



# Temperature measurement



## Resistance thermometer Pt100

standard diving sleeve resistance thermometer Pt-100  
with and without neck tube

### Description

Fundamentals of ACS Universal RTD standardized, high-quality platinum resistance form of a nominal resistance of 100 ohms at 0 ° C, tolerance classes A, B, 1/3B (AA) - in accordance with DIN EN / IEC 60751st.

ACS Pt100 probes are characterized by high accuracy and reproducibility are made and extremely reliable. The sensing elements are embedded in the protective tube with magnesium oxide powder and sealed hermetically. Thus, a good heat transfer and vibration protection is achieved.

Standard measuring temperatures are -70 ° C. .. +300 ° C;

High temperature versions +500 ° C / +600 ° C, low-temperature versions, special materials, special process connections, OEM versions are also available.

The given measuring temperature refers to an average temperature at the probe tip.

With cable versions, for example PTS / PTK and Pt100 sensors with connection head, possibly with integrated head transmitter, must be based on the respective maximum

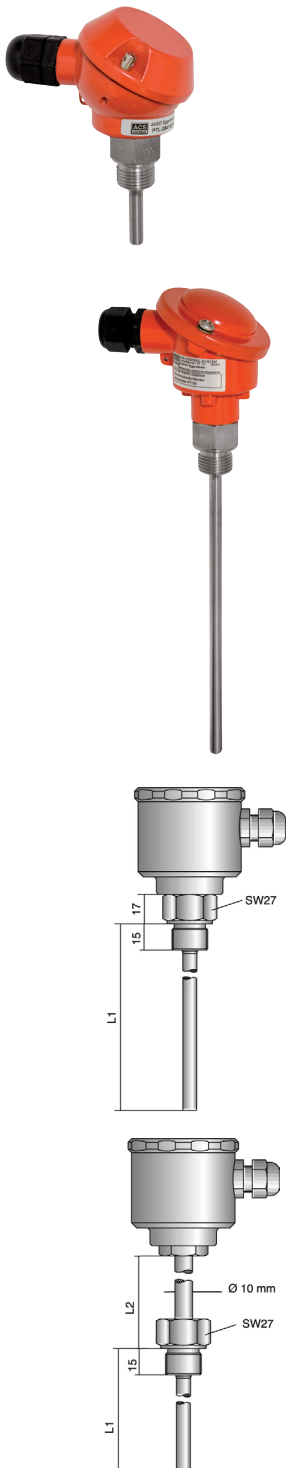
temperature of the cable, heads, etc., with on-site isolation, use of Pt100 be used with extension into account. The measurement speed of the individual Pt100 sensor is highly dependent on operating conditions, the measured medium and the physical dimensions.

The immersion depth should be not less than 50 mm. Shorter probe lengths clarify please always experienced with the ACS staff.



technical data	
measuring element:	Platinum resistance element Pt100/Pt1000, others by request
temperature ranges:	at measurement tip: -70°C...+300°C +500°C/ +600°C and low temperature versions by request
tolerance:	AA, A, B - according to IEC 60751
signal type:	- 1x Pt100: in 2-, 3-, 4-wire-switch
	- 2x Pt100: in 2x 2-wire or 2x 3-wire-switch
	- 3x Pt100: in 3x 2-wire-switch
connection:	- with flying leads for head transmitter mounting
	- head transmitter, 4...20 mA/ 0...10 V output, Standard, Ex, Profibus; others by request
connection:	- connection area made out of aluminium, plastic or stainless steel
	- fixed connection cable - PTFE shielded, silicone, PVC, glass silk protected with steel mesh, others by request - Lemo-plug system, M12 plug system
materials	
materials (terms of process):	- protection tubes made of seamless stainless steel: 1.4571 (AISI 316Ti) - flanges, process connections: 1.4571 (AISI 316 Ti) - special materials by request
Materialien (terms of connection):	- housing: aluminium, CrNi-steel, PP-polypropylene, POM-polyoxymethylene - cable material -> see „connection“

# Order code PTA



## sensor type

- 1 1x Pt100, 2-wire
- 2 **1x Pt100, 3-wire** (preferred type)
- 3 1x Pt100, 4-wire
- 4 2x Pt100, 2-wire (Doppel Pt100 with changeable measuring insert only from ø 8 mm)
- 5 2x Pt100, 3-wire (Doppel Pt100 with changeable measuring insert only from ø 8 mm)
- 6 1x Pt1000, 3-wire
- 7 3x Pt100, 2-wire (3x Pt100 with changeable measuring insert only from ø 8 mm)

## accuracy (price x 2 at double Pt100)

- B **class B, up to +300°C** (preferred type)
- A class A, up to +300°C
- C class AA (formerly class 1/5B), up to +300°C
- Y special version e.g. high temperature etc.
- P class AA (formerly class 1/5B), paired versions for e.g. heat quantity measurement . . . .

## process connection

- 1 **male thread G½"** (preferred type)
- 2 male thread G1"
- 3 male thread G¾"
- 5 union nut G¾"
- J DIN flange DN 100
- F DIN flange DN 50
- E DIN flange DN 25
- Y other process connections

## material, sensor diameter, process side

- T 1.4571 / 3 mm
- U 1.4571 / 5 mm
- K 1.4571 / 6 mm
- N **1.4571/ 8 mm** (preferred type)
- L 1.4571 / 10 mm
- W 1.4571 / 12 mm
- P 1.4571 / 6 mm, reduced head 4 mm; 40 mm long
- M 1.4571 / 8 mm, reduced head 5 mm; 40 mm long
- O 1.4571 / 10 mm, reduced head 6 mm; 40 mm long
- R 1.4571 / 8 mm, reduced head 3 mm; 40 mm long
- Y andere

## neck tube

- A **without neck tube** (preferred type)
- B **with neck tube** (standard L2 =100 mm) (preferred type)
- Y with neck tube upon request in mm

## connection head

- A PP-head small
- B PP-head big
- 1 plastic head Delrin® small
- 2 **plastic head Delrin® big** (preferred type)
- 3 aluminium head small (not with sensor type 5 and 7)
- 4 aluminium head big
- 5 steel head big
- 7 PTFE-head small
- 8 PTFE-head big
- G aluminium head double sized
- Y others

## measurement insert

- F **fixed** (preferred type)
- W changeable (at high temperature version always mandatory)

## connection type

- K **connection with terminal socket** (preferred type)
- M **connection for headtransmitter 4-20mA/0-10V fixed value**
- X connection headtransmitter UTN-500 software programmable
- T connection for headtransmitter PTN-600 PROFIBUS PA-interface
- D connection with wire ends for installation of headtransmitter
- V 5-pole M12-plug
- G connection for 2x headtransmitter
- L connection with 2x terminal socket
- Y special version

## length L1 sensor in mm

(preferred lengths: 50 | 100 | 150 mm)

## length L2 neck tube in mm

(preferred length 100 mm)

order code

**PTA**

mm

mm