

# 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  $\tau$  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

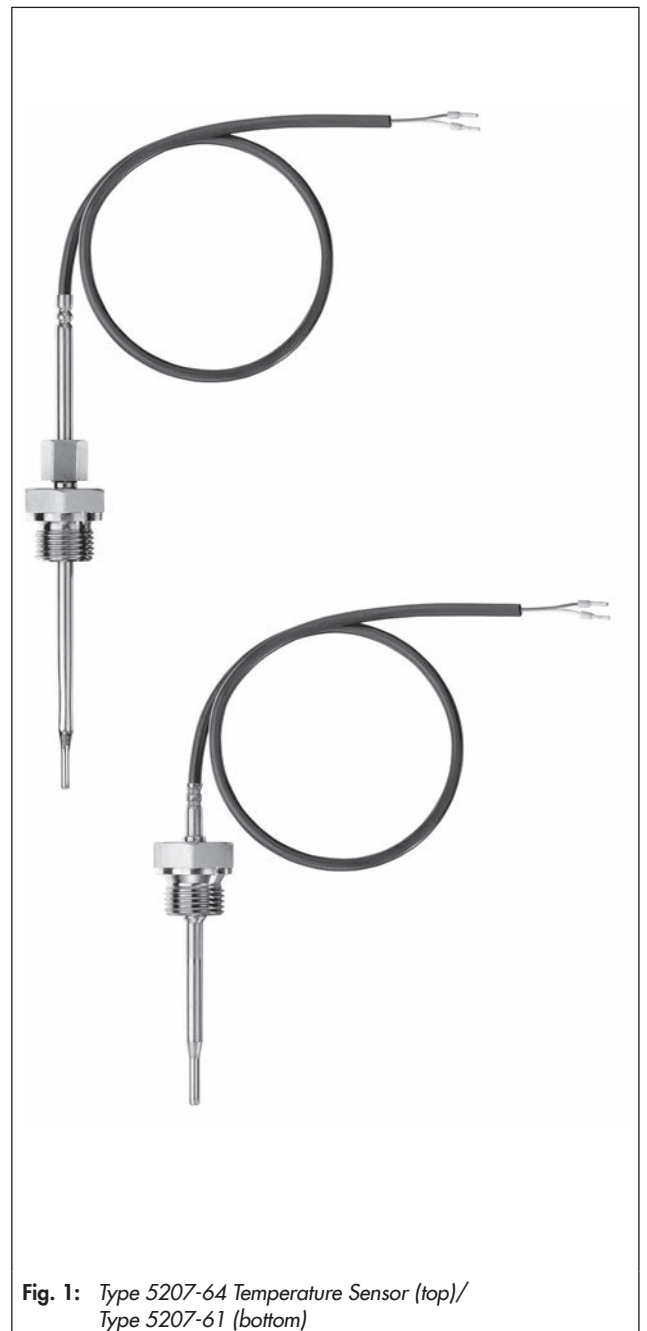


Fig. 1: Type 5207-64 Temperature Sensor (top)/  
Type 5207-61 (bottom)

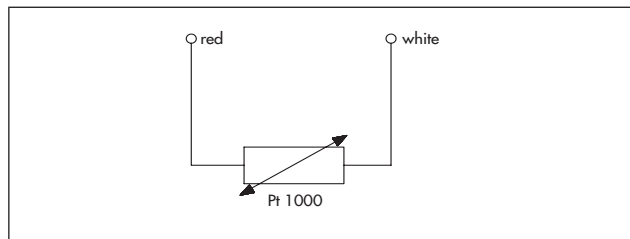
**Table 1: Technical data**

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 $\tau$		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 1/2	Screw gland G 1/2	
Electrical connection		Free cable end with wire ferrule		
Connecting cable length		2.5 m		
Weight		0.15 kg	0.21 kg	0.27 kg

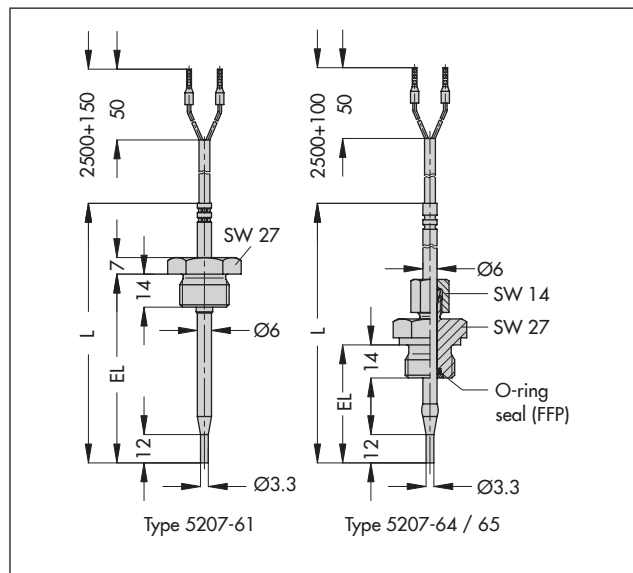
**Table 2: Materials**

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.

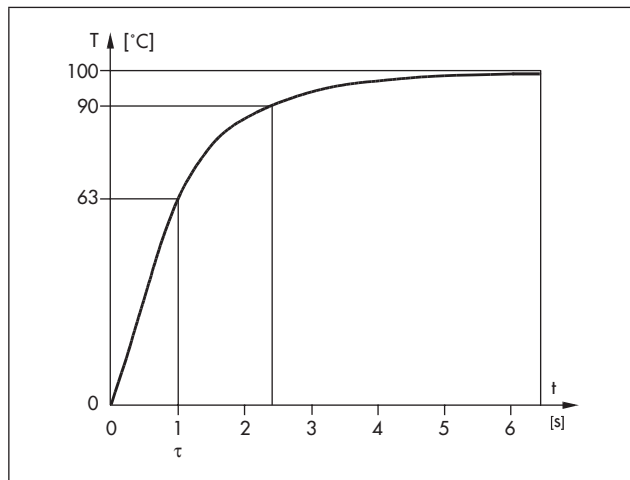
**Electrical connection**



**Dimensions in mm**



**Step response of sensors**



Specifications subject to change without notice.



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