

## TEMPERATURE SENSOR FOR COLLECTOR AND TANK

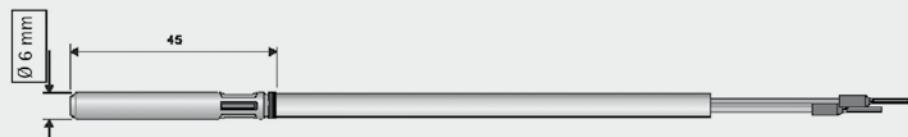


### Product description

Versatile temperature sensor that can be installed in thimbles; the thimbles are not included with delivery. 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).

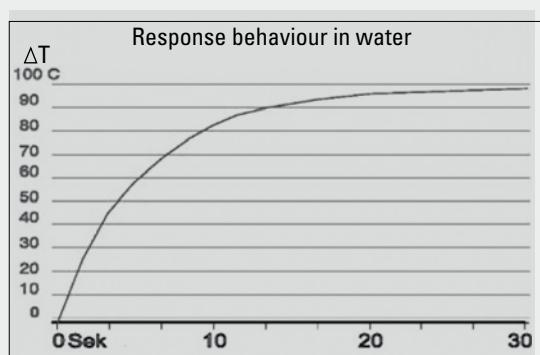
**Caution when laying cables:** Due to possible induction, always lay sensor lines away from lines carrying higher voltage (cable ducts, cable trays, etc.)! Otherwise, use screened cables and connect screen to earth.

**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, Multiplex can be used to correct the problem.



### General information

Type		KFS15	KFS50	KFS250	SFK30
Item no.		1510087	1510089	1510441	1510088
<b>Sensor sleeve</b>	Outer Ø		6.0 mm		
	Length		45 mm		
	Material		Stainless steel 1.4571		
<b>Conductor</b>	Shell	Silicon cable, black/red	Silicon cable, black/red in protecting hose (black)	Plastic cable, grey	
	Cores		2 x 0.34 mm <sup>2</sup>		
	Conductor		Flexible Cu wire		
	Length	1.5 m	5 m	25 m	3 m
	Temperature range:		-50°C to +180°C		-5°C to +105°C
	Application		Collector or tank		Tank
<b>Sensor element</b>	Type		Pt1000		
	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		