

Super OMEGACLAD® XL Thermocouple Probes

High Performance!

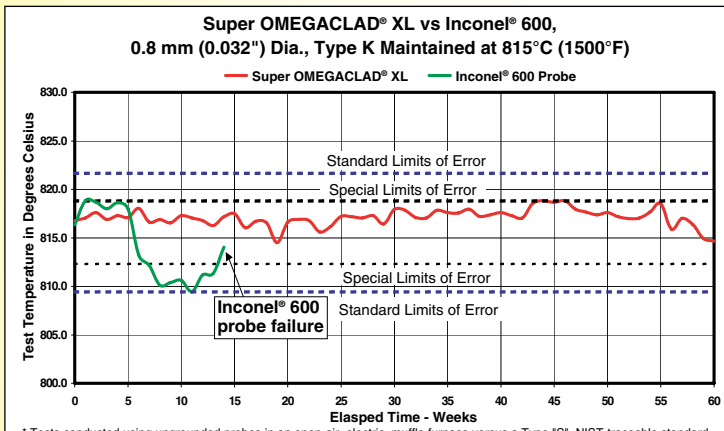
A Technological Advance in Temperature Measurement



KQXL-18U-12, shown smaller than actual size.

- ✓ Thermocouple Technology for K and N Calibrations Only
- ✓ Super Stable Temperature Drift—Less than 2.8°C in 25 weeks
- ✓ Better Performance at a Smaller Size—0.8 mm Probe Withstands 815°C (1500°F) for 3 Years
- ✓ Probe Life Expectancy up to 10 Times Greater than Competing Devices*
- ✓ Handles Temperatures Up to 1335°C (2400°F)

NewportUS Brings you the Super OMEGACLAD XL Thermocouple® Probe family, the exclusive innovation in thermocouple technology. Manufactured using state-of-the-art processes for mineral insulated (MI) thermocouple cable and finished thermocouple probe assemblies, these temperature sensors maximize performance, even at extremely small diameters. The devices resist carburization, oxidation, and chlorination in tough environments.



* Tests conducted using ungrounded probes in an open-air, electric, muffle furnace versus a Type "S", NIST-traceable standard. Individual results may vary depending on customer application. Inconel® is a registered trademark of Special Metals Corporation.

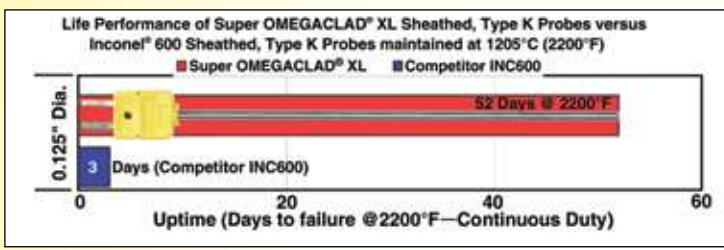
Small Size, Big Performance!

Typical 0.8 mm (0.032") Dia. Type K probes have a maximum temperature of 700°C (1260°F). Our Super OMEGACLAD® XL 0.8 mm (0.032") Dia. probe took on 815°C (1500°F) for 3 years and even reached 1000°C (1832°F) for 2 months!

0.250"
2.25 sec**
0.125"
0.55 sec**
0.062"
0.3 sec**
0.032"
~0.25 sec**

Probes shown ~50% smaller than actual size.

** Approx. response time—ungrounded in water



1204°C (2200°F) replace 17 of theirs in 52 days or just one of ours!

In life-cycle lab testing, the OMEGACLAD® XL sheathed, 0.125" Type K Probe operated continuously for 52 days at 1204°C (2200°F) while competitors' 0.125" Inconel® 600 sheathed, Type K probes lasted 3 days.†

† Results will vary on application and operating environment.

Long Life, Low Maintenance!

If your application operates at the punishing temperature of nearly 1204°C (2200°F), changing out failed thermocouples costs money in excessive maintenance, slows or cuts production, and can cause inconsistent product quality.

