

# Industrial Replacement Probes

## Rigidly Mounted or Spring Loaded

### ½" NPT Mounting Thread



MADE IN  
USA

See Section I

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

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

See page A-43 to A-48.

- ✓ Direct Surface Contact
- ✓ For Use in Thermowells
- ✓ Faster Response

**Spring loaded thermocouple probes** are designed to provide fast response when used in a thermowell. Approximately 13 mm (½") of travel is standard. Thermocouple junction cannot be damaged when installed into a thermowell. This probe is also ideal for use as a bearing sensor.

#### To Order:

Add Suffix "-RP-HNSL" to model numbers of NB1 and NB2 probe.

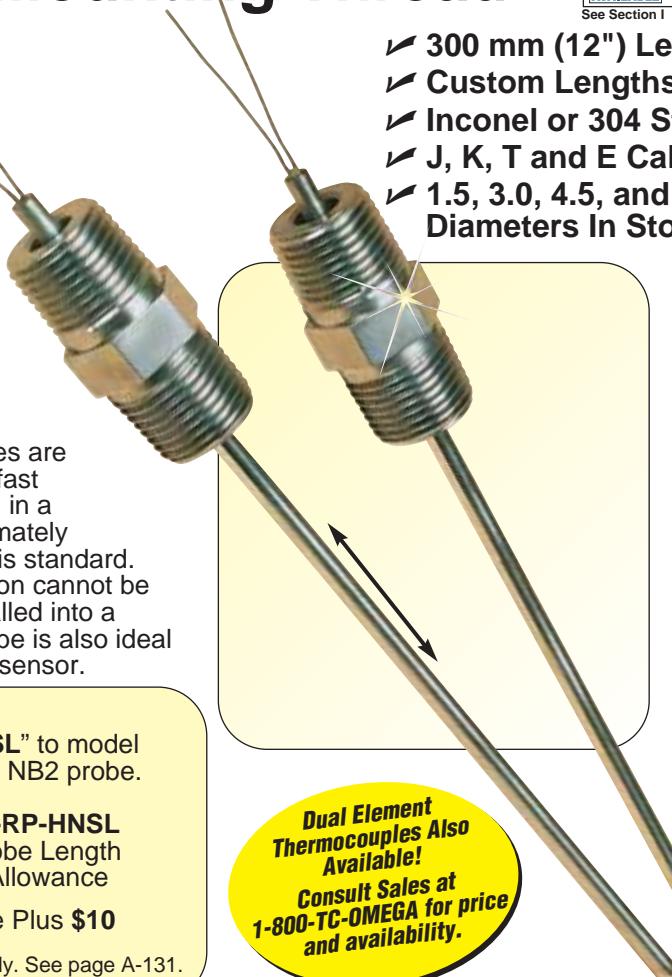
#### Example:

**NB1-ICSS-316G-12-RP-HNSL**

Nipple Assembly Probe Length Includes ½" Thread Allowance

**Price: NB1-RP** Price Plus \$10

**Note:** Head sold separately. See page A-131.



- ✓ 300 mm (12") Length Stock<sup>†</sup>
- ✓ Custom Lengths Available
- ✓ Inconel or 304 Stainless Steel Sheath
- ✓ J, K, T and E Calibrations in Stock
- ✓ 1.5, 3.0, 4.5, and 6.0 mm (½", ⅛", ⅓", and ¼") Diameters In Stock

- ✓ Use with Any Protection Head!
- ✓ Made with Special Limits of Error Material

Rigidly mounted probes have ½" NPT mounting thread. They are supplied with a hex nipple for attachment to tank walls, pipe fittings, or conduit. The fitting is silver soldered to the probe sheath for a positive pressure seal. Supplied with 38 mm (1½") of bare leads with epoxy seal.

**Price:** NB1 Price Less \$14  
(See page 138 and 139)

#### Replacement Probe

**To Order:** Add suffix RP to part numbers of NB series probes.

**Example: NB1-CAIN-14G-12-RP**

Nipple Assembly Probe Length Includes ½" Thread Allowance

**Note:** Head sold separately.

<sup>†</sup>Other lengths available, consult Sales Dept.

Weld Pad Probe	Suffix	Price	
		304SS	Inconel
Parallel	-PD	Add \$11	Add \$16
Perpendicular	-PD90	Add 16	Add 21
Curved*	-PDR*	Add 16 <sup>†</sup>	Add 21 <sup>†</sup>

<sup>†</sup>Plus \$60 set-up.

\* Specify pipe radius.

Quick Disconnect probes are available with 304 stainless steel or Inconel welding pads for permanent installation. These rugged assemblies are available in three styles, Parallel, Perpendicular, and Curved, to meet most industrial applications. (⅛" Diameter probes and larger.)

