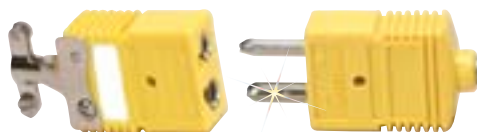




Super OMEGACLAD® XL Thermocouple Probes

A Technological Advance in Temperature Measurement

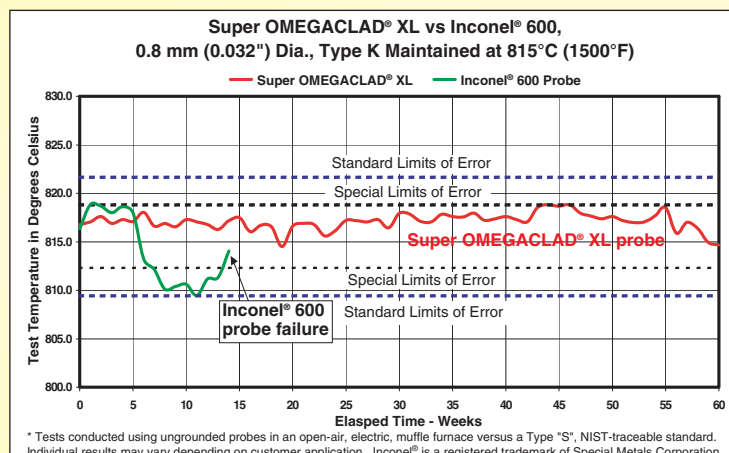
High Performance!



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

- ✓ **New Thermocouple Technology from OMEGA 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)**

OMEGA brings you the Super OMEGACLAD® XL Thermocouple Probe family, the latest, **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.



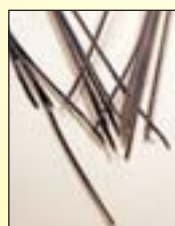
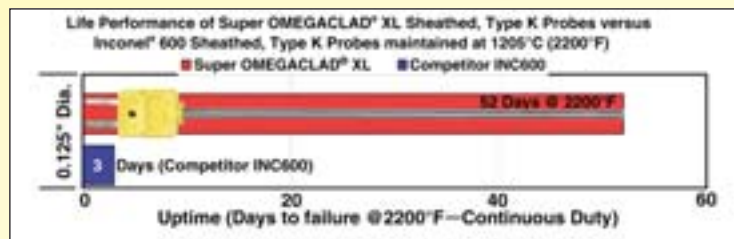
Small Size, Big Performance!

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.

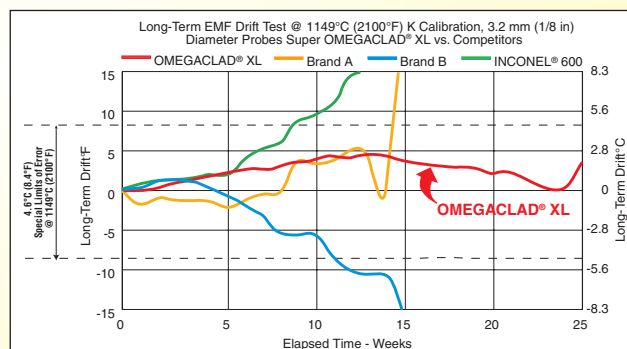
In head-to-head tests, Super OMEGACLAD® XL Thermocouple probes consistently post the best performance results. Our innovative temperature sensors last upwards of 10 times or longer when compared to competitors' Inconel® 600 sheathed probes of equal or larger diameters. Let OMEGA's leading edge products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



OMEGA's products making OMEGA's products. OMEGA uses 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.*

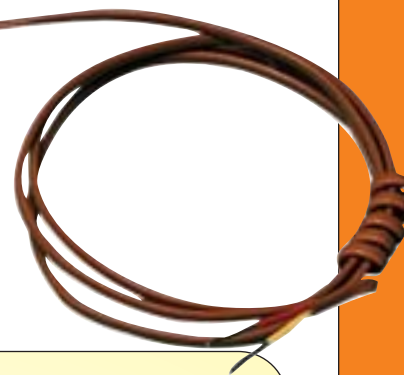


*Tests conducted using ungrounded probes in an open-air, electric, muffle furnace versus a Type "S", NIST-traceable standard. Individual results may vary depending on customer application. Inconel® is a registered trademark of Special Metals Corporation.



