

Pt100, Thermistor and Thermocouple Assemblies With Protection Head and Fabricated Thermowell for Industrial Applications



DIN Series Starts at
£28

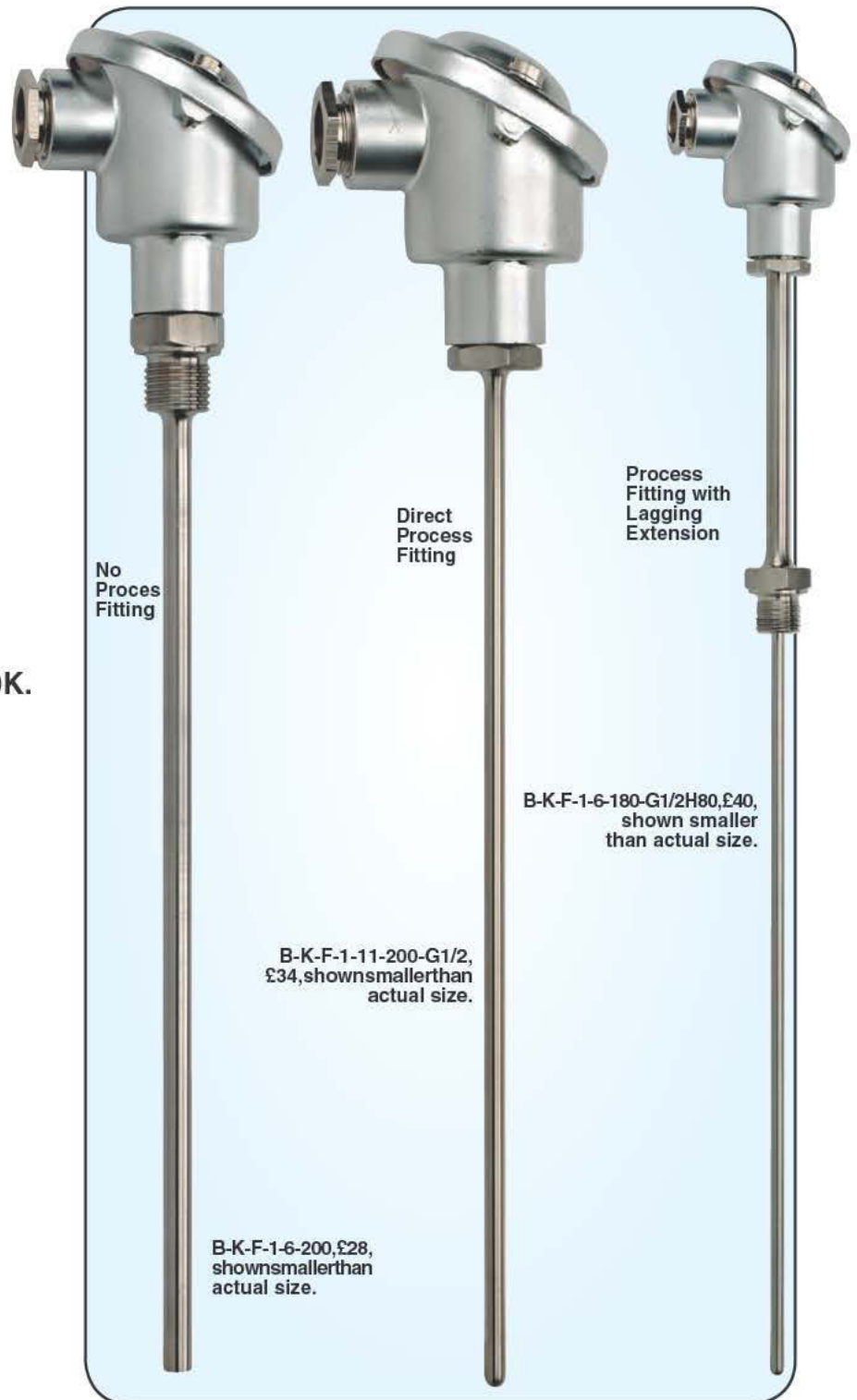


- ✓ Wide Range of Protection Head Styles and Materials
- ✓ Pt100 in Class A, 1/3 DIN and 1/10 DIN Available, Max 400°C
- ✓ Thermocouples Type J, K, N and T Accuracy IEC Class 1, Max 800°C
- ✓ Thermistors: 2K2, 3K, 5K, 10K.
- ✓ Sheath Lengths of 20 to 500 mm Standard
- ✓ Sheath Diameters of 6, 9, 11 and 15 mm
- ✓ Wide Range of Process Fittings/Threads
- ✓ Optional Head-Mount Transmitters

