

## T 5221 EN

### Types 5207-61/-64/-65 Fast-response Temperature Sensors with Pt1000 resistor



#### Application

Fast-responding temperature sensors for measuring rapid temperature changes in heat exchangers and DHW circuits

#### Special features

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

- Basic values according to Class B of DIN EN 60751
- Pt1000 resistors
- Step response (see Fig. 3) 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
- Fixed immersion depth (Type 5207-61)
- Variable immersion depth (Types 5207-64/-65)

#### Versions

Immersion sensor with immersion tube

- 110 mm length, 80 mm immersion depth, operating temperature range -50 to +180 °C
- 170 mm length, 40 to 100 mm immersion depth, operating temperature range -15 to +180 °C
- 250 mm length, 120 to 190 mm immersion depth, operating temperature range -15 to +180 °C

#### Principle of operation

Fast-responding temperature sensors are used in compact heat exchangers and DHW heaters that are fairly small and have a low heat storage capacity. As a result, the temperature can change rapidly. Furthermore, the temperature sensors are easy to install and do not need to be calibrated.

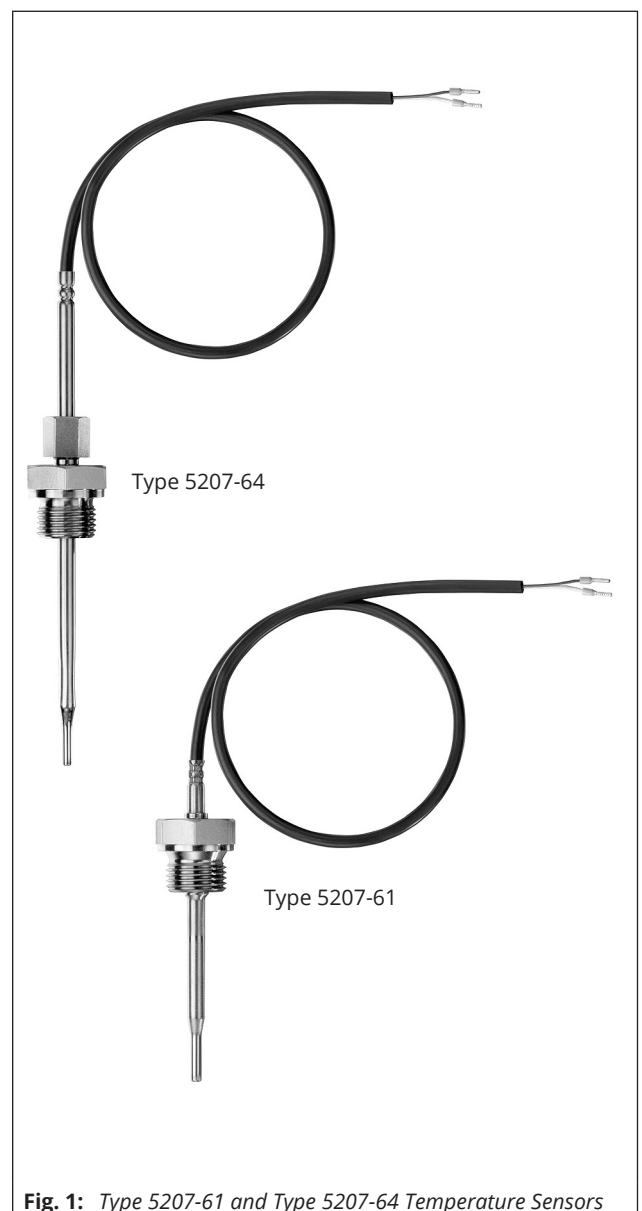


Fig. 1: Type 5207-61 and Type 5207-64 Temperature Sensors

Electrical connection

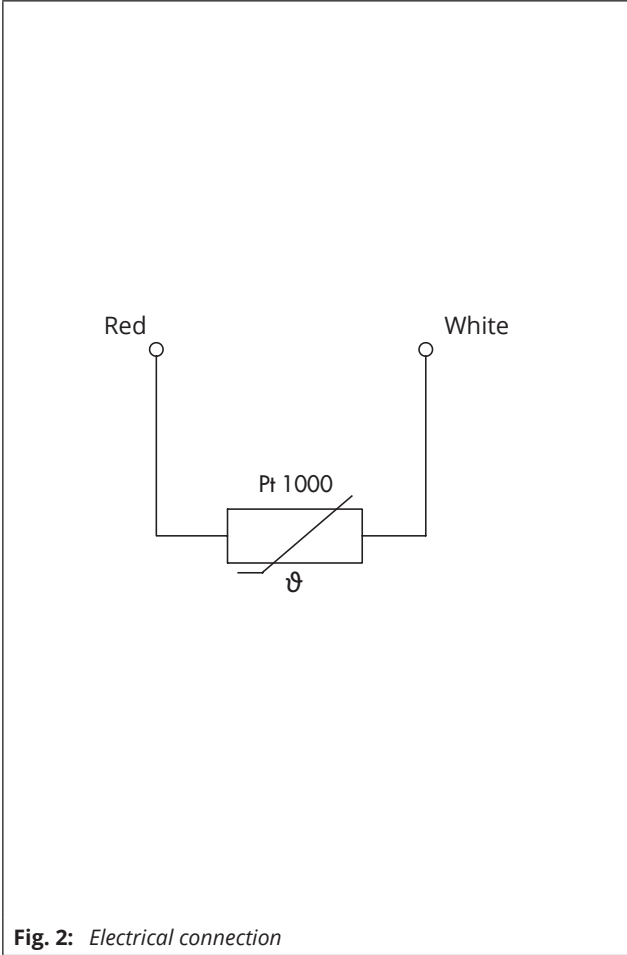


Fig. 2: Electrical connection

Step response of sensors

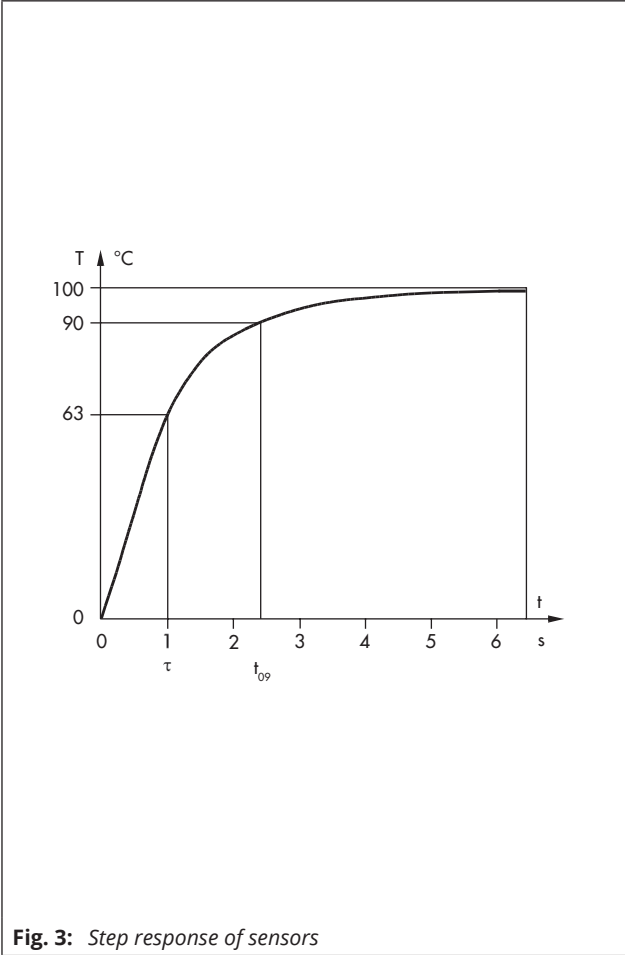


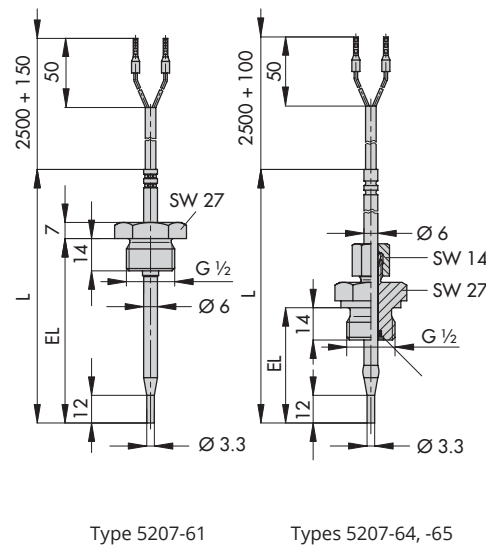
Fig. 3: Step response of sensors

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 Pt1000 (DIN EN 60751 Class B)		
Field of application		-50 to +180 °C	-15 to +180 °C	-15 to +180 °C
Permissible temperature range of the process medium		-50 to +180 °C	-15 to +180 °C	-15 to +180 °C
