

Wire and angled or lined inconel thermocouple temperature sensor with or without fitting



Type SFC K et SFCR K

SFC K – SFCD K – SFCR K – SFCRD K

■ **Sensor features**

- Temperature sensor mounted on conductor cables with angled contact tip with or without stainless steel compression fitting.
- Thermocouple types T, J, K and N
- Measuring range from -40°C to +1000°C
- Mounting with 316 L stainless steel contact tip or inconel 600

■ **Technical features**

Working temperature.....*For SFCK and SFCRK series*
(According to cable) from -40°C to +105°C for PB output
from -40°C to +260°C for TB output
from -40°C to +400°C for SVB output
from -40°C to +550°C for SVB (Tc K) output

For SFCKI and SFCRKI series
from -40°C to +750°C for Tc J
from -40°C to +1000°C for Tc K and Tc N



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



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

Mounting of the welding.....Insulated hot welding in standard
Add SCM to part number for a mounting at hot welding to earth.
from -20°C to +80°C

Storage temperature.....stripped wires, male miniature connector or standard on request

Output.....stripped wires, male miniature connector or standard on request

Contact tip and fitting.....*For SFCK and SFCRK series*
316 L stainless steel
Angled at 90° (Other on request)
Waterproof crimping with heat-shrink tubing
(Unless glass silk cable with single crimping on stainless steel sheath)
Curve spring as option

For SFCKI and SFCRKI series
Inconel contact tip 600 T max. 1000°C
Stainless steel compression fitting 316L T max. 800°C
Angled at 90° (Other on request)

Thread of the fitting.....1/2" or 1/4" Gas

Mounting of the fitting.....**On L2 length (See schema)** : 12 or 14 corresponding to 1/2" G and 1/4" G compression fitting
On L1 length (See schema) : 12L1 or 14L1 corresponding to 1/2" G et 1/4" G compression fitting

⚠ T° maxi of L2 : 800 °C for this specific case

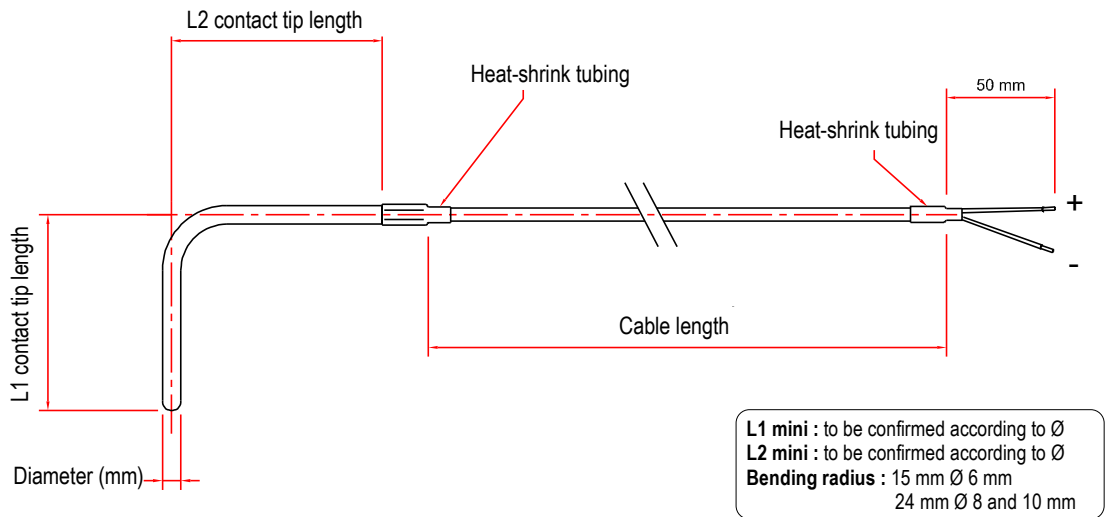
* Performed in laboratory conditions, the above accuracies mentioned in this document will be guaranteed, provided that you use the calibration compensation data or identical calibration conditions.

