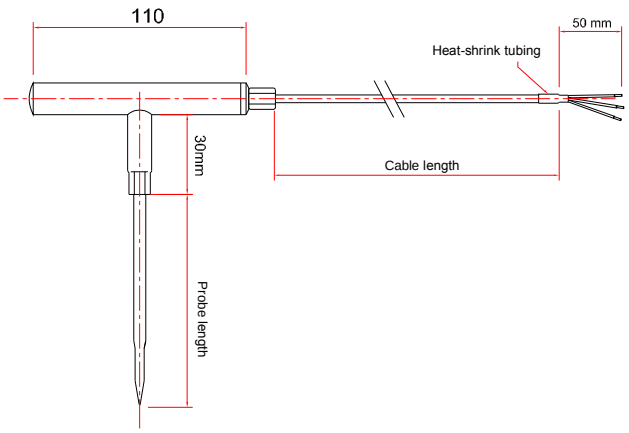


* Other length available on request
‡ impossible for probe with corkscrew contact tip
**No Jack plug output

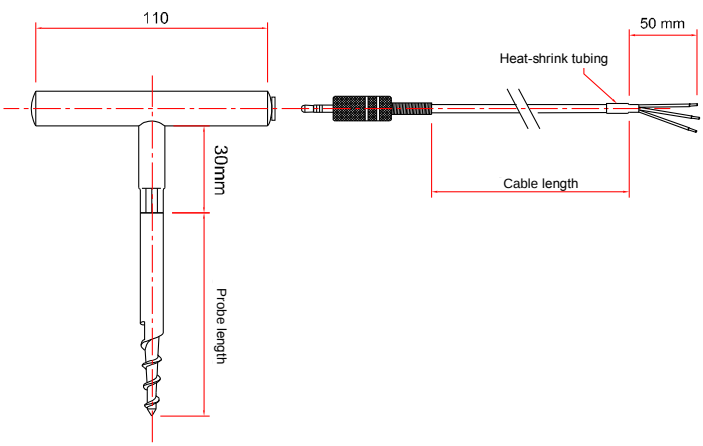
Example : SFPPTD50-A-6-00-TB-2-PA-110
Model : PT100 temperature probe, Class A, multipair assembly 6 wires, outer sheath in shielded Teflon cable of length 2m. Stainless steel contact tip 4,5 mm Ø for food industry penetration of length 110 mm with shrinking type penetration end piece. **Measuring range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

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 ± 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 data sheet)

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

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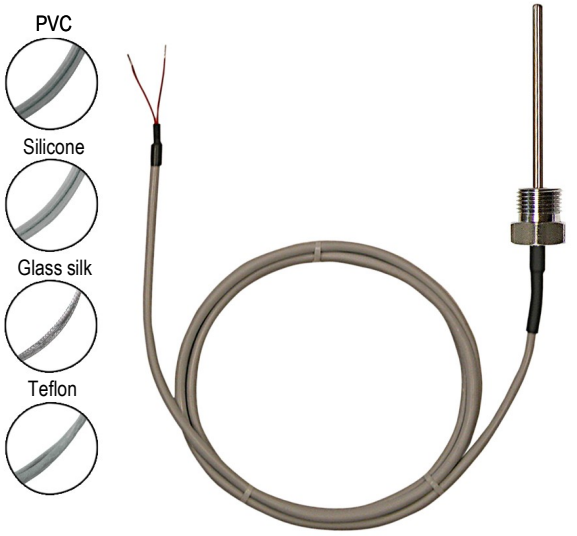


*Temperature probe with **cable** at **resistive element** with fixing fitting*

CE

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

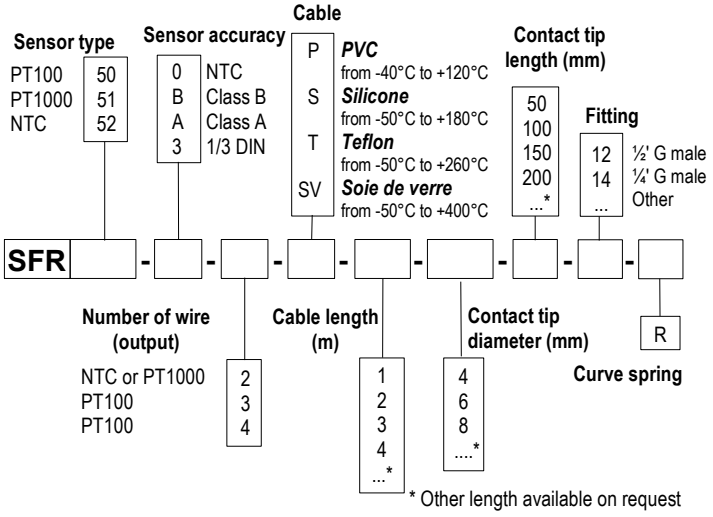
Operating temperature.....from -50°C to +400°C (PT100 and PT1000)
(According to cable) from -20°C to +120°C (NTC)
Accuracy *.....**PT100 or PT1000 :** see "Tolerances" table
NTC : see "Tolerances" table
Sensor type.....**PT100 or PT1000** : class B, class A and 1/10 DIN as perIEC751
NTC : resistance at 25°C, R_{25} = 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.....¼" or ½" 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 guaranted for measurements carried out in the same conditions, or carried out with calibration compensation.

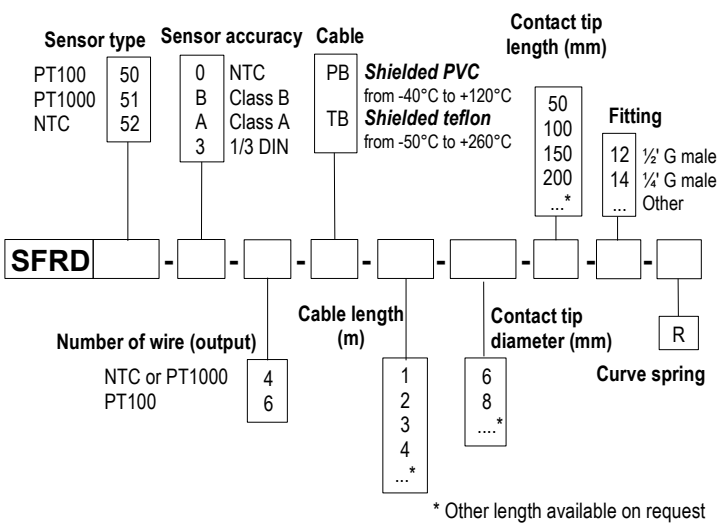
Part numbers

SFR 50 – Simple pair probe -



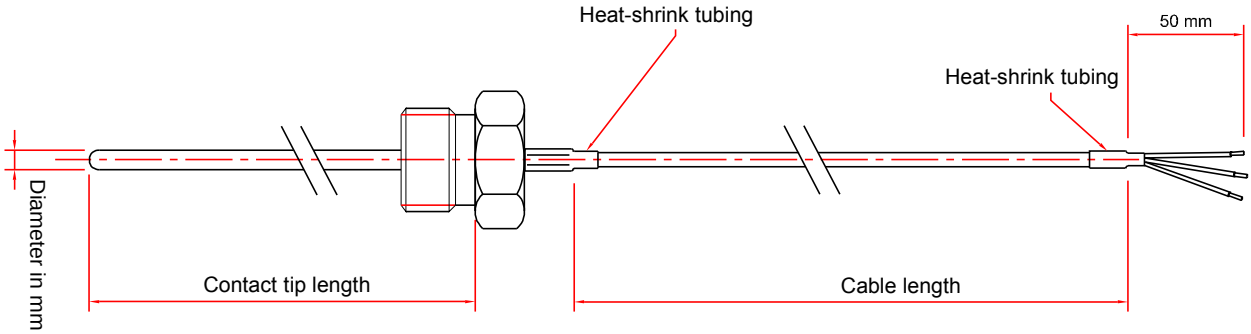
Example : SFR51-B-2-P-1-4-100-12
Model : PT1000 temperature probe, Class B, 2 wires, PVC cable of 1m length. Stainless steel contact tip of 4 mm Ø , length 100 mm, fitting process with ½' G thread, without curve spring. **Measuring range from -40 to +120°C.**

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 ½' G thread, without curve spring. **Measuring range from -40 to +120°C.**

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 ± 0,3°C → ± 1,2 Ω

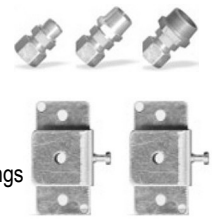
Tolerances* of NTC probes

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 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

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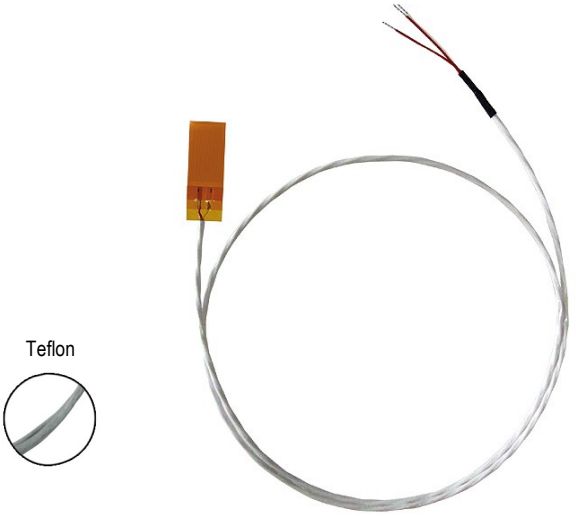
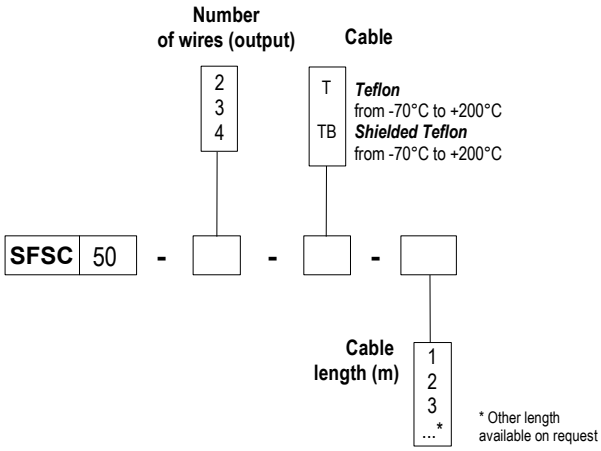


Probe with self adhesive patch

SFSC 50

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

Part numbers

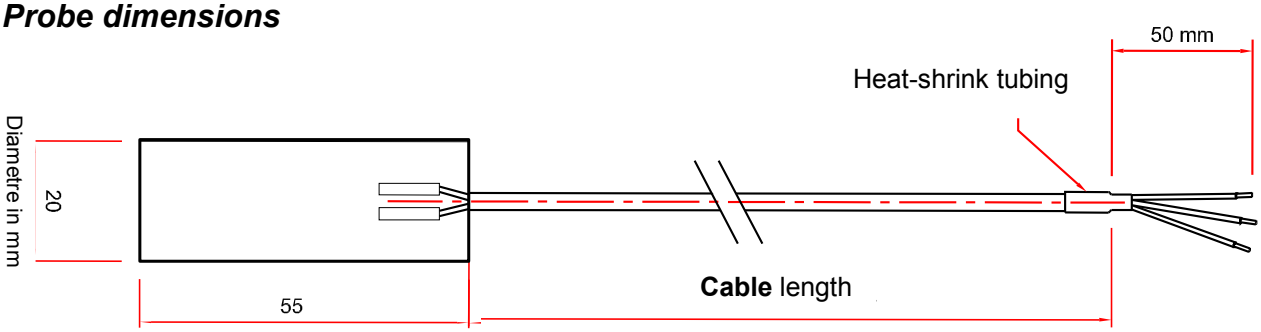


Example : SFSC50-3-T-4
Model : Pt 100 temperature sensor, Class A, 3 wires, Teflon cable of 4 m length. **Measuring range from -70 to +200°C.**

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

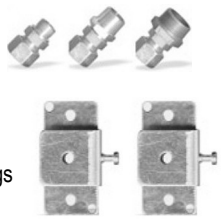
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

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

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New

CE

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 ¼" 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 :

	Type of sensor	Accuracy of the sensor	Probe length (mm)	Stainless steel sliding connection, ½ cylindrical gas	
SG	50 PT100 51 PT1000 52 NTC	0 CTN B Class B A Class A 3 1/3 DIN	50 100 150 200 250 300 350 400 ...*	R with sliding connection S without sliding connection ...†	
					Probe diameter (mm): 4 / 6 / 8

* Other lengths available on request.

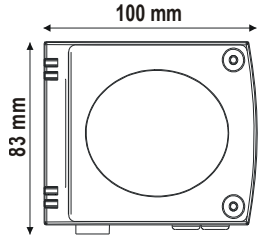
† Other connections available on request.

Example : SG51-B-4-100-R

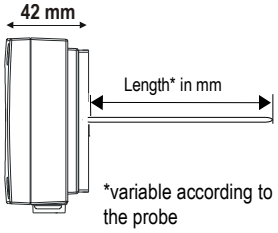
Model : Temperature sensor PT1000 Class B. Stainless steel probe Ø 4 mm, length 100 mm, with stainless steel sliding connection ½ cylindrical gas on IP65 ABS housing. Measuring range from -50 à +100°C.

Housing dimensions

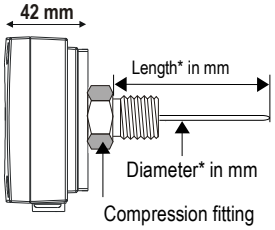
(including wall-mount plate)



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, ¾ to 4/4 hard, no welding
Compression fitting	316 L stainless steel , ½"G male
Environment	air and neutral gases

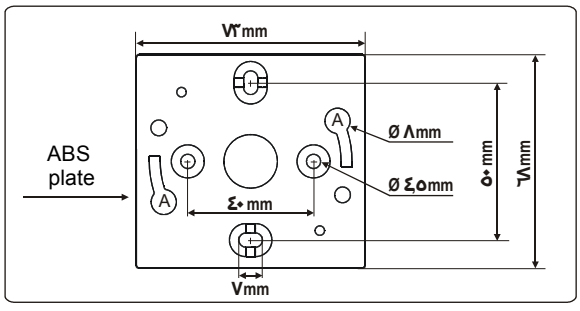
*all accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be garanted for measurements carried out in the same conditions, or carried out with calibration compensation.

