

# Fast-response Temperature Sensor Type 5207-0060



with Pt 1000 resistor

## Application

Fast-responding temperature sensor for measuring rapid temperature changes in heat exchangers. Pt 1000 resistor. Basic values conforming 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 in the heat exchanger 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)
- Minimal thermal resistance and a low heat capacity
- 52-mm-long immersion tube
- Easy to install
- The use of a special sensor pocket provides the best positioning of the temperature sensor at the heat exchanger

Three time 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**  $\tau$ , indicates the time taken to reach 63.2 % of the final value



Fig. 1 · Type 5207-0060 Temperature Sensor

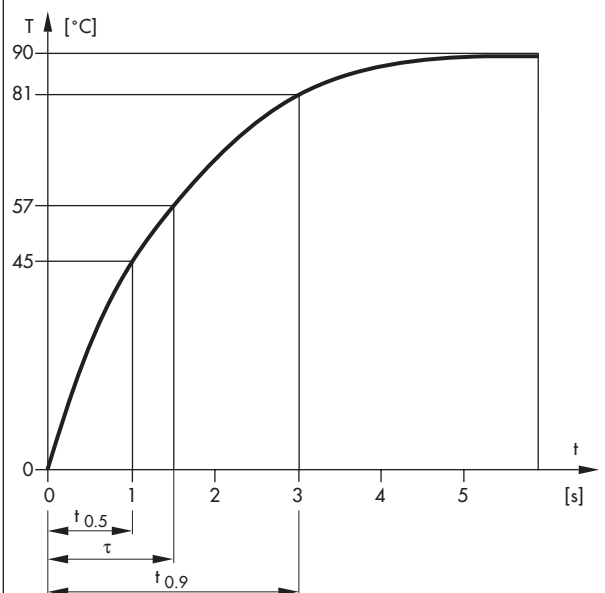


Fig. 2 · Step function

**Table 1 · Technical data**

Type 5207-0060 Temperature Sensor	
Measuring element	1 Pt 1000 (DIN EN 60 751, 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
Immersion depth	52 mm
Mechanical connection	Screw thread G ¼
Electrical connection	Free cable end fitted with wire end ferrules with plastic sleeves
Connecting cable length	2000 mm
Sensor pocket	
Mechanical connection	Male thread G ¾ Female thread G ¼ Coupling nut G ¾ or G 1
Nominal pressure	PN 16

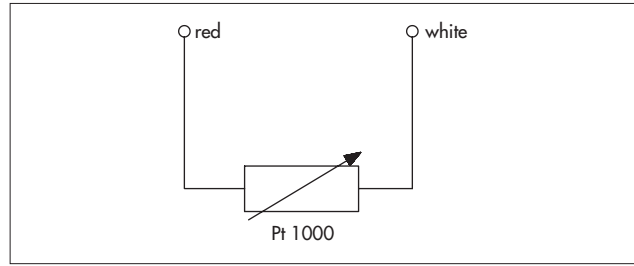
**Table 2 · Materials**

Type 5207-0060 Temperature Sensor	
Mechanical connection	Brass (2.0401.20)
Protective tubing	Stainless steel Inconel 600 (9.4816)
Connecting lead	PVC
Sensor pocket	Red casting brass CC491K, Rg5

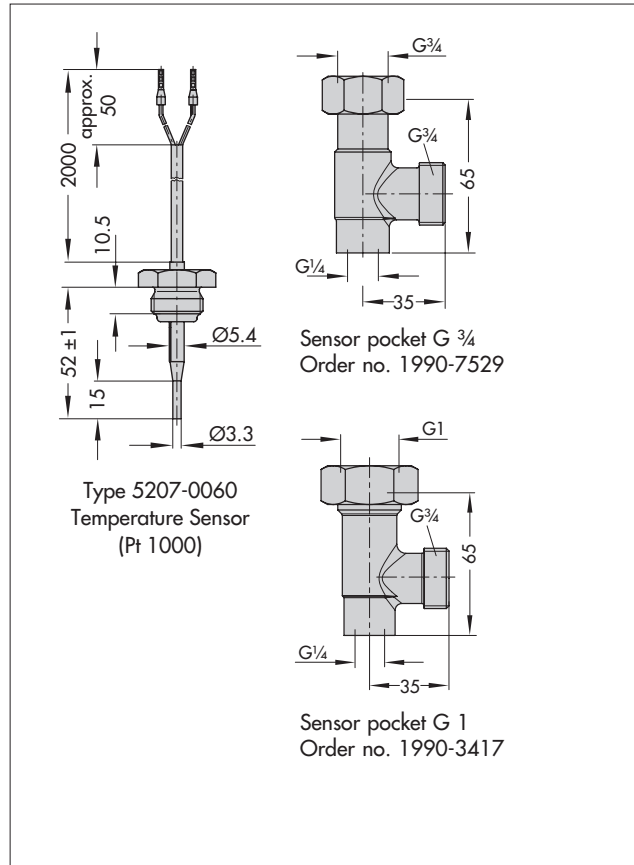
**Ordering text**

Fast-response Temperature Sensor Type 5207-0060  
Accessories: Sensor pocket with coupling nut (G ¾ or G 1) and gasket.

**Electrical connection**



**Dimensions in mm**



Specifications subject to change without notice.