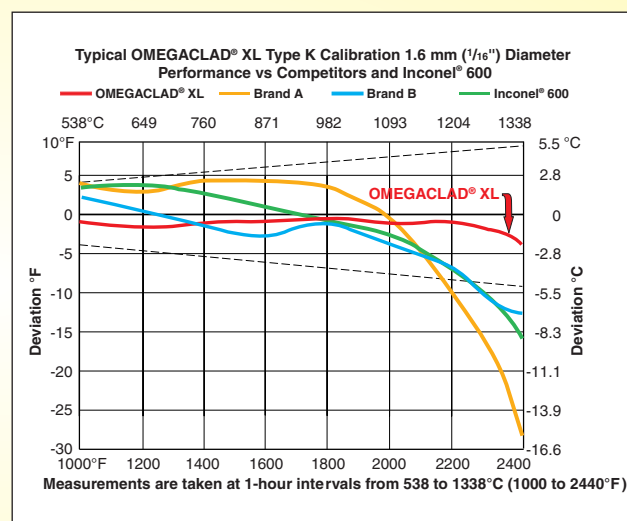
Look for this logo to identify probes available in Super OMEGACLAD® XL sheathed thermocouple wire and probes

TJ36-CAXL-18U-12, shown smaller than actual size. See pages A-43c through A-43f 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)



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

ANSI
color
code
shown

To order
IEC color
code

Universal
connector
and clamp
included

MOST POPULAR
MODELS HIGHLIGHTED!

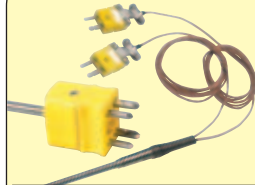
Standard Dimension—Quick-Connect Probes

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

Heavy-duty style

Miniature style

Dual Elements



The probes shown on
this page are also
available in our dual
element configuration.

Miniature
size

Both models
include mating
connector and
cable clamp

Products shown
smaller than
actual size.

Standard
size

Standard Dimension—Transition Junction Probes

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

Ordering Example for Quick-Connect Probes: KQXL-18U-12, molded quick-connect probe, Type K (CHROMEGA®-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 (CHROMEGA®-ALOMEGA®), SUPER OMEGACLAD® XL sheath, 1/4" OD, grounded junction, 12".

Super OMEGACLAD® XL Probes

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

ANSI
color
code
shown

To order
IEC color
code

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

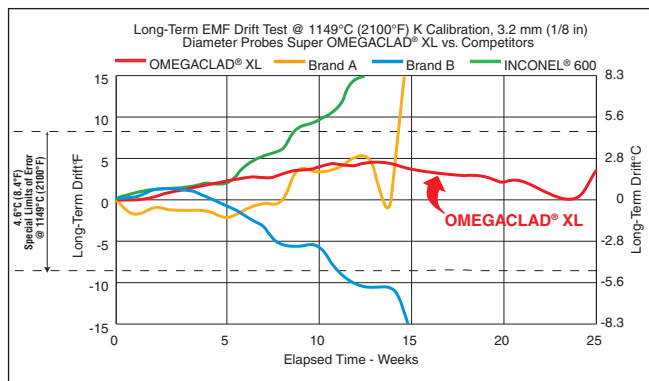
OMEGACLAD®
Factory CAL
AVAILABLE
MADE IN
USA
See Section I

- ✓ 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 pages
A-47 and A-48.

All industrial head
probe styles are available
in **SUPER OMEGACLAD® XL**
design! See pages
A-135 to A-140.

PFA Coating
Available.
Consult Sales.



Standard Dimension—Industrial Head Probe Assemblies and Replacement Probes

MOST POPULAR MODELS HIGHLIGHTED!

Alloy/ANSI Color Code	Sheath Dia. inches	Model Number ANSI Color Code					
CHROME®-ALOMEGA® XL Sheath K	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[*]-[**]					
	3/8"	NB(*)-CAXL-38[*]-[**]					
OMEGA-P®-OMEGA-N® XL Sheath N	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-135 to A-140: 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.



NB1 Style Shown

Products shown smaller than actual size.



Standard Dimension—Utility Handle Probes

MOST POPULAR MODELS HIGHLIGHTED!

Alloy/ANSI Color Code	Sheath Dia. inches	Model Number ANSI Color Code					
CHROME®-ALOMEGA® XL Sheath K	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-[**]					
	3/8"	†KHXL-38[*]-RSC-[**]					
OMEGA-P®-OMEGA-N® XL Sheath N	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-[**]					

[*] Specify junction type: **G** (Grounded), **E** (Exposed), **U** (Ungrounded) or **S** (Surface). [**] Specify length in inches: 6, 12, 18 or 24.
Ordering Example: KHXL-14G-RSC-12, utility handle probe, Type K (CHROME®-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.

