

Pt100 and Thermocouple Assemblies

With Protection Head and Fabricated Thermowell for Industrial Applications



DIN Series Starts at
£28

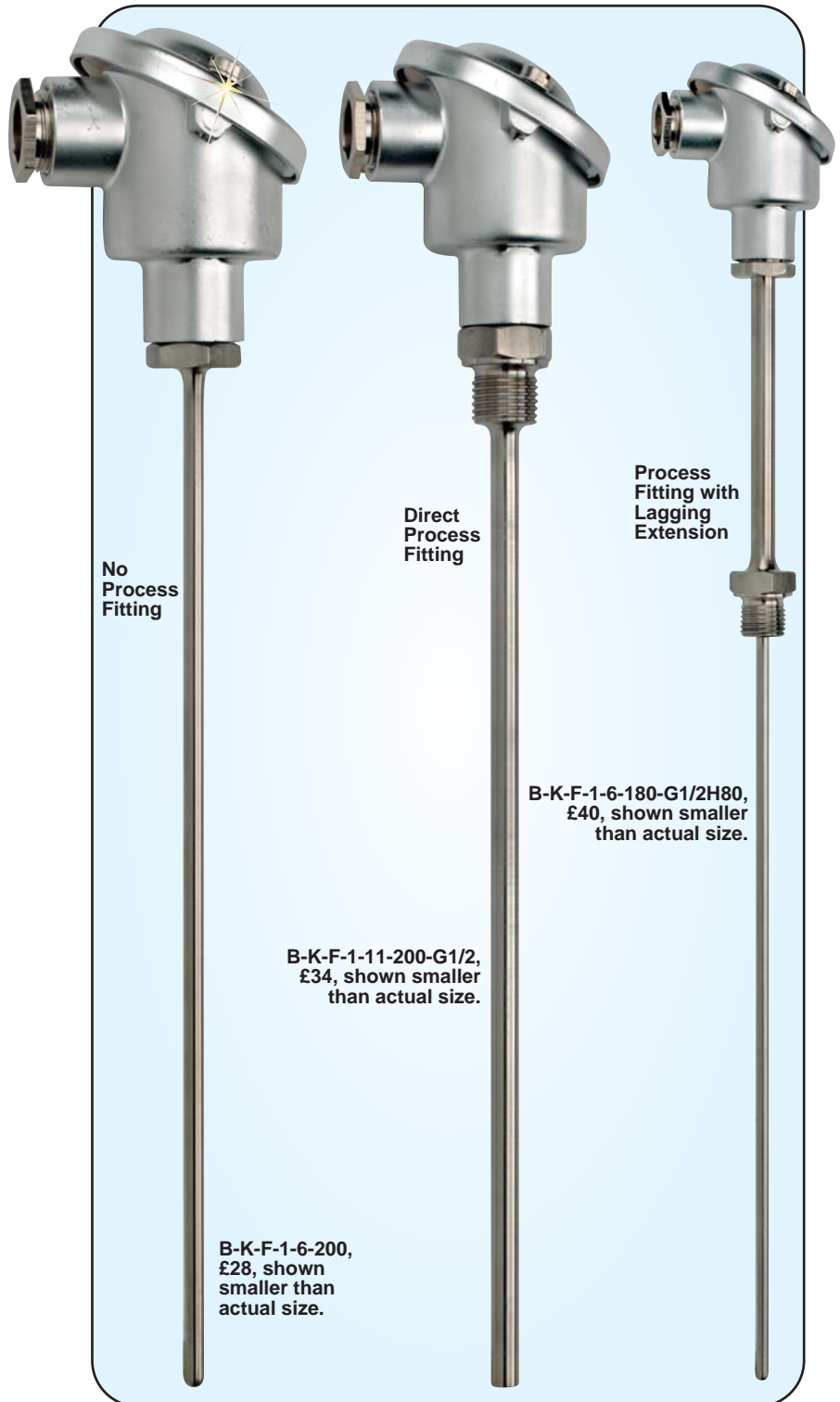


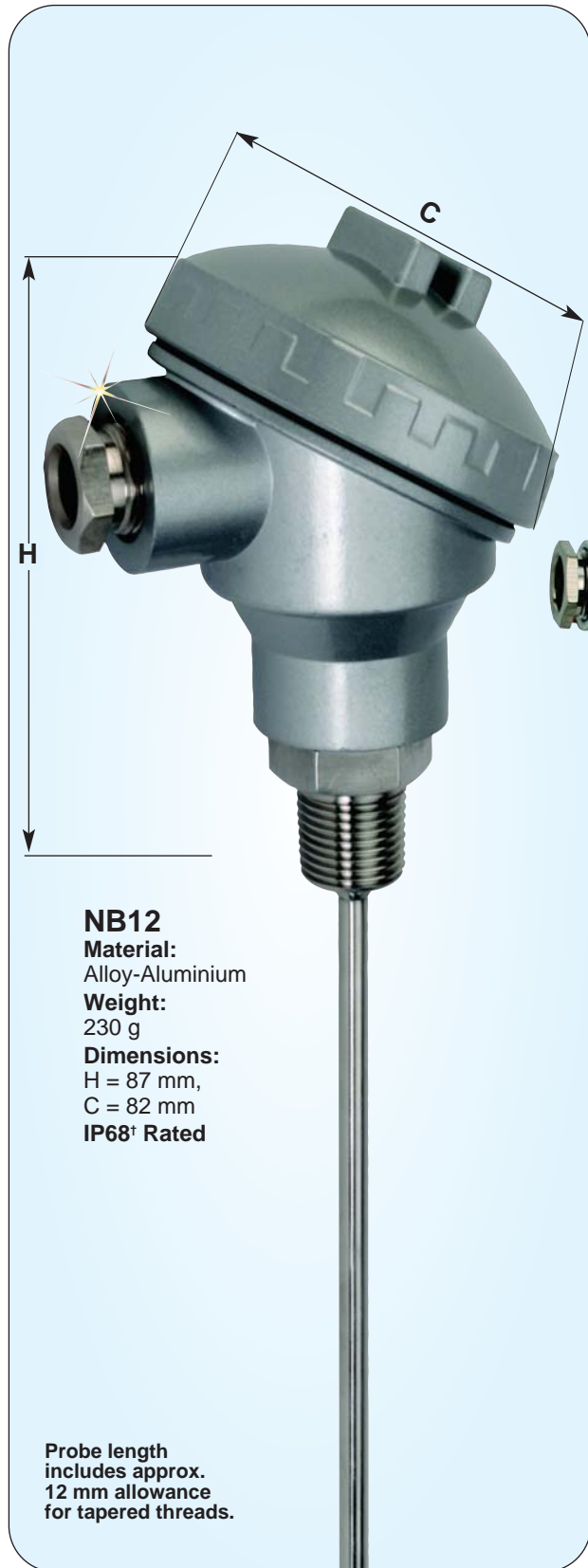
- ✓ Wide Range of Protection Head Styles and Materials
- ✓ Pt100 in Class A, 1/3 DIN and 1/10 DIN Available, Max 400°C
- ✓ Thermocouples Type J, K, N and T Accuracy IEC Class 1, Max 800°C
