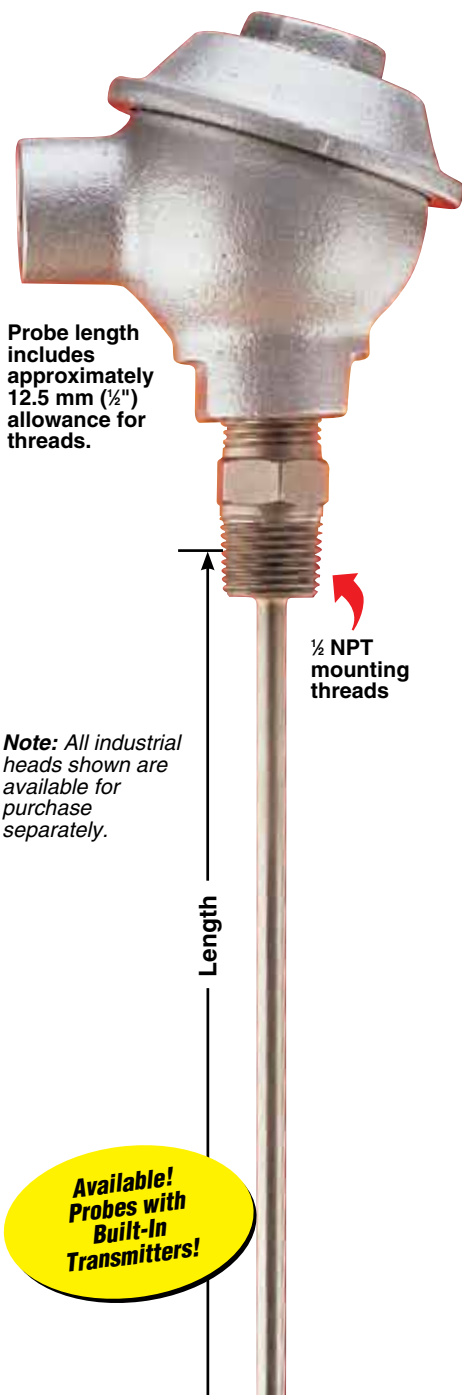


Industrial Thermocouples Protection Head Design

OMEGA®

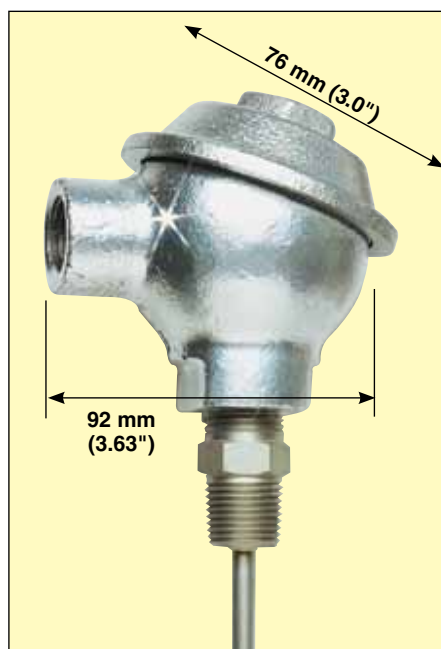
- ✓ Sheath Materials:
304SS, 310SS, 316SS,
321SS, Inconel® or
Super OMEGACLAD® XL
- ✓ Probe Length 300
mm (12"), 600 mm
(24") Custom Lengths
Available, Consult Sales



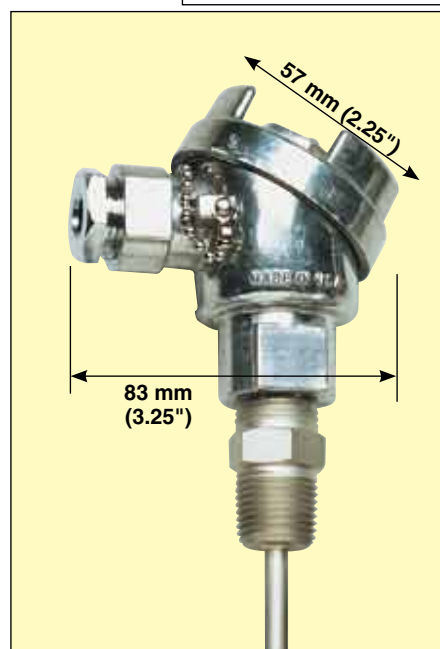
Note: All industrial heads shown are available for purchase separately.

