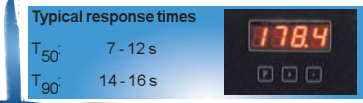


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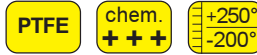
Temperature Probes





BOLA-Temperature Probes PT 100

Ideal for measuring temperatures in aggressive liquids and gases. The thermocouple is located in a PTFE-coated stainless-steel tube (1.4571). This metal core provides rigidity, but can easily be bent by hand to the desired shape. Entirely sealed in a solid and seamless PTFE coating, these temperature probes are resistant to virtually all chemicals. The collar ring on the upper part of the probe prevents accidental slipping into the liquid. The PTFE-coated probe tip is tapered, which allows quick measurements. The connecting cable is also coated with PTFE, and it is firmly attached to the body of the temperature probe. The 4-core cable has a length of 1500 mm. Supplied with: PTFE temperature probe with 1,5 metre cable.



Cat. No.	Probe dia.	Useful length	Overall length	Tip dia.	Dia. of collar ring
P 1750-10	8 mm	100 mm	160 mm	6 mm	12 mm
P 1750-15	8 mm	200 mm	260 mm	6 mm	12 mm
P 1750-20	8 mm	300 mm	360 mm	6 mm	12 mm
P 1750-25	8 mm	500 mm	560 mm	6 mm	12 mm
P 1750-30	8 mm	600 mm	660 mm	6 mm	12 mm

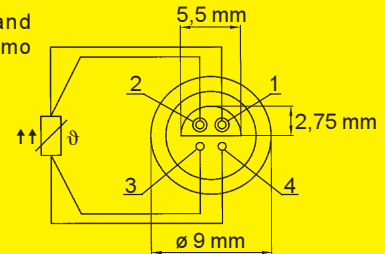


Technical data on BOLA Temperature Probes PT 100

Temperature range: -50°C to +250°C,
 Specification: DIN EN 60751
 Type: Platinum temperature sensor
 Class: A
 Tolerance: 0,15 + (0,002 x (t))
 Typical discrepancy: at 0°C: +/- 0,15°C
 at 100°C: +/- 0,35°C

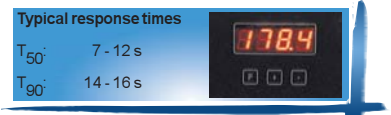
Position of the pins and dimensions of the Lemo coupling

- 1 = I +
- 2 = U +
- 3 = U -
- 4 = I -



BOLA-Temperature Probes PT 100 with Lemo Plug

Ideal for measuring temperatures in aggressive liquids and gases. The thermocouple is located in a PTFE-coated stainless-steel tube (1.4571). This metal core provides rigidity, but can easily be bent by hand to the desired shape. Entirely sealed in a solid and seamless PTFE coating, these temperature probes are resistant to virtually all chemicals. The collar ring on the upper part of the probe prevents accidental slipping into the liquid. The PTFE-coated probe tip is tapered, which allows quick measurements. The connecting cable is also coated with PTFE, and it is firmly attached to the body of the temperature probe. The connecting plug is a Lemo coupling, size 1, with 4 cores. Supplied with: PTFE thermocouple probe with 1,5 metre cable and a Lemo coupling.



Cat. No.	Probe dia.	Useful length	Overall length	Tip dia.	Dia. of collar ring
P 1760-10	8 mm	100 mm	160 mm	6 mm	12 mm
P 1760-15	8 mm	200 mm	260 mm	6 mm	12 mm
P 1760-20	8 mm	300 mm	360 mm	6 mm	12 mm
P 1760-25	8 mm	500 mm	560 mm	6 mm	12 mm
P 1760-30	8 mm	600 mm	660 mm	6 mm	12 mm



Any technical questions?

For technical assistance, for instance dimensions or range of applications please call our technical hotline:

+49(0)9346 / 92 86-54



Response times

The response time of a temperature probe is determined by introducing the probe to a step change in temperature and measuring how long the probe takes to reach a certain proportion of its final, steady-state reading. Typically, the time taken to reach 50% of the final reading (T_{50}) or 90% of the final reading (T_{90}) is indicated.

The following is a field-proven method of determination:

Put the temperature probe in an ice/water bath and let it reach a steady-state. Then transfer it quickly to a column of steam and monitor its resistance until a steady-state is reached. Examining a graph of the probe's response allows you to determine the time taken to achieve a reading midway between the two steady-state values. This time is the T_{50} response time.

BOLA-Temperature Probes PT 100 Lemo Compact

Ideal for measuring temperatures in aggressive liquids and gases. The thermocouple is located in a PTFE-coated stainless-steel tube (1.4571). This metal core provides rigidity, but can be bent by hand to the desired shape. Entirely sealed in a solid and seamless PTFE coating, these temperature probes are resistant to virtually all chemicals. The collar ring on the upper side of the probe prevents accidental slipping into the liquid. The PTFE-coated probe tip is tapered, which allows quick measurements. The connecting plug is a Lemo coupling size 1 with 4 cores.

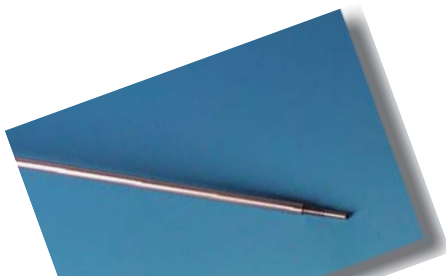
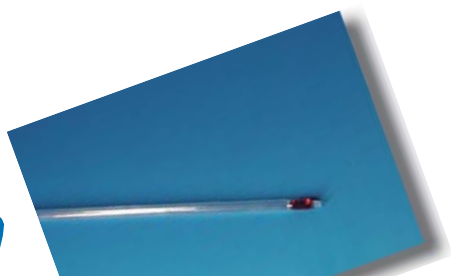
Supplied with: PTFE probe with integrated Lemo coupling

PTFE chem. + + + $+250^{\circ}$ -200°



Cat. No.	Probe dia.	Useful length	Overall length	Tip dia.	Dia. of collar ring
P 1730-10	8 mm	100 mm	170 mm	6 mm	12 mm
P 1730-20	8 mm	300 mm	370 mm	6 mm	12 mm
P 1730-23	8 mm	400 mm	470 mm	6 mm	12 mm
P 1730-25	8 mm	500 mm	570 mm	6 mm	12 mm

Typical response times
 T_{50} : 7 - 12 s
 T_{90} : 14 - 16 s



Coating your thermometers and probes!

We would be glad to coat your probes or thermometers with a PTFE shrinkable tubing. This way your probes obtain the chemical resistance of PTFE. Please consider that the probe/thermometer has a higher inertia because of this thin coating. The probe/thermometer has to be able to bear short-time temperatures of at least $+250^{\circ}\text{C}$

Please contact us. We would be glad to send you a quotation!





BOLA-Total Immersion Probes PT 100

These probes can be immersed completely in aggressive liquids and gases. The 4-core cable is coated with white PFA. The cable and the probes are resistant to virtually all chemicals. In addition, the total immersion probes can be used for measurement of temperature in autoclaves. The cable has a Lemo coupling size 1 for easier connection. The probes correspond to class A, PRT100.

PTFE
chem.
+++
+250°
-200°

Typical response times

T ₅₀	4 - 6 s
T ₉₀	6 - 8 s



Cat. No.	Dia. of probe	Probe length	Cable length
P 1790-20	4 mm	50 mm	4 m

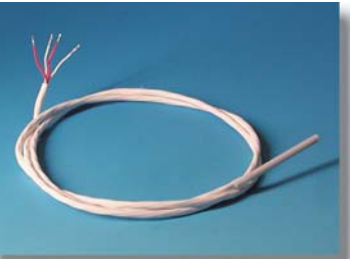


BOLA-Total Immersion Probes PT 100

These probes can be immersed completely in aggressive liquids and gases. The 4-core cable is coated with white PFA. The cable and the probe are resistant to virtually all chemicals. In addition, the total immersion probes can be used for measurement of temperature in autoclaves. The probes are manufactured according to class A, PRT100.

PTFE
chem.
+++
+250°
-200°

Cat. No.	Dia. of probe	Probe length	Cable length
P 1780-20	4 mm	50 mm	4 m



Typical response times

T ₅₀	4 - 6 s
T ₉₀	6 - 8 s

