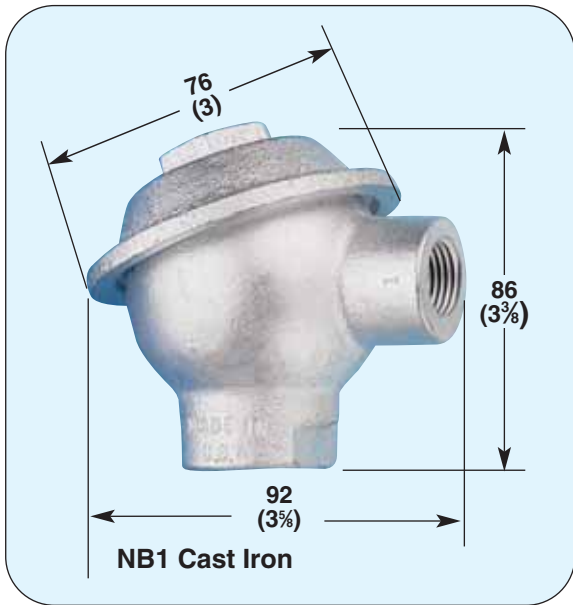
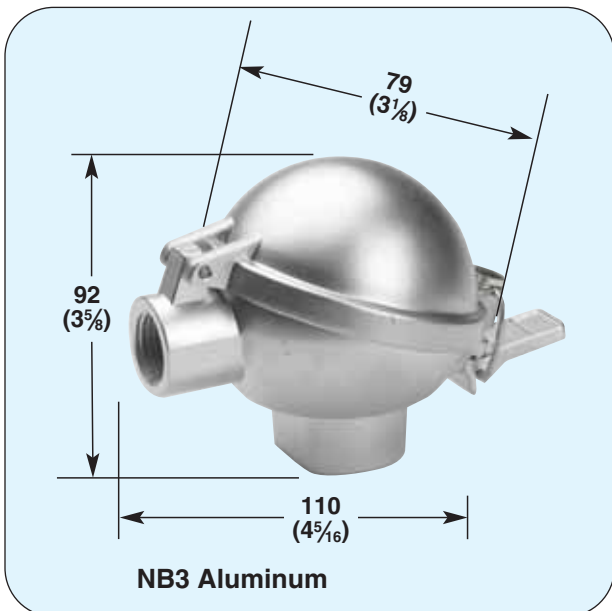
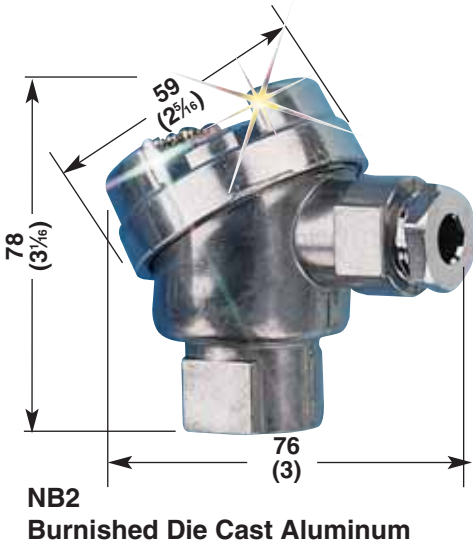


Thermocouple Heads



Dimensions: mm (in)



To Order (Specify Model No.)			
Material	Type	Model Number	
Cast Iron	NB1	NB1-0 NB1-2 NB1-4	
Burnished Die-Cast Aluminum	NB2	NB2-0 NB2-2 NB2-4	
Aluminum	NB3	NB3-0 NB3-2 NB3-4	
Aluminum	NB4	NB4-0 NB4-4	
Cast Iron	NB5	NB5-0 NB5-2 NB5-4	
Aluminum	NB6	NB6-0 NB6-2 NB6-4	

MOST POPULAR MODELS HIGHLIGHTED!