SFC & SFC-I

Angled wire probe or lined inconel



■ Dimensions



■ Part numbers

• SFC - Stainless steel contact tip -

Type	Cable length (m)	Diameter (mm)	L1 contact tip (mm)	L2 contact tip (mm)	Angle	Curve spring	Connector
T	1	4	50	50	90	R	MM Male miniature
J	2	4	100	100			FM Female miniature
K	3	4	150	150			MS Male standard
N	4	4	200	200			FS Female standard
	*	*	*	*			- Without connector

SFC [] - [] - [] - [] - [] - [] - [] - []

*other on request

[] Insulated To earth

• SFC-I – Inconel contact tip -

Type	Cable length (m)	Diameter (mm)	L1 contact tip (mm)	L2 contact tip (mm)	Angle	Curve spring	Connector
J	1	6	50	50	90	R	MM Male miniature
K	2	6	100	100			FM Female miniature
I	3	6	150	150			MS Male standard
N	4	6	200	200			FS Female standard
	*	*	*	*			- Without connector

SFC [] - [] - [] - [] - [] - [] - [] - []

*other on request

[] Insulated To earth

Example : SFCJ-SVB-4-4-100-100-90-MM-SCM

Model : J thermocouple sensor welded to earth with stainless steel contact tip Ø 4 mm angled at 90° and L1 and L2 lengths of 100 mm, without curve spring and mounted on shielded glass silk cable ended by a male miniature connector.

Example : SFCJI-SVB-4-6-100-100-90-MM

Model : J thermocouple sensor, insulated welding with lined inconel contact tip of 6 mm Ø angled at 90° and L1 and L2 lengths of 100 mm, without curve spring and mounted on shielded glass silk cable ended by a male miniature connector.

