

Fast-response Temperature Sensor Type 5207-0060



with Pt 1000 resistor

Application

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



Fast-responding temperature sensors are used in compact heat exchangers which only have a fairly small mass with a low heat storage capacity. As a result, the temperature can change rapidly.

The Type 5207-0060 Temperature Sensor has been especially designed for domestic hot water heating in instantaneous heating systems. The sensor is primarily used in conjunction with Series 57xx Controllers with Electric Actuators.

Special features

- Optimal step response featuring a half-value time $t_{0.5} \leq 1$ second and a 90 % time $t_{0.9} \leq 3$ seconds measured in flowing water (0.4 m/s)
- Minimum thermal resistance and low heat capacity
- Immersion depth 52 mm
- Easy installation
- The use of a special sensor pocket provides optimal positioning of the temperature sensor at the heat exchanger

Three times characterize the step response:

- **Half-value time $t_{0.5}$** indicates the time taken for the measurement to reach 50 % of the final value
- **90 % time $t_{0.9}$** indicates the time taken to reach 90 % of the final value
- **Time τ** , indicates the time taken to reach 63.2 % of the final value



Fig. 1: Type 5207-0060 Temperature Sensor

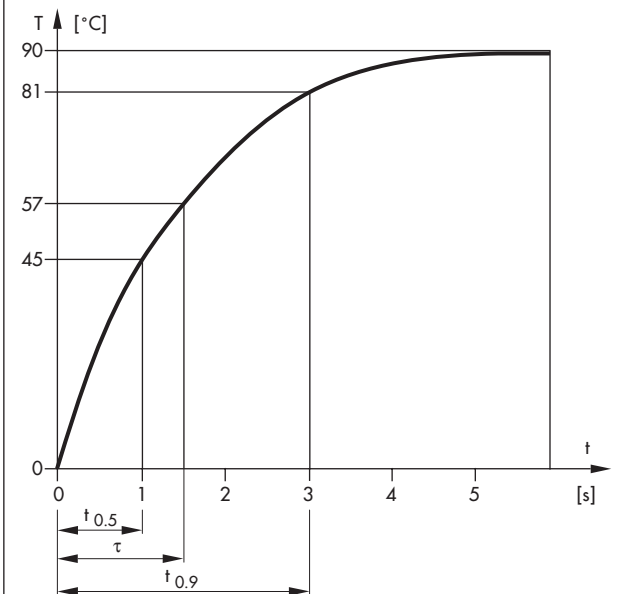


Fig. 2: Step response

Table 1: Technical data

Type 5207-0060 Temperature Sensor	
Measuring element	1 Pt 1000 (DIN EN 60751, Class B) Two-wire circuit
Perm. medium temperature	-5 to 90 °C
Perm. ambient temperature	-5 to 80 °C
Time constants (medium: water 0.4 m/s)	$t_{0.5} \leq 1$ second $t_{0.9} \leq 3$ seconds
Nominal pressure	PN 16
Degree of protection	IP 54 according to EN 60529
Immersion depth	52 mm
Mechanical connection	Thread G 1/4
Electrical connection	Free cable end fitted with wire end ferrules with plastic sleeves
Length of connecting cable	2000 mm
Sensor pocket	
Mechanical connection	Male thread G 3/4 Female thread G 1/4 Coupling nut G 3/4 or G 1
Nominal pressure	PN 16

Table 2: Materials

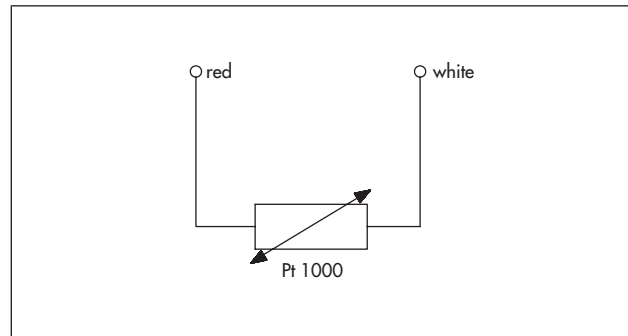
Type 5207-0060 Temperature Sensor	
Mechanical connection	Brass (2.0401.20)
Protective tubing	Inconel 600 (2.4816)
Connecting cable	PVC
Sensor pocket	
	Red brass CC491K (Rg 5)

Ordering text

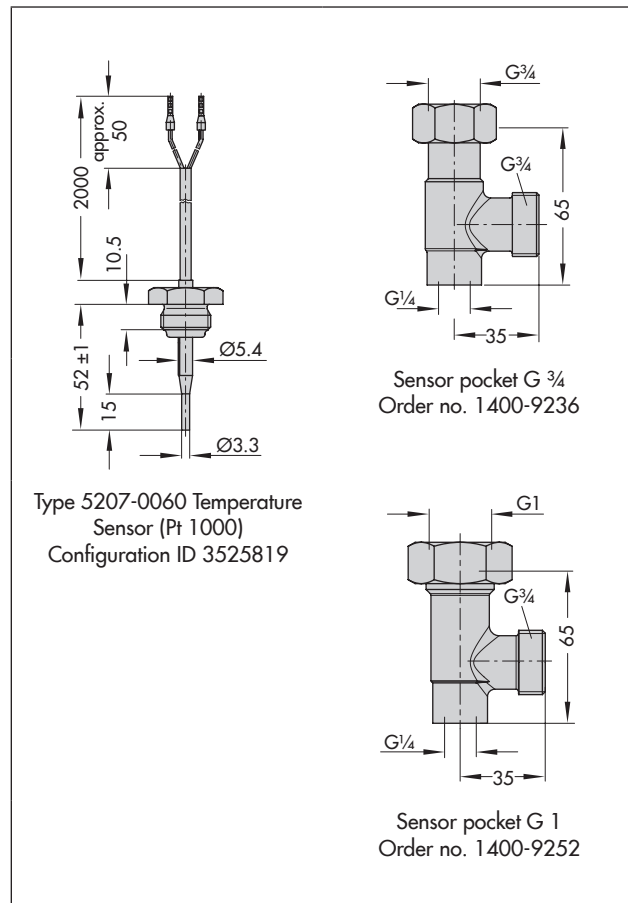
Type 5207-0060 Fast-response Temperature Sensor

Accessories: sensor pocket with coupling nut (G 3/4 or G 1) and seal

Electrical connection



Dimensions in mm



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
 samson@samson.de · www.samson.de

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