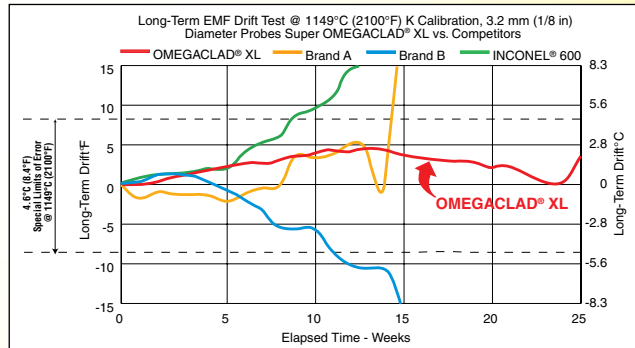
In head-to-head tests, Super OMEGACLAD® XL Thermocouple probes consistently post the best performance results. Our innovative temperature sensors last upwards of 10 times or longer when compared to competitors' Inconel® 600 sheathed probes of equal or larger diameters. Let our leading edge products help engineer **your next innovation!**



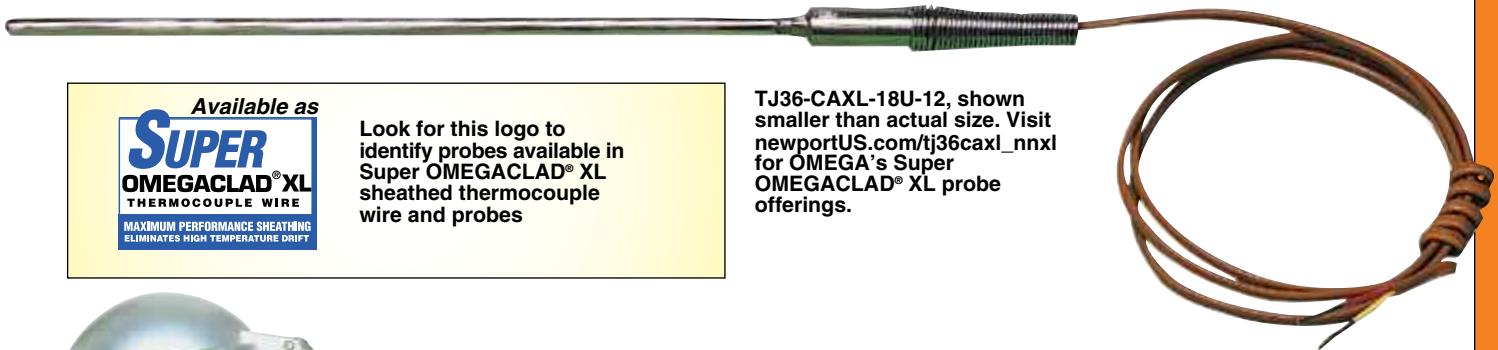
Super OMEGACLAD® XL thermocouple probes in its Class 10 clean rooms to monitor critical process temperatures and achieve consistent, high-quality products.

Low Drift, Reliable Temperatures!

Super OMEGACLAD® XL's low-drift characteristic ensures reliability of temperature readings longer than any other brand or sheath material. Within 15 weeks, Brands A, B, and C exhibited more than 8.3°C drift. At 25 weeks, OMEGACLAD® XL's drift was less than 2.8°C.*



* Tests conducted using ungrounded probes in an open-air, electric, muffle furnace versus a Type "S", NIST-traceable standard. Individual results may vary depending on customer application. Inconel® is a registered trademark of Special Metals Corporation.



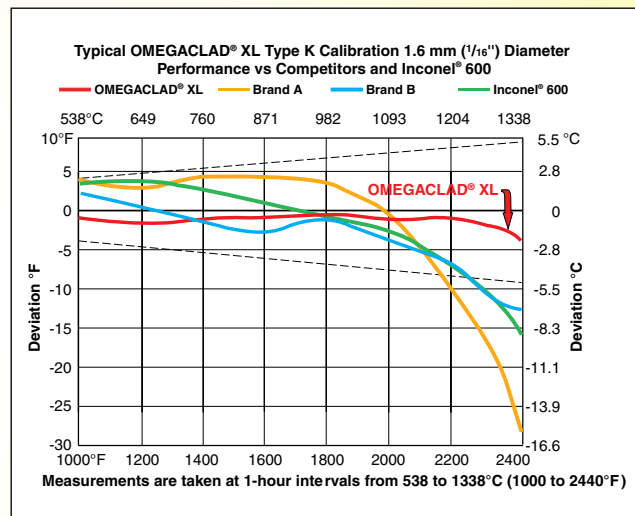
Look for this logo to identify probes available in Super OMEGACLAD® XL sheathed thermocouple wire and probes

TJ36-CAXL-18U-12, shown smaller than actual size. Visit newportUS.com/tj36caxl_nnx1 for OMEGA's Super OMEGACLAD® XL probe offerings.