**Available!
Probes with
Built-In
Transmitters!**

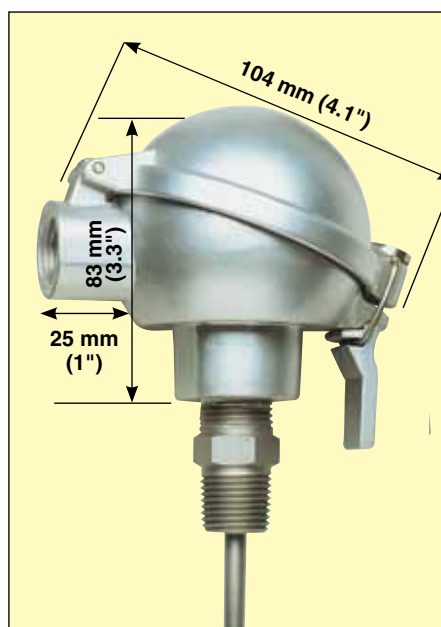
Complete your application
with OMEGA's extension wire.



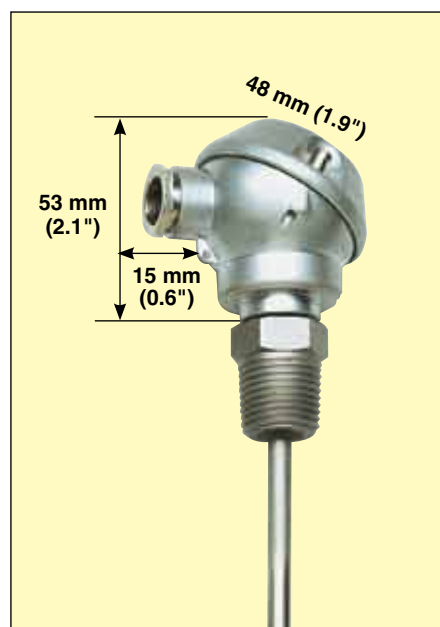
NB1, Cast Iron



NB2, Aluminum



NB3, Aluminum with Snap-Lock



NB4, Sub-Miniature Aluminum



260S Series

For a complete selection of thermowells in both Standard and Metric dimensions, please visit us online.



260HL Series

New and Improved Protection Heads Industrial Thermocouple Probes



A



Available!
Probes with
Built-in Transmitters!

Cast Iron

NB5

Material: Cast iron
Weight: 1.6 kg (3.5 lb)
Dimensions:
H=95 mm (3.8")
C=86 mm (3.4")



Deep Base

NB6

Material: Alloy-Aluminum
Weight: 250 g (8.8 oz)
Dimensions:
H=82 mm (3.2")
C=82 mm (3.2")



Flip Top NB7

Material: Alloy-Aluminum
Weight: 250 g (8.8 oz)
Dimensions:
H=93 mm (3.7")
C=76 mm (3")

Industrial Thermocouple Protection Head Probe Assemblies



Low Profile NB12

Material:
Alloy-Aluminum
Weight: 274 g (9.7 oz)
Dimensions:
H=87 mm (3.4")
C=82 mm (3.2")
IP67 Approval

Miniature Bakelite NB10

Material: Bakelite
Weight: 82 g (2.9 oz)
Dimensions:
H=68 mm (2.7")
C=61.5 mm (2.4")
O-Ring Seal

Available!
Probes with
Built-In
Transmitters!