Housing features

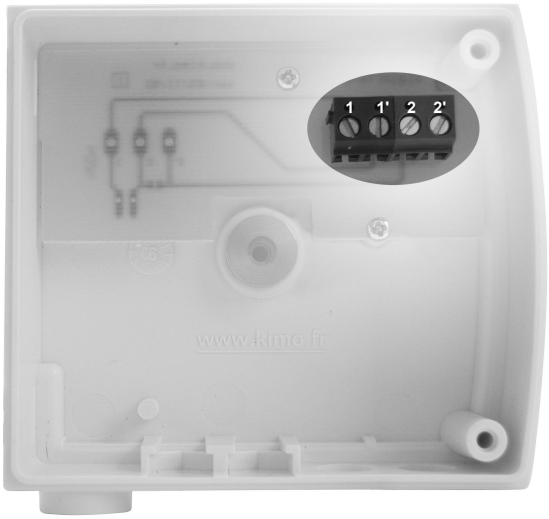
Housing	ABS
Fire-proof classification	H-B as per UL94
Dimensions	See drawings beside
Protection	IP 65
Cable grid	for cables Ø 7mm maxi
Weight	110g
Working temperature	from -20°C to +80°C

Mounting

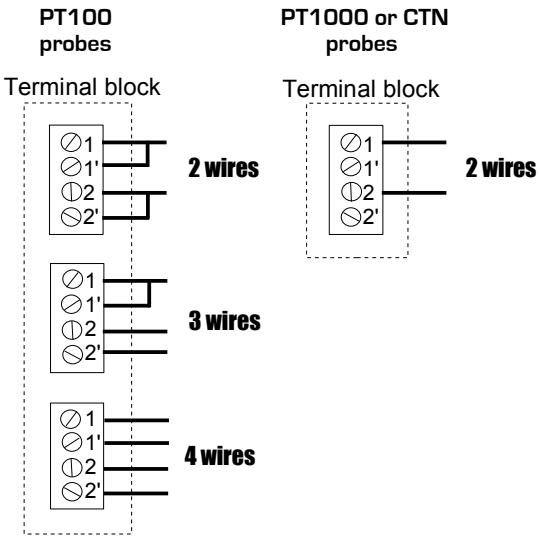
Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : Ø 6 mm (with the screws and pins supplied with the transmitter). Insert the transmitter on the plate (see A on the drawing below) and rotate its housing in clockwise direction until you hear a “click” 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*

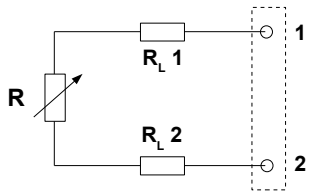


Cable connection on terminal block



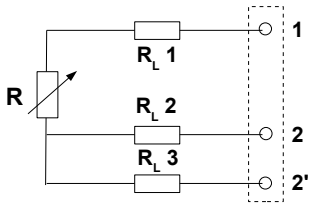
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



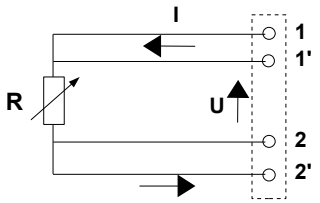
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be substracted 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		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

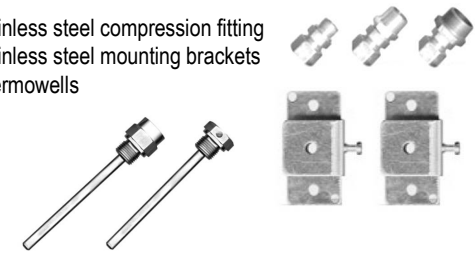
Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

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



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KIMO INSTRUMENTS

Technical Data Sheet

Pressure • Temperature • Humidity • Air Velocity • Air Flow

New

CE

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 ouput, 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 ¼" turn system with wall-mount plate.
- LCC100 configuration software (optional).
- With or without stainless steel sliding connection, ½" cylindrical Gas.

Part numbers

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

Output / Sensor / Power supply
- A V : **4-20 mA** ▪ Passive ▪ 18/30 Vdc / **0-10 V** ▪ Active ▪ 24 Vac/Vdc

Display
- O N : with display / without display

Stainless steel compression fitting, ½ cylindrical gas
- R S ...* : with sliding connection / without sliding connection

* Other sliding connections available on request

SG100 [ ] - [ ] - [ ] - [ ] - [ ]

Probe diameter (mm): 4 / 6 / 8

Probe length (mm): 50 / 100 / 150 / 200 / 250 / 300 / 350 / ...*

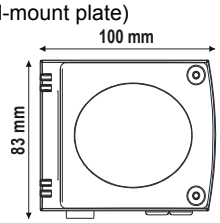
* Other lengths available on request

Example : SG100 – V – O – 4 - 100 - R

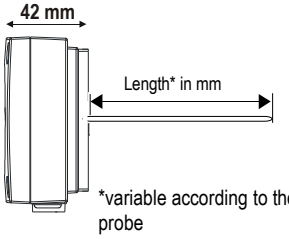
Model : PT100 Class A temperature sensor, with display.
Stainless steel probe Ø 4, length 100 mm with stainless steel compression fitting ½" cylindrical gas on IP65 ABS housing. 0-10V active sensor with a 24 Vac/Vdc power supply.

Housing dimensions

(including wall-mount plate)

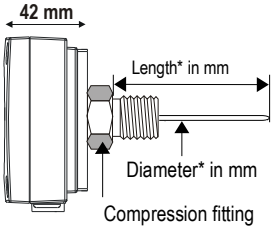


Without compression fitting



*variable according to the probe

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, ¾ to 4/4 hard, no welding
Compression fitting	316 L stainless steel , ½"G male

*all accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be garantied 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

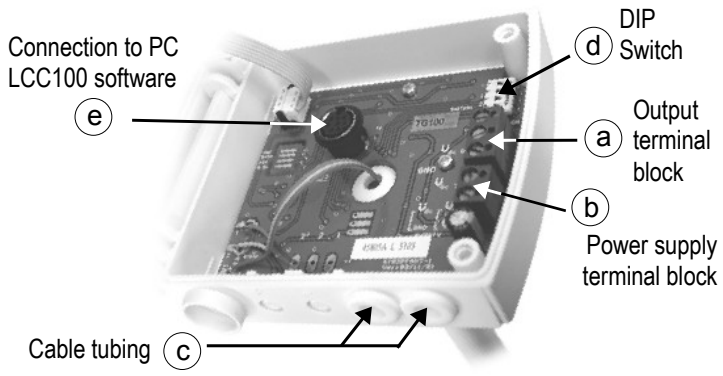
WITH or WITHOUT **display**

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



Power supply

b — Vdc..... direct voltage
GND..... ground

OR

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

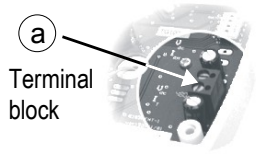
Output

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)

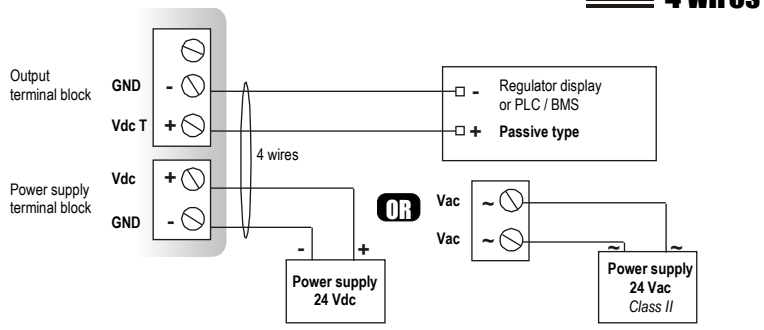


Electrical connection - *as per norm* ***NFC15-100***

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

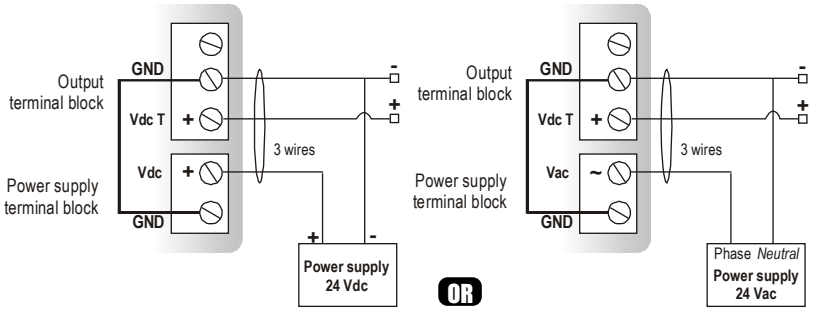
For models
SG 100 - V - O & SG 100 - V - N ● Output 0-10 V – active loop

4 wires



3 wires

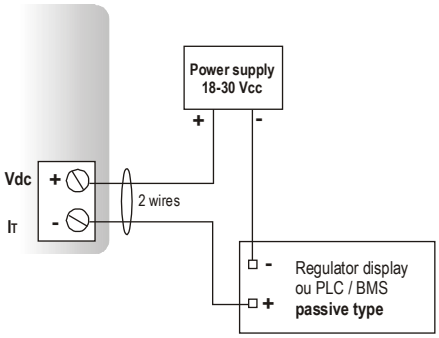
⚠ To make a 3-wire connection, **before powering up the transmitter**, connect the ground to the output of the input ground. See drawing below.



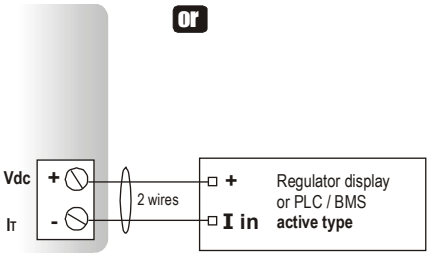
For models

SG 100 - A - O & SG 100 - A - N ● Output 4-20 mA – passive loop

2 wires



Or



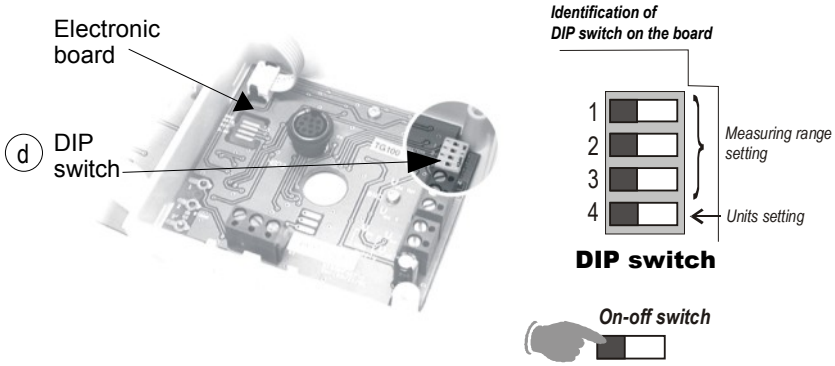
Configuration

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 ■ 2 □ 3 □ 4 ■	1 □ 2 □ 3 □ 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.

	Measuring ranges			
Configurations	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 □

■ *Initialization of the transmitter*

When the transmitter is powered up, it initializes and displays the digits 0.0.0.0.0. , and then its configuration including :
- The measuring range - The analogue output.

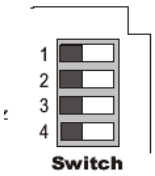
1 – The measuring range.
The following message is displayed : Lo . This is the low value of the measuring range, and its digit value : **ex** : 0
The following message is displayed : HI . This is the high value of the measuring range and its digit value : **ex** : 100
The arrow displayed (at the bottom 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 : 4-20A .
If the analogue output is 0-10 V, then the following message will appear : 0-10U .

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").

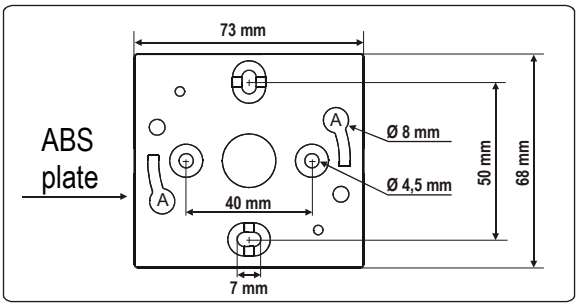
• **Please refer to the user manual of the LCC 100 to make the configuration.**

⚠ 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

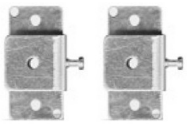
Clean the housing and probe only with cloth dampened with soapy water. Please avoid any of the following solvents at any concentration : petrol, petroleum, acetone, trichloroethylene, ammonia, acid, bicarbonate soap or bleach.

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



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KIMO INSTRUMENTS

Technical Data Sheet

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

Temprerature probe thermocouple K / CTN / Pt100

Special compost

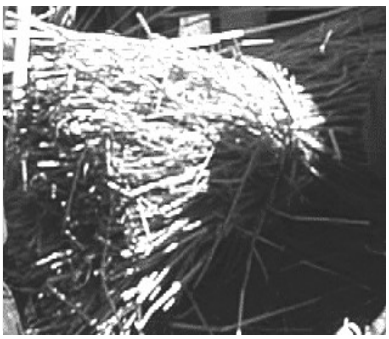
- Measuring ranges from -50°C to +400°C
- Lengths from 1000 mm to 2000 mm
- Protection sheath made in stainless steel, perpendicular handle and tapered tip
- Robust and hard-wearing
- Probes compatible with temperature dataloggers and with portable thermometers

Temperature dataloggers version*

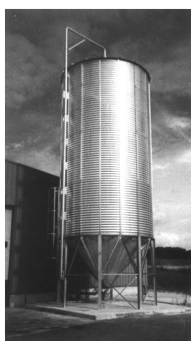
*Sold separately

The **"special compost"** temperature probes allow measurements in specofic environments such as :

Compost

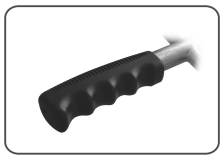


Straw

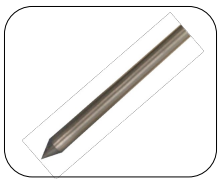


Grain elevator

DESCRIPTION

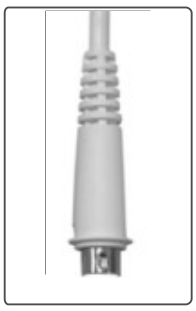


Perpendicular handle
2 x 150 mm, Ø 21,3 mm

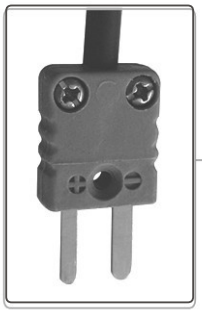


Tapered tip

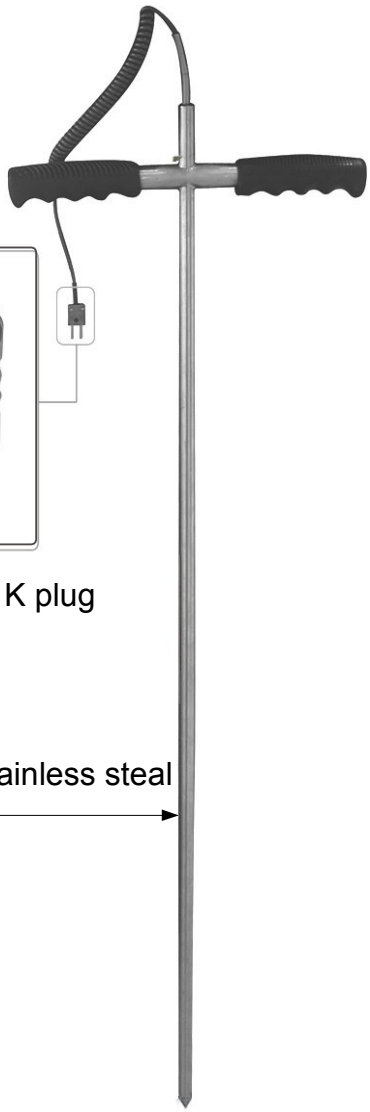
NTC plug



Pt100 plug



Thermocouple K plug



Protection sheath in stainless steal
316 L, Ø 16

SPECIFICATIONS

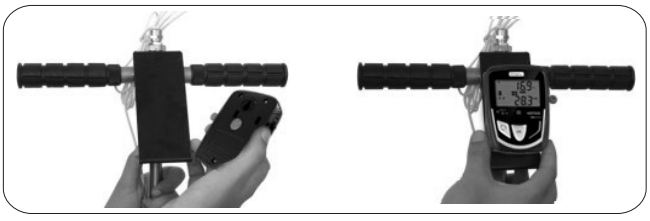
Probe	Length	Range	Accuracy	Compatible with...
SKP 1000 **SKP 1500** **SKP 2000**	1000 mm 1500 mm 2000 mm	From -50 to +400°C	±1.1 °C ±0.4% of reading	**Portable thermometers :** TK100 / TK100 / TM200
KCC 1500 I (CTN)	1500 mm	From -40 to +120°C	±0.3°C ±0.5°C	**Temperature dataloggers :** Classes 110/1210
KRCI 1500 (Pt100)	1500 mm	From -50 to +400°C	±0.3°C ±0.4% of reading	**Temperature dataloggers :** classe 310

OPTIONAL

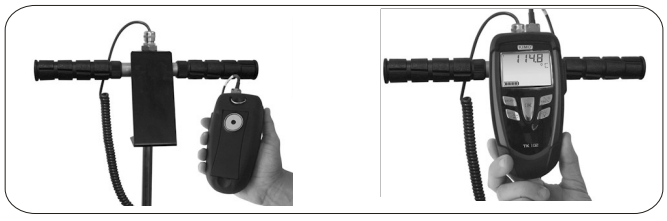
• Support type **KSP**

It allows you to fasten temperature devices (portable or datalogger) to the probe, making the measurement easier.