NB1-CAXL-14U-12, shown smaller than actual size.

Take on High Temperatures!



In tests up to 1335°C (2400°F), Super OMEGACLAD® XL outperformed both the Inconel® 600 and other competing high-temperature models.

Super OMEGACLAD® XL Probes

Very Low Drift at High Temperatures

Super Accurate, Super Stable, Super Value—Standard Dimensions

- ✓ For Use Up to 1335°C (2440°F)
- ✓ Excellent Long-Term Stability at High Temperatures
- ✓ Larger Diameter Available (Consult Sales)



Universal connector and clamp included



Standard Dimension—Quick-Connect Probes

To Order Visit newportUS.com/kmqxl_nmql for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. inches	Model Number ANSI Color Code
MOLDED STANDARD CONNECTOR		
K CHROME [®] GA [®] -ALOMEGA [®] XL Sheath	1/16	KQXL-116[*]-[**]
	1/8	KQXL-18[*]-[**]
	3/16	KQXL-316[*]-[**]
	1/4	KQXL-14[*]-[**]
N OMEGA-P [®] -OMEGA-N [®] XL Sheath	1/16	NQXL-116[*]-[**]
	1/8	NQXL-18[*]-[**]
	3/16	NQXL-316[*]-[**]
	1/4	NQXL-14[*]-[**]
MINIATURE CONNECTOR		
K CHROME [®] GA [®] -ALOMEGA [®] XL Sheath	0.010	KMQXL-010[*]-[**]
	0.020	KMQXL-020[*]-[**]
	0.032	KMQXL-032[*]-[**]
	0.040	KMQXL-040[*]-[**]
	0.062	KMQXL-062[*]-[**]
	0.125	KMQXL-125[*]-[**]
N OMEGA-P [®] -OMEGA-N [®] XL Sheath	0.020	NMQXL-020[*]-[**]
	0.032	NMQXL-032[*]-[**]
	0.040	NMQXL-040[*]-[**]
	0.062	NMQXL-062[*]-[**]
	0.125	NMQXL-125[*]-[**]

Standard Dimension—Transition Junction Probes

To Order Visit newportUS.com/kmqxl_nmql for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (inches)	Model Number ANSI Color Code
HEAVY DUTY TRANSITION JUNCTION PROBE		
K CHROME [®] GA [®] -ALOMEGA [®] XL Sheath	1/16	TJ36-CAXL-116[*]-[**]
	1/8	TJ36-CAXL-18[*]-[**]
	3/16	TJ36-CAXL-316[*]-[**]
	1/4	TJ36-CAXL-14[*]-[**]
	5/16	TJ36-CAXL-516[*]-[**]
	3/8	TJ36-CAXL-38[*]-[**]
N OMEGA-P [®] -OMEGA-N [®] XL Sheath	1/16	TJ36-NNXL-116[*]-[**]
	1/8	TJ36-NNXL-18[*]-[**]
	3/16	TJ36-NNXL-316[*]-[**]
	1/4	TJ36-NNXL-14[*]-[**]
	5/16	TJ36-NNXL-516[*]-[**]
	3/8	TJ36-NNXL-38[*]-[**]
MINIATURE TRANSITION JUNCTION PROBE		
K CHROME [®] GA [®] -ALOMEGA [®] XL Sheath	0.010	KMTXL-010[*]-[**]
	0.020	KMTXL-020[*]-[**]
	0.032	KMTXL-032[*]-[**]
	0.040	KMTXL-040[*]-[**]
	0.062	KMTXL-062[*]-[**]
	0.125	KMTXL-125[*]-[**]
N OMEGA-P [®] -OMEGA-N [®] XL Sheath	0.020	NMTXL-020[*]-[**]
	0.032	NMTXL-032[*]-[**]
	0.040	NMTXL-040[*]-[**]
	0.062	NMTXL-062[*]-[**]
	0.125	NMTXL-125[*]-[**]

Note: Probes with 0.032" diameter and larger are supplied with molded transition joints. Smaller-sized probes are supplied with stainless steel transition joints. Stripped leads standard.

