

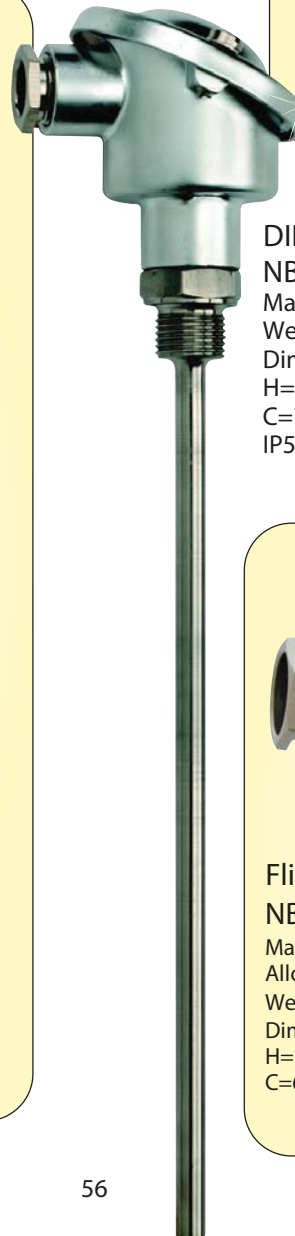
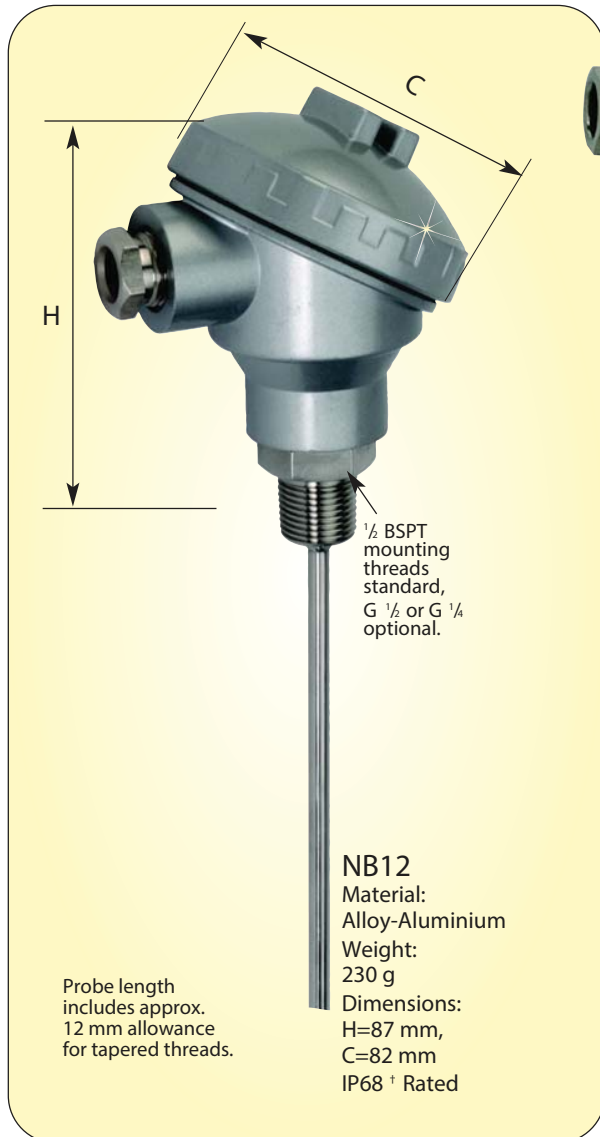
# Industrial Mineral-Insulated Thermocouples

## with Protection Head and Process Connection

- ✓ Made from Class 1 Tolerance MI Cable
- ✓ All Head Styles Include a Terminal Block as Standard
- ✓ Optional In-Head Mounted Transmitters Available
- ✓ All Probes Individually Pressure and Insulation Tested
- ✓ ½ BSPT, G ½ or G ¾ Process Fittings
- ✓ 310, 316, 321 SS, Inconel<sup>®</sup> or Super OMEGACLAD<sup>™</sup> XL sheaths
- ✓ Type K, N, T or J Thermocouple Types



Available!  
Probes with Built-In Transmitters!