Miniature Aluminum NB11

Material: Alloy-Aluminum
Weight: 140 g (4.9 oz)
Dimensions:
H=67 mm (2.6")
C=62 mm (2.4")
IP67 Approval



Nylon and
Glass Fiber.

NB9
Material: Nylon
& Glass Fiber
Weight:
144 g (5 oz)
Dimensions:
H=87 mm (3.4")
C=82 mm (3.2")

To Order:
Insert the style
number into the part
numbers shown in
the "How To Order"
table. See ordering
examples below and
on next page.

Ordering Example:
NB9-CASS-18G-12,
a 300 mm (12")
grounded CASS
Type K stainless
steel thermocouple,
3 mm (1/8") sheath
diameter probe with
an NB9 protection
head.

- ✓ **NB1 Cast-Iron Protection Head with Internal Terminal Block**
- ✓ **NB2 Miniature Aluminum Head with Internal Terminal Block**
- ✓ **NB3 Aluminum Head Features Convenient Snap-Lock Design with Internal Terminal Block**
- ✓ **NB4 Subminiature Aluminum Head with Internal Terminal Block**
- ✓ **½ NPT Mounting Thread**
- ✓ **12" Length Standard†**

Standard Dimensions

The industrial-style assemblies offer a variety of protection heads to meet the environmental and size requirements of most applications. They are available in J, K, T, E, or N calibrations, with 304 SS, 316 SS, 321 SS, Super OMEGA CLAD® XL, or Inconel® sheathing. Standard lengths are 12", including ½" for the pipe thread, with other lengths available. Both the thread on the probe and the extension-wire opening are ½ NPT. The NB2 and NB4 include a compression fitting nut and rubber ferrule for ⅜ to ¼" OD wires or tubing. The internal terminal block is standard on all models.