[*]Specify junction type: "G" (Grounded), "E" (Exposed) or "U" (Ungrounded).

[**]Specify length in inches: "6", "12", "18" or "24".

For a male straight M8 plug add "M8-S-M" to the model number and additional cost to the price, for a male straight M12 plug add "M12-S-M" to the model number and additional cost to the price. For a male right-angled M8 plug add "M8-R-M" to the model number and additional cost to the price, for a male right-angled M12 plug add "M12-R-M" to the model number and additional cost to the price.

Ordering Example for Quick-Connect Probes: KQXL-18U-12, molded quick-connect probe, Type K (CHROME[®]GA[®]-ALOMEGA[®]), SUPER OMEGACLAD[®] XL sheath, 1/8" OD, ungrounded junction, 12".

Ordering Example for Transition Junction Probes: TJ36-CAXL-14G-12, heavy-duty transition junction probe, Type K (CHROME[®]GA[®]-ALOMEGA[®]), SUPER OMEGACLAD[®] XL sheath, 1/4" OD, grounded junction, 12".

Dual Elements

The probes shown on this page are also available in our dual element configuration. Please contact the Sales Department for more details.

Miniature size

Both models include mating connector and cable clamp and shown smaller than actual size.

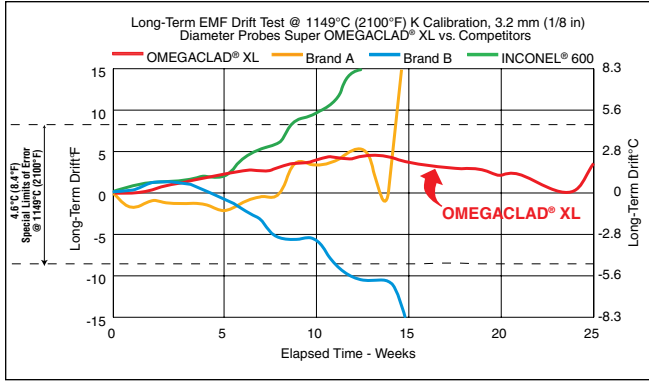
Standard size

Heavy-duty style

Miniature style

Super OMEGACLAD® XL Probes

Available in Most Thermocouple Probe Styles and Designs with **Standard Dimensions**



- ✓ Standard- and Miniature-Size Quick-Connect and Molded Transition Junction Probes
- ✓ Rugged Industrial Head Styles, Replacement Probes, and Utility Handle Probes
- ✓ All Standard Lengths Available—6, 12, 18, and 24"

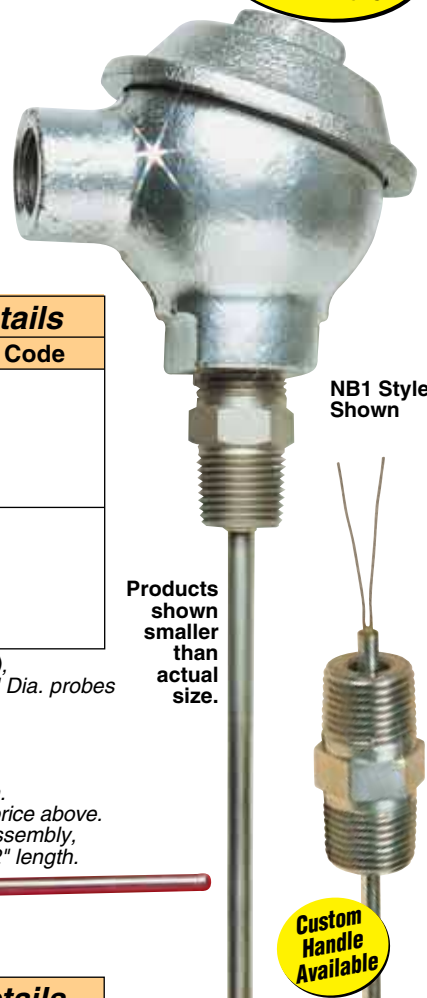
For Models With Metric Dimensions, See Next Pages