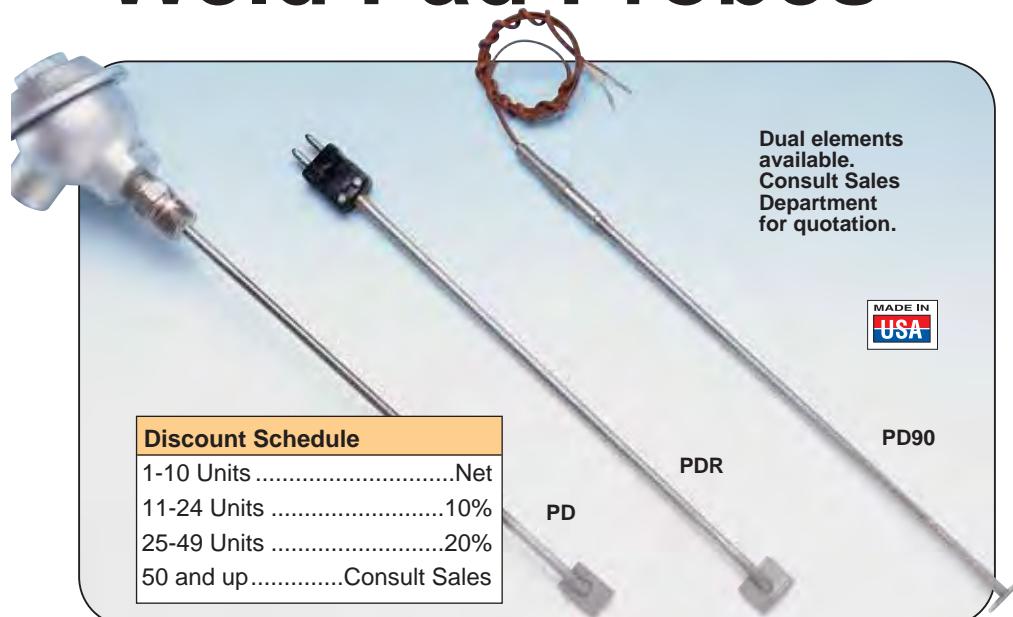
#### PAD Dimensions:

25 x 19 x 3 mm (1" x ¾" x ⅜")

**Ordering Example:**  
**ICSS-14G-12-PDR-2"**, Iron-Constantan quick disconnect thermocouple ¼" dia., 12" L, SS sheath with a curved weld pad for a 2" pipe radius. Price \$47 each plus \$60 setup for lot.

#### Discount Schedule

1-10 Units	Net
11-24 Units	10%
25-49 Units	20%
50 and up	Consult Sales



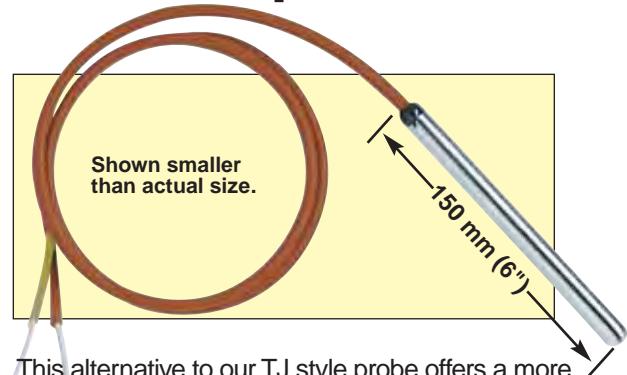
# Specialty Thermocouple Probes

## Low-Cost Hollow-Tube Thermocouple Probe

- ✓ 1 m (40") PFA-Insulated Lead Wire Epoxy Potted into a 304 SS Sheath
- ✓ Probe Rated Up to 450°F
- ✓ Probe Diameters of 1.5, 3.0, 4.5, and 6.0 mm (1/16", 1/8", 3/16", and 1/4")
- ✓ J, K, T, E, and N Calibrations
- ✓ Glass-Insulated Leads Available for Higher Temperatures (Up to 900°F)
- ✓ Made with Special Limits of Error Wire



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



This alternative to our TJ style probe offers a more compact size at a lower cost. It meets the requirements of limited-space applications, without the metal transition fitting or strain relief spring.

### To Order (Specify Model Number)

Model Number	Probe Dia.	Lead AWG	Price
HTTC36-(*)-116G-(**)	1.5 mm (1/16")	30 Solid	\$22
HTTC36-(*)-18G-(**)	3.0 mm (1/8")	24 Stranded	19
HTTC36-(*)-316G-(**)	4.5 mm (3/16")	20 Stranded	21
HTTC36-(*)-14G-(**)	6.0 mm (1/4")	20 Stranded	22

\*Specify calibration type: J, K, T, E, N.

