

## W-EYK, Insert Pt Temperature Sensor Stainless-Steel Housing acc. to DIN EN 60751

Temperature range -40 °C to +500 °C

- Platinum sensor encapsulated in protective stainless steel housing
- Hi-temperature fiberglass insulated connection wires
- High maximum operating temperature +500 °C
- Housing resistant to oils, organic and inorganic bases and alkalis (medium concentration)

The dimensionally stable stainless steel protective tube allows easy mounting in corresponding mating holes. Applications include temperature measurement in gas, including HVAC equipment at elevated temperatures. Measurement accuracy is optimized for temperatures between 0 °C and 100 °C.

Nominal Resistance (Element) $R_0$ [Ω]	Tolerance Class (Element)	Order Number	Packaging
Pt 100	F 0.10 (1/3 B)	30500109	Plastic bag
Pt 1000	F 0.10 (1/3 B)	31500989	Plastic bag

### Temperature Range of Tolerance Class

Tolerance Class F 0.10 (1/3 B) 0 °C to +100 °C

### Temperature Coefficient

TCR = 3850 ppm/K

### Response Time

Water ( $v = 0.4$  m/s)

$$t_{0.5} = 3.2 \text{ s}$$

$$t_{0.9} = 9.6 \text{ s}$$

### Measuring Current

Pt100 Ω: 0.3 bis 1 mA

Pt1000 Ω: 0.1 bis 0.3 mA

(self-heating has to be considered)

### Long-Term Stability (Sensor Element)

The drift of the resistance value at 0 °C after a storage for 1000 hours in air at the declared upper temperature limit is not more than the tolerance value of the declared tolerance class according DIN EN 60751.

Typical drift of  $R(0 \text{ °C})$  is 0.04 % after 1000 hours at +500 °C.

### Self-Heating (Sensor Element)

0.4 K/mW bei 0 °C

### Connection Technology

Welding, Crimping, Brazing, Soft Soldering, Clamping



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Temperature range -40 °C to +500 °C

### Housing

Closed end tube  
Stainless-Steel 1.4571 (316 Ti)

### Connection Cable

Fiberglass insulated twisted wire pair Ni  
2 x 0.5 mm (AWG24), total length 2 x 320 mm

### Conductor Resistance

0.269  $\Omega$  (0.42  $\Omega$ /m)

### Applications

- HVAC
- Data Logging
- Laboratory instrumentation
- Oven temperature
- Hi-temp temperature sensing

### Properties

- Corrosion resistant stainless steel protective housing
- High- temperature fiberglass-insulated connection wires
- Widely used for a variety of temperature sensing applications
- Available in Pt100 or Pt1000 resistance values
- +500 °C maximum operating temperature

### Customer-Specific Adaptions can be implemented in High Volume for the following Properties:

- Extension Length
- Sensor Element: Type and Resistance
- Connectors

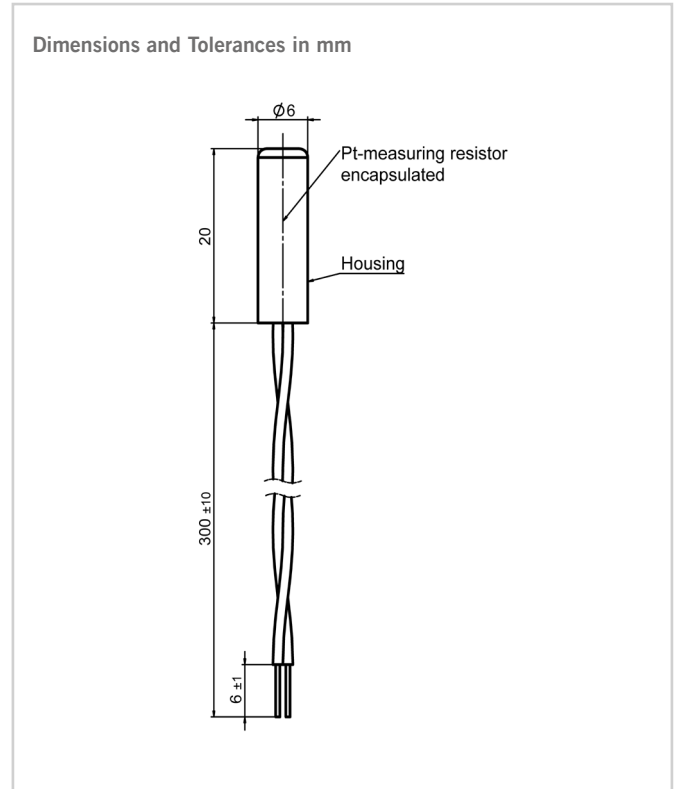


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Resistance vs.  
Temperature Table



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Page 2 of 2