Standard Dimension—Industrial Head Probe Assemblies and Replacement Probes

To Order Visit newportUS.com/kmqxl_nmql for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (inches)	Model Number ANSI Color Code
K CHROMEQA®-ALOMEGA® XL Sheath	1/16	NB(*)-CAXL-116[*]-[**]
	1/8	NB(*)-CAXL-18[*]-[**]
	3/16	NB(*)-CAXL-316[*]-[**]
	1/4	NB(*)-CAXL-14[*]-[**]
	5/16	NB(*)-CAXL-516[*]-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	1/16	NB(*)-NNXL-116[*]-[**]
	1/8	NB(*)-NNXL-18[*]-[**]
	3/16	NB(*)-NNXL-316[*]-[**]
	1/4	NB(*)-NNXL-14[*]-[**]
	5/16	NB(*)-NNXL-516[*]-[**]
	3/8	NB(*)-NNXL-38[*]-[**]

(*) Specify head style from pages A-131 to A-136: **1** (NB1), **2** (NB2), **3** (NB3), **4** (NB4), **5** (NB5), **6** (NB6), **7** (NB7), **8** (NB8), **9** (NB9), **10** (NB10), **11** (NB11), **12** (NB12). **Note:** NB4, 8, 10, 11 not offered with 3/8" Dia. probes
 [*] Specify junction type: **G** (Grounded), **E** (Exposed), **U** (Ungrounded) or **S** (Surface).
 [**] Specify length in inches: **6, 12, 18 or 24**.
 Spring loaded designs available, add **"-SL"** to the model number, no additional charge.
Ordering Example: NB1-CAXL-14G-12, industrial head probe, NB1-style head, Type K (CHROMEQA®-ALOMEGA®) SUPER OMEGACLAD® XL sheath, (1/4") OD, grounded junction, 12" length.
 To order a replacement probe for a head assembly, add **"-RP"** to the part number and subtract from the price above.
Ordering Example: NB1-CAXL-14G-12-RP, industrial head replacement probe, for NB1-style head assembly, Type K (CHROMEQA®-ALOMEGA®), SUPER OMEGACLAD® XL sheath, 1/4" OD, grounded junction, 12" length.



NB1 Style Shown

Products shown smaller than actual size.

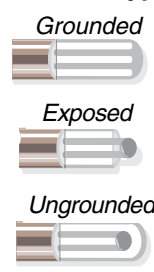
Custom Handle Available

Standard Dimension—Utility Handle Probes

To Order Visit newportUS.com/kmqxl_nmql for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (inches)	Model Number ANSI Color Code
K CHROMEQA®-ALOMEGA® XL Sheath	1/16	KHXL-116[*]-RSC-[**]
	1/8	KHXL-18[*]-RSC-[**]
	3/16	KHXL-316[*]-RSC-[**]
	1/4	KHXL-14[*]-RSC-[**]
	5/16	†KHXL-516[*]-RSC-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	1/16	NHXL-116[*]-RSC-[**]
	1/8	NHXL-18[*]-RSC-[**]
	3/16	NHXL-316[*]-RSC-[**]
	1/4	NHXL-14[*]-RSC-[**]
	5/16	†NHXL-516[*]-RSC-[**]
	3/8	†NHXL-38[*]-RSC-[**]

Junction Types



[*] Specify junction type: **"G"** (Grounded), **"E"** (Exposed), **"U"** (Ungrounded) or **"S"** (Surface). [**] Specify length in inches: **6, 12, 18 or 24**.
 For a male straight M8 plug add **"M8-S-M"** to the model number and additional cost to the price, for a male straight M12 plug add **"M12-S-M"** to the model number and additional cost to the price. For a male right-angled M8 plug add **"M8-R-M"** to the model number and additional cost to the price, for a male right-angled M12 plug add **"M12-S-M"** to the model number and additional cost to the price.

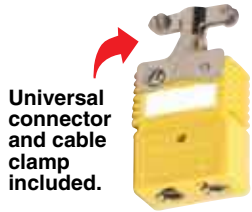
Ordering Example: KHXL-14G-RSC-12, utility handle probe, Type K (CHROMEQA®-ALOMEGA®), SUPER OMEGACLAD® XL sheath, 1/4" OD, grounded junction, 12" length, supplied with a miniature connector (SMP) termination.