Terminals	Wt (oz)	Threaded Openings		Features
		Protection Tube Entry	Extension Wire Entry	
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	22 23 24	½ NPT	½ NPT	<ul style="list-style-type: none"> Rugged construction Screw cover with inside thread Moisture and dust resistant Ideal for outdoor use Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	5 6 6½	½ NPT Standard	½ NPT w/compression fitting for ¼ to ¼" OD wire	<ul style="list-style-type: none"> Small and lightweight Good corrosion resistance Gasketed, weather resistant Burnished finish Safety chain on cover Medium size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	8 9¼ 9¾	½ NPT	½ NPT	<ul style="list-style-type: none"> Hinge top Lightweight aluminum Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	2½ 3¼ 3¾	M10 x1 works with ½ NPT	M15 x 0.75 w/compression fitting	<ul style="list-style-type: none"> Metric Miniature size Good corrosion resistance Uses miniature barrier strip connector (optional)
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	56 57 58	½ NPT	½ NPT w/compression fitting	<ul style="list-style-type: none"> Rugged cast iron High-temperature painted finish Safety chain on cover Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	8¾ 9¾ 10¾	½ NPT	½ NPT w/compression fitting	<ul style="list-style-type: none"> Deep base Lightweight aluminum Standard size

Ordering Examples: NB1-0, cast iron head with no terminal block, NB6-2, deep base aluminum head with a 2-terminal terminal block (for 1 thermocouple element),

Terminal Blocks for Connection Heads

(Order separately or included with heads with -2 or -4 suffixes)

Ceramic Block with Nickel Plated Brass Terminals for NB2 Head for Gage 14 Wire Maximum



To Order (Specify Model No.)

Model No.	Terminals	Wt g (oz)
CH-49	2 = single	43 (1½)
CH-50	4 = duplex	57 (2)

Ceramic Blocks with Brass Terminals for Type NSA, NSB, NSC, and NBS Connection Heads for Max 8-Gage Wire



To Order (Specify Model No.)

Model No.	Terminals	Wt g (oz)
CH-47	2 = single	85 (3)
CH-48	4 = duplex	128 (4½)

Ceramic Blocks with Brass Terminals for Type NBN, NB3, NBG, NXT, NB1, and NBB Connection Heads for Max 14-Gage Wire



To Order (Specify Model No.)

Model No.*	Terminals	Wt g (oz)
CH-73	2 = single	35 (1¼)
CH-74	4 = duplex	50 (1¾)

*For NB1 heads, add suffix "-NB1" to model number; no additional charge.

To Order (Specify Model No.)

Model No.	Desc	Material	Term	Wt g (oz)
CH-83	For NB4	Ceramic	2	28 (1)
CH-84	For NB4	Ceramic	4	28 (1)
CH-76	For NBG, NB5, NB6,	Bakelite	2	77 (2½)
CH-77	NB7, NB9	Bakelite	3	77 (2½)
CH-78	and NB12	Bakelite	4	77 (2½)

†These are alternatives, not standard with -2 or -4 suffixes on thermocouple heads.



