Fast-response Temperature Sensors
Types 5207-61/-64/-65

with Pt 1000 resistors

Application

Fast-responding temperature sensors for measuring rapid temperature changes in heat exchangers and DHW circuits. Pt 1000 resistors. Basic values according to Class B of DIN EN 60751.

Fast-responding temperature sensors are used in compact heat exchangers and domestic hot water generators which only have a fairly small mass with a low heat storage capacity. As a result, the temperature can change rapidly. Moreover, the temperature sensors are easy to install and do not need to be calibrated.

The Types 5207-61/-64/-65 Temperature Sensors include the following features:

- Step response (refer to diagram on following page) featuring a response time τ of less than one second
- Minimum thermal resistance and low heat capacity
- No air space between measuring insert and immersion tube
- Without thermowell
- Immersion depth fixed for Type 5207-61
- Immersion depth variable for Types 5207-64/-65

Versions

Type 5207-61 · Fast-response temperature sensor; immersion sensor with Pt 1000 resistor; operating temperature range –50 to 180 °C, with immersion tube of 110 mm in length, 80 mm immersion depth

Type 5207-64 · Fast-response temperature sensor; immersion sensor with Pt 1000 resistor; operating temperature range –15 to 180 °C, with immersion tube of 170 mm in length, 40 to 100 mm immersion depth

Type 5207-65 · Fast-response temperature sensor; immersion sensor with Pt 1000 resistor; operating temperature range –15 to 180 °C, with immersion tube of 250 mm in length, 120 to 190 mm immersion depth

