

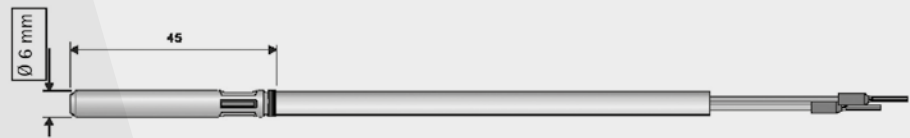
## TEMPERATURE SENSOR



### Product description

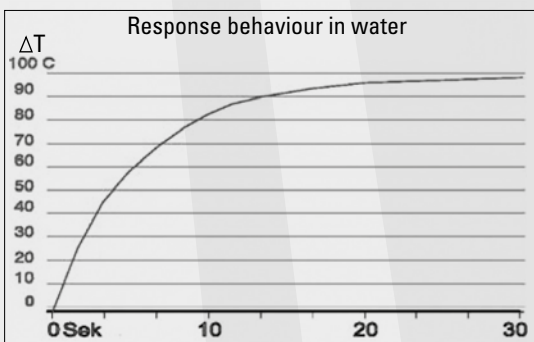
Versatile temperature sensor that can be installed in Sleeve pockets or in the RAS model for attachment to pipes (immersion sleeve not included in delivery, RAS incl. holding clip, cable binders up to 105°C and a can of heat conducting paste). A resistance proportional to the temperature is measured (1,000 Ohm at 0 °C, the resistance increases linearly with temperature and vice versa). Only two wires are required for this; the resistance is zero for a sensor short-circuit and infinite for a sensor or cable break. No damage is caused to the electronic systems connected in either case (sensor break is normally recognised as such by the electronic system). Caution when laying cables: Due to possible induction, always lay sensor lines away from lines carrying higher voltage (cable ducts, cable trays, etc.)! Otherwise, use screened cables and connect screen to earth.

**Caution when extending cables:** To avoid undue voltage drops, the cable cross-section of the extension must be at least 0.5 mm<sup>2</sup>. For lines longer than approx. 30 m, the cable cross-section must be at least 0.75 mm<sup>2</sup>. For lines longer than 50 m, the cross-section should be 1,5 mm<sup>2</sup> If the difference between the resistance value (and the related measured temperature value) and the actual temperature is still too great, can be corrected up to a value of +/- 5 Kelvin on the controller..



### General information

Type		KFS15	KFS50	KFS250	SFK30	RAS
Item no.		1510087	1510089	1510441	1510088	1510742
Sensor sleeve	Outer Ø	6.0 mm				-
	Length	45 mm				39 mm
	Material	Stainless steel 1.4571				
Conductor	Shell	Silicon cable, black	Silicon cable, black in protecting hose (black)	Plastic cable, grey		Silicon cable, black
	Cores	2 x 0.34 mm <sup>2</sup>				
	Conductor	Flexible copper wire				
	Length	1.5 m	5 m	25 m	3 m	1.5 m
Sensor element	Temperature range	-50°C to +180°C			-5°C to +105°C	-50°C to +180°C
	Application	Collector or tank			Tank	Pipe
	Type	PT1000				
Sensor element	Supply voltage	5 V				
	Resistance	I <sub>c</sub> = 2 mA, R <sub>0</sub> = 1000 Ohm				
	Tolerance	at 0°C ± 0,3°C, at 100°C ± 0,8°C				
	Connection (sensor/conductor)	Soldered connection (solder joint melting point 221 °C)				



### Resistance

°C	Ω	°C	Ω	°C	Ω
-10	961	35	1136	80	1309
-5	980	40	1155	85	1328
0	1000	45	1175	90	1347
5	1019	50	1194	95	1366
10	1039	55	1213	100	1385
15	1058	60	1232	105	1404
20	1078	65	1252	110	1423
25	1097	70	1271	115	1442
30	1117	75	1290		