# Fast-response Temperature Sensor Type 5207-0060

samson

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.

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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**

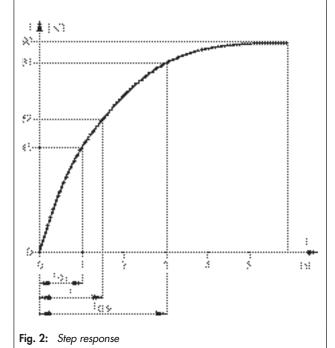
- Optimal step response featuring a half-value time
   t<sub>0.5</sub>≤ 1 second and a 90 % time t<sub>0.9</sub>≤ 3 seconds measured
   in flowing water (0.4 m/s)
- Minimum thermal resistance and low heat capacity
- Immersion depth 52 mm
- Easy to install
- The use of a special sensor pocket provides optimal positioning of the temperature sensor at the heat exchanger

Three times characterize the step response:

- Half-value time t<sub>0.5</sub> indicates the time taken for the measurement to reach 50 % of the final value
- 90 % time t<sub>0.9</sub> 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



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### Table 1: Technical data

Type 5207-0060 Temperature Sensor	
Measuring element	1 Pt 1000 (DIN EN 60751, Class B) Two-wire circuit
Permissible medium temperature	−5 to 90 °C
Permissible ambient temperature	−5 to 80 °C
Time constants (medium: water 0.4 m/s)	$t_{0.5} \le 1$ second $t_{0.9} \le 3$ 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

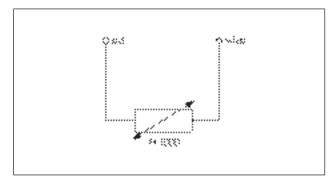
# Table 2: Materials

Type 5207-0060 Temperature Sensor	
Mechanical connection	Stainless steel (1.4404)
Protective tubing	Stainless steel (1.4404)
Connecting cable	PVC
Sensor pocket	Red brass CC491K (Rg5)

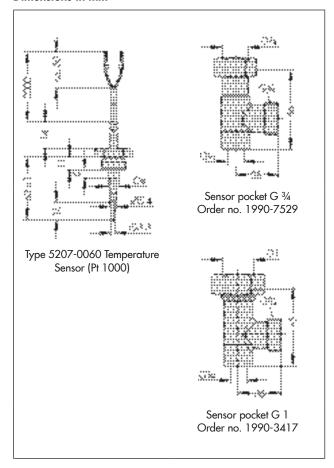
## Ordering text

Type 5207-0060 Fast-response Temperature Sensor Accessories: Sensor pocket with coupling nut (G  $^{3}\!\!/_{2}$  or G 1) and seal

#### **Electrical connection**



### Dimensions in mm



Specifications subject to change without notice.