Ordering text

Types 5207-61/-64/-65 Fast-response Temperature Sensor

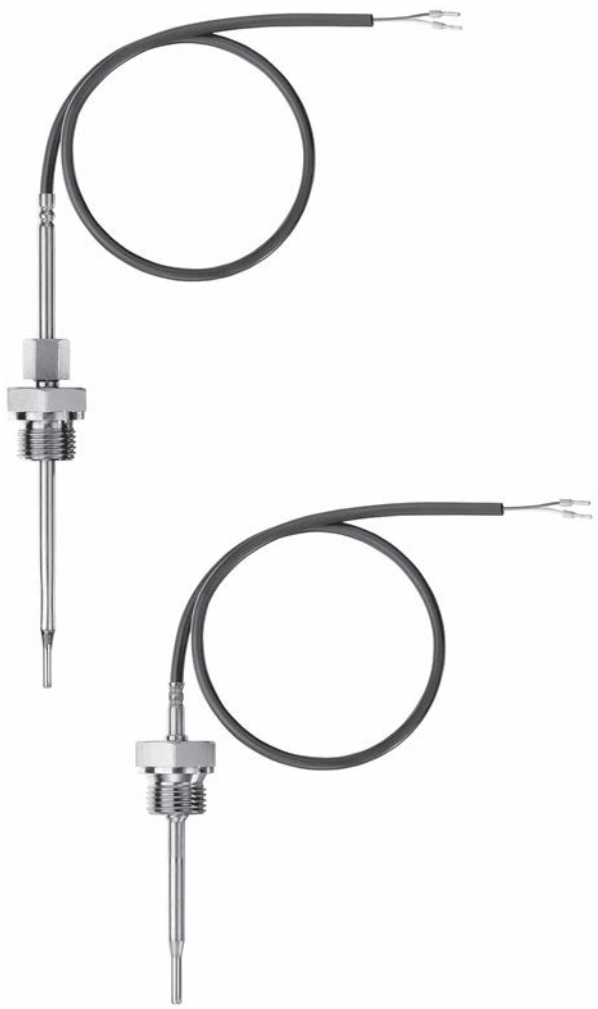

Fig. 1: *Type 5207-64 Temperature Sensor (top)/ Type 5207-61 (bottom)*

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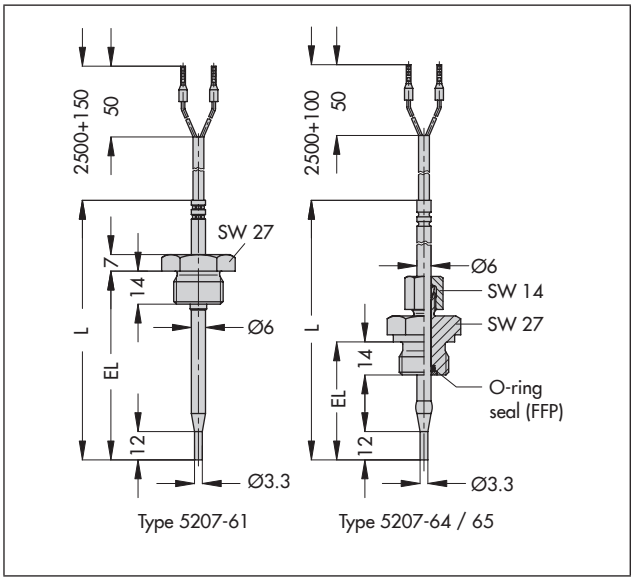
Table 1: *Technical data*

Temperature sensor — Type	5207-61	5207-64	5207-65
Style	Immersion sensor	Immersion sensor with screw gland	
Number of resistors	1x Pt 1000 (DIN EN 60751 Class B)		
Scope	–50 to +180 °C	–15 to +180 °C	–15 to +180 °C
Permissible medium temperature	–50 to +180 °C	–15 to +180 °C	–15 to +180 °C
Permissible ambient temperature	–50 to +180 °C	–15 to +180 °C	–15 to +180 °C
Time constant τ	0.8 s	0.9 s	0.9 s
Nominal pressure	PN 40		
Degree of protection	IP 65 according to EN 60529		
Length of immersion tube L	110 mm	170 mm	250 mm
Immersion depth EL	80 mm fixed	40 to 120 mm	120 to 190 mm
Mechanical connection	Thread G ½	Screw gland G ½	
Electrical connection	Free cable end with wire ferrule		
Connecting cable length	2.5 m		
Weight	0.15 kg	0.21 kg	0.27 kg

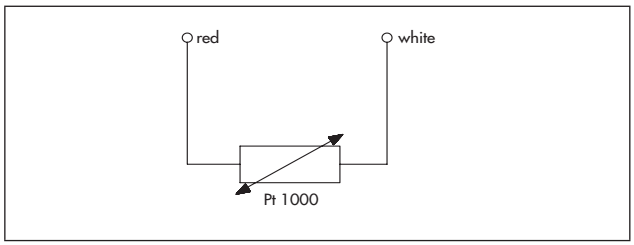
Table 2: *Materials*

Immersion tube, screw fitting	CrNiMo steel
Screw gland	CrNiMo steel
Seal	FPM
Connecting cable	Insulation: Silicone The silicone connecting cable is approved for permanent use within the temperature range –50 to +180 °C.

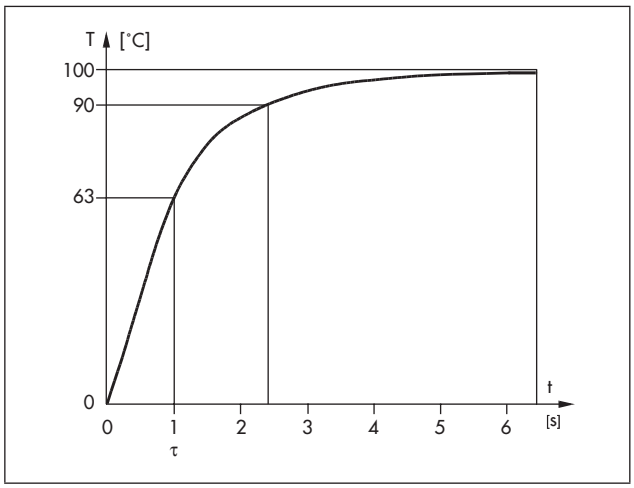
Dimensions in mm



Electrical connection



Step response of sensors



Specifications subject to change without notice.

SAMSON AG · MESS- UND REGELTECHNIK
Weismüllerstraße 3 · 60314 Frankfurt am Main · Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507
Internet: http://www.samson.de