Bakelite CH-76



Bakelite CH-78



Ceramic CH-83



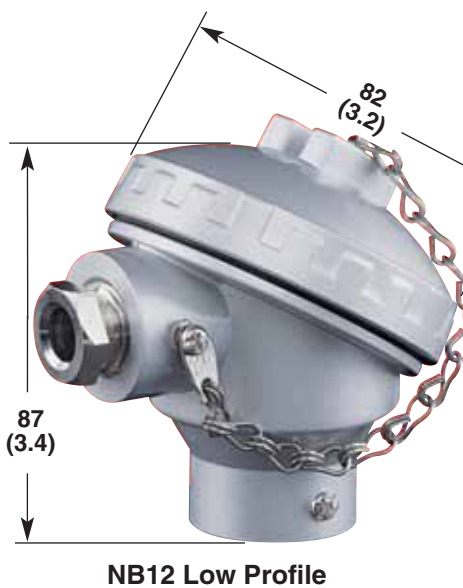
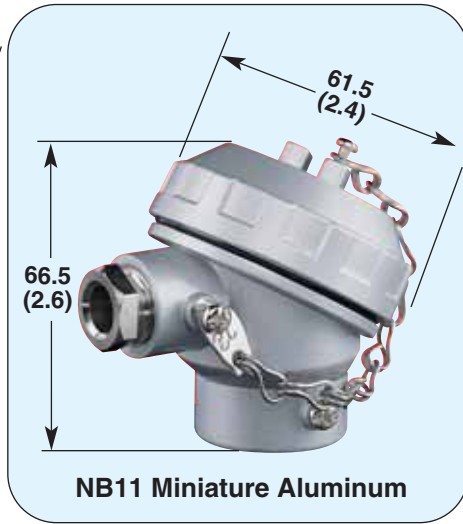
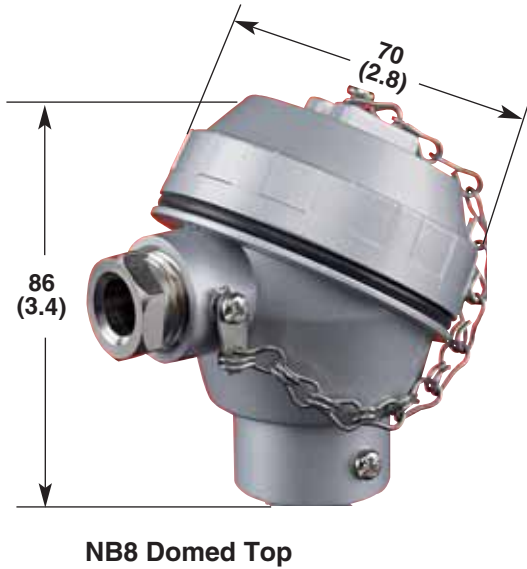
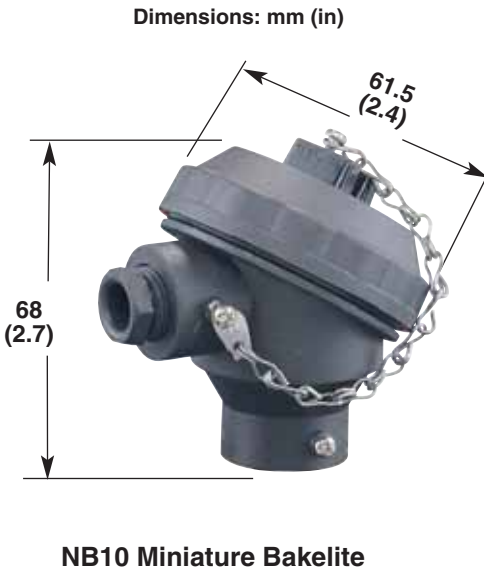
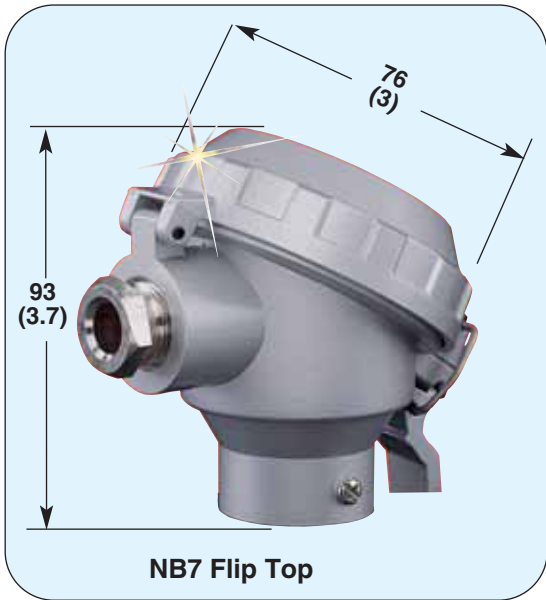
Ceramic CH-84



Bakelite CH-77

All shown smaller than actual size.

Thermocouple Heads



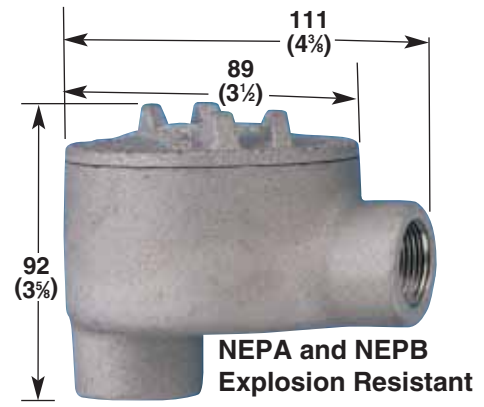
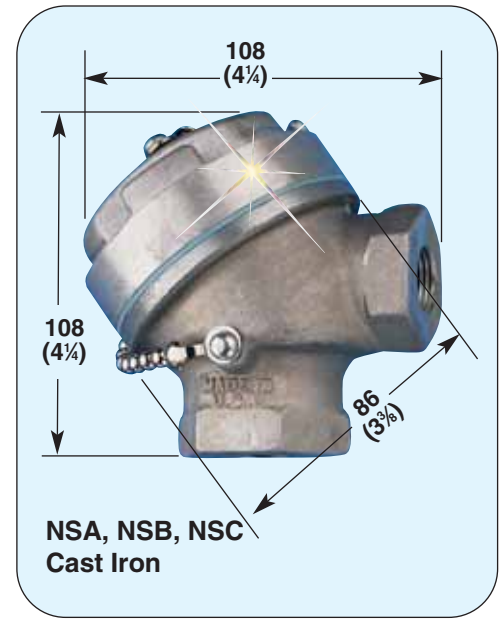
To Order (Specify Model No.)			
Material	Type	Model Number	
Aluminum	NB7	NB7-0 NB7-2 NB7-4	
Aluminum	NB8	NB8-0 NB8-2 NB8-4	
Glass Reinforced Nylon	NB9	NB9-0 NB9-2 NB9-4	
Bakelite	NB10	NB10-0 NB10-2 NB10-4	
Aluminum	NB11	NB11-0 NB11-2 NB11-4	
Aluminum	NB12	NB12-0 NB12-2 NB12-4	
Cast Aluminum Body and Cap	NEPA	NEPA-0 NEPA-2 NEPA-4	
	NEPB	NEPB-0 NEPB-2 NEPB-4	
Cast Iron	NSA	NSA-0 NSA-2 NSA-4	
	NSB	NSB-0 NSB-2 NSB-4	
	NSC	NSC-0 NSC-2 NSC-4	