Junction Types

Grounded



Exposed



Ungrounded



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)



Universal connector and cable clamp included



Metric Dimension—Quick-Connect Probes

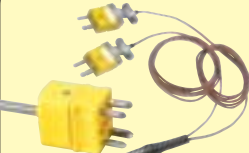
MOST POPULAR MODELS HIGHLIGHTED!

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

Heavy duty style

Miniature style

Dual Elements



The probes shown on this page are also available in our dual element configuration.

Miniature size

Both models include mating connector with cable clamp

Shown smaller than actual size.

Standard size

Metric Dimension—Transition Junction Probes

Alloy/ANSI Color Code	Sheath Dia. mm	Model Number ANSI Color Code			
HEAVY-DUTY TRANSITION JUNCTION PROBE					
CHROMEGLA®-ALOMEGA® XL Sheath K	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[*]-[**]			
OMEGA-P®-OMEGA-N® XL Sheath N	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					
CHROMEGLA®-ALOMEGA® XL Sheath K	0.25	KMTXL-M025[*]-[**]			
	0.5	KMTXL-M050[*]-[**]			
	0.75	KMTXL-M075[*]-[**]			
	1.0	KMTXL-M100[*]-[**]			
	1.5	KMTXL-M150[*]-[**]			
	3.0	KMTXL-M300[*]-[**]			
OMEGA-P®-OMEGA-N® XL Sheath N	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.

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

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

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.

Super OMEGACLAD® XL Probes

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

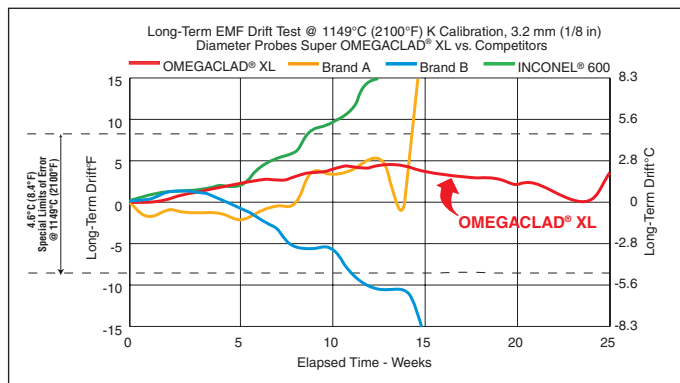
ANSI
color
code
shown

To order
IEC color
code see
page A-9

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

OMEGACLAD®
Factory CAL
AVAILABLE
See Section I

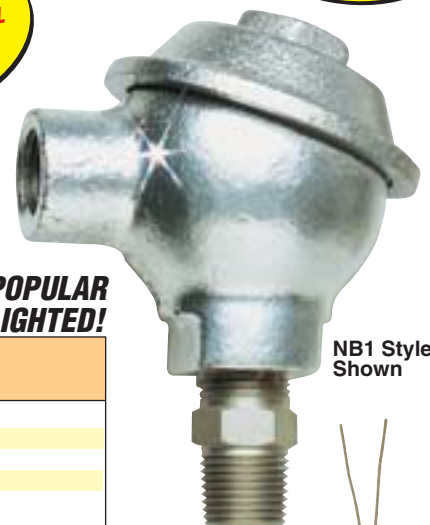
MADE IN
USA



- ✓ 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

All industrial head probe styles are available in **SUPER OMEGACLAD® XL** design! See pages A-135 to A-140.

For models with standard dimensions, see pages A-45 and A-46.



NB1 Style Shown

Products shown smaller than actual size.

Metric Dimension—Industrial Head Probe Assemblies and Replacement Probes

MOST POPULAR MODELS HIGHLIGHTED!

Alloy/ANSI Color Code	Sheath Dia. mm	Model Number ANSI Color Code					
CHROMECLA®-ALOMEGA® XL Sheath K	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[*]-[**]					
OMEGA-P®-OMEGA-N® XL Sheath N	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-135 to A-140: 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.

Metric Dimension—Utility Handle Probes

Alloy/ANSI Color Code	Sheath Dia. mm	Model Number ANSI Color Code					
CHROMECLA®-ALOMEGA® XL Sheath K	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-[**]					
OMEGA-P®-OMEGA-N® XL Sheath N	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-[**]					

[*] 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**". **Note:** These diameters will be assembled manually, not molded.
Ordering Example: KHXL-M60G-RSC-300, utility handle probe, Type K (CHROMECLA®-ALOMEGA®), SUPER OMEGACLAD® XL sheath, 6 mm OD, grounded junction, 300 mm length, supplied with a miniature connector (SMP) termination.

Junction Types

Grounded



Exposed



Ungrounded





More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters