

Pt100 RTD & Thermocouple Probes for Industrial Applications



See Section B for Details

- ✓ Pt100 in class A, 1/3 DIN and 1/10 DIN available
- ✓ Thermocouples J, K, T, E & L with accuracy to IEC class 1
- ✓ Temperature range -100°C to +400°C
- ✓ Standard closed end sensors or airstream models available
- ✓ Standard lengths up to 200mm, optional lengths of 201-500mm
- ✓ Diameter 3mm or 6mm
- ✓ A range of mounting threads
- ✓ All Pt100 sensors have a 4-wire connection
- ✓ A broad range of lead wire materials available



OMEGA temperature probes for industrial applications are produced with a wide variety of mechanical attachment systems suitable for a range of process conditions.

They may be specified to your precise requirements by the sensor type in either a closed-end or airstream version, accuracy, probe length, different threads, wire material in shielded and unshielded versions.

AVAILABLE VERSIONS:

Probe Type	Style	Accuracy	Diameter	Probe Length	Mounting Bush	Lead Wire Insulation	Lead Wire Length
P-Pt100 J-Thermocouple J K-Thermocouple K T-Thermocouple T L-Thermocouple L E-Thermocouple E N-Thermocouple N	M-Closed end L-Airstream Probe H-Hand Held Probe EH-Hand-held probe with penetration tip	P-Pt100(4-wire): A-Class A 1/3-1/3 DIN B 1/10-1/10 DIN B Thermocouples: 1-Class 1 (standard)	6-6mm 3-3mm	5-200mm 200-500mm	O-Plain stem M6-M6x1 pitch M8-M8x1 pitch M10-M10x1 pitch G1/8-1/8" BSP PI. G1/4-1/4" BSP PI G1/2-1/2" BSP PI.	M12-M12 Connector P-PVC S-Silicone Rubber T-FEP G-Glass Fibre PS-PVC Shielded TS-FEP Shielded GS-Glass Shielded	XM-Cable length in metres

Specifications

Temperature range:

-100°C to +400°C

Lead wire temperature range:

PVC 100°C (max), Silicone rubber 200°C (max), FEP 250°C (max), Fibreglass 400°C (max)

Sheath material:

Stainless steel grade 304

Maximum pressure:

Ø6mm - 40bar, Ø3mm - 20bar

Response time T66 in liquid:

Pt100 closed end probe: 3 seconds
Thermocouple: 4 seconds

Response time T66 in air:

Pt100 closed end probe 15 seconds
Thermocouples: 5 seconds

Sensor Configuration:

Pt100: 4-wire system
Thermocouples: Ungrounded

The standard temperature range is -100°C to +400°C. Selection of the wire insulation, i.e. PVC, Silicone, FEP or Glass will effect the maximum probe temperature. Do not exceed the maximum temperature of the insulation at the transition between the probe and wire.

Ordering Guide										
Model No	Description	Ordering Code								
Probe Type	Pt100 to IEC 751 Thermocouple type J, Iron/Constantan to IEC 584 Thermocouple type K, NiCr/NIAI to IEC 584 Thermocouple type T, Copper/Constantan to IEC 584 Thermocouple type L, Iron/Constantan to DIN 43710	P J K T L								
Style	Closed end Airstream probe Hand-held probe Hand-held probe with penetration tip	M L H EH								
Sensor Accuracy*	<table border="1"> <tr> <td>Pt100</td> <td>Class A (1/2 DIN Class B – Standard)</td> </tr> <tr> <td></td> <td>1/3 DIN Class B</td> </tr> <tr> <td></td> <td>1/10 DIN Class B</td> </tr> <tr> <td>Thermocouples</td> <td>Class 1 (Standard)</td> </tr> </table>	Pt100	Class A (1/2 DIN Class B – Standard)		1/3 DIN Class B		1/10 DIN Class B	Thermocouples	Class 1 (Standard)	A 1/3 1/10 1
Pt100	Class A (1/2 DIN Class B – Standard)									
	1/3 DIN Class B									
	1/10 DIN Class B									
Thermocouples	Class 1 (Standard)									
Stem Diameter	6mm 3mm	6 3								
Stem Length	5-200mm 201-500mm	5-200 201-500								
Process Connection**	Plain stem (Standard) M6 x 1mm pitch thread (Ø3mm probes) M8 x 1mm pitch thread M10 x 1mm pitch thread 1/8" BSP Parallel (G1/8") 1/4" BSP Parallel (G1/4") 1/2" BSP Parallel (G1/2" – Ø6mm probes)	0 M6 M8 M10 G1/8" G1/4" G1/2"								
Lead wire insulation (Price per metre)	M12 Plug Instead of Cable PVC 100°C maximum Silicone Rubber 200°C maximum FEP 250°C maximum Fibreglass 400°C maximum PVC with internal tinned copper braid 100°C maximum FEP with internal tinned copper braid 200°C maximum	M12 P S T G PS TS GS								
Lead Wire Length***	xm	X								

* Thermocouples are supplied with Class 1 accuracy as standard. ** The probe diameters shown above are available with the thread sizes indicated. *** The lead wire is supplied in multiples of one metre.

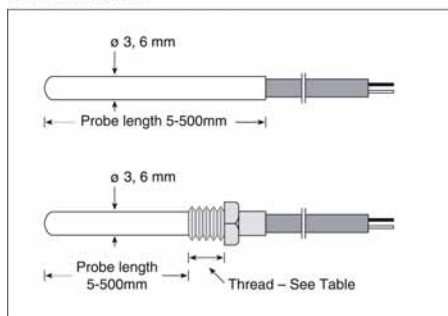
Ordering example 1: K-L-1-3-50-PS-1

Thermocouple type K airstream probe with Class 1 accuracy and diameter of 3mm. The probe length is 50mm with 1 metre of PVC shielded lead wire.

Ordering example 2: P-M-1/3-6-100-M10-S-8

Pt100 closed end probe with 1/3 DIN accuracy and diameter of 6mm. The probe length is 100mm with an M10 x 1 mounting bush and 8 metres of silicone lead wire.

Submersion Sensors



Air Stream Sensors