Permissible ambient temperature range		-50 to +180 °C	-15 to +180 °C	-15 to +180 °C
Time constant τ		0.8 s	0.9 s	0.9 s
Pressure rating		PN 40		
Degree of protection		IP65 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		Screw-in 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****Fig. 4:** Dimensions in mm and inches**Disposal**

SAMSON is a producer registered in Europe.  
 ► [www.samsongroup.com](http://www.samsongroup.com) >  
 About SAMSON > Environment, Social & Governance > Material Compliance > Waste electrical and electronic equipment (WEEE)  
 WEEE reg. no.: DE 62194439

Information on substances listed as substances of very high concern (SVHC) on the candidate list of the REACH regulation can be found in the document "Additional Information on Your Inquiry/Order", which is added to the order documents, if applicable. This document includes the SCIP number assigned to the devices concerned. This number can be entered into the database on the European Chemicals Agency (ECHA) website (► <https://www.echa.europa.eu/scip-database>) to find out more information on the SVHC contained in the device.

**i Note**

SAMSON can provide you with a recycling passport according to PAS 1049 on request. Simply e-mail us at [aftersaleservice@samsongroup.com](mailto:aftersaleservice@samsongroup.com) giving details of your company address.

**💡 Tip**

On request, SAMSON can appoint a service provider to dismantle and recycle the product as part of a distributor take-back scheme.

- ➔ Observe local, national and international refuse regulations.
- ➔ Do not dispose of components, lubricants and hazardous substances together with your other household waste.

**Ordering text**


Fast-response temperature sensor

Type 5207-61

Type 5207-64

Type 5207-65

**Associated Information Sheet**

- Temperature sensors and thermostats  **T 5200**