PFA Coating Available. Consult Sales



To Order 12" Lengths

Alloy/ANSI Color Code	Sheath Dia. (inch)	Grounded Junction	Ungrounded Junction	Exposed Junction
Iron-Constantan Inconel® Sheath J	⅛ ⅜ ⅝ ¾	NB(*)-ICIN-116G-12 NB(*)-ICIN-18G-12 NB(*)-ICIN-316G-12 NB(*)-ICIN-14G-12	NB(*)-ICIN-116U-12 NB(*)-ICIN-18U-12 NB(*)-ICIN-316U-12 NB(*)-ICIN-14U-12	NB(*)-ICIN-116E-12 NB(*)-ICIN-18E-12 NB(*)-ICIN-316E-12 NB(*)-ICIN-14E-12
Iron-Constantan 304 SS Sheath J	⅛ ⅜ ⅝ ¾	NB(*)-ICSS-116G-12 NB(*)-ICSS-18G-12 NB(*)-ICSS-316G-12 NB(*)-ICSS-14G-12	NB(*)-ICSS-116U-12 NB(*)-ICSS-18U-12 NB(*)-ICSS-316U-12 NB(*)-ICSS-14U-12	NB(*)-ICSS-116E-12 NB(*)-ICSS-18E-12 NB(*)-ICSS-316E-12 NB(*)-ICSS-14E-12
CHROMEALLOY®- ** ALOMEGA® Inconel® Sheath K	⅛ ⅜ ⅝ ¾	NB(*)-CAIN-116G-12 NB(*)-CAIN-18G-12 NB(*)-CAIN-316G-12 NB(*)-CAIN-14G-12	NB(*)-CAIN-116U-12 NB(*)-CAIN-18U-12 NB(*)-CAIN-316U-12 NB(*)-CAIN-14U-12	NB(*)-CAIN-116E-12 NB(*)-CAIN-18E-12 NB(*)-CAIN-316E-12 NB(*)-CAIN-14E-12
CHROMEALLOY®- ** ALOMEGA® 304 SS Sheath K	⅛ ⅜ ⅝ ¾	NB(*)-CASS-116G-12 NB(*)-CASS-18G-12 NB(*)-CASS-316G-12 NB(*)-CASS-14G-12	NB(*)-CASS-116U-12 NB(*)-CASS-18U-12 NB(*)-CASS-316U-12 NB(*)-CASS-14U-12	NB(*)-CASS-116E-12 NB(*)-CASS-18E-12 NB(*)-CASS-316E-12 NB(*)-CASS-14E-12
CHROMEALLOY®- Constantan Inconel® Sheath E	⅛ ⅜ ⅝ ¾	NB(*)-CXIN-116G-12 NB(*)-CXIN-18G-12 NB(*)-CXIN-316G-12 NB(*)-CXIN-14G-12	NB(*)-CXIN-116U-12 NB(*)-CXIN-18U-12 NB(*)-CXIN-316U-12 NB(*)-CXIN-14U-12	NB(*)-CXIN-116E-12 NB(*)-CXIN-18E-12 NB(*)-CXIN-316E-12 NB(*)-CXIN-14E-12
CHROMEALLOY®- Constantan 304 SS Sheath E	⅛ ⅜ ⅝ ¾	NB(*)-CXSS-116G-12 NB(*)-CXSS-18G-12 NB(*)-CXSS-316G-12 NB(*)-CXSS-14G-12	NB(*)-CXSS-116U-12 NB(*)-CXSS-18U-12 NB(*)-CXSS-316U-12 NB(*)-CXSS-14U-12	NB(*)-CXSS-116E-12 NB(*)-CXSS-18E-12 NB(*)-CXSS-316E-12 NB(*)-CXSS-14E-12
Copper-Constantan Inconel® Sheath T	⅛ ⅜ ⅝ ¾	NB(*)-CPIN-116G-12 NB(*)-CPIN-18G-12 NB(*)-CPIN-316G-12 NB(*)-CPIN-14G-12	NB(*)-CPIN-116U-12 NB(*)-CPIN-18U-12 NB(*)-CPIN-316U-12 NB(*)-CPIN-14U-12	NB(*)-CPIN-116E-12 NB(*)-CPIN-18E-12 NB(*)-CPIN-316E-12 NB(*)-CPIN-14E-12
Copper-Constantan 304 SS Sheath T	⅛ ⅜ ⅝ ¾	NB(*)-CPSS-116G-12 NB(*)-CPSS-18G-12 NB(*)-CPSS-316G-12 NB(*)-CPSS-14G-12	NB(*)-CPSS-116U-12 NB(*)-CPSS-18U-12 NB(*)-CPSS-316U-12 NB(*)-CPSS-14U-12	NB(*)-CPSS-116E-12 NB(*)-CPSS-18E-12 NB(*)-CPSS-316E-12 NB(*)-CPSS-14E-12
OMEGAALLOY®- NICROSIL-NISIL Inconel Sheath N	⅛ ⅜ ⅝ ¾	NB(*)-NNIN-116G-12 NB(*)-NNIN-18G-12 NB(*)-NNIN-316G-12 NB(*)-NNIN-14G-12	NB(*)-NNIN-116U-12 NB(*)-NNIN-18U-12 NB(*)-NNIN-316U-12 NB(*)-NNIN-14U-12	NB(*)-NNIN-116E-12 NB(*)-NNIN-18E-12 NB(*)-NNIN-316E-12 NB(*)-NNIN-14E-12

Note: PFA coating is available, 400°F (204°C) max. † Other lengths available, consult Sales Department.

* Insert the number "1" through "12" for NB1, NB2, NB3, NB4, NB5, NB6, NB7, NB8, NB9, NB10, NB11 or NB12 heads, respectively.

** For highest temperature and stability rating, change "SS" or "IN" to "XL".

To order probes with lengths other than 12", change the last 2 digits of the model number from "12" to the desired length in inches. To order with 310, 316 or 321 SS sheath, change "SS" in model number to "310SS", "316SS" or "321SS", respectively. Consult Sales for lengths between 2 and 12", or for lengths over 24".

Ordering Examples: NB1-CASS-14G-12, 12" grounded 304 SS probe, Type K, ¼" sheath diameter.