Fastening on stand with temperature datalogger



Fastening on stand with portable thermometers



• **BPK** case in polycarbonate

It allows you to hold and protect the device to the probe making the measurement easier. It is equipped with a specific seal to resist to aggressive environments**.**

Technical features :

- Dimension : 170 x 80 x 65 mm
- Material : polycarbonate
- Seal : EPDM
- Protection : IP 67
- Transparente cover front

Fixation with
magnetic support

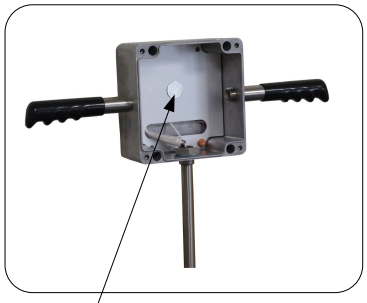
Housing with
Kistock KT210

• **BAK** case in aluminium

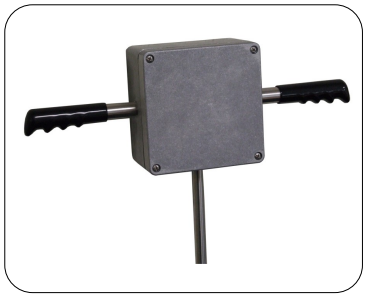
It allows you to fasten and protect the device to the probe making measuring dataset easier. The housing is made of strong cast aluminium and is suitable for aggressive environments.

Technical features :

- Dimension : 160 x 160 x 90 mm
- Material : cast aluminium
- Seal : neoprene
- Protection : IP 65



Fixation with
magnetic support



Housing closed

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KIMO INSTRUMENTS

Technical Data Sheet

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

SPR350 / SPR500

Highly accurate *temperature probe*

TECHNICAL FEATURES

Sensitive element	Pt100 1/10 Din
Working temperature	From -190 °C to +500 °C
Accuracy (linearity, hysteresis, drift over one year)	From -70 to +250 °C : ±(0.1+0.0017 |t|) °C From -190 to -70 °C and from +250 to +500 °C : ± (0.15+0.002 |t|) °C
Nominal resistance	100 Ω at 0 °C as per IEC 60 751 standard
Measurement current	Recommended 1 mA
Temperature coefficient	0.385 Ω/°C (between 0 and 100 °C)
Response time at 63%	12 sec.
Self-heating coefficient "E"	0.05 K/mW in the air (V_{air} = 2 m/s) 0.01 k/mV in water (V_{water}= 0.2 m/s)
Self-heating	$\Delta t = I^2 \times R \times E$
Contact tip	O4,5 mm, length : 350 mm (SPR350) or 500 mm (SPR500) in 316 L stainless steel whitout weld
Handle	Black ABS Temperature : from -40 to +85 °C
Cable	Pfa sheathed Shielded braid 4 conductors in silver copper, of 0.22 mm² section Max. temperature : 250 °C Length : 2 m
Cofrac calibration	3 points : -40 °C, 0 °C and 200 °C, others points on request
Recommended immersion length	130 mm

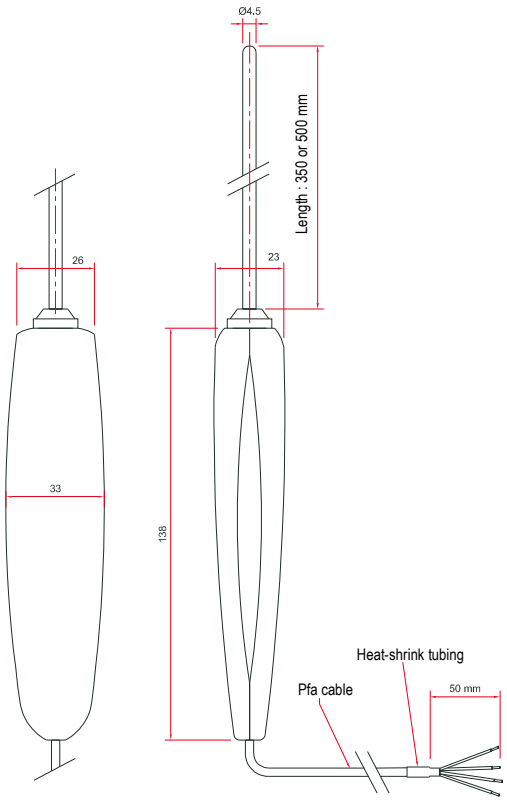
OPTIONAL

- Custom connector mounting on request

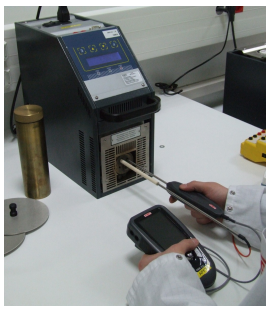
SUPPLIED WITH

Supplied with transport case

DIMENSIONS



APPLICATION



SPR350 probe on calibration oven

SPR350 probe on climatic chamber

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KIMO INSTRUMENTS

Technical Data Sheet

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

CE

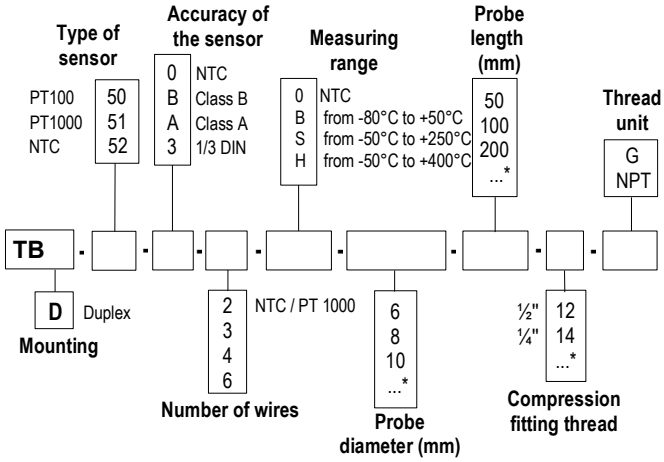
RTD sensor with standard connection head

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.

Part numbers

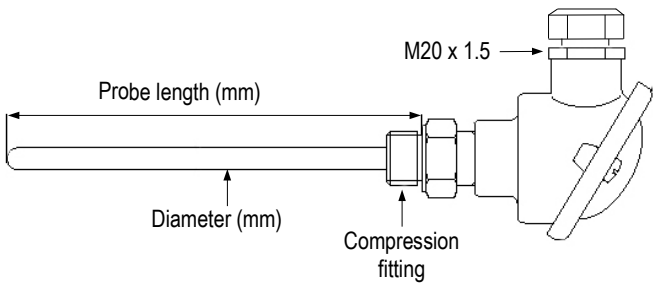
To order, just add the codes to complete the part number.



* 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 ½" 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} = 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)

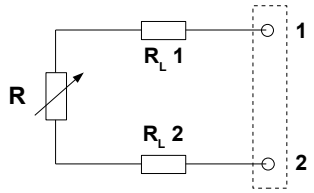
Electrical connection.....with or without terminal block
transmitter 4/20mA 0/10V as option

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

Adjustable mountings.....compression fitting welded further along the sheath, flange, clamp, repleacable probe insert, restricted end, ambient end.
See datasheet.

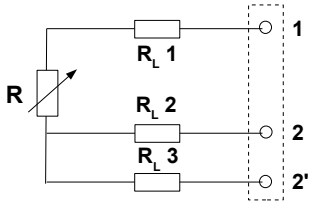
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



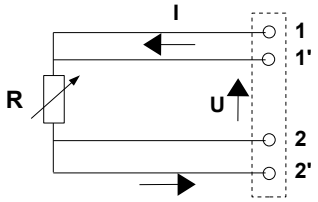
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be substracted 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

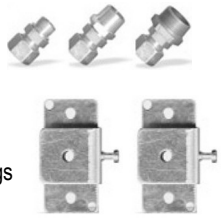
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

Tolerances of NTC probes

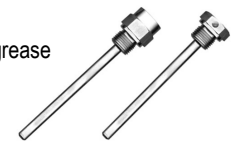
Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

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



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KIMO INSTRUMENTS

Technical Data Sheet

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

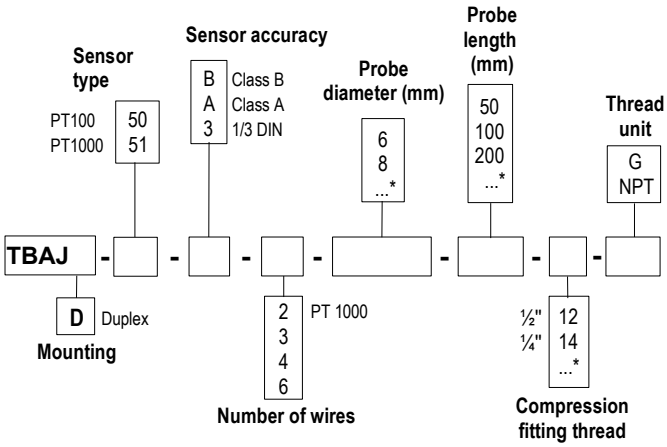
CE

*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 ½" 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

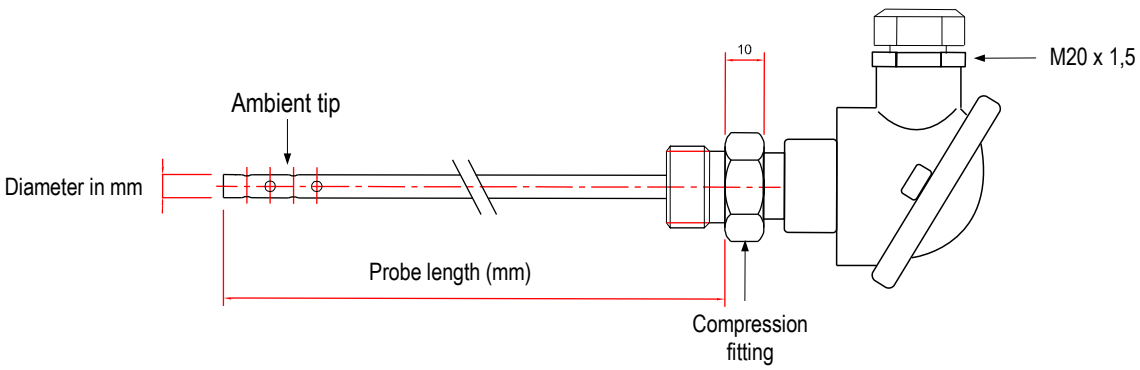
Sheath.....316 L stainless steel, no welding, 3/4 to 4/4 hard. Ambient tip of 20 mm.
6 or 8 mm Ø or other on request

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

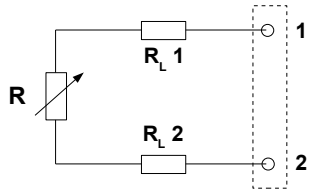
Adjustable mountings.....compression fitting welded further along the sheath, flange, clamp, interchangeable probe system, restricted tip, ambient tip. See datasheet.

Dimensions



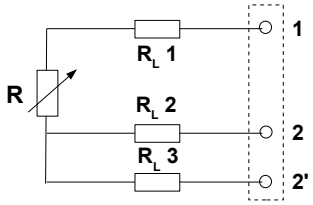
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



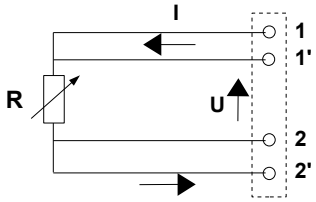
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be substracted 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.

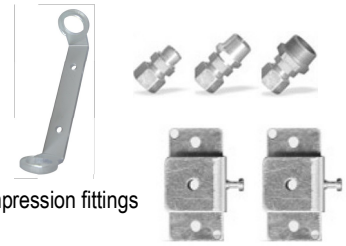
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

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

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KIMO INSTRUMENTS

Technical Data Sheet

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

CE

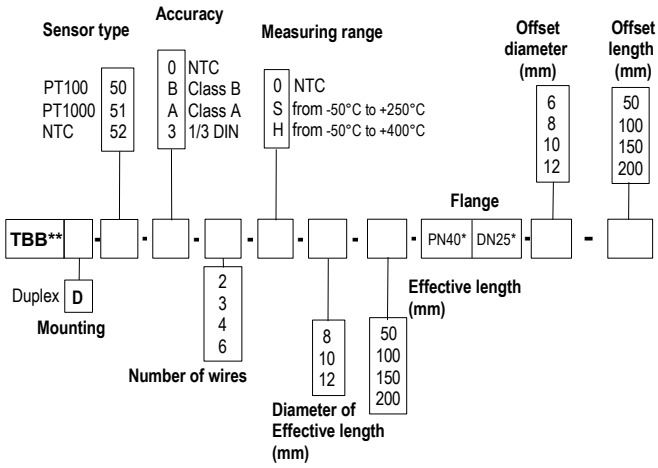
RTD sensor with ***standard head,*** *with* ***resistive element*** *and* ***mounting flange***

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

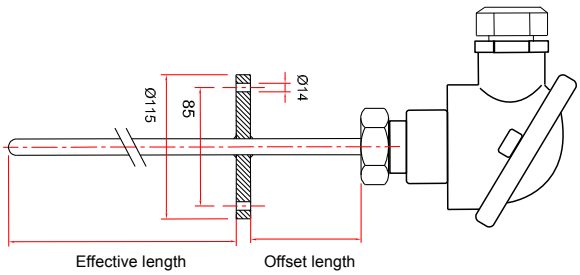
To order, just add the codes to complete the part number.



* 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, R_{25} = 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 ¾ 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.

