

Presently the persistent pressure on reduction of costs that are connected with heat consumption for heating buildings is exerted. Therefore high-quality temperature control is very important and temperature sensors are the essential part of the process. The company SENSIT s.r.o. reacts to the requirements of producers of control systems and control devices themselves used for controlling boilers, solar systems, fireplaces and fire ovens. The company is engaged in development and production of temperature sensors in such way to satisfy needfull applications. We recommend following types from the wide range of offered sensors:

## Temperature sensors for temperature measurement in a space

### Sensor series S 110 and K 110



The sensors are intended for external temperature measurements that is important in the case of equitherm regulations. On the basis of outdoor temperature measurements of the temperature of heating water is set. Thus the continuous power change as well as the cost reduction is established.

Basic data:

- temperature operating range -30 to 100 °C
- design versions K 110 with a metal connection head and a stem  
S 110A with a plastic connection head and a stem  
S 110B with a plastic connection head
- output signals Pt, Ni, NTC PTC, DALLAS and others  
4 to 20 mA
- ingress protection according to EN 60 529 IP 54 for K 110  
IP 65 for S 110

### Sensor series S 100 in the design SENSIT, ABB, LEGRAND

The sensors are intended for actual temperature measurements in interiors that is the part of the control process. In this manner the regulation takes into account also extraneous temperature influences such as: insolation, the heat rising by cooking in a kitchen, the heat generated due to presence of persons or due to any equipment running.

Basic data:

- temperature operating range -30 to 100 °C for S 100 SENSIT  
5 to 55 °C for S 100ABB, LEGRAND
- design versions S 100 standard version SENSIT  
S 100TANGO, S 100TIME, S 100ALPHA and others
- output signals Pt, Ni, NTC PTC, DALLAS and others  
4 to 20 mA
- ingress protection according to EN 60 529 IP 30 (for S 100IMPULS IP 20)



## Contact temperature sensors

The sensors are intended for temperature measurements of substances in tubing that is important for controls and limitation of temperature of heating water eventually reverse water.

### Sensor series S 150

Basic data:

- temperature operating range -30 až 130 °C
- temperature sensing elements Pt, Ni, NTC, PTC,
- ingress protection according to EN 60 529 IP 65
- material of the case brass
- material of the protection case SILIKON and SILAMID
- type of cable silicon 2 x 0,22 mm<sup>2</sup>



### Sensor series TR 026 a TR 141

Basic data:

- temperature operating range TR 026 -30 to 200 °C  
TR 141 0 to 350 °C
- temperature sensing elements Pt, Ni, NTC, PTC, DALLAS and others
- ingress protection according to EN 60 529 IP 65  
IP 50 for the version up to 350 °C
- material of the case brass, stainless steel or dural
- type of cable silicon 2 x 0,22 mm<sup>2</sup> up to 200 °C  
glass fibre insulation and metal braiding up to 350 °C



## Sensors for temperature measurements of flue and burnt gases

The sensors are intended for temperature measurements in drain channels for burnt gases in gas appliances, fireplaces and ovens. The temperature measurements have significance not only for temperature monitoring of flue gas itself but also for time specifications for switching on/off of a burner, for specification of fuel consumption etc.

### Sensor series TR 068

Basic data:

- temperature operating range -30 to 400 °C
- temperature sensing elements Pt 100, Pt 500 and Pt 1000
- ingress protection according to EN 60 529 - IP 65
- material of the case stainless steel EN X5CrNi18-10 (DIN 1.4301)
- type of thread/OK M 10x1/OK17 or other
- type of the cable silicon 2 x 0,5 mm<sup>2</sup>

### Sensor series TR 085

Basic data:

- temperature operating range -50 to 600 °C (according to the design)
- temperature sensing elements Pt, Ni, thermoelements K
- ingress protection according to EN 60 529 IP 54 to IP 67 (according to the design)
- material of the case stainless steel EN X5CrNi18-10 (DIN 1.4301)
- type of thread/OK M 10x1,5/OK17 or other
- type of the cable according to the design



## Temperature sensors for universal application

The basic sensor types with cable TG8, TR 050A a TR 160 can be used for external temperature measurement, temperature of a floor, temperature of heating water (combination with a thermowell), in feed tanks for solar systems TUV or in flue gas ductings etc. They can be used also as contact temperature sensors.



Basic data:

- temperature operating range
 

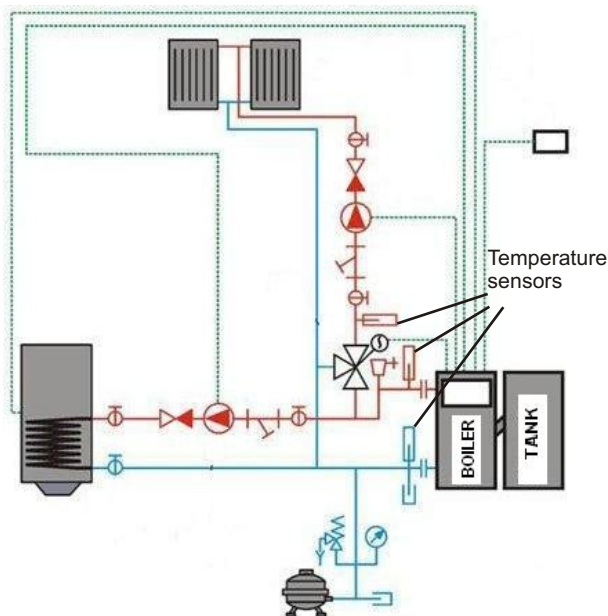
|         |               |
|---------|---------------|
| TG8     | -50 to 200 °C |
| TR 050A | 0 to 400 °C   |
| TR 160  | -40 to 105 °C |
- temperature sensing elements Pt, Ni, DS 18 B20, NTC and others
- ingress protection according to EN 60 529
 

|                |       |
|----------------|-------|
| TG8 and TR 160 | IP 67 |
| TR 050A        | IP 50 |
- material of the case
 

|               |                             |
|---------------|-----------------------------|
| TG8 a TR 050A | stainless steel             |
|               | EN X5CrNi18-10 (DIN 1.4301) |
| TR 160        | polyamid                    |
- type of cable according to the design

## Examples of application of SENSIT temperature sensors in heating systems control

Integration of a boiler in heat system with TUV heating - three way valve



Integration of a boiler in heat system with TUV heating and solar panels - three way valve