OMEGA's industrial protection head temperature probes are offered in 3 different mechanical constructions and with many options and fittings, making them suitable for a wide range of applications.

The following may be specified at time of order:

- ✓ Sensor Type
- ✓ Fixed, Replaceable or Mineral Insulated Construction
- ✓ Accuracy Class
- ✓ Diameter
- ✓ Insertion and Lagging Lengths
- ✓ Process Fittings and Optional Head-Mount Transmitter





Available!
Probes with Built-In Transmitters!
See page 67

NB12

Material: Alloy-Aluminium
Weight: 230 g
Dimensions: H = 87 mm, C = 82 mm
IP68[†] Rated

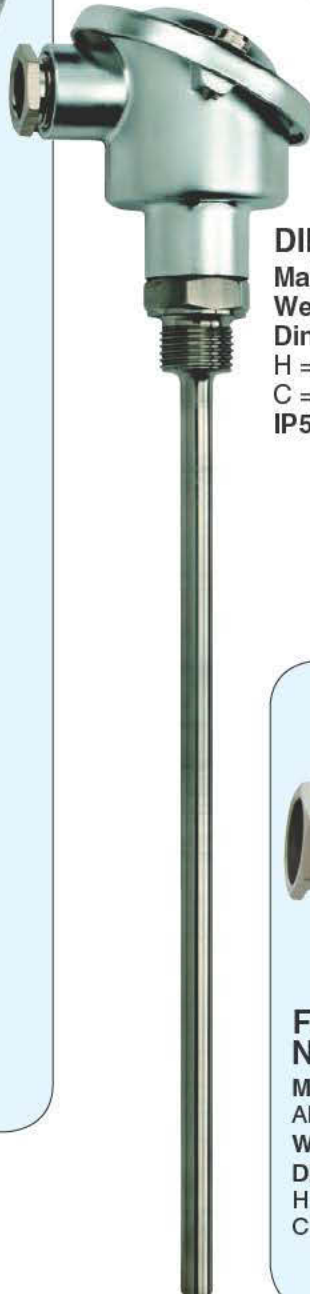
Probelength includes approx. 12 mm allowance for tapered threads.

[†] Final IP rating depends on quality of installation.



Cast Iron NB5

Material: Cast iron
IP67[†] Rated
Weight: 1.6 kg
Dimensions: H = 95 mm, C = 86 mm



DIN Form B

Material: Alloy-Aluminium
Weight: 250 g
Dimensions: H = 72 mm, C = 72 mm
IP53[†] Rated