- ✓ Sheath Lengths of 20 to 500 mm Standard
- ✓ Sheath Diameters of 6, 9, 11 and 15 mm
- ✓ Wide Range of Process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

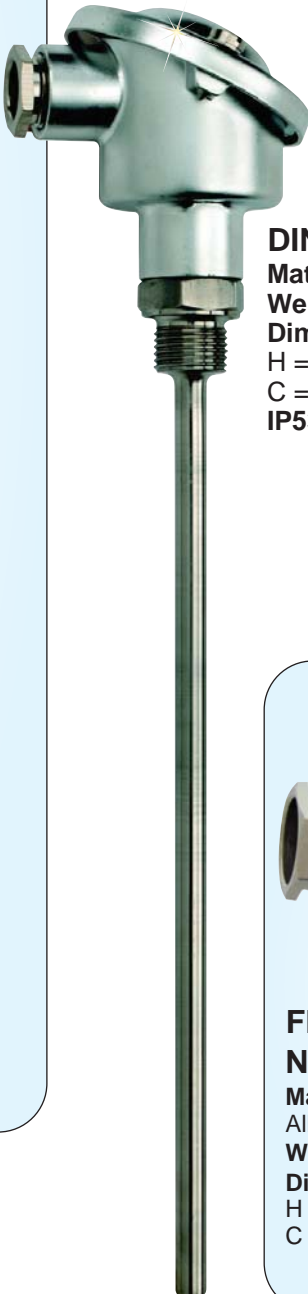




NB12
Material: Alloy-Aluminium
Weight: 230 g
Dimensions:
 H = 87 mm,
 C = 82 mm
IP68[†] Rated

Probe length includes approx. 12 mm allowance for tapered threads.