NB2-ICSS-14U-12, 12" ungrounded 304 SS, Type J, ¼" sheath diameter.

- ✓ **NB1 Cast-Iron Protection Head with Internal Terminal Block**
- ✓ **NB2 Miniature Aluminum Head with Internal Terminal Block**
- ✓ **NB3 Aluminum Head Features Convenient Snap-Lock Design with Internal Terminal Block**
- ✓ **NB4 Subminiature Aluminum Head with Internal Terminal Block**
- ✓ **½" BSPT Mounting Thread**
- ✓ **300 mm Length Standard†**

Metric Dimensions

The industrial-style assemblies offer a variety of protection heads to meet the environmental and size requirements of most applications. They are available in J, K T, E, or N calibrations, with 304 SS, 310 SS, 316 SS, 321 SS, Super OMEGACLAD® XL, or Inconel® sheathing. Standard lengths are 300 mm, including 12 mm for the pipe thread, with other lengths available. Both the thread on the probe and the extension-wire opening are ½" BSPT. The NB2 and NB4 include a compression fitting nut and rubber ferrule for 3.2 to 6.3 mm OD wires or tubing. The internal terminal block is standard on all models.



To Order 300 mm Lengths

Alloy/ANSI Color Code	Sheath Dia. (mm)	Grounded Junction	Ungrounded Junction	Exposed Junction
Iron-Constantan Inconel® Sheath J	1.5	NB(*)-ICIN-M15G-300	NB(*)-ICIN-M15U-300	NB(*)-ICIN-M15E-300
	3.0	NB(*)-ICIN-M30G-300	NB(*)-ICIN-M30U-300	NB(*)-ICIN-M30E-300
	4.5	NB(*)-ICIN-M45G-300	NB(*)-ICIN-M45U-300	NB(*)-ICIN-M45E-300
	6.0	NB(*)-ICIN-M60G-300	NB(*)-ICIN-M60U-300	NB(*)-ICIN-M60E-300
Iron-Constantan 304 SS Sheath J	1.5	NB(*)-ICSS-M15G-300	NB(*)-ICSS-M15U-300	NB(*)-ICSS-M15E-300
	3.0	NB(*)-ICSS-M30G-300	NB(*)-ICSS-M30U-300	NB(*)-ICSS-M30E-300
	4.5	NB(*)-ICSS-M45G-300	NB(*)-ICSS-M45U-300	NB(*)-ICSS-M45E-300
	6.0	NB(*)-ICSS-M60G-300	NB(*)-ICSS-M60U-300	NB(*)-ICSS-M60E-300
CHROMEALLOY®- ** ALOMEGA® Inconel® Sheath K	1.5	NB(*)-CAIN-M15G-300	NB(*)-CAIN-M15U-300	NB(*)-CAIN-M15E-300
	3.0	NB(*)-CAIN-M30G-300	NB(*)-CAIN-M30U-300	NB(*)-CAIN-M30E-300
	4.5	NB(*)-CAIN-M45G-300	NB(*)-CAIN-M45U-300	NB(*)-CAIN-M45E-300
	6.0	NB(*)-CAIN-M60G-300	NB(*)-CAIN-M60U-300	NB(*)-CAIN-M60E-300
CHROMEALLOY®- ** ALOMEGA® 304 SS Sheath K	1.5	NB(*)-CASS-M15G-300	NB(*)-CASS-M15U-300	NB(*)-CASS-M15E-300
	3.0	NB(*)-CASS-M30G-300	NB(*)-CASS-M30U-300	NB(*)-CASS-M30E-300
	4.5	NB(*)-CASS-M45G-300	NB(*)-CASS-M45U-300	NB(*)-CASS-M45E-300
	6.0	NB(*)-CASS-M60G-300	NB(*)-CASS-M60U-300	NB(*)-CASS-M60E-300