Flip Top NB3

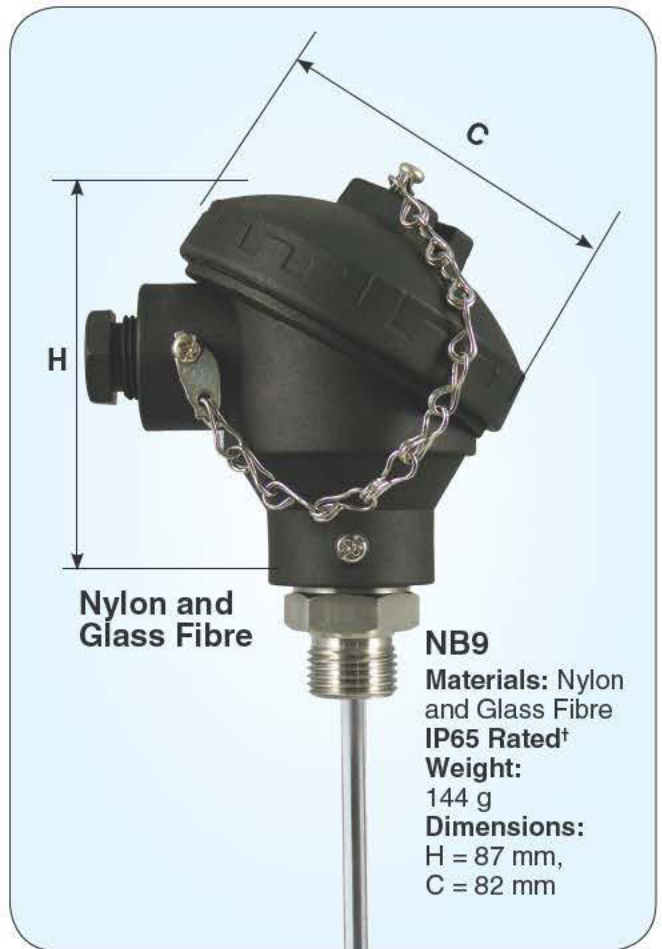
Material: Alloy-Aluminium
Weight: 250 g
Dimensions: H = 73 mm, C = 69 mm



**Miniature
Aluminium
Head
NB11**

Material:
Alloy-Aluminium
Weight: 140 g
Dimensions:
H = 64 mm,
C = 62 mm
IP68 Rated†

†Final IP rating depends on quality of installation.



**Nylon and
Glass Fibre**

NB9
Materials: Nylon
and Glass Fibre
IP65 Rated†
Weight:
144 g
Dimensions:
H = 87 mm,
C = 82 mm

Specifications

Sheath Material: 316 SS

Max Head Temperature:

70°C: With transmitter

150°C: Without transmitter

Standard Pt100 Wiring:

Class A: 2 wire

Class ½ and ⅓ DIN: 4-wire

Pt100 Transmitter:

Minimum Span: 20°C

Accuracy: $\pm(0.1^\circ\text{C} + 0.1\%$
range) $\pm 5\mu\text{A}$ for -100 to 500°C

$\pm(0.2^\circ\text{C} + 0.1\%$ range) $\pm 5\mu\text{A}$
for -200 to 850°C

Thermal Drift:

Zero: $\pm 0.01^\circ\text{C}/^\circ\text{C}$

Span: ± 50 ppm

Output: 4 to 20 mA,
2 wire, loop powered

Operating voltage:

8 to 30Vdc

Loop Resistivity:

800 Ω @ 24 Vdc

Thermocouple Transmitter:

Minimum Span: 75°C

Accuracy: $\pm 0.1\%$ FS (0/100°C
range) Excl. CJ

Overall Stability (inc. CJ):

400 ppm/°C, 8 to 30 Vdc

**Stainless
Steel Head**



NB13

Material: 316 SS
IP68 Rated†
Weight:
820 g
Dimensions:
H = 87 mm,
C = 82 mm

Cold Junction Compensation:

Automatic 1 to 70°C; accuracy
0.2°C @ 20°C, tracking
 $\pm 0.05^\circ\text{C}/^\circ\text{C}$

Output: 4 to 20 mA, 2 wire,
loop powered

Operating Voltage:

10 to 30 Vdc

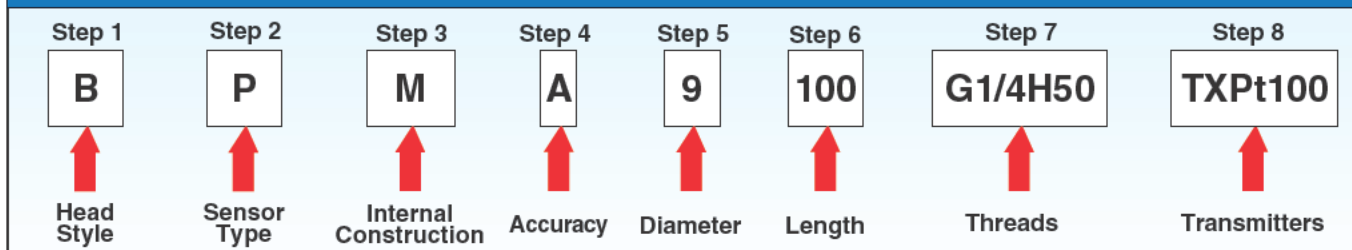
Loop Resistance:

$(V_{\text{supply}} - 10)/0.021$

Thermistor Transmitter:

See TX206TH Data Sheet

Multi Point Probe Model Numbers



Ordering Example: B-P-M-A-9-100-G1/4H50-TXPt100, £102.00.