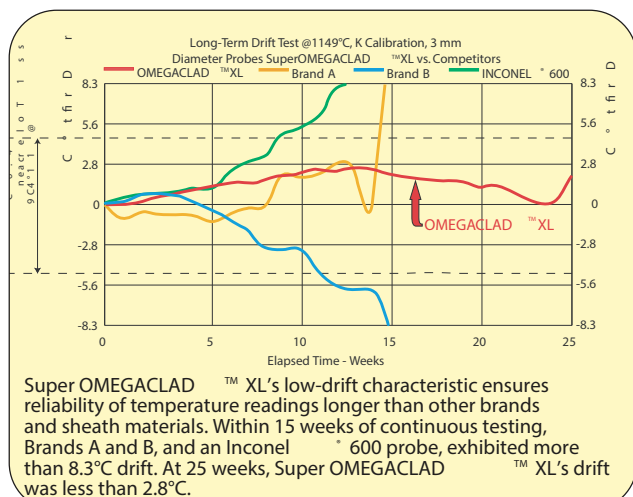


<sup>†</sup> Final IP rating depends on quality of installation.

# Industrial Thermocouple Protection Head Probe Assemblies

## Why Choose Super OMEGACLAD™ Probes?

You've chosen an industrial head for your application. Why not complement it with an OMEGA Super OMEGACLAD™ XL sheathed probe? These probes can be used at high temperatures for prolonged periods with very little drift of the base metal thermocouple. Super OMEGACLAD™ XL sheathing provides excellent oxidation resistance, and can withstand exposure to combustion gases or air at temperatures up to 1335°C. Superior resistance to oxidation attack results from an internal protective high-temperature film that does not affect the stability of the thermocouple alloys. Super OMEGACLAD™ XL sheathing also provides excellent resistance to corrosion in high temperature chlorine-contaminated oxidizing environments and ammonia/nitride-rich environments at temperatures above 980°C, the temperature at which the protective film forms.



Available as  
**SUPER**  
**OMEGACLAD™ XL**  
THERMOCOUPLE PROBES  
MAXIMUM PERFORMANCE SHEATHING  
ELIMINATES HIGH TEMPERATURE DRIFT

See page 26 to 29.

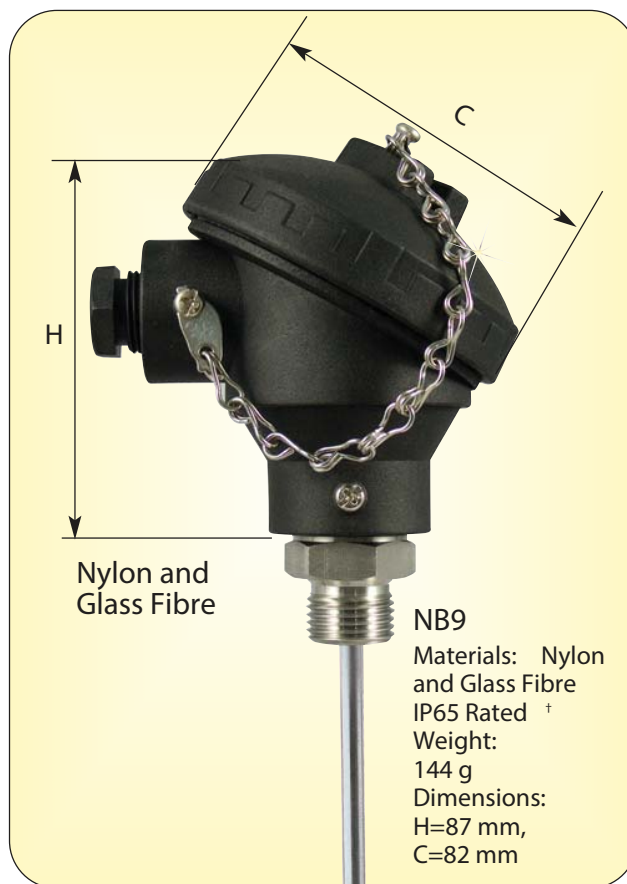
MEETS OR EXCEEDS  
SPECIAL LIMITS  
OF ERROR (SLE)  
AND EN 60584-2:  
Tolerance Class 1

Available!  
Probes with Built-In  
Transmitters!