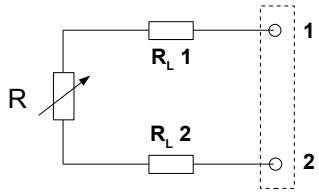
Electrical connection.....with or without terminal block
4/20mA 0/10V transmitter as option

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

Adjustable mountings.....replaceable element

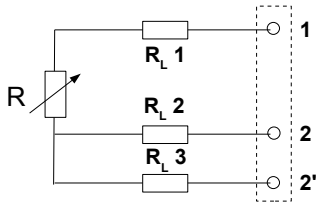
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



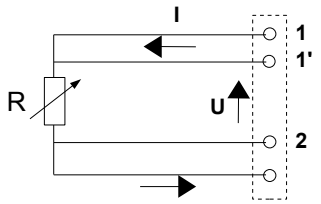
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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

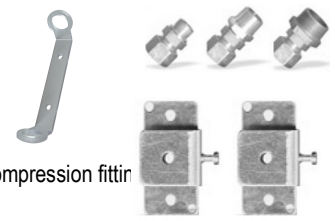
Tolerances of NTC probes*

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

*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 fittir



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

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Technical Data Sheet

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

CE

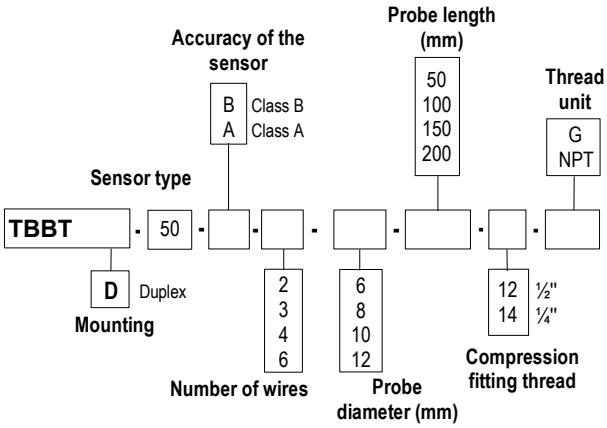
RTD sensor with
standard** head and with **resistive element
for very low temperature application

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).

Part numbers

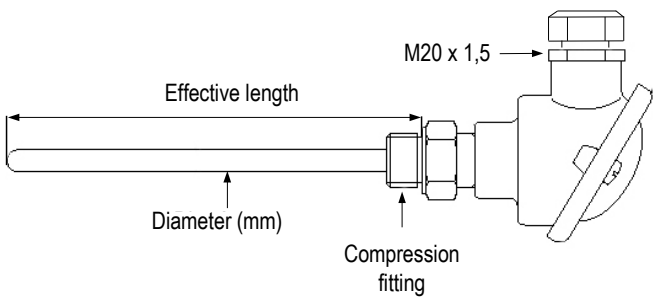
To order, just add the codes to complete the part number.



* 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 ½' 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

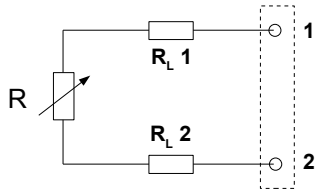
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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.

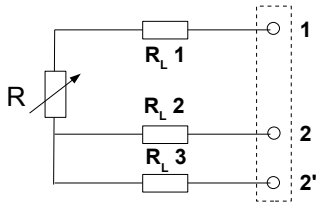
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



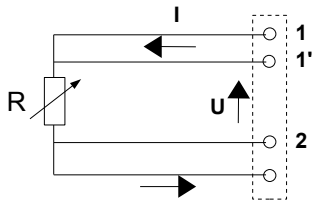
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

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

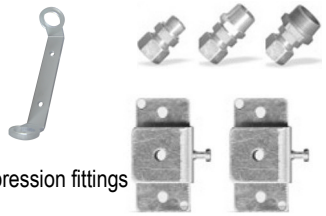
• 4-wire connection



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.

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

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KIMO INSTRUMENTS

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

CE

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.

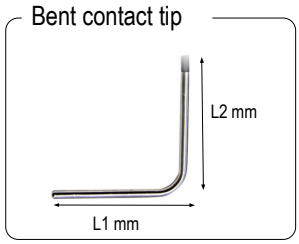
Transmitter features

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} = 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 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 ½'G et ¼'G fittings.
Mounting with fitting on L1 (See schema) : 12L1 or 14L1 corresponding to ½'G et ¼'G fittings.

No 4 wires mounting for contact tip 4mm ø.

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

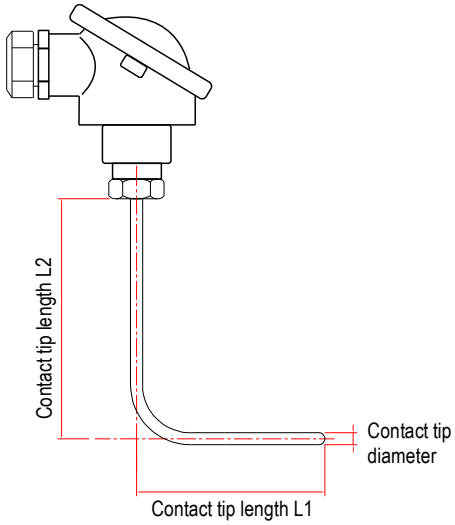
Adjustable mounting.....See catalogue or data sheet of related mountings.

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

	Multipair	Sensor type		Accuracy		Number of wires (output)		Measuring range		Contact tip diameter (mm)	L1 length (mm)	L2 length (mm)	Angle
TBC –	D ...	50 51 52	PT100 PT1000 NTC	0 B A 3	NTC Class B Class A 1/3 DIN	2 3 4 6	NTC or PT1000 PT100 PT100	O S H	NTC from -50°C to +250°C from -50°C to +400°C	6 8 10 12	50 100 150 200 ...*	50 100 150 200 ...*	90 ...

* Other dimension on request

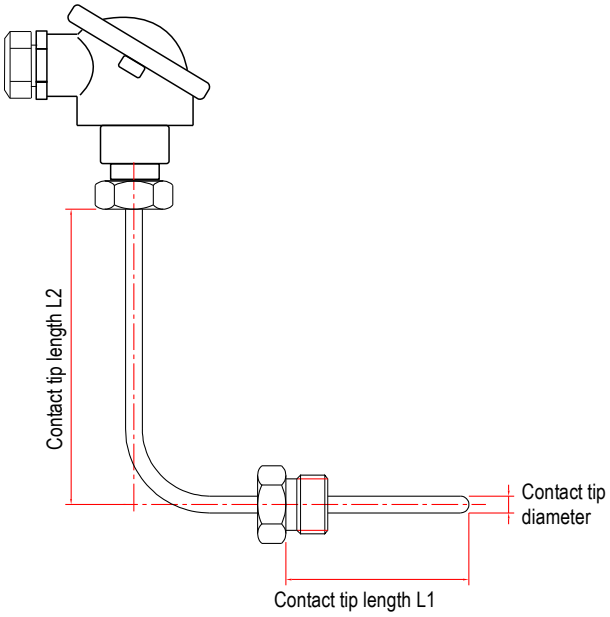
Example : TBC-51-B-2-S-8-100-100-90
Model : PT1000 temperature sensor Class B, 2 wires, stainless steel contact tip 8 mm Ø bent at 90° and lengths L1 and L2 of 100 mm.
Measuring range from -50 to +250°C.

TBCR

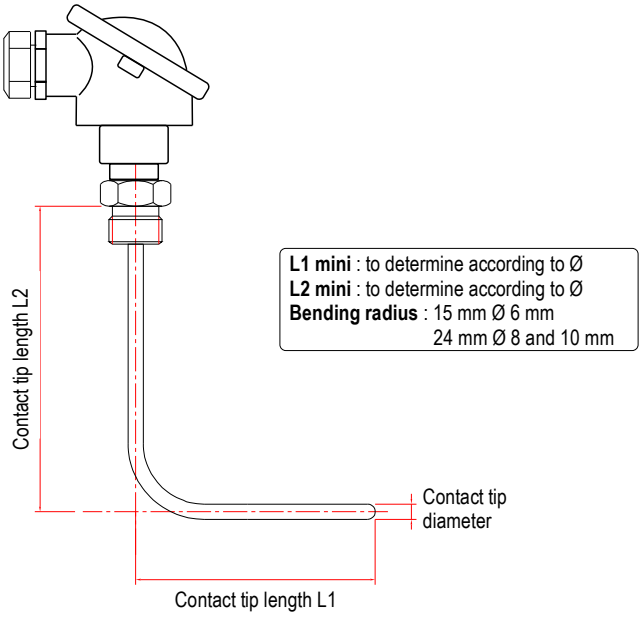
Bent sensor with fitting
and with or without multipair mounting

Dimensions probe

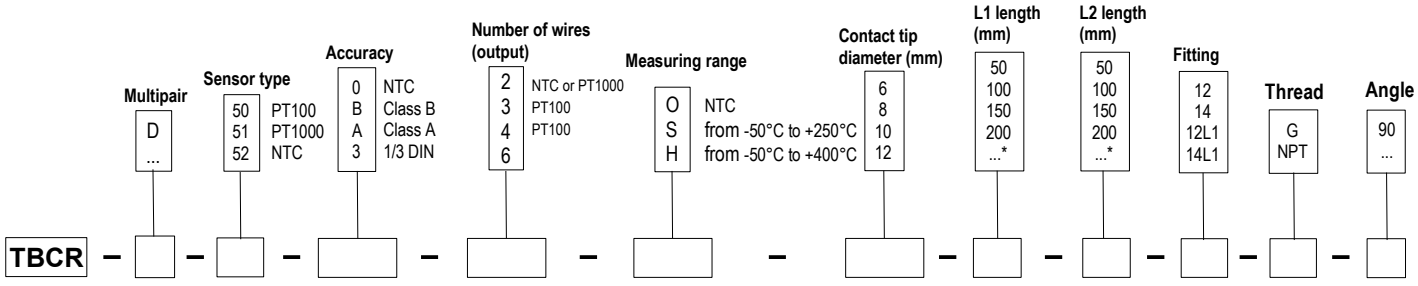
- With fitting on L1



- With fitting on L2



Part numbers



* Other dimension on request

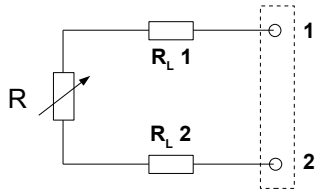
Example : TBCR-51-B-2-S-8-100-100-12-G-90

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 ½' G fitting on L2.

Measuring range from -50 to +250°C.

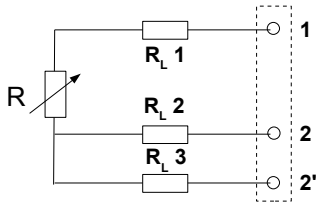
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



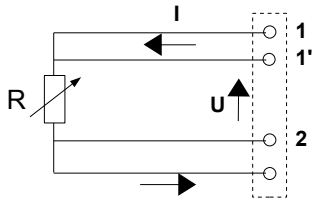
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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

*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

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KIMO INSTRUMENTS

Technical Data Sheet

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

CE

*RTD sensor with head for **contact duct***

TBCT 50 / TBCTD 50
TMCT 50 / TMCTD 50

Supplied with clip for DN 100 duct

Transmitter features

Working temperature ***(according to reference)*** ..... *for mounting TBCT type*
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, R_{25} = 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

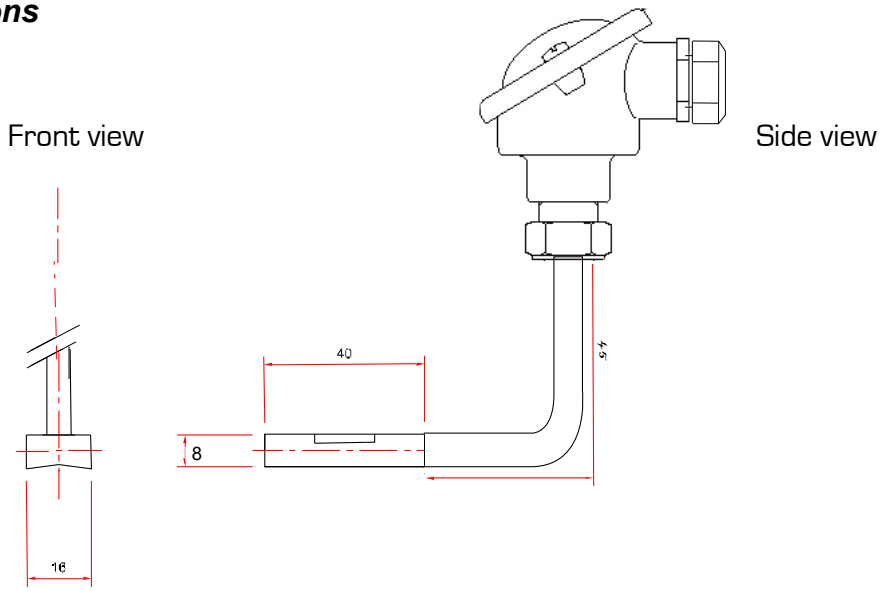
Probe features

- 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.

TBCT 50 & TBCTD 50

Temperature sensor with standard head and with contact for duct

Probe dimensions



Références

• Single pair sensor – Ref. TBCT 50

Sensor type		Number of wires (output)		Clearance of the head
PT100	50	2	NTC or PT1000	45
PT1000	51	3	PT100	...*
NTC	52	4	PT100	

TBCT - [ ] - [ ] - [ ] - [ ] - [ ] - 45

Accuracy		Measuring range		
NTC	0	0	NTC	
Class B	B	S	from -50°C to +250°C	
Class A	A	H	from -50°C to +400°C	
1/3 DIN	3			

* 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

Sensor type		Number of wires (output)		Clearance of the head
PT100	50	4	NTC or PT1000	45
PT1000	51	6	PT100	...*
NTC	52			

TBCTD - [ ] - [ ] - [ ] - [ ] - [ ] - 45

Accuracy		Measuring range		
NTC	0	0	NTC	
Class B	B	S	from -50°C to +250°C	
Class A	A	H	from -50°C to +400°C	
1/3 DIN	3			

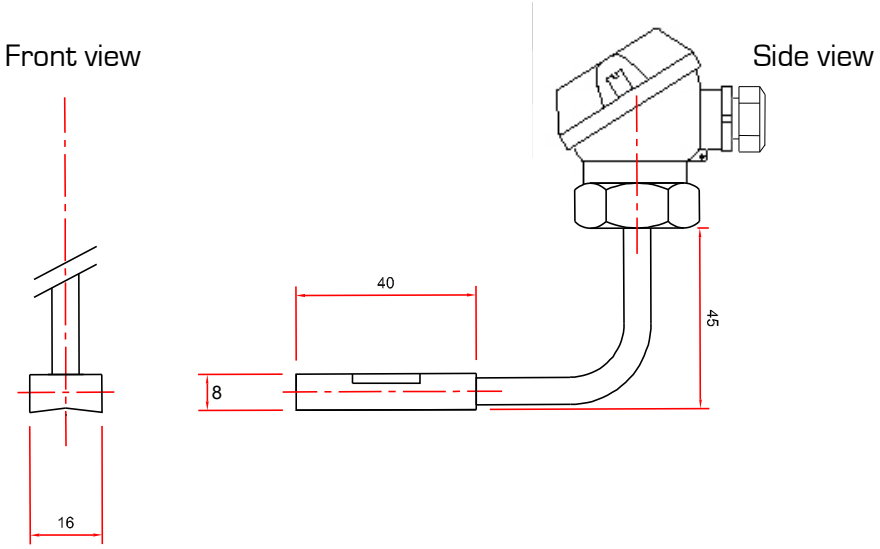
* Other on request

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

Sensor type		Number of wires (output)		Clearance of the head
PT100 / PT1000 / NTC	50 / 51 / 52	2 / 3	NTC or PT1000 / PT100	45 / ...*

TMCT - ☐ - ☐ - ☐ - ☐ - ☐ - 45

Accuracy		Measuring range	
NTC Class B	0	0	NTC from -50°C to +250°C
Class A	B	S	
1/3 DIN	A		
	3		

* 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

Sensor type		Number of wires (output)	Clearance of the head
PT100 / PT1000 / NTC	50 / 51 / 52	4	45 / ...*

TMCTD - ☐ - ☐ - ☐ - ☐ - ☐ - 45

Accuracy		Measuring range	
NTC Class B	0	0	NTC from -50°C to +250°C
Class A	B	S	
1/3 DIN	A		
	3		

* 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.

