



# PT-03

## Resistance Thermometer or Thermocouples with Cable Connection



## Features

- / With thread or smooth shaft
- / Cable tolerance up to 260°C
- / Sleeve -50 up to +1200°C
- / Pt-100, 2-, 3- or 4-wire
- / 3, 4 or 6 mm sensor diameter
- / Thermocouple K and J
- / Customer-specific solutions

## Description:

The PT-03 cable thermometer is an universally applicable temperature sensor on the basis of Pt100 or a thermocouple. A temperature-sensitive measuring element is situated in a protective sleeve made of stainless steel which is permanently fixed to a cable. It can be supplied in different variants with regard to material and length. The measuring element is available as a PT100 class B (optional accuracy class A) in 2-, 3- or 4-wire technology or as a thermocouple type K or J. Using the PT-03, a temperature range of -50...+1200°C can be easily detected. However, the maximum temperature on the cable must not exceed 260°C. Customer-specific special solutions are available on request.

## Application:

Cable thermometers are widely used in the industry in a variety of versions. Besides the versions with clamp connection housing or plug, the PT-03 exemplifies a simple and cost-effective method for measuring temperatures securely and accurately even in places which are difficult to access, e.g. shafts or narrow spaces, safely and accurately. By attaching an additional protective hose on the joint between the cable and protective sleeve, the protection class in some of the versions can be upgraded to IP68 so that the PT-03 is also suitable for measuring temperatures in wells. Basically, any type of fluid and gaseous media can be measured which are compatible with the material used.



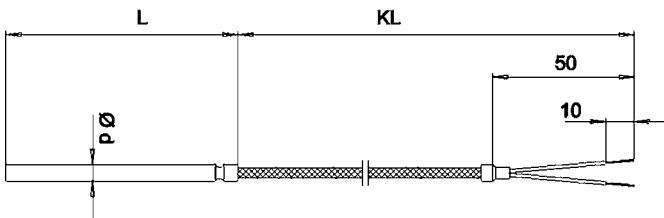
## Technical Specifications:

<b>Protection sleeve /</b>	stainless steel 1.4571, optionally 1.4541 or 2.4816 Inconel
<b>Shaft length /</b>	25 mm, 50 mm, 100 mm, 150 mm, 200 mm, 250 mm, 400 mm, special types on request
<b>Shaft diameter /</b>	3 mm, 4 mm or 6 mm
<b>Connecting thread /</b>	G1/2"-male or smooth shaft, optionally G1/4"-male, 1/4"-NPT, 1/2"-NPT or slidable compression fitting, special type connections on request
<b>Media-temperature /</b>	-50...+550°C for resistance thermometer -50...+1200°C for thermocouples
<b>Temperature ranges /</b>	-20...+70°C (PVC-cable) -60...+180°C (Silicone-cable) -65...+200°C (Teflon-cable) -50...+260°C (glass fibre insulated cable)
<b>Cable length /</b>	1000 mm standard, special type lengths on request

## Electrical Specifications:

<b>Measuring element /</b>	1 x Pt100 2-wire, 1 x Pt100 3-wire, 1 x Pt100 4-wire, 2 x Pt100 2-wire, or 2 x Pt100 3-wire, 1 or 2 thermocouples type K or J
<b>Accuracy /</b>	Class B, optionally Class A for Pt100, Class 1 for thermocouples type K or J
<b>Prot. Class /</b>	IP65 as per IEC 751 Class B, optionally IP68 (cable material glass fibre: IP50)
<b>El. Connection /</b>	bare cable ends, insulated, or core cable ends, optionally miniature plug for thermocouples

## Dimensions in mm:



## Ordering Codes:

**Order number**    **PT-03.**    **3.**    **2.**    **1.**    **1.**    **1.**    **3**

**PT-03 Resistance Thermometer with Cable Connection**

**Version /**

- 3 = ø 3 mm, for inserting
- 3a = ø 4 mm, for inserting
- 4 = ø 6 mm, for inserting

**Insertion or sleeve length /**

- 1 = 25 mm
- 2 = 50 mm
- 3 = 100 mm
- 4 = 150 mm
- 5 = 200 mm
- 6 = 250 mm
- 7 = 400 mm
- = special type length in mm

**Cable material /**

- 1 = -20...+70°C with PVC cable
- 2 = -60...+180°C with silicone cable
- 3 = -65...+200°C with PTFE cable
- 4 = -50...+260°C with glass fibre insulated cable
- 5 = -55...+180°C with shielded FEP cable
- 6 = -50...+260°C with SS-shielded glass fibre cable
- 7 = special material

**Cable length /**

- 1 = 1000 mm (standard)
- = special type length in mm

**Measuring element /**

- 1 = 1 x Pt100 Class B, 2-wire
- 2 = 1 x Pt100 Class B, 3-wire
- 3 = 1 x Pt100 Class B, 4-wire
- 4 = 2 x Pt100 Class B, 2-wire
- 4a = 2 x Pt100 Class B, 3-wire
- 5 = 1 x NiCr-Ni
- 6 = 1 x Fe-CuNi
- 7 = 2 x NiCr-Ni
- 8 = 2 x Fe-CuNi

**Options /** (multiple entries such as /2/9/10 are possible):

- 0 = none
- 1 = process connection G1/4"-male fixed
- 2 = process connection G1/2"-male fixed
- 3 = process connection 1/4"-NPT fixed
- 4 = process connection 1/2"-NPT fixed
- 5 = process connection G1/4"-male slidable
- 6 = process connection G1/2"-male slidable
- 7 = process connection 1/4"-NPT slidable
- 8 = process connection 1/2"-NPT slidable
- 8a = special connection, please specify in detailed text
- 9 = sensor class A instead of Class B
- 10 = material 1.4541 instead of stainless steel 1.4571
- 11 = material Inconel instead of stainless steel 1.4571
- 12 = miniature plug for thermocouples (only thermocouples)