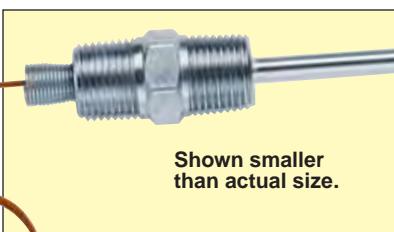
\*\*Specify probe length in inches 1 1/2 to 6" (38 to 150 mm).

Over 150 mm (6") add \$1/inch. 32 mm (1.25") minimum; 1.2 m (48") maximum. Over 1.2 m (48") consult Custom Engineering Department.

Over 1 m (40") leads, add \$1/ft, and modify model number. Add suffix: "GG" for fiberglass insulated lead wire. (Does not include 1.5 mm (1/16") dia.)

Ordering Example: HTTC36-K-18G-6-GG, hollow tube thermocouple type K calibration, 3 mm (1/8") dia., 150 mm (6") probe length, 1 m (40") glass insulated leads, \$19.

Options: Modify model number to meet your specific needs. For connector terminations add suffix "-OSTW-M" or "-SMPW-M" and add \$5 to the price. For ungrounded probe change G in part number to U and add \$6 to price.



This flexible lead-wire replacement probe is ideal for field installation with existing protection heads or for extending leads to remote locations. Flexible leads prevent breakage in hard-to-wire situations. These probes have 20 AWG stranded lead wire and a 1/2 x 1/2 NPT hex fitting. Probe length includes 13 mm (1/2") of hex fitting threads.

- ✓ Wide Variety of Wire Types Available
- ✓ J, K, T, E, and N Calibration Types
- ✓ User-Selectable Diameter and Length
- ✓ Made with Special Limits of Error Wire
- ✓ 1 m (40") Long Leads, Standard; Other Lengths Available



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

### To Order (Specify Model Number)

Model Number	Description	Price
NB1-(*)-SS-14G-(**)-RP-†	Up to 300 mm (12") Probe Length	\$45

\*Specify calibration type: CA, IC, CP, CX, NN.

\*\*Probe length in inches.

†Wire insulation type: TT: PFA, GG: fiberglass and length in inches.

Ordering Example: NB1-CASS-14G-12RP-TT36, Type K "replacement probe", 300 mm (12") long, 6 mm (1/4") Dia., grounded junction with 1 m (40") PFA leads, \$45 (for other diameters and configurations, contact Sales).

## Metal Handle Probe

- ✓ 1.5, 3.0, 4.5, and 6.0 mm (1/16", 1/8", 3/16", and 1/4") Diameters
- ✓ 300 mm (1') of Retractable Cable Expands to 1.5 m (5')
- ✓ Probe Leads Terminate in a Male SMP Miniature Connector
- ✓ Heavy-Duty Aluminum Handle
- ✓ Bendable Probe
- ✓ Variations Available—Contact the Quotations Department

The MHP handle probe picks up where the HPS handle probes leave off, offering unparalleled durability and no probe length limitations. A compression fitting rigidly secures the probe to the cast-aluminum handle and provides the rugged construction and stability that long probes and heavy-duty applications require.

### To Order (Specify Model Number)

Model Number	Price
MHP-(*)-SS-14G-(**)-SMP	\$67

\*Specify calibration type: CA, IC, CP, CX, NN for K, J, T, E and N.

\*\*Specify probe length in inches.

Ordering Example: MHP-CASS-14G-12-SMP, metal handle probe, K Type calibration, 6 mm (1/4") diameter, 300 mm (12") length, SMP connector, \$67 (for other diameters and configurations, contact Sales).

Shown smaller than actual size.



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

Molded Miniature  
Connector Standard



#### UNITED STATES

[www.omega.com](http://www.omega.com)

1-800-TC-OMEGA  
Stamford, CT.

#### CANADA

[www.omega.ca](http://www.omega.ca)

Laval(Quebec)  
1-800-TC-OMEGA

#### GERMANY

[www.omega.de](http://www.omega.de)

Deckenpfronn, Germany  
0800-8266342

#### UNITED KINGDOM

[www.omega.co.uk](http://www.omega.co.uk)

Manchester, England  
0800-488-488  
+44-(0)161-777-6611

#### FRANCE

[www.omega.fr](http://www.omega.fr)

0800-466-342

#### BENELUX

[www.omega.nl](http://www.omega.nl)

0800-099-33-44



## More than 100,000 Products Available!

### • Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, 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, Thermocouple Wire, RTD Probes

### • 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

Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers, Plug-in Cards, Signal Conditioners, USB, RS232, RS485, Ethernet 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, Pressure Transmitters, Strain Gauges, 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