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

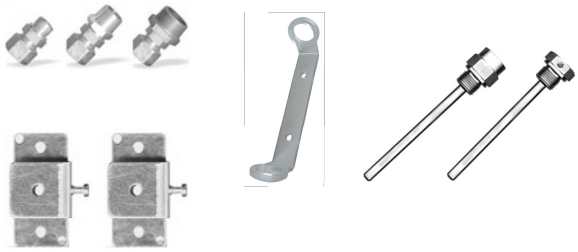
Tolerances of NTC probes*

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



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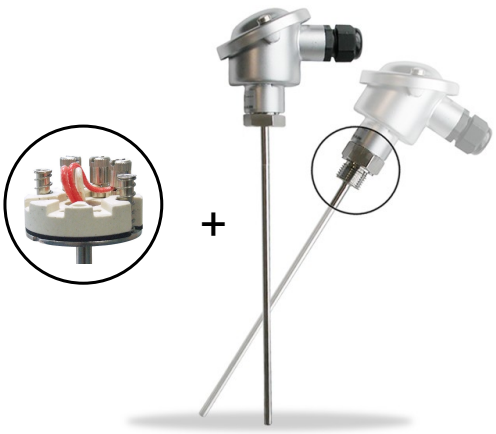
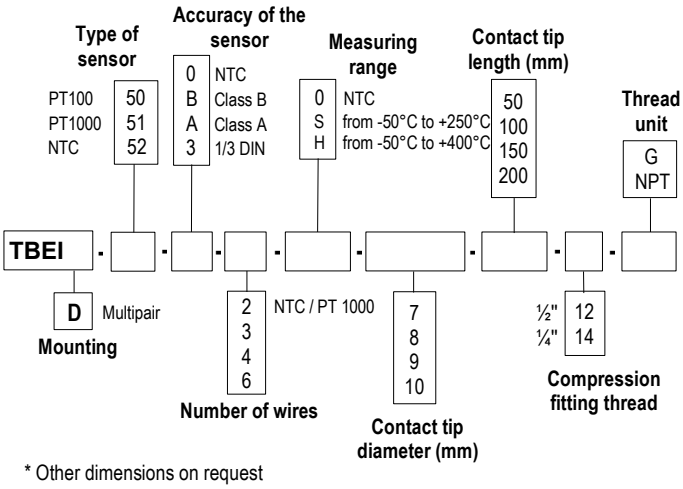


*RTD sensor with **standard head** and with **resistive element** with **interchangeable mountings***

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

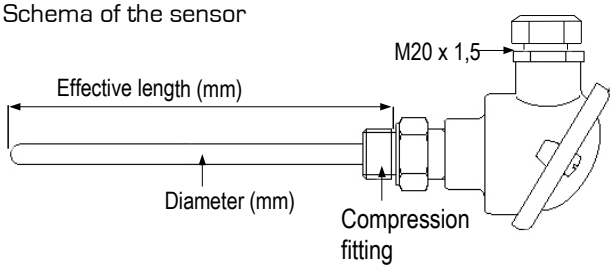


* Other dimensions on request

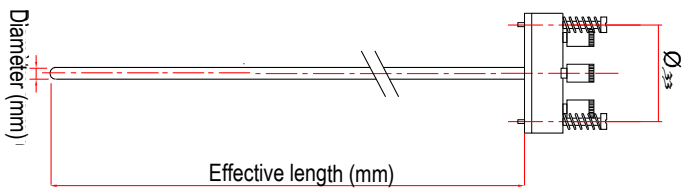
Example : TBEI-50-B-3-S-7-100-12G.
Model : PT 100 temperature sensor class B, with 3 wires in a sheath of 7 mm diameter and 100 mm length (including thread), with a ½ "G thread plug and with interchangeable element of 4 mm Ø and 140 mm length.
Standard measuring range from -50°C to 250°C.

Dimensions

• Schema of the sensor



• Internal interchangeable element schema



Technical features

Working temperature (*According to reference*) ..... 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
CTN : resistance à 25°C, R_{25} = 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

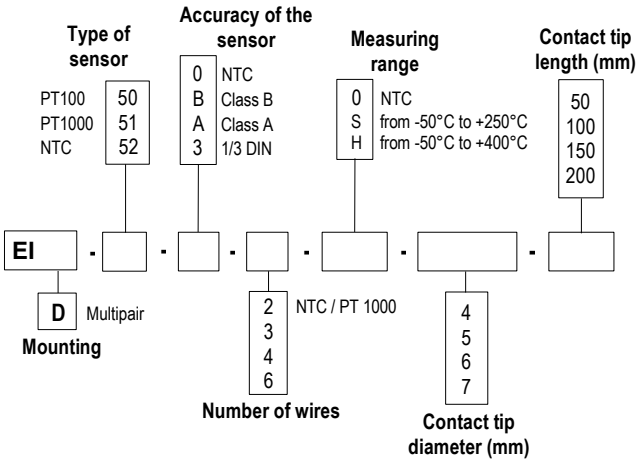
Adjustable mountings ..... compression fitting welded further along the sheath, flange, clamp, repleacable probe insert, restricted end, ambient end.
See data sheet.

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

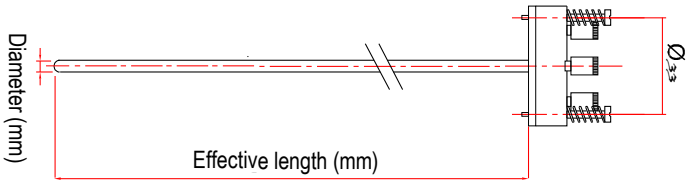


* Other dimension on request

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} = 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

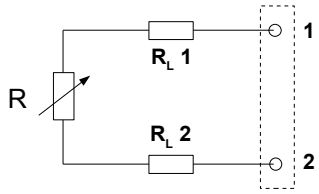
Interchangeable element Ø	*Contact tip minimum Ø*
4 mm	7 mm
5 mm	8 mm
6 mm	9 mm
7 mm	10 mm

LU Length : contact tip length + 40 mm

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.

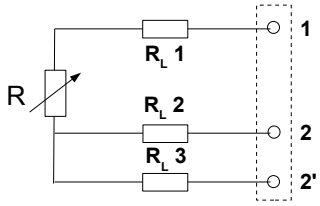
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



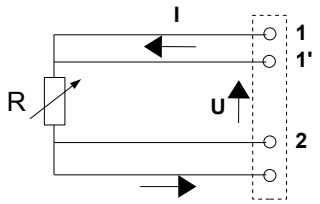
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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.*

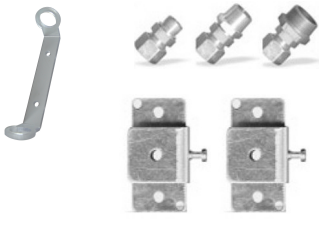
Norms as per IEC 751 (1993), BS 1904 (1984) et DIN 43760 (1980).

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



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KIMO INSTRUMENTS

Technical Data Sheet

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

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

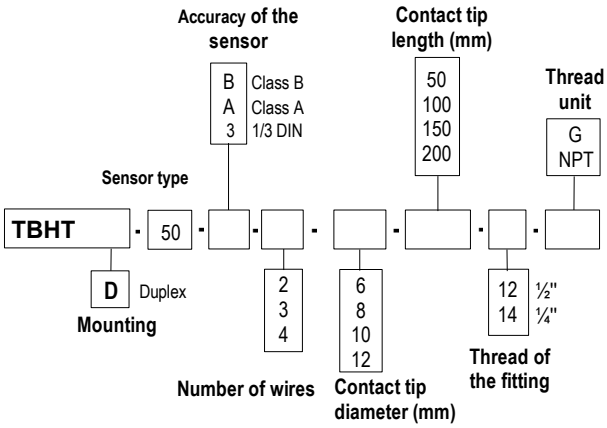
CE

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

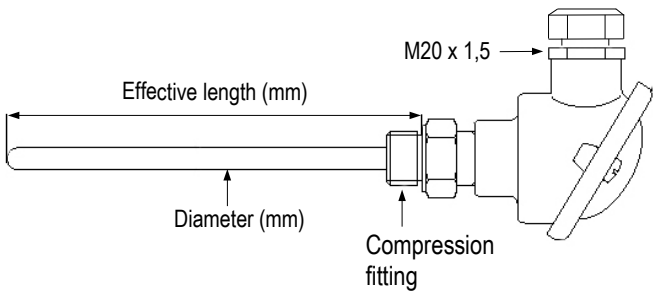
To order, just add the codes to complete the part number.



* 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 ½' 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

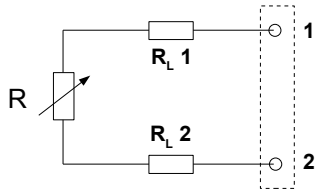
Tolerance of PT100 probes

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

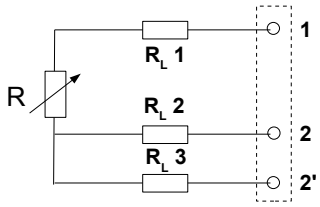
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



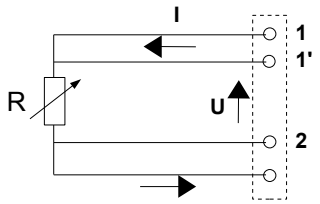
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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.

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

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KIMO INSTRUMENTS

Technical Data Sheet

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

CE

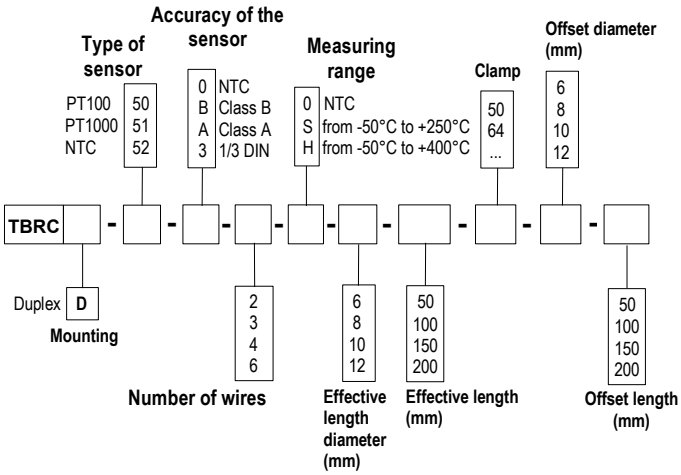
*RTD sensor with **standard head, resistive element** and **clamp fitting***

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

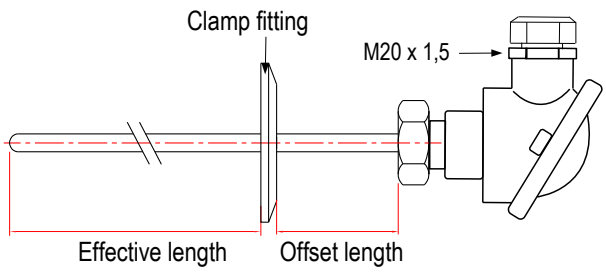
To order, just add the codes to complete the part number.



* 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, R_{25} = 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)

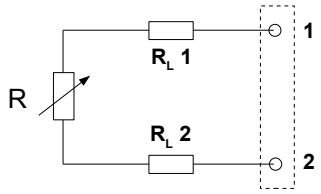
Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

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

Adjustable mountings.....See catalogue or data sheet of specific mountings.

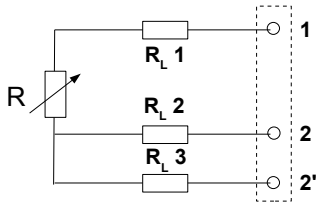
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



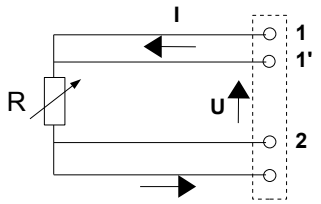
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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) 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

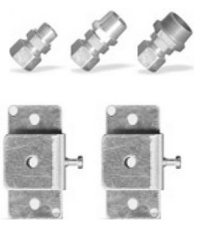
Tolerances of NTC probes*

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

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KIMO INSTRUMENTS

Technical Data Sheet

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

CE

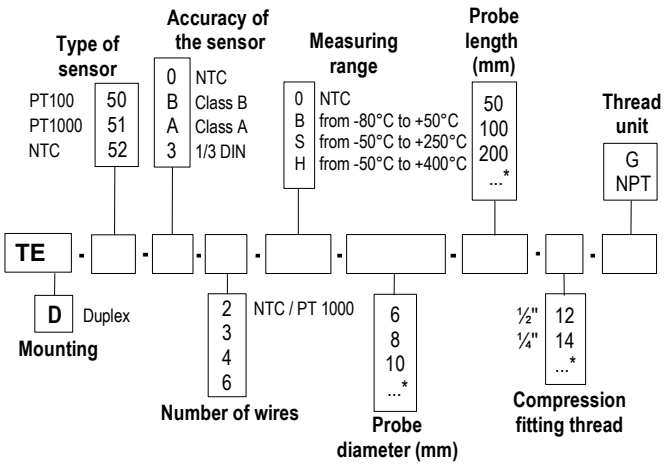
RTD sensor with waterproof connection head

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

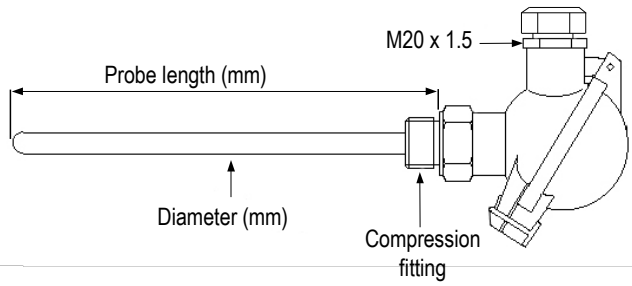
To order, just add the codes to complete the part number.



