

RESISTANCE SENSORS FOR HEAT METERS

TSH 202 TSH 204

Sensors are designed for temperature measurement of liquid and gaseous media, **especially in central heating systems.**

Sensor is made on the basis of **Pt100** , **Pt500** or **Pt1000** resistor and is equipped with 2-terminal block that enables the 2-wire measurement (**TSH 202**) or equipped with 4-terminal block that enables the 4-wire measurement (**TSH 204**) .

Sensors are delivered in pairs that meet requirements of metrological regulations on heat meters for water .
Selection accuracy for pairs is limited to 66% of permissible errors acc. to the National Weights and Measures Office „GUM” instructions as well as the MID directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014.

For easy mounting, sensors are marked with red label (supply) and blue label (return). Additionally, the covers of connection heads are coloured the same way. Connection heads are made of die aluminum cast. Each sensor pair is equipped with stainless steel housings of immersion length ranging from 65 to 450 mm with a 5 mm step.



TSH 202
TSH 204

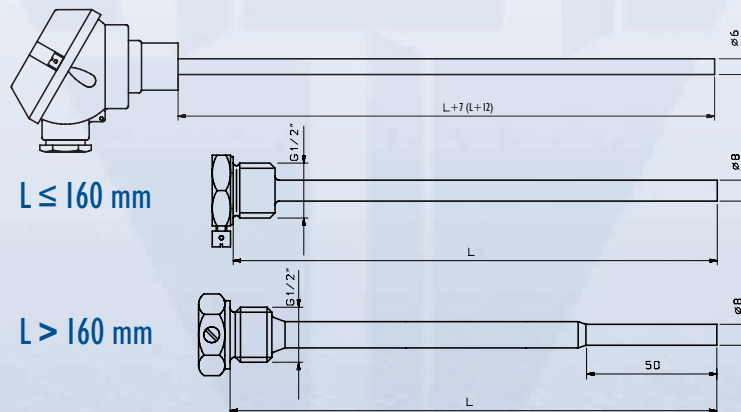
TECHNICAL DATA

- Number of block terminals **2 - TSH 202, 4 - TSH 204**
- Measurement **2- or 4-wire**
- Measuring range **0°C ≤ Θ ≤ 150°C**
- Temperature difference range **3K ≤ ΔΘ ≤ 150K**
- Sensing element **Pt100, Pt500, Pt1000**
acc. to DIN EN 60751:2009
- Permissible working pressure **1,6 MPa**
- Max. measuring current **5 mA**
- Housing material **stainless steel**
- Time constant **τ_{0,5} ≤ 8s**
- Connection **Aluminium Head Type MA**

PERMISSIBLE ERRORS OF A PAIR OF SENSORS

$$E_{Td} = \pm (0,5 + \frac{9}{\Delta\Theta})\% \cdot 0,66$$

DIMENSIONS



The paired sensors have the same manufacturing No., but a different marking that depends on a mounting place.

- ..XX/1 – marking for sensor on “supply” (red color)
- ..XX/2 – marking for sensor on “return” (blue color)

DESCRIBING AND ORDERING EXAMPLE

The paired resistance sensors **TSH 202 (204)** [] / [] mm

- Sensing element
- Immersion length of housing L =

Pt 100
Pt 500
Pt 1000
65 ÷ 450

Example:

The paired resistance sensors **TSH 202 Pt500 / 65 mm**



TSH 202
TSH 204