Please Note: These diameters will be manually assembled, not molded.

Super OMEGACLAD® XL Probes

Very Low Drift at High Temperatures

Super Accurate, Super Stable, Super Value—Metric Dimensions



- ✓ For Use Up to 1335°C (2440°F)
- ✓ Excellent Long-Term Stability at High Temperatures
- ✓ Larger Diameter Available (Consult Sales)



Metric Dimension—Quick-Connect Probes

To Order Visit newportUS.com/kmqxl_nmqxl for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (mm)	Model Number ANSI Color Code
MOLDED STANDARD CONNECTOR		
K CHROMEGLA®-ALOMEGA® XL Sheath	1.5	KQXL-M15[*]-[**]
	3.0	KQXL-M30[*]-[**]
	4.5	KQXL-M45[*]-[**]
	6.0	KQXL-M60[*]-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	1.5	NQXL-M15[*]-[**]
	3.0	NQXL-M30[*]-[**]
	4.5	NQXL-M45[*]-[**]
K CHROMEGLA®-ALOMEGA® XL Sheath	0.25	KMQXL-M025[*]-[**]
	0.5	KMQXL-M050[*]-[**]
	0.75	KMQXL-M075[*]-[**]
	1.0	KMQXL-M100[*]-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	1.5	KMQXL-M150[*]-[**]
	3.0	KMQXL-M300[*]-[**]
	0.5	NMQXL-M050[*]-[**]
	0.75	NMQXL-M075[*]-[**]
	1.0	NMQXL-M100[*]-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	1.5	NMQXL-M150[*]-[**]
	3.0	NMQXL-M300[*]-[**]

Metric Dimension—Transition Junction Probes

Miniature style

To Order Visit newportUS.com/kmqxl_nmqxl for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (mm)	Model Number ANSI Color Code
HEAVY-DUTY TRANSITION JUNCTION PROBE		
K CHROMEGLA®-ALOMEGA® XL Sheath	1.5	TJ36-CAXL-M15[*]-[**]
	3.0	TJ36-CAXL-M30[*]-[**]
	4.5	TJ36-CAXL-M45[*]-[**]
	6.0	TJ36-CAXL-M60[*]-[**]
	8.0	TJ36-CAXL-M80[*]-[**]
	9.5	TJ36-CAXL-M95[*]-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	1.5	TJ36-NNXL-M15[*]-[**]
	3.0	TJ36-NNXL-M30[*]-[**]
	4.5	TJ36-NNXL-M45[*]-[**]
	6.0	TJ36-NNXL-M60[*]-[**]
	8.0	TJ36-NNXL-M80[*]-[**]
	9.5	TJ36-NNXL-M95[*]-[**]
MINIATURE TRANSITION JUNCTION PROBE		
K CHROMEGLA®-ALOMEGA® XL Sheath	0.25	KMTXL-M025[*]-[**]
	0.5	KMTXL-M050[*]-[**]
	0.75	KMTXL-M075[*]-[**]
	1.0	KMTXL-M100[*]-[**]
	1.5	KMTXL-M150[*]-[**]
	3.0	KMTXL-M300[*]-[**]
N OMEGA-P®-OMEGA-N® XL Sheath	0.5	NMTXL-M050[*]-[**]
	0.75	NMTXL-M075[*]-[**]
	1.0	NMTXL-M100[*]-[**]
	1.5	NMTXL-M150[*]-[**]
	3.0	NMTXL-M300[*]-[**]

Note: Probes with 0.75 mm diameter and larger are supplied with molded transition joints. Smaller-sized probes are supplied with stainless steel transition joints. Stripped leads standard.

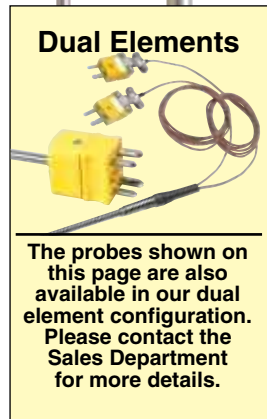
[*]Specify junction type: "G" (Grounded), "E" (Exposed) or "U" (Ungrounded)

[**]Specify length in millimeters: "150" mm, "300" mm, "450" mm, or "600" mm.

For a male straight M8 plug add "M8-S-M" to the model number and additional cost to the price, for a male straight M12 plug add "M12-S-M" to the model number and additional cost to the price. For a male right-angled M8 plug add "M8-R-M" to the model number and additional cost to the price, for a male right-angled M12 plug add "M12-S-M" to the model number and additional cost to the price.

Ordering Example for Quick-Connect Probes: KQXL-M30U-300, molded quick connect probe, Type K (CHROMEGLA®-ALOMEGA®), SUPER OMEGACLAD® XL sheath, 3 mm OD, ungrounded junction, 300 mm length.

Ordering Example for Transition Junction Probes: TJ36-CAXL-M60G-300, heavy-duty transition junction probe, Type K (CHROMEGLA®-ALOMEGA®), SUPER OMEGACLAD® XL sheath, 6 mm OD, grounded junction, 300 mm length.



Miniature size

Both models include mating connector with cable clamp shown smaller than actual size.

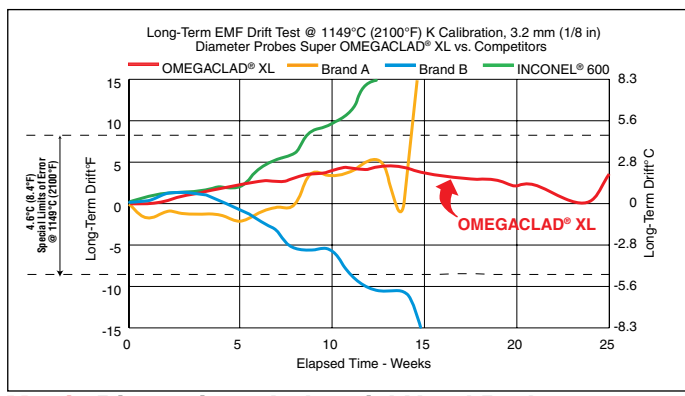
Standard size



Super OMEGACLAD® XL Probes

Available in Most Thermocouple Probe Styles and Designs with **Metric** Dimensions

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



- Standard- and Miniature-Size Quick-Connect and Molded Transition Junction Probes
- Rugged Industrial Head Styles, Replacement Probes, and Utility Handle Probes
- All Standard Lengths Available—150, 300, 450 and 600 mm

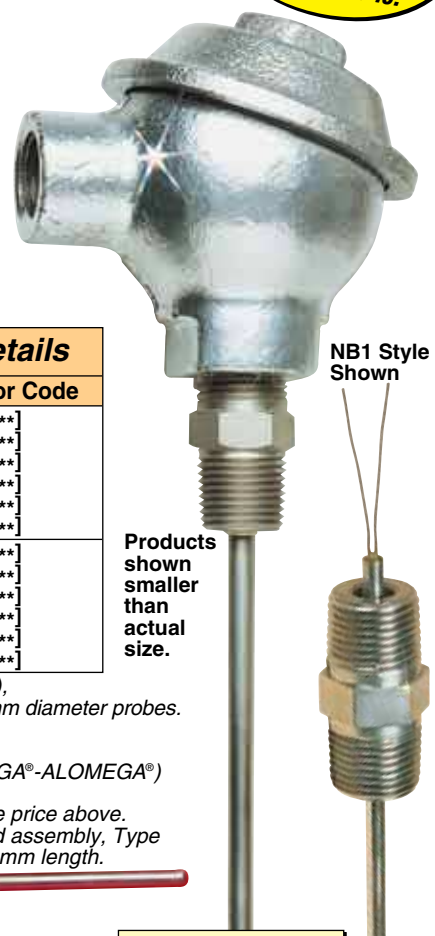
For Models with Standard Dimensions, See Pages A-45 and A-46.

Metric Dimension—Industrial Head Probe Assemblies and Replacement Probes

To Order Visit newportUS.com/kmqxl_nmql for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (mm)	Model Number ANSI Color Code
K CHROME [®] -ALOMEGA [®] XL Sheath	1.5	NB(*)-CAXL-M15[*]-[**]
	3.0	NB(*)-CAXL-M30[*]-[**]
	4.5	NB(*)-CAXL-M45[*]-[**]
	6.0	NB(*)-CAXL-M60[*]-[**]
	8.0	NB(*)-CAXL-M80[*]-[**]
	9.5	NB(*)-CAXL-M95[*]-[**]
N OMEGA-P [®] -OMEGA-N [®] XL Sheath	1.5	NB(*)-NNXL-M15[*]-[**]
	3.0	NB(*)-NNXL-M30[*]-[**]
	4.5	NB(*)-NNXL-M45[*]-[**]
	6.0	NB(*)-NNXL-M60[*]-[**]
	8.0	NB(*)-NNXL-M80[*]-[**]
	9.5	NB(*)-NNXL-M95[*]-[**]

(*)Specify head style from pages A-131 to A-136: 1 (NB1), 2 (NB2), 3 (NB3), 4 (NB4), 5 (NB5), 6 (NB6), 7 (NB7), 8 (NB8), 9 (NB9), 10 (NB10), 11 (NB11), 12 (NB12). **Note:** NB4, 8, 10, 11 not offered with 9.5 mm diameter probes.
 [*]Specify junction type: **G** (Grounded), **E** (Exposed), **U** (Ungrounded) or **S** (Surface).
 [**]Specify length in millimeters: 150 mm, 300 mm, 450 mm or 600 mm.
Ordering Example: NB1-CAXL-M60G-300 industrial head probe, NB1-style head, Type K (CHROME[®]-ALOMEGA[®]) SUPER OMEGACLAD[®] XL sheath, 6 mm OD, grounded junction, 300 mm length.
 To order a replacement probe for a head assembly, add “RP” to the part number and subtract from the price above.
Ordering Example: NB1-CAXL-M60G-300-RP, industrial head replacement probe, for NB1-style head assembly, Type K (CHROME[®]-ALOMEGA[®]), SUPER OMEGACLAD[®] XL sheath, 6 mm OD, grounded junction, 300 mm length.



Products shown smaller than actual size.

Metric Dimension—Utility Handle Probes

To Order Visit newportUS.com/kmqxl_nmql for Pricing and Details

ANSI Color Code/Alloy	Sheath Dia. (mm)	Model Number ANSI Color Code
K CHROME [®] -ALOMEGA [®] XL Sheath	1.5	KHXL-M15[*]-RSC-[**]
	3.0	KHXL-M30[*]-RSC-[**]
	4.5	KHXL-M45[*]-RSC-[**]
	6.0	KHXL-M60[*]-RSC-[**]
	8.0	†KHXL-M80[*]-RSC-[**]
	9.5	†KHXL-M95[*]-RSC-[**]
N OMEGA-P [®] -OMEGA-N [®] XL Sheath	1.5	NHXL-M15[*]-RSC-[**]
	3.0	NHXL-M30[*]-RSC-[**]
	4.5	NHXL-M45[*]-RSC-[**]
	6.0	NHXL-M60[*]-RSC-[**]
	8.0	†NHXL-M80[*]-RSC-[**]
	9.5	†NHXL-M95[*]-RSC-[**]

Junction Types

Grounded

Exposed

Ungrounded

[*]Specify junction type: **G** (Grounded), **E** (Exposed), **U** (Ungrounded) or **S** (Surface). [**]Specify length in millimeters: 150 mm, 300 mm, 450 mm, or 600 mm. Order standard part number with a suffix “-PFA”. Visit newportUS.com for additional price on 300 mm (12”) probes, 450 mm (18”) probes and 600 mm (24”) probes. 200°C (400°F) max. **Note:** These diameters will be assembled manually, not molded.
 For a male straight M8 plug add “M8-S-M” to the model number and additional cost to the price, for a male straight M12 plug add “M12-S-M” to the model number and additional cost to the price. For a male right-angled M8 plug add “M8-R-M” to the model number and additional cost to the price, for a male right-angled M12 plug add “M12-S-M” to the model number and additional cost to the price.
Ordering Example: KHXL-M60G-RSC-300, utility handle probe, Type K (CHROME[®]-ALOMEGA[®]), SUPER OMEGACLAD[®] XL sheath, 6 mm OD, grounded junction, 300 mm length, supplied with a miniature connector (SMP) termination.