* 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 ½"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} = 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)

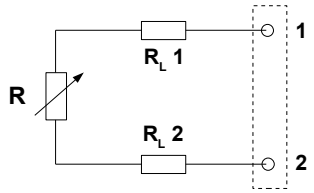
Electrical connection.....with or without terminal block
transmitter 4/20mA 0/10V as option

Connection head.....Aluminium alloy
cable gland : M20 x 1.5
IP68 protection

Adjustable mountings.....compression fitting welded further along the sheath, flange, clamp, repleacable probe insert, restricted end, ambient end.
See datasheet.

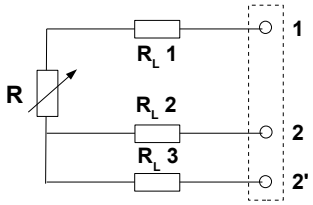
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



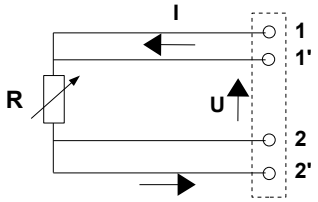
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be substracted 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

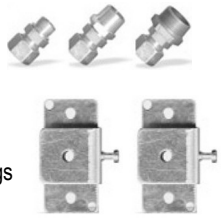
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

Tolerances of NTC probes

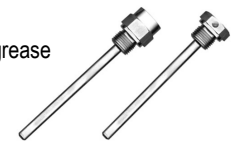
Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

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



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

CE

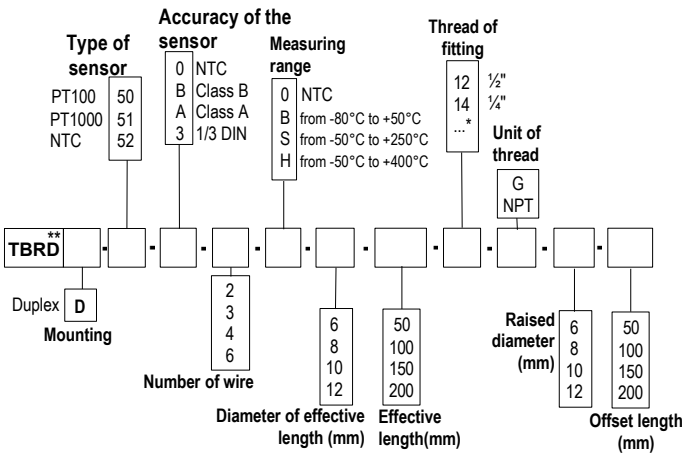
*RTD sensor with **standard head, resistive element and offset fitting***

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.

Part numbers

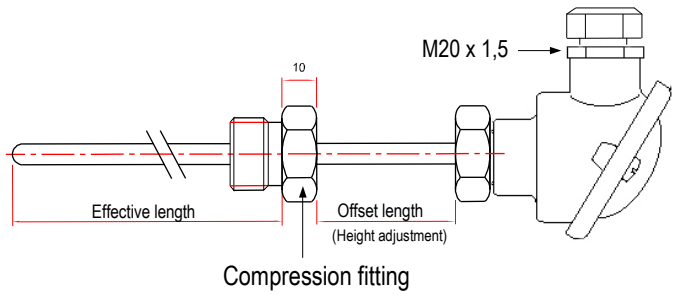
To order, just add the codes to complete the part number.



* 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 ½' 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, R_{25} = 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)

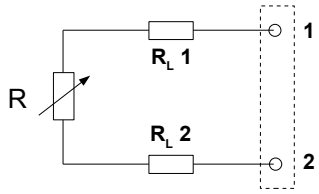
Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

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

Adjustable mountings.....interchangeable element

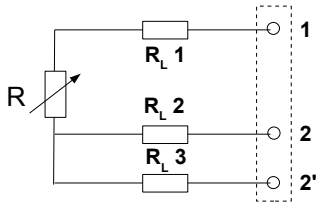
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



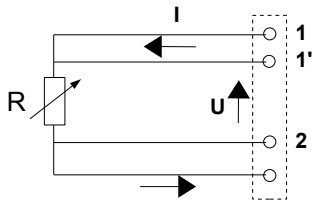
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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) 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

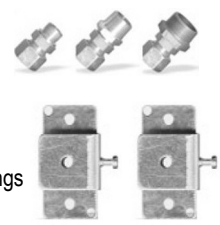
Tolerances of NTC probes*

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

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CE

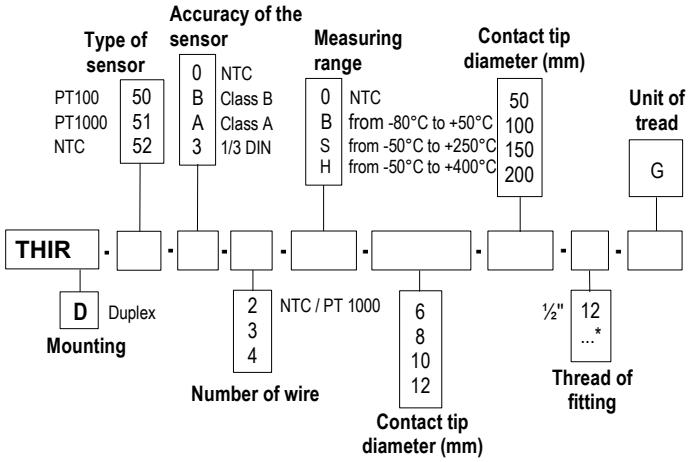
*RTD sensor with **DIN 43650** head and **resistive element***

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.

Part numbers

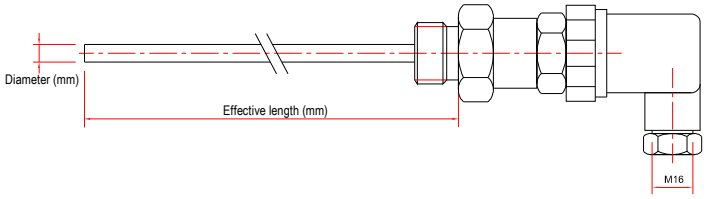
To order, just add the codes to complete the part number.



* 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 ½' 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, R_{25} = 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, ½' G in standard
other on request

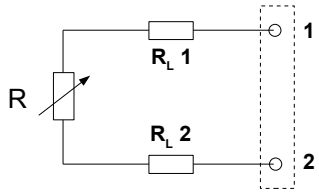
Electrical connection.....Attached tinned brass eyelet on flange

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

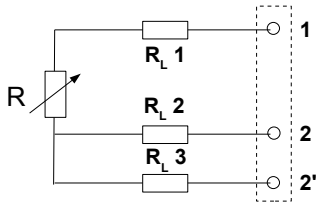
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



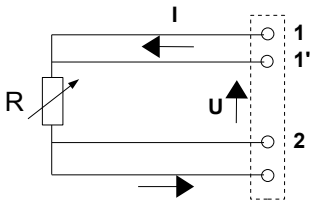
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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) 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

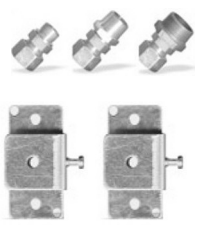
Tolerances of NTC probes*

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

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CE

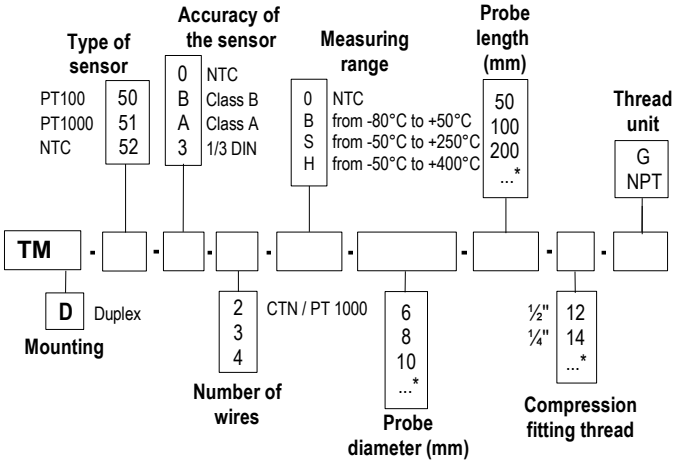
RTD sensor with miniature connection head

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

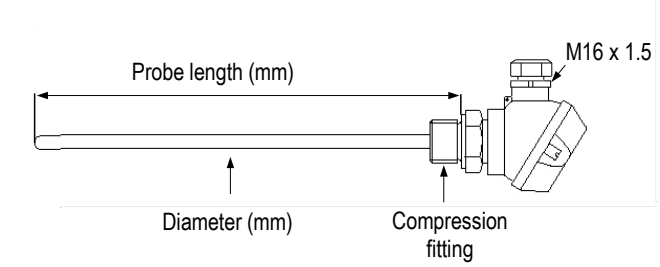
To order, just add the codes to complete the part number.



* 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 ½"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} = 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)

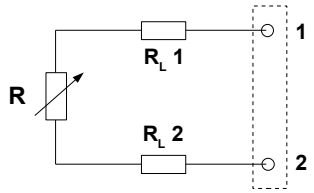
Electrical connection.....with or without terminal block
transmitter 4/20mA 0/10V as option

Connection head.....Aluminium alloy
cable gland : M16 x 1.5
IP65 protection

Adjustable mountings.....compression fitting welded further along the sheath, flange, clamp, repleacable probe insert, restricted end, ambient end.
See datasheet.

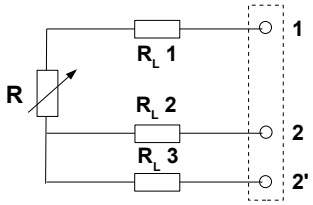
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



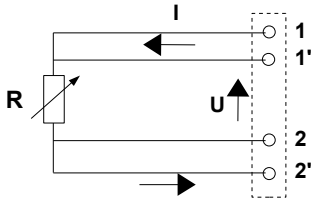
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be substracted 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

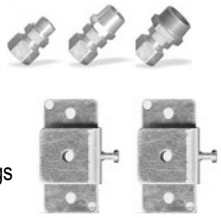
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

Tolerances of NTC probes

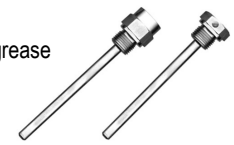
Measuring range °C	Tolerances °C
from -20°C to 0°C	± 0.5°C
from 0°C to +70°C	± 0.2 °C
from +70°C to +100°C	± 0.5 °C

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



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

CE

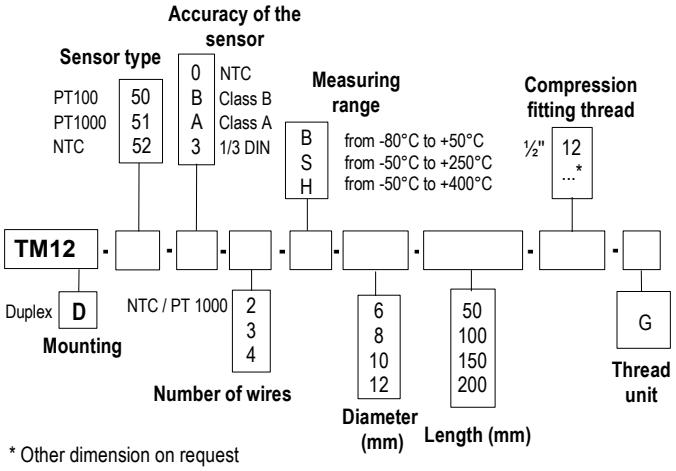
TM 12 50 / TM 12 D 50

- 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.

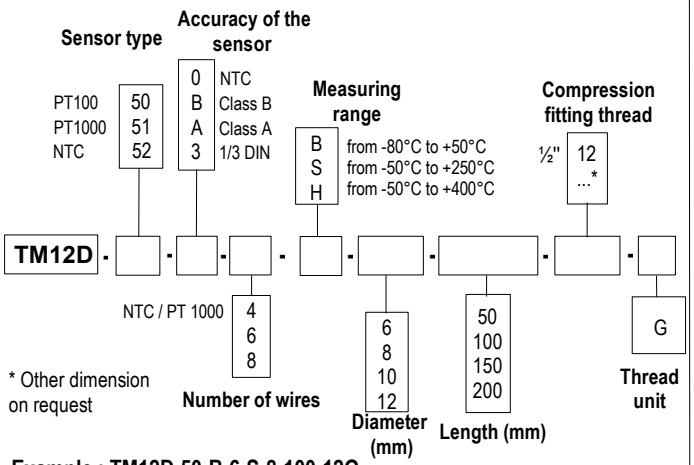
• TM 12



* Other dimension on request

Example : TM12-50-B-3-8-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 ½' 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 ½' G. Measuring range **from -50°C to 250°C.**

Technical features

Operating temperatures *(according to reference)*: 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

Sensor type: **PT100 orPT1000** : Class B, Class A, 1/3 DIN as per DIN IEC 751
NTC: resistance at 25°C, R_{25} = 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 ¾ to 4/4 hard
Other on request

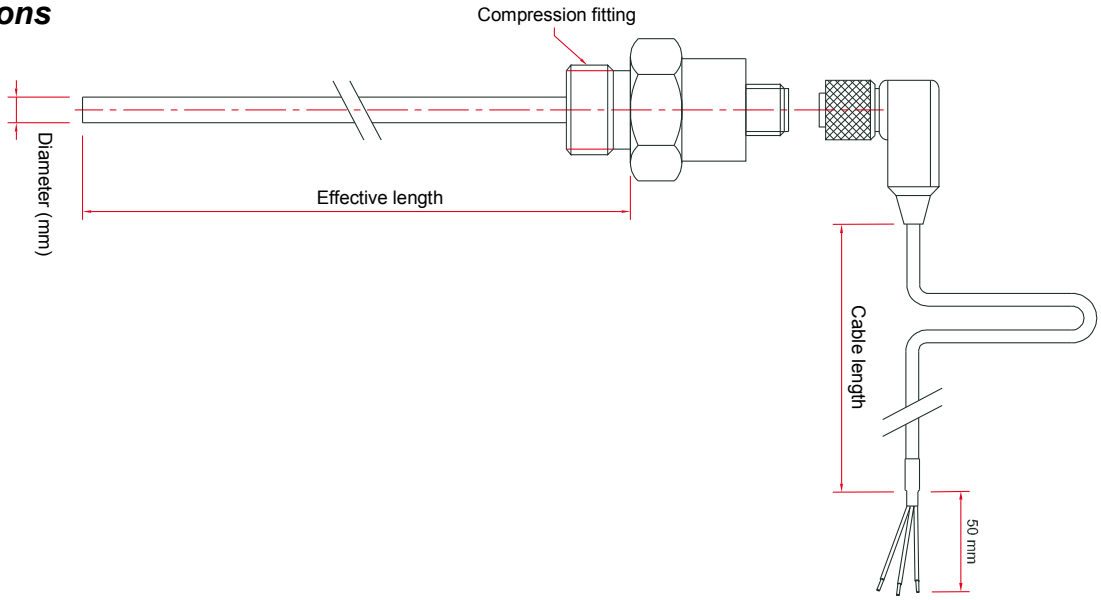
Compression fitting: 316 L stainless steel

Thread: with or without, ½' 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 : nickeled CuZm with gilding of 0.8 µm

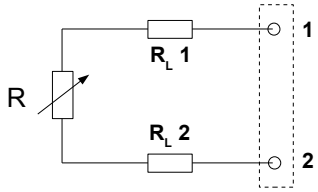
Adjustable mountings: flange, offset fitting, perforated, etc...