CHROMEALLOY®- Constantan Inconel® Sheath E	1.5	NB(*)-CXIN-M15G-300	NB(*)-CXIN-M15U-300	NB(*)-CXIN-M15E-300
	3.0	NB(*)-CXIN-M30G-300	NB(*)-CXIN-M30U-300	NB(*)-CXIN-M30E-300
	4.5	NB(*)-CXIN-M45G-300	NB(*)-CXIN-M45U-300	NB(*)-CXIN-M45E-300
	6.0	NB(*)-CXIN-M60G-300	NB(*)-CXIN-M60U-300	NB(*)-CXIN-M60E-300
CHROMEALLOY®- Constantan 304 SS Sheath E	1.5	NB(*)-CXSS-M15G-300	NB(*)-CXSS-M15U-300	NB(*)-CXSS-M15E-300
	3.0	NB(*)-CXSS-M30G-300	NB(*)-CXSS-M30U-300	NB(*)-CXSS-M30E-300
	4.5	NB(*)-CXSS-M45G-300	NB(*)-CXSS-M45U-300	NB(*)-CXSS-M45E-300
	6.0	NB(*)-CXSS-M60G-300	NB(*)-CXSS-M60U-300	NB(*)-CXSS-M60E-300
Copper-Constantan Inconel® Sheath T	1.5	NB(*)-CPIN-M15G-300	NB(*)-CPIN-M15U-300	NB(*)-CPIN-M15E-300
	3.0	NB(*)-CPIN-M30G-300	NB(*)-CPIN-M30U-300	NB(*)-CPIN-M30E-300
	4.5	NB(*)-CPIN-M45G-300	NB(*)-CPIN-M45U-300	NB(*)-CPIN-M45E-300
	6.0	NB(*)-CPIN-M60G-300	NB(*)-CPIN-M60U-300	NB(*)-CPIN-M60E-300
Copper-Constantan 304 SS Sheath T	1.5	NB(*)-CPSS-M15G-300	NB(*)-CPSS-M15U-300	NB(*)-CPSS-M15E-300
	3.0	NB(*)-CPSS-M30G-300	NB(*)-CPSS-M30U-300	NB(*)-CPSS-M30E-300
	4.5	NB(*)-CPSS-M45G-300	NB(*)-CPSS-M45U-300	NB(*)-CPSS-M45E-300
	6.0	NB(*)-CPSS-M60G-300	NB(*)-CPSS-M60U-300	NB(*)-CPSS-M60E-300
OMEGAALLOY®- NICROSIL-NISIL Inconel Sheath N	1.5	NB(*)-NNIN-M15G-300	NB(*)-NNIN-M15U-300	NB(*)-NNIN-M15E-300
	3.0	NB(*)-NNIN-M30G-300	NB(*)-NNIN-M30U-300	NB(*)-NNIN-M30E-300
	4.5	NB(*)-NNIN-M45G-300	NB(*)-NNIN-M45U-300	NB(*)-NNIN-M45E-300
	6.0	NB(*)-NNIN-M60G-300	NB(*)-NNIN-M60U-300	NB(*)-NNIN-M60E-300

Note: PFA coating is available, 204°C (400°F) max. † Other lengths available, consult Sales Department.

* Insert the number "1" through "12" for NB1, NB2, NB3, NB4, NB5, NB6, NB7, NB8, NB9, NB10, NB11 or NB12 heads, respectively.

** For highest temperature and stability rating, change "SS" or "IN" to "XL".

To order probes with lengths other than 300 mm, change the last 3 digits of the model number from "300" to the desired length in mm. To order with 310 SS, 316 SS or 321 SS sheath, change "SS" in model number to "310SS", "316SS" or "321SS", respectively. Consult Sales for lengths between 50 and 300 mm or for lengths over 600 mm. **Ordering Examples:** NB1-ICSS-M60G-300, 300 mm grounded 304 SS probe, Type J, 6.0 mm sheath diameter.

NB2-CASS-M60U-300, 300 mm ungrounded 304 SS, Type K, 6 mm sheath diameter.