MOST POPULAR MODELS HIGHLIGHTED!

Terminals	Wt (oz)	Threaded Openings		Features
		Protection Tube Entry	Extension Wire Entry	
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	8 $\frac{3}{4}$ 9 $\frac{1}{4}$ 10 $\frac{3}{4}$	$\frac{1}{2}$ NPT	$\frac{1}{2}$ NPT	<ul style="list-style-type: none"> Lightweight aluminum construction Flip top Moisture and dust resistant Ideal for outdoor use Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	8 9 10	$\frac{1}{2}$ NPT	$\frac{1}{2}$ NPT w/compression fitting	<ul style="list-style-type: none"> Small and lightweight Domed top Gasketed, weather resistant Secure screw thread Safety chain on cover Medium size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	5 6 7	$\frac{1}{2}$ NPT	$\frac{1}{2}$ NPT w/compression fitting	<ul style="list-style-type: none"> Very lightweight construction Safety chain on cover Good corrosion resistance Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	2 $\frac{7}{8}$ 3 $\frac{3}{8}$ 4 $\frac{1}{4}$	$\frac{1}{2}$ NPT	$\frac{3}{8}$ NPT	<ul style="list-style-type: none"> Ultra lightweight construction Safety chain on cover High temperature plastic Miniature size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	4 $\frac{7}{8}$ 5 $\frac{1}{2}$ 6 $\frac{1}{2}$	$\frac{1}{2}$ NPT	$\frac{3}{8}$ NPT w/compression fitting	<ul style="list-style-type: none"> Miniature size IP 67 Sealed Safety chain on cover Lightweight construction Miniature size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	9 $\frac{3}{4}$ 10 $\frac{3}{4}$ 11 $\frac{1}{4}$	$\frac{1}{2}$ NPT	$\frac{1}{2}$ NPT	<ul style="list-style-type: none"> Low profile Safety chain on cover Lightweight construction Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	16 $\frac{1}{2}$ 17 $\frac{1}{4}$ 18 $\frac{1}{4}$	$\frac{3}{4}$ NPT	$\frac{3}{4}$ NPT	<ul style="list-style-type: none"> Explosion resistant head* Rated for: Class III Class I, Group C, D Class II, Groups E, F, G Screw cover Moisture and dust resistant Ideal for outdoor use Utilizes barrier strip connector (optional)
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	21 $\frac{1}{2}$ 22 $\frac{3}{4}$ 23 $\frac{3}{4}$	$\frac{1}{2}$ NPT	$\frac{1}{2}$ NPT	<ul style="list-style-type: none"> Rugged construction Screw cover with inside thread Moisture and dust resistant Ideal for outdoor use Standard OMEGA heavy-duty head Cover equipped with safety chain (readily removed without tools) Standard size
0 = no terminal block 2 = single element 4 = duplex element max 8-gage wire	40 44 46	$\frac{3}{4}$ NPT	$\frac{3}{4}$ NPT	
0 = no terminal block 2 = single element 4 = duplex element max 8-gage wire	36 40 42	1 NPT	$\frac{3}{4}$ NPT	

Ordering Examples: 1.) NB10-0 is a bakelite head with no terminal block, 2.) NB7-4 is a flip-top aluminum head with a 4-terminal terminal block (for 2 thermocouple elements),