Dimensions



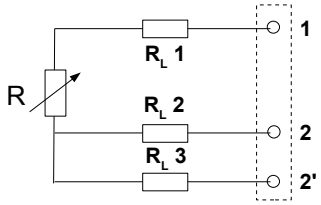
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



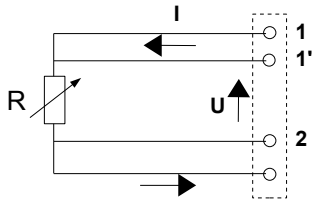
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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.

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.

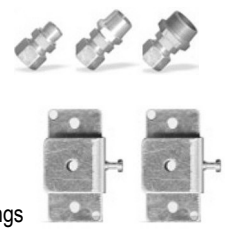
Norms as per IEC 751 (1993), BS 1904 (1984) and DIN 43760 (1980).

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

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RTD sensor with noryl connection head for chemical or food industry

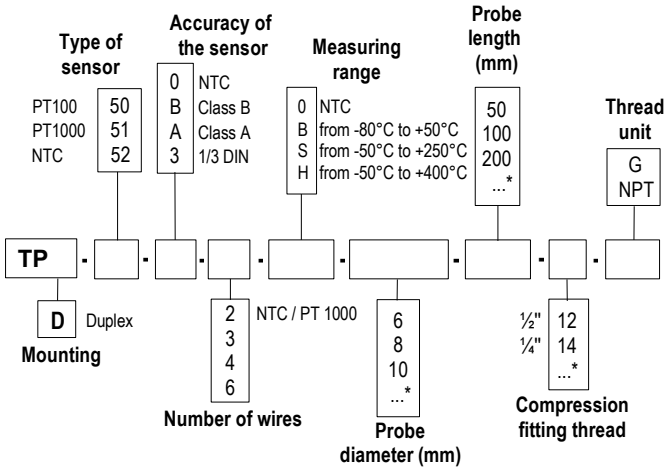
CE

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.

Part numbers

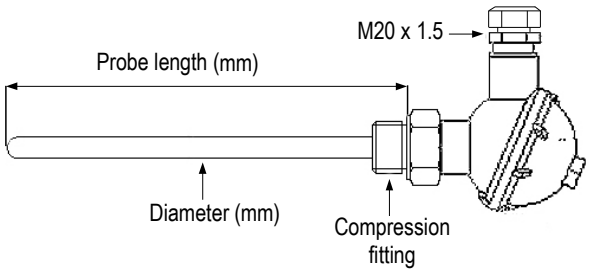
To order, just add the codes to complete the part number.



* 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 ½"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} = 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)

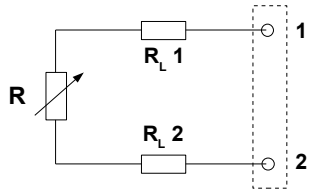
Electrical connection.....with or without terminal block
transmitter 4/20mA 0/10V as option

Connection head.....Noryl resin
cable gland : M20 x 1.5
IP65 protection

Adjustable mountings.....compression fitting welded further along the sheath, flange, clamp, repleacable probe insert, restricted end, ambient end.
See datasheet.

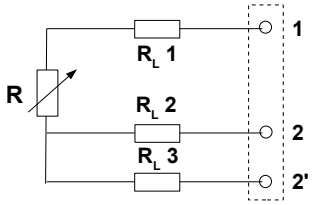
Useful information on thermometry with platinum resistor PT100, PT1000 or NTC .

• 2-wire connection



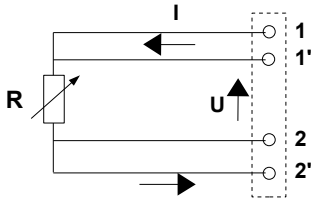
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 3-wire connection



This connection involves identical line resistors (RL1-RL2-RL3), RL2 + RL3 allow you to measure the line resistance that will be substracted 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

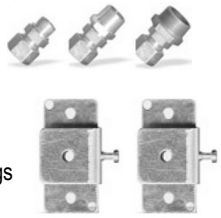
Resistance values for PT1000 (Ω) must be multiplied by 10 for the same corresponding temperature value (°C). I.e : at 0°C for Class B PT1000 ± 0.3°C → ± 1.2 Ω

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

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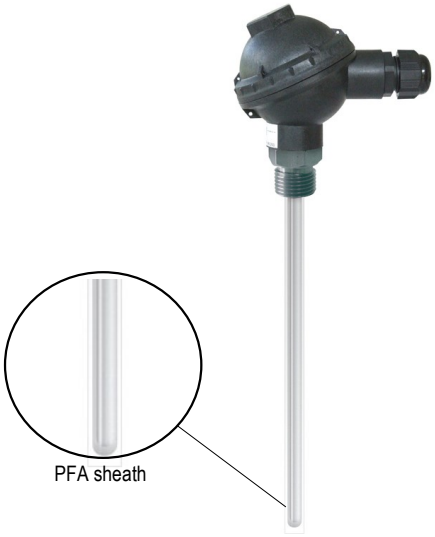
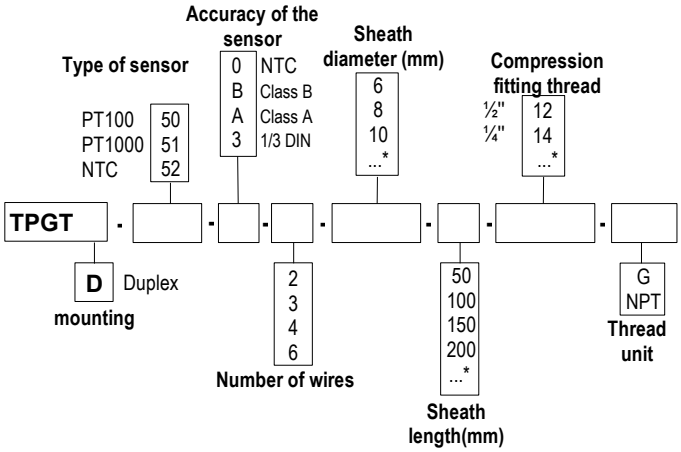


*Temperature probe at resistive element for **aggressive environment***

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.

Part numbers



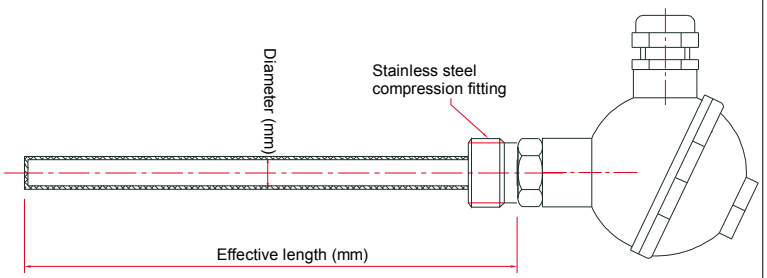
* Other dimension on request

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, R_{25} = 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 (perfluoralkoxy) 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)

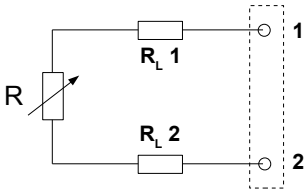
Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

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

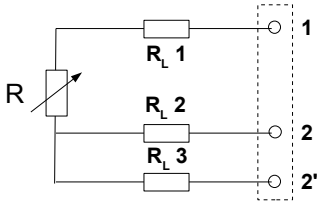
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



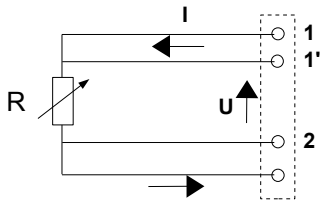
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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.

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

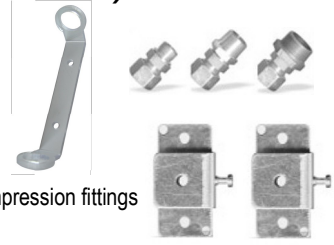
Tolerances* of NTC probes

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

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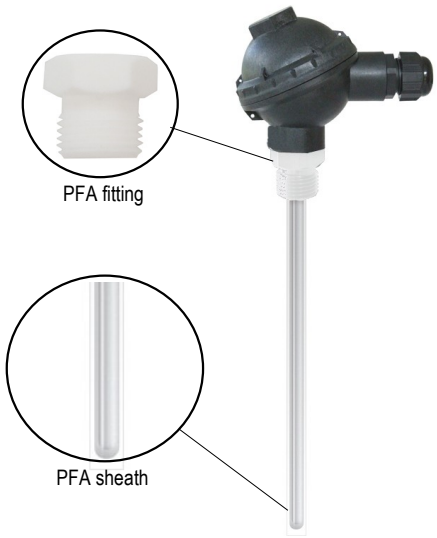
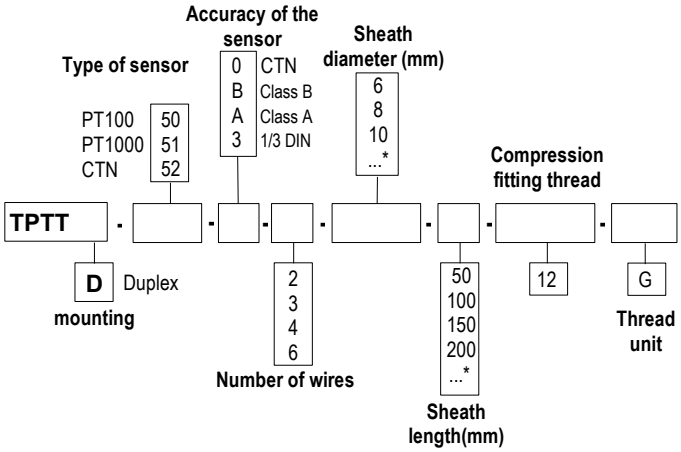


*Temperature probe at resistive element for **aggressive environment***

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.

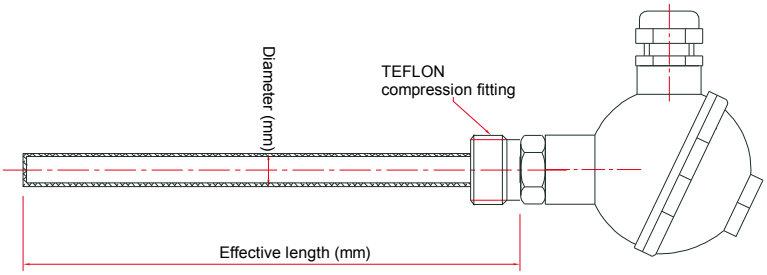
Part numbers



* 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} = 10KΩ

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.....polythetrafluorethylene PTFE

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

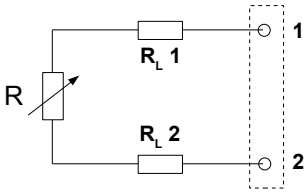
Electrical connection.....with or without terminal block
Transmitter 4/20mA 0/10V as option

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

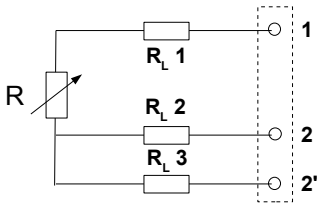
Useful information on thermometry with platinum resistor PT100.

• 2-wire connection



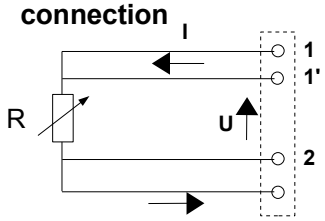
This is the simplest way, but line resistors (RL1 and RL2) are connected to the sensor in a series circuit. The addition of RL1 + RL2, leads to an off-set between measured temperature and real temperature. This connection must be avoided.

• 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 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.

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

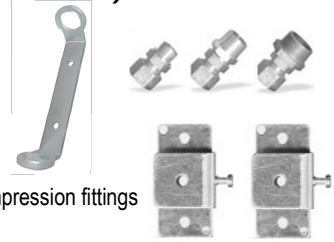
Tolerances* of NTC probes

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

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KIMO INSTRUMENTS

Technical Data Sheet

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

CE

Temperature probe at
resistive element for wine application

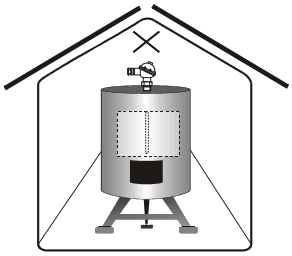
TM 50 / TPV 50 / SF 50

TPV 50

SF 50

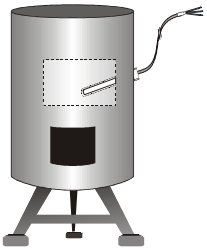
TM 50

A installation



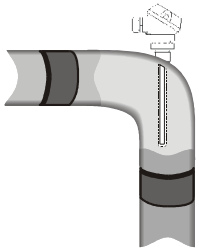
Head probe mounted vertically in the tank with removable head connection

D installation



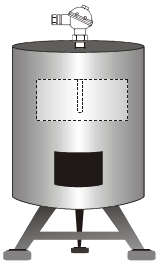
Cable probe mounted in a thermowell on the side of the tank

E installation



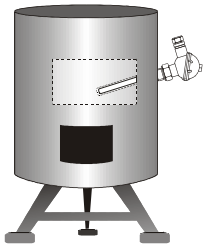
Head probe for measuring temperature on a water pipeline

B installation



Head probe mounted vertically in the tank

C installation



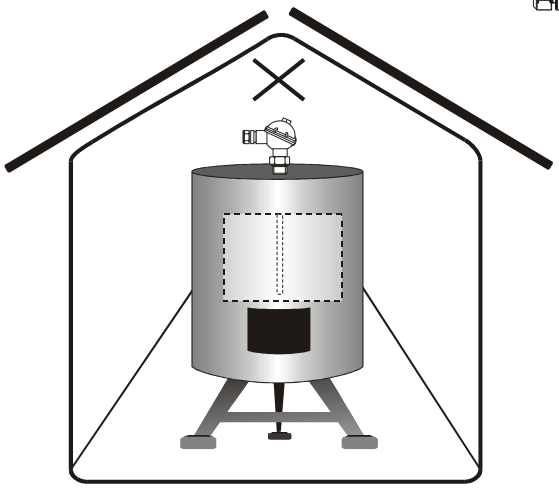
Head probe mounted in a thermowell on the side of the tank

- 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).