### 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.



### Stainless Steel Head

**NB13**  
Material: 316 SS  
IP68 Rated †  
Weight: 820 g  
Dimensions:  
H=87 mm,  
C=82 mm



To Order: Insert the head style number into the part numbers shown in the "To Order" table on page 58. See ordering example below.

Ordering Example: NB12-CA310SS-IM60U-300, probe with an NB12 protection head

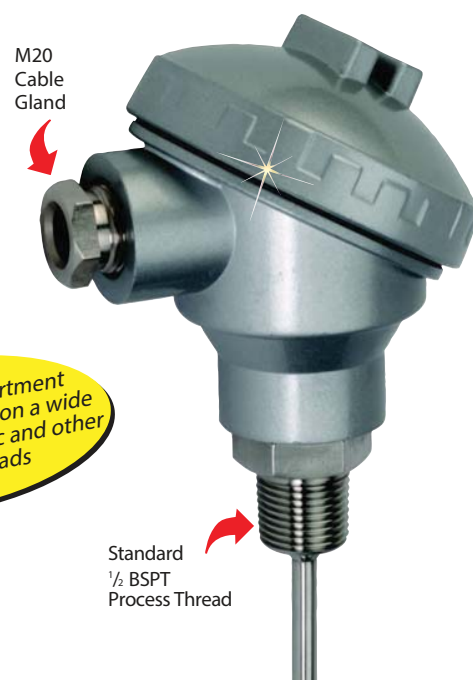
300 mm insulated junction Type K stainless steel thermocouple,

6 mm sheath diameter

NB12 Low-Profile Aluminium Head with Internal Terminal Block

- ✓ Made from Class 1 Tolerance MI Cable
- ✓ All Head Styles Include a Terminal Block as Standard
- ✓ Optional In-Head Mounted Transmitters Available
- ✓ All Probes Individually Pressure and Insulation Tested
- ✓ ½ BSPT, G ½ or G ¼ Process Fittings
- ✓ 310, 316, 321 SS, Inconel or Super OMEGACLAD™ XL sheaths
- ✓ Type K, N, T or J Thermocouple Types

These industrial thermocouple assemblies are manufactured from Class 1 MI cable. The semi-rigid sheath may be shaped to suit different applications. Protection heads and process fittings that suit most environmental and application conditions are available. A ½" BSPT process fitting is standard; refer to the note below the order table for details on how to specify G ½ or G ¼ process threads.



Available as  
**SUPER**  
**OMEGACLAD™ XL**  
THERMOCOUPLE PROBES  
MAXIMUM PERFORMANCE SHEATHING  
ELIMINATES HIGH TEMPERATURE DRIFT

MEETS OR EXCEEDS  
SPECIAL LIMITS  
OF ERROR (SLE)  
AND EN 60584-2:  
Tolerance Class 1

| Discount Schedule |                    |
|-------------------|--------------------|
| 1 to 10 units     | .....Net           |
| 11 to 24 units    | .....10%           |
| 25 to 49 units    | .....20%           |
| 55 and up         | ..Consult UK Sales |

  **SUPER OMEGACLAD™ XL HIGHLIGHTED!**

| To Order (Specify Model Number)  |                    |                      |                                                |                              |  |
|----------------------------------|--------------------|----------------------|------------------------------------------------|------------------------------|--|
| Calibration<br>IEC Code          | Sheath<br>Material | Sheath<br>Dia.<br>mm | Upper Temp<br>Guidelines<br>°C<br>T/C Junction | Model No.<br>300 mm Length** |  |
| <b>K</b><br>CHROMEGA<br>ALOMEGA™ | 304SS              | 1.5                  | 899                                            | NB(*)-CASS-IM15( +)-300      |  |
|                                  | 304SS              | 3.0                  | 899                                            | NB(*)-CASS-IM30( +)-300      |  |
|                                  | 304SS              | 4.5                  | 899                                            | NB(*)-CASS-IM45( +)-300      |  |
|                                  | 304SS              | 6.0                  | 899                                            | NB(*)-CASS-IM60( +)-300      |  |
|                                  | INC600             | 1.5                  | 921                                            | NB(*)-CAIN-IM15( +)-300      |  |
|                                  | INC600             | 3.0                  | 1071                                           | NB(*)-CAIN-IM30( +)-300      |  |
|                                  | INC600             | 4.5                  | 1149                                           | NB(*)-CAIN-IM45( +)-300      |  |
|                                  | INC600             | 6.0                  | 1149                                           | NB(*)-CAIN-IM60( +)-300      |  |
|                                  | XL                 | 1.5                  | 1038                                           | NB(*)-CAXL-IM15( +)-300      |  |
|                                  | XL                 | 3.0                  | 1149                                           | NB(*)-CAXL-IM30( +)-300      |  |
| <b>T</b><br>IRON-<br>CONSTANTAN  | 304SS              | 1.5                  | 441                                            | NB(*)-CPSS-IM15( +)-300      |  |
|                                  | 304SS              | 3.0                  | 521                                            | NB(*)-CPSS-IM30( +)-300      |  |
|                                  | 304SS              | 4.5                  | 621                                            | NB(*)-CPSS-IM45( +)-300      |  |
|                                  | 304SS              | 6.0                  | 721                                            | NB(*)-CPSS-IM60( +)-300      |  |
| <b>J</b><br>IRON-<br>CONSTANTAN  | 304SS              | 6.0                  | 721                                            | NB(*)-ICSS-IM15( +)-300      |  |
|                                  | 304SS              | 6.0                  | 721                                            | NB(*)-ICSS-IM30( +)-300      |  |
|                                  | 304SS              | 6.0                  | 721                                            | NB(*)-ICSS-IM45( +)-300      |  |
|                                  | 304SS              | 6.0                  | 721                                            | NB(*)-ICSS-IM60( +)-300      |  |
| <b>N</b><br>OMEGA-P™ -N™         | XL                 | 1.5                  | 371                                            | NB(*)-NNXL-IM15( +)-300      |  |
|                                  | XL                 | 3.0                  | 371                                            | NB(*)-NNXL-IM30( +)-300      |  |
|                                  | XL                 | 4.5                  | 371                                            | NB(*)-NNXL-IM45( +)-300      |  |
|                                  | XL                 | 6.0                  | 371                                            | NB(*)-NNXL-IM60( +)-300      |  |

Note: PFA coating is available, 204°C max. \*\*Other lengths available; consult Sales Department.  
To order with with alternative Stainless Steel Sheaths change "SS" in part number to "310SS", "316SS" or "321SS."

†Specify junction type: E (exposed), G (grounded), U (ungrounded/insulated).

\*Insert the numbers "3" to "13" for NB3, NB5, NB6, NB8, NB9, NB11, NB12 or NB13 heads, respectively. Standard process fitting is 1/2" BSPT.  
For G ½ or G ¼ fittings, add "-G2" or "-G4" to end of model number, no additional charge. for NB6, 8, 9, 11 and 12. There is an  
number and specify scaling required. for NB3 head styles. To order with in-head 4-20 mA transmitter add -TX to end of part

Ordering Example: NB5-CA310SS-IM60U-300, 150 mm insulated-junction 310 SS probe, Type K, 6 mm, sheath diameter, cast-iron head,