



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

**SFE 50 / SFED 50**

**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<sub>25</sub> = 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

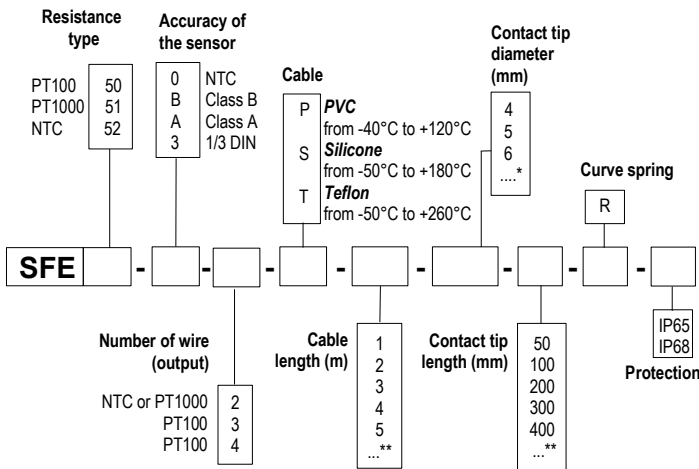
\*\*All accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

**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.

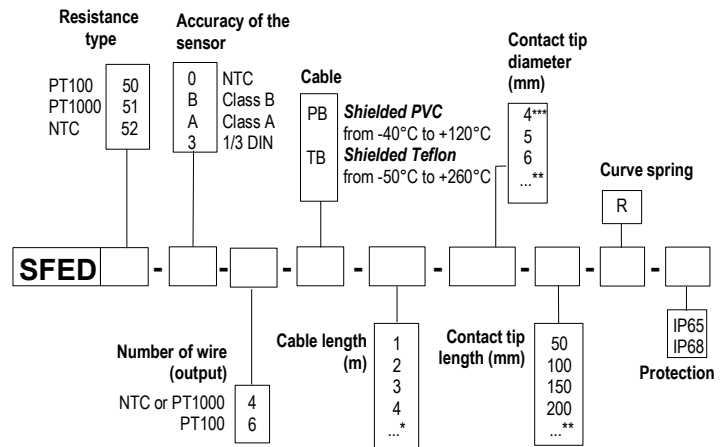
**Part numbers**

**• SFE 50 – Single pair probe -**



\*\*Other length available on request

**• SFED 50 – Multipair probe -**



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

**Example : 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, length 100 mm, without curve spring, IP68 watertight.

**Measuring range from -40 to +120°C.**

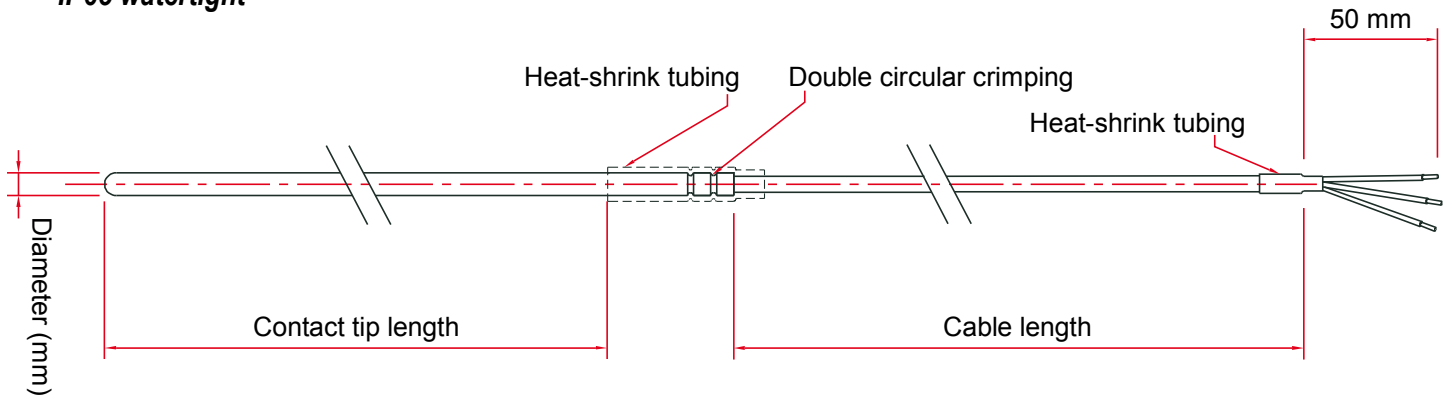
**Example : SFED51-B-4-PB-1-6-100-IP68**

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.

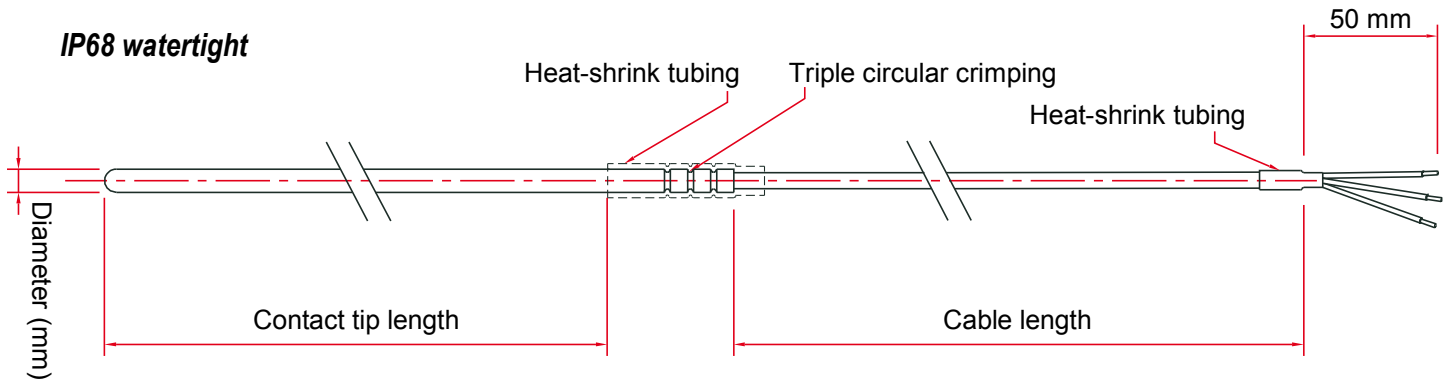
**Measuring range from -40 to +120°C.**

## ■ 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). i.e. at 0°C for class B PT1000 ± 0,3°C → ± 1,2 Ω

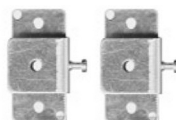
## Tolerances\* of NTC probes

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

\* 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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