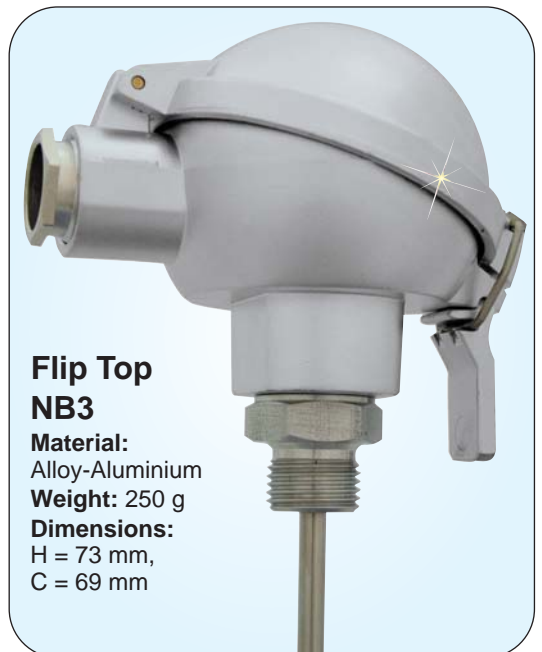
Available!
Probes with Built-In Transmitters!
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DIN Form B
Material: Alloy-Aluminium
Weight: 250 g
Dimensions:
 H = 72 mm,
 C = 72 mm
IP53[†] Rated

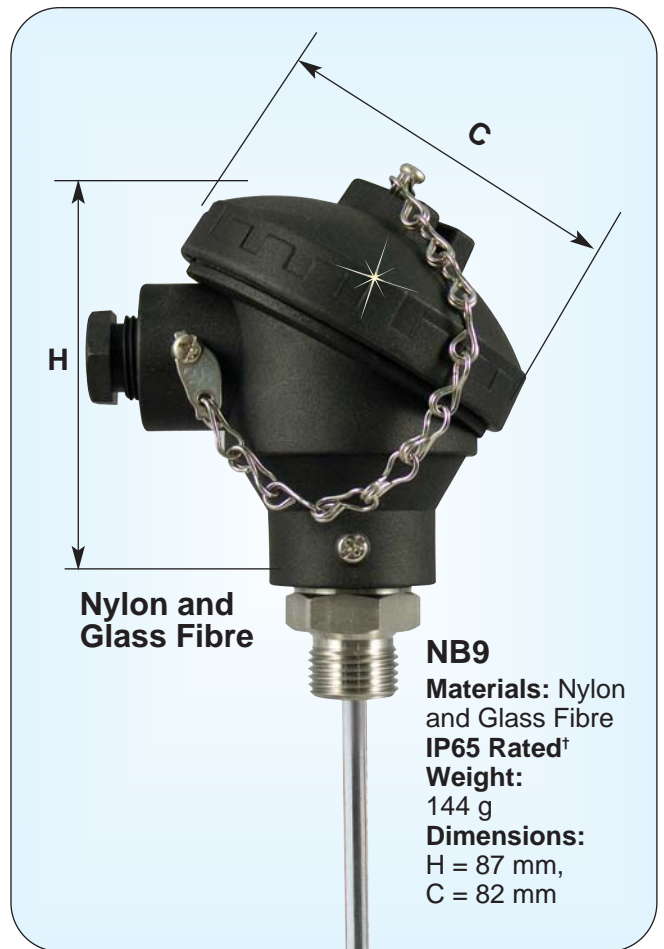


Cast Iron NB5
Material: Cast iron
IP67[†] Rated
Weight: 1.6 kg
Dimensions:
 H = 95 mm,
 C = 86 mm



Flip Top NB3
Material: Alloy-Aluminium
Weight: 250 g
Dimensions:
 H = 73 mm,
 C = 69 mm

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



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 ¼ DIN: 4-wire

Pt100 Transmitter:

Minimum Span: 20°C

Accuracy: ±(0.1°C + 0.1% range) ±5µA for -100 to 500°C

±(0.2°C + 0.1% range) ±5µA for -200 to 850°C

Thermal Drift:

Zero: ±0.01°C/°C

Span: ±50 ppm

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

Operating voltage:

8 to 30Vdc

Loop Resistivity:

800 Ω @ 24 Vdc

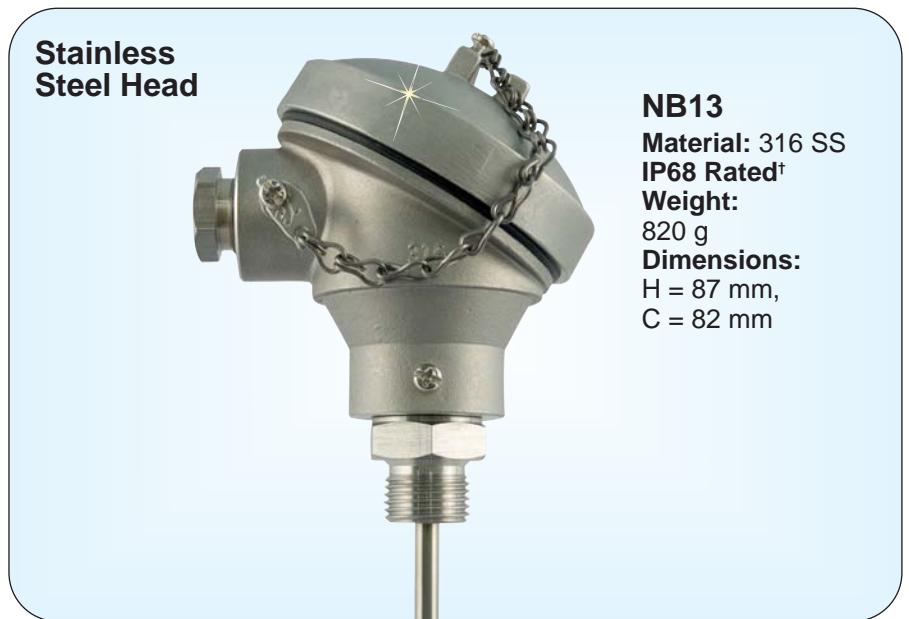
Thermocouple Transmitter:

Minimum Span: 75°C

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

Overall Stability (inc. CJ):

400 ppm/°C, 8 to 30 Vdc



Cold Junction Compensation:

Automatic 1 to 70°C; accuracy 0.2°C @ 20°C, tracking ±0.05°C/°C

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

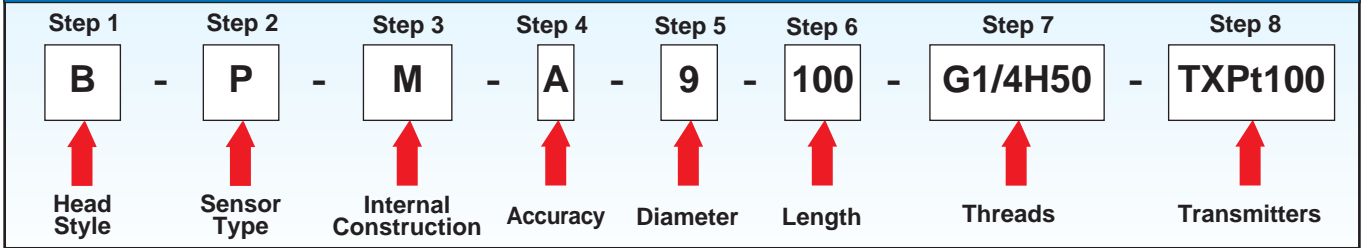
Operating Voltage:

10 to 30 Vdc

Loop Resistance:

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

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)	Additional Price
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

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

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

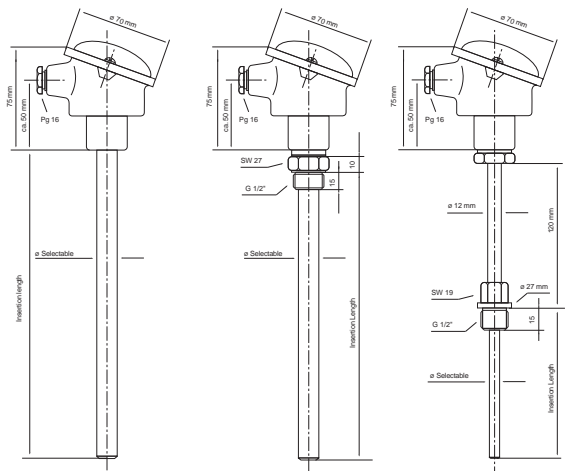
(xxx Specify the distance from the thread to the sensor head)

Transmitters (step 8)	Additional Price
TX-Pt100 = Transmitter for Pt100	£50
TX-TC = Transmitter for Thermocouple	£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





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