Head Type (step 1)

	Additional Price
B = DIN Form B IP53	N/C
NB5 = Cast Iron IP67	£10
NB3 = Flip-Top Aluminium Alloy IP65	£2
NB8 = Domed Top Aluminium Alloy IP67	N/C
NB9 = Glass Filled Nylon IP67	N/C
NB11 = Mini Aluminium Alloy IP67	N/C
NB12 = Aluminium Alloy IP67	N/C
NB13 = 3/6 Stainless Steel IP67	£25

Internal (step 3)

	Additional Price
F = Fixed Sensor Element	N/C
G = Replaceable Pt100 Sensor	£14
(Only for 9, 11 & 15 mm Diameter)	
M = Mineral Insulated Pt100	£8

Diameter (step 5)

6 = 6 mm Diameter	N/C
9 = 9 mm Diameter	N/C
11 = 11 mm Diameter	N/C
15 = 15 mm Diameter	N/C

Sensor Type (step 2)

	Base Price
P = Pt100 (RTD) Probe	£32
J = J Thermocouple	£28
K = K Thermocouple	£28
T = T Thermocouple	£28
N = N Thermocouple	£28
2K2 = 2,252 Ω Thermistor	£32
3K = 3K Ω Thermistor	£32
5K = 5K Ω Thermistor	£32
10K = 10K Ω Thermistor	£32

Accuracy (step 4)

	Additional Price
A = Accuracy Class A	N/C
1/3 = Pt100 Accuracy 1/3 DIN	£6
1/10 = Pt100 Accuracy 1/10 DIN	£20
1 = Accuracy Class 1	N/C
TH1 = 0.1° Thermistor	£15
TH2 = 0.2° Thermistor	£10

Length (step 6)

	Additional Price
20-200 = Length 5-200 mm	N/C
201-500 = Length 201-500 mm	£5.50

Threads (step 7)

	Additional Price
0 = No thread	N/C
M18 = M18 x 1.5	£6
G1/4 = G1/4 with 19 mm Hex	£6
G1/2 = G1/2 with 24 mm Hex	£6
R1/4 = R1/4 with 19 mm Hex	£6
R1/2 = R1/2 with 24 mm Hex	£6
M18Hxxx = Lagging Ext. with M18x1.5	£12
G1/4Hxxx = Lagging Ext. with 19 mm Hex	£12
G1/2Hxxx = Lagging Ext. with G1/2 with 24 mm Hex	£12

(xxx Specify the distance from the thread to the sensor head)

Transmitters (step 8)

TX-Pt100 = Transmitter for Pt100	£50
TX-TC = Transmitter for Thermocouple	£50
TX-TH = Transmitter for Thermistor	£50

Note: When ordering a transmitter, specify required scaling.
 Ex: range 0 to 120°C = output 4 to 20 mA

Ordering Example 1: B-K-M-1-6-50-M18
 Thermocouple type K probe with Class 1 accuracy and diameter of 6 mm. The probe length is 50 mm with M18 x 1.5 mounting thread.

Base price - K	£28.00
Additional price for M18 thread	£6.00
Total Price	£34.00

Ordering Example 2: NB13-P-M-A-9-100-G1/4H50-TXPt100
 Pt100 probe with Class A accuracy and diameter of 9 mm. Stainless steel protection head The probe length is 100 mm with a G1/4 mounting bush, 50 mm lagging extension and a head mounted transmitter.

Base price - P	£32.00
Additional price for Stainless Steel Head	£25.00
Additional price MI Construction	£8.00
Additional price for process connection/extension	£12.00
Additional price for transmitter	£50.00
Total Price	£102.00