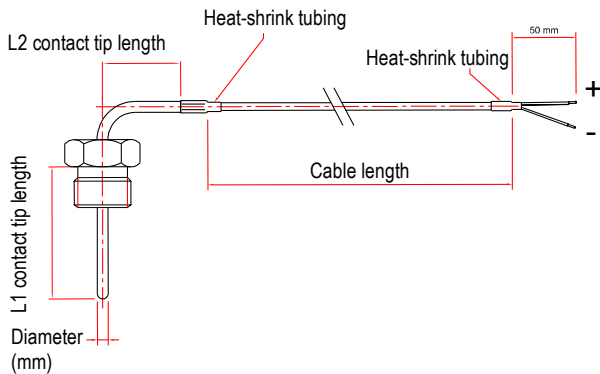
SFCR & SFCR-I

Angled wire probe or lined inconel with fitting

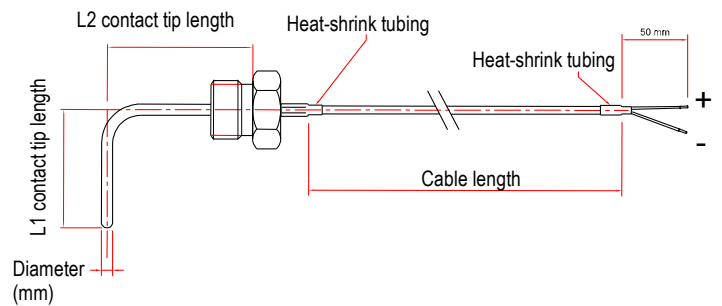


■ Dimensions

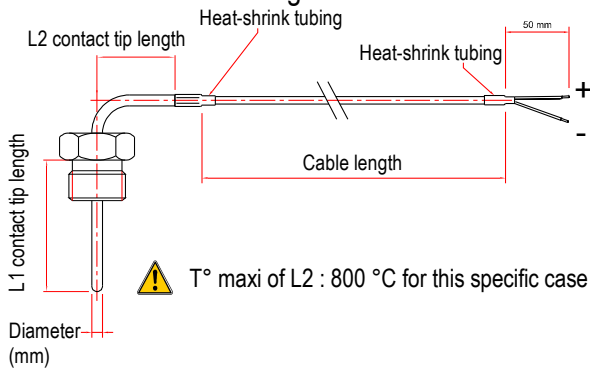
• Stainless steel with fitting on L1



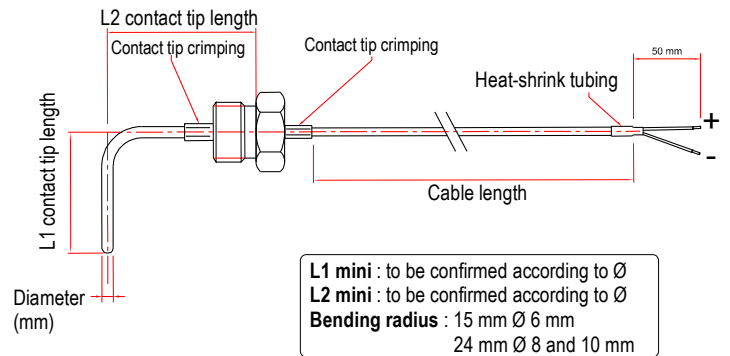
• Stainless steel with fitting on L2



• Lined inconel with fitting on L1



• Lined inconel with fitting on L2



■ Part numbers

• SFCR - Stainless steel contact tip -

Type	Cable		L1 contact tip diameter (mm)	L2 contact tip (mm)	Angle	Fitting	Connector	
	length (m)	Diameter (mm)					MM	Female standard
T	1	4	50	50	12	MM	Male miniature	
J	2	4	100	100	14	FM	Female miniature	
K	3	6	150	150	12L1	MS	Male standard	
N	4	8	200	200	14L1	FS	Female standard	
	*	*	*	*	90	-	Without connector	

SFCR [] - [] - [] - [] - [] - [] - [] - [] - [] - []

*other on request Curve spring R - Insulated To earth SCM

• SFCR-I - Inconel contact tip -

Type	Cable		L1 contact tip diameter (mm)	L2 contact tip (mm)	Angle	Fitting	Connector	
	length (m)	Diameter (mm)					MM	Female standard
J	1	4	50	50	12	MM	Male miniature	
K	2	4	100	100	14	FM	Female miniature	
I	3	6	150	150	12L1	MS	Male standard	
N	4	8	200	200	14L1	FS	Female standard	
	*	*	*	*	90	-	Without connector	

SFCR [] - [] - [] - [] - [] - [] - [] - [] - [] - []

*other on request Curve spring R - Insulated To earth SCM

Example : SFCRJ-SVB-4-4-100-100-90-12-MM

Model : J thermocouple sensor, insulated hot welding with stainless steel contact tip Ø 4 mm angled at 90° and L1 and L2 lengths of 100 mm, without curve spring with ½G thread union fixed on L2. Contact tip mounted on shielded glass silk cable ended by a male miniature connector.

Example : SFCRJI-SVB-4-6-100-100-90-12-MM

Model : J thermocouple sensor, insulated hot welding with lined inconel contact tip of 6 mm Ø angled at 90° and L1 and L2 lengths of 100 mm, without curve spring with ½G thread union fixed on L2. Contact tip mounted on shielded glass silk cable ended by a male miniature connector.

Tolerances* of the probe

As per IEC 584-3 norm

TC	Measuring range Class 1	TOLERANCE
T	From -40°C to +350°C	From -40°C to +125°C $\pm 0.5^\circ\text{C}$ From 125°C to +350°C $\pm 0.004 \times T^\circ\text{abs}$
J	From -40°C to +750°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 750°C $\pm 0.004 \times T^\circ\text{abs}$
K	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$
N	From -40°C to +1000°C	From -40°C to +375°C $\pm 1.5^\circ\text{C}$ From 375°C to 1000°C $\pm 0.004 \times T^\circ\text{abs}$

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

Most common thermocouple types

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

Accessories (See data sheet)

- Extension cable
- Compensating cable
- Standard or miniature connector
- Cable seal for plug and socket connector
- Miniature or standard connectors panel
- Miniature or standard connectors panel
- Extension lead
- Converters