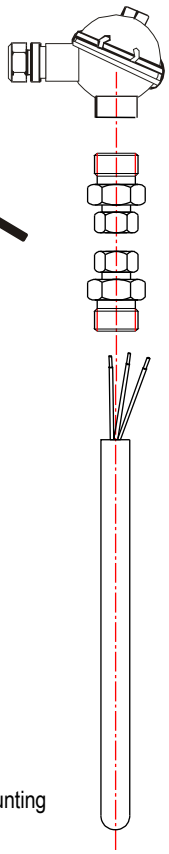
TPVD 50

Installation A

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



Draw of the removable probe



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 ½'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 ½'G male thread stainless steel connection
Electrical connection.....terminal block with 3 screws
Accessories.....connection cable (lyflex 3 x 0,75 mm^2)
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*	-	

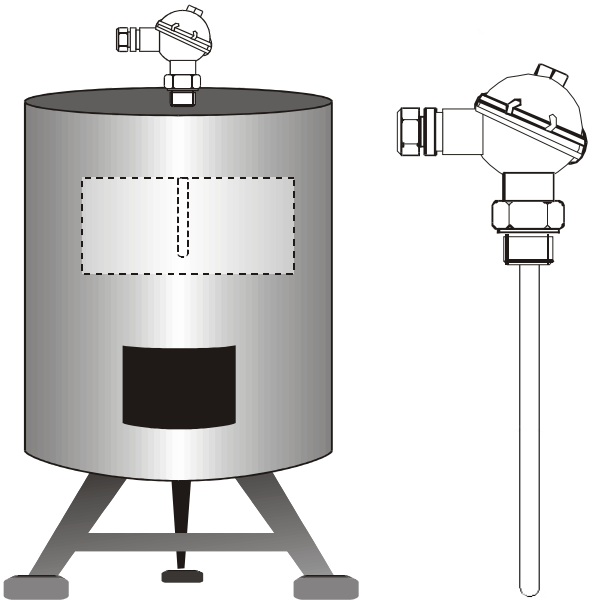
* Other dimension on request

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 ½'G male thread
Connection head.....noryl resin
IP65 protection
Electrical connection.....terminal block with 3 screws
Accessories.....connection cable (lyflex 3 x 0,75 mm^2)
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*

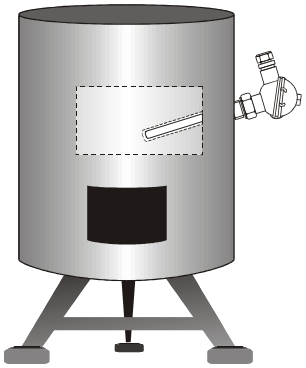
* Other dimension on request

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 ½'G male thread
Connection head.....noryl resin
IP65 protection
Electrical connection.....terminal block with 3 screws
Accessories.....connecting cable (lyflex 3 x 0,75 mm^2)

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 : ½'G 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.

TPV	-	50	-	B	-	3	-	S	-	6*	-	490 590 650 ...*
												Contact tip length (mm)

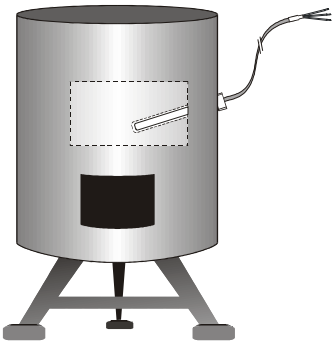
* Other dimension on request

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

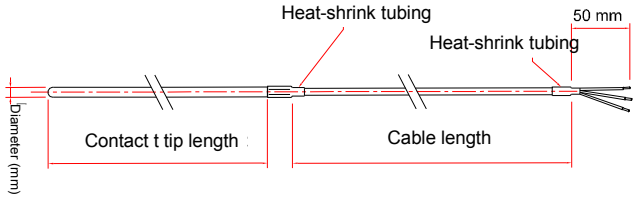
Cable probe mounted in a thermowell on the side of the tank



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.

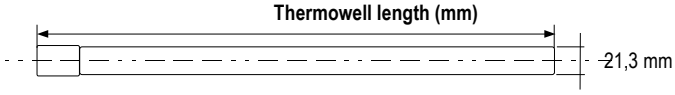
		Sensor type			**Number of wire**			**Cable length (m)**		**Contact tip diameter (mm)**		**Contact tip length (mm)**		
		PT100 PT1000	50 51		PT1000 PT100	2 3		1 2 3 4 5 ...*		4 6 8 ....*		50 100 200 300 400 ...*		
SF			-	B	-		-	P	-		-		-	

* Other dimension on request

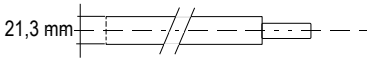
Example : SF51-B-2-P-1-4-100
Model : PT1000 temperature probe class B, 2 wires, PVC cable of 1 m length.
Stainless steel contact tip of Ø 4 mm and length of 100 mm.
Measuring range **from -40 to +120°C.**

Wine growing thermowell

• Standard model



• Model with shrink



• Part numbers

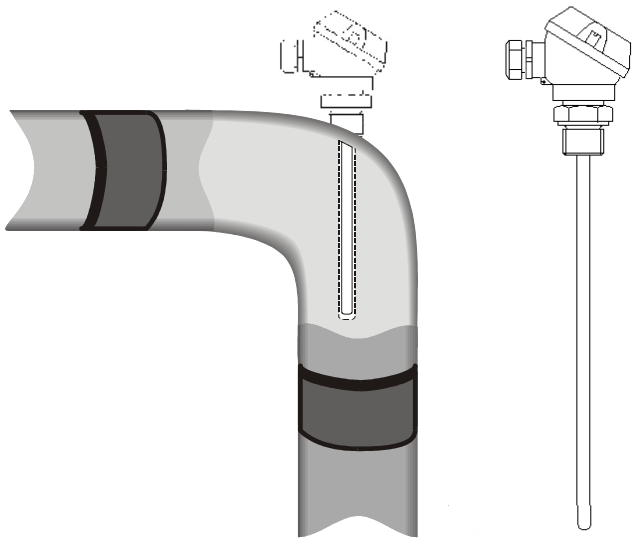
DG	-	M	-	213	-	500 600 660	-	RT
						Thermowell length (mm)		**Shrink**

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 ½'G 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 mm^2)
Welding sleeve

Part numbers

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

Contact tip length (mm): 50 / 100 / 150 / ...*

TM	-	50	-	B	-	3	-	S	-	6*	-	

* 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.

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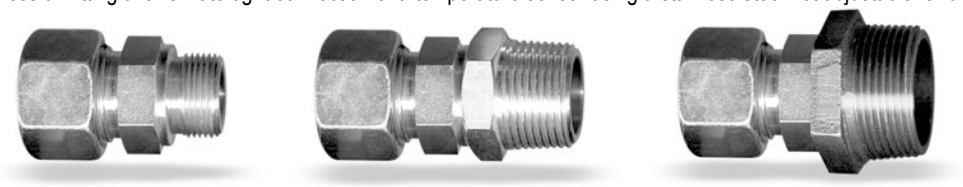
Accessories for RTD temperature sensors

— 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	¼"	RCI-3/14	RCT-3/14
4	1/8"	RCI-4/18	RCT-4/18
4	¼"	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	¼"	RCI-6/14	RCT-6/14
6	3/8"	RCI-6/38	RCT-6/38
6	½"	RCI-6/12	RCT-6/12
8	¼"	RCI-8/14	RCT-8/14
8	½"	RCI-8/12	RCT-8/12
10	½"	RCI-10/12	RCT-10/12
12	½"	RCI-12/12	RCT-12/12
14	½"	-	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.

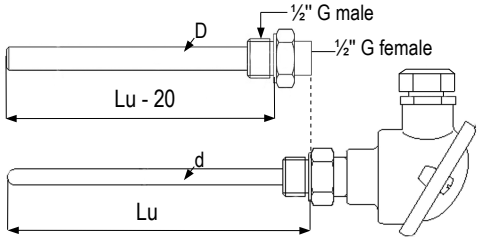
Options :
- Treatment with teflon, halar etc...
- Swaging

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

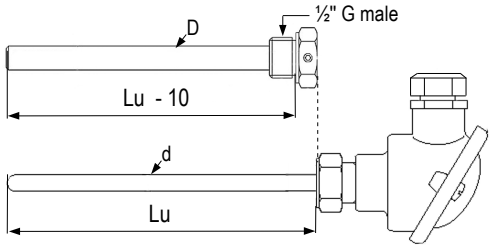
• Determination of thermowell length



$Lu_{thermowell} = Lu_{probe} - 20mm$

Thermowell with screw connection

• Determination of thermowell length



$Lu_{thermowell} = Lu_{probe} - 10mm$

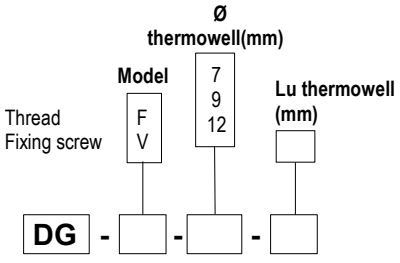
• Determination of thermowell diameter

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

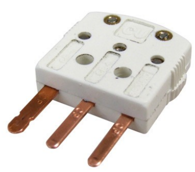
Standard connector

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: CFS / CMS — P

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: CMM / CFM — P

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 : ES — P

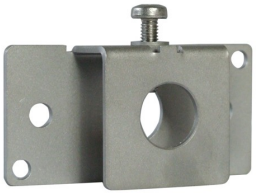
Miniature base for panel

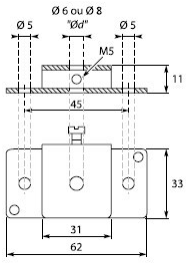
Connector **three flat pins** for mounting on panel. Polarized pins. A system of locating pin prevents the inversion of polarity.
Material : glass silk filled thermoplastic
Temperature resistance : from -50°C to +210°C
For wire of diameter : 0.002 mm to 0.6 mm
Connection cable : 4.5 mm maxi.
Standard color *: white*

Part numbers : EM — P

Fixations

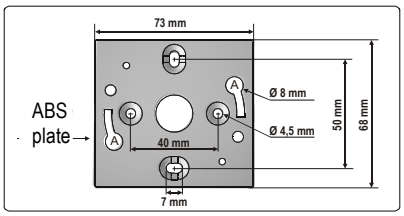
Mounting brackets





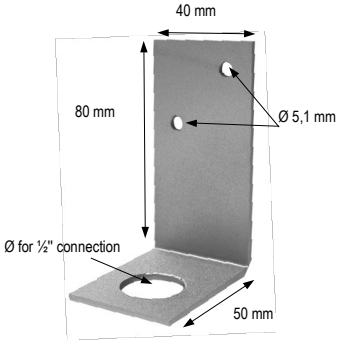
BF – 4 : Stainless steel (316L) mounting brackets for duct fixing of probes Ø 4 et 3mm.
BF – 6 : As above, Ø 6 mm.
BF – 8 : As above, Ø 8 mm.

Wall 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 ½" 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 Ø 4 mm and with 100 mm minimum length.
SFM - 6 : As above, Ø 6 mm.
SFM - 8 : As above, Ø 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	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

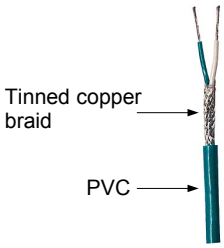
- Length at rest : 450 mm
- Developed length : 2000 mm
- Material : PVC
- Max. temperature : 105°C

Connector	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

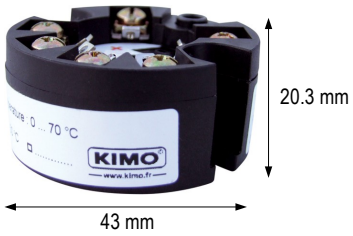
Nature of the cable	Working temperature	Section of conductors	Number of conductors	Part numbers
PVC	From -40 to +105 °C	0.22 mm²	3	CE-PVC-3
			4	CE-PVC-4
Silicone	From -60 to +180 °C	0.22 mm²	3	CE-SIL-3
			4	CE-SIL-4
Teflon	From -190 to +260 °C	0.22 mm²	3	CE-PFA-3
			4	CE-PFA-4

Shielded

Nature of the cable	Working temperature	Section of conductors	Number of conductors	Part numbers
PVC	From -40 to +105 °C	0.22 mm²	3	CE-PB-3
			4	CE-PB-4
			6	CE-PB-6
Silicone	From -60 to +180 °C	0.22 mm²	3	CE-SB-3
			4	CE-SB-4
			6	CE-SB-6
Teflon	From -190 to +260 °C	0.22 mm²	3	CE-TB-3
			4	CE-TB-4
			6	CE-TB-6
Glass silk	From -60 to +400 °C	0.22 mm²	3	CE-SvB-3
			4	CE-SvB-4
			6	CE-SvB-6

Convertors

CO-P transmitter



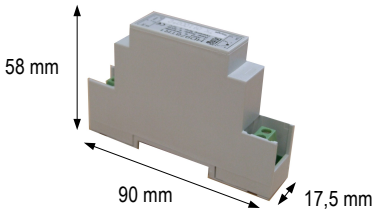
Sensor : Pt100 (100Ω at 0 °C)
Mounting of the element : 2 or 3 wires
Linearization : EN60751, IEC 751
Current in the sensor : <1 mA
Measuring range : from -200 to +850 °C
Default range : from 0 to 100 °C
Minimum measuring range : 25 °C
Influence of connection wires : negligible with coupled wires
Speed conversion : 2 measurements per second
Accuracy : from -100 to + 500 °C : ±0.1 °C ±0.1% of reading
beyond : ±0.2 °C ±0.2% of reading
Sensitivity to variations of feeding voltage : 0.01 °C/°C
Sensitivity to variations of voltage supply : 0.005% FC / Vdc
Storage temperature : from -40 to +80 °C
Working temperature : from 0 to +70 °C

Output : 4-20 mA (or 20-4 mA), 22 mA in case of programming error or temperature out of range* (fig1)
Resolution : 2 µA
Power supply voltage : 7-30 Vdc (protection against inversions of polarity)
Load resistance : $R_{Lmax} = \frac{Vdc - 7}{0.022}$

=>R_{Lmax} = 770 Ω @ Vcc = 24 Vdc

Temperature range to be specified

CRD-P transmitter (Passive / 2 wires)



Mounting : rail DIN symetric or asymmetrical
Input : PT100 3 wires
Output : 4-20 mA 2 wires
Accuracy : ±0.1°C ±0.1% of reading (-100 to +500°C)
±0.2°C ±0.2% of reading (-200 to +650°C)
Linearisation : En 60751, IEC 751, BS 1904 (α=0,00385)
Operating voltage : 7 to 30 VDC polarity protected
Power supply influence : ±0.02 % /V in relation to 24 V
Resistance influence : 0.4 µA/V
Working temperature : from 0 to +70°C
Storage temperature : from -40 to +70°C
Temperature dependence : ±0.01°C/°C
Measuring range : *from* -200 to 650°C
Measuring range minimum : 25°C
Safety : max. 22 mA
Charge calculation according to power supply : RLmax (Ω) = (V – 9)/0.022 = 680 Ω 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 : ±0,2 %
Input resistance : 10 MΩ
Charge (min.) : 500 kΩ
Operating voltage : 230 Vac, 24 Vac, 24 Vdc and 110 Vac
Working temperature : from -20 to +60°C
Storage temperature : from -20 to +60°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

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.

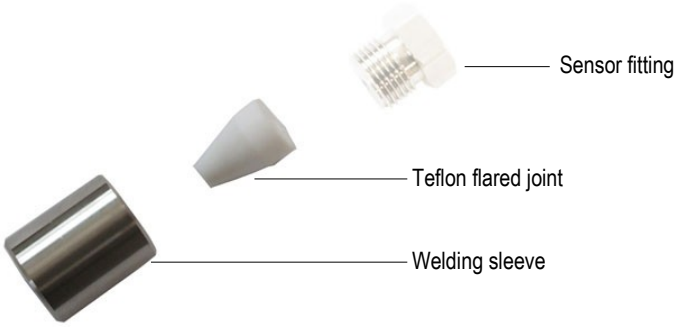
• Direct current

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



MES-6-12 : 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.

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