

# Pt100 Insertion Sensor

**Sensor tube in stainless steel**

**Fast response time**

**Tolerates damp**

**4-wire silicone cable**



## Description

The measuring principle in the Pt100 temperature sensor is based on the relationship between resistance and temperature in platinum. The platinum sensor is manufactured in accordance with DIN/EN/IEC 751, e.g. 0°C corresponds to 100 Ohm and 100°C to 138.5 Ohm.

The sensors are factory calibrated to 1/1 DIN B, which means that the temperature sensor can be replaced without recalibrating the measuring system.

The insertion sensor can be used in industrial, marine, petro-chemical and food sectors. It is especially suited for use in freezing or smoking processes.

The sensor is mounted with a 4-wire cable.

If the Pt100 signal is to be converted to 4...20 mA, a transmitter with built-in Pt100 linearisation, such as FlexTemp Iso or FlexTop 2211, should be used.

## Technical Data

### Sensor

|  |   |
|--|---|
| <b>Sensor element</b>                        | Pt100 (DIN/EN/IEC 60751)                            |
| <b>Accuracy</b>                              | DIN/EN/IEC 60751                                    |
| 1/1 DIN B: _____                             | $\pm(0.3 + 0.005 \times t) \text{ } ^\circ\text{C}$ |
| <b>Sensor tube</b>                           | Stainless steel<br>AISI 304 (W.1.4301)              |
| <b>Shaft</b>                                 | FPM and stainless steel                             |
| <b>Wiring</b>                                | 5 m silicone cable, 4-wire                          |
| <b>Response time <math>\tau_{0,5}</math></b> |   |
| Water at 0.4 m/sec.:                         | < 1.5 sec.  |
| Air at 3 m/sec.:                             | < 25 sec.   |

### Environmental conditions

|                              |                      |
|------------------------------|----------------------|
| <b>Measuring range</b>       | -50...205°C          |
| <b>Ambient temperature</b>   | -50...205°C          |
| <b>Marking label</b>         | -30...105°C          |
| <b>Protection class</b>      | IP 65                |
| <b>Humidity</b>              | < 95% RH, condensing |
| <b>Mechanical tolerances</b> | ISO 2768-m           |

### Disposal of product and packing

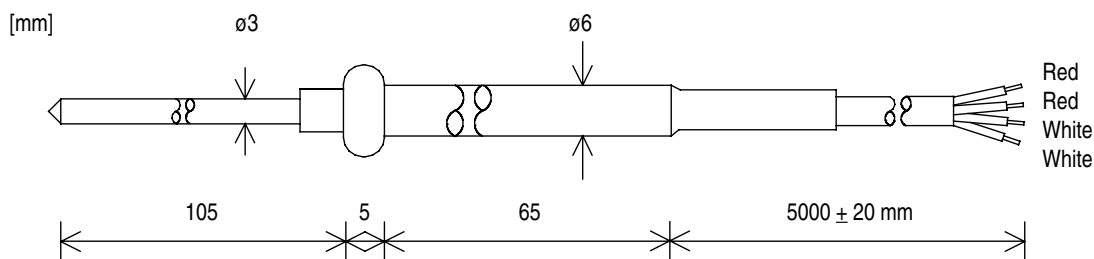
According to national laws or by returning to Baumer

## Ordering Details - Pt100 Insertion Sensor

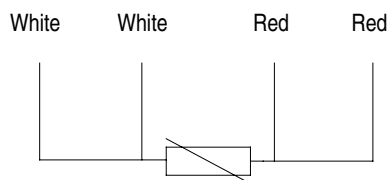
Pt100 Insertion sensor, 4-wire cable, 5 meters

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## Dimensional Drawing

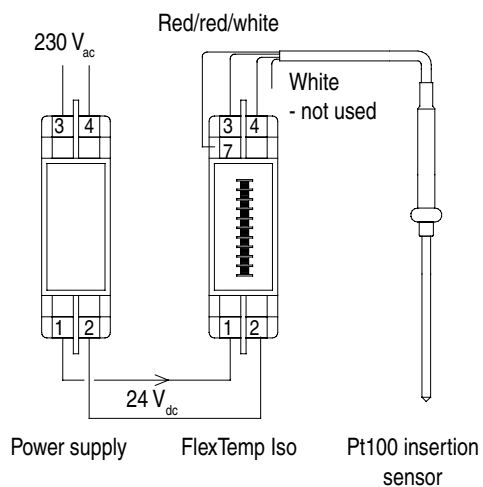


## 4-wire Sensor



**Warning:**  
One of the wires may not be connected in case of a 3-wire connection to the temperature transmitter

## Example of Application



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