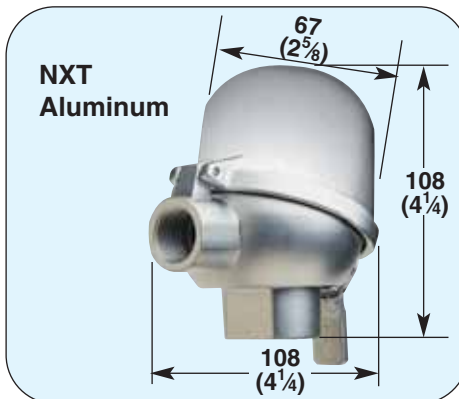
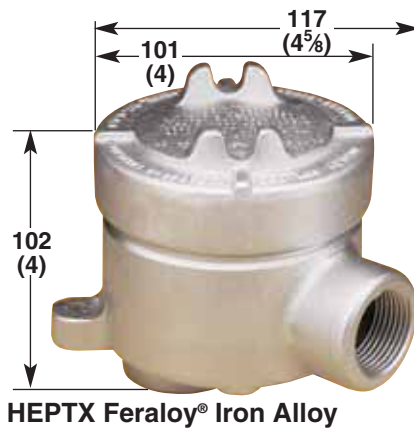
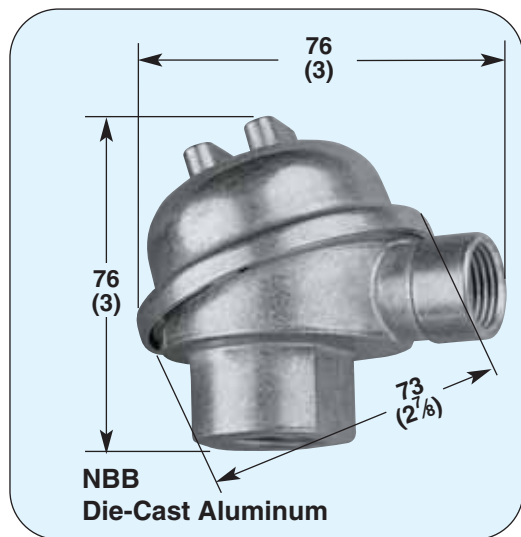
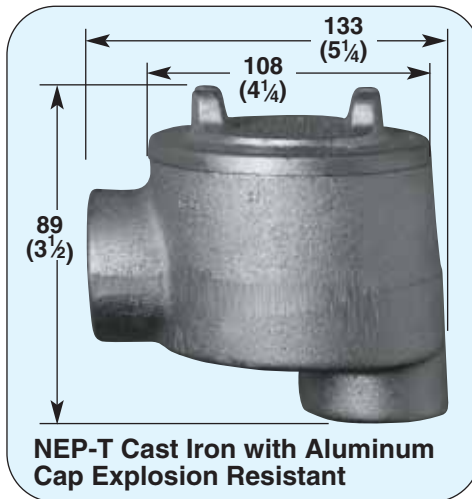
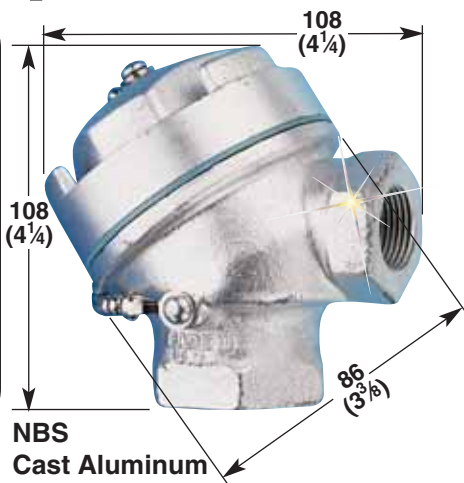
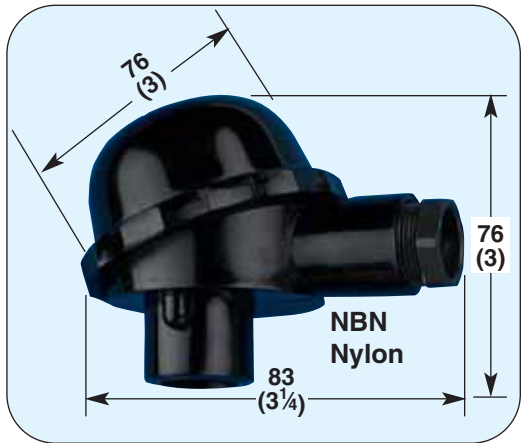
***Note:** The use of explosion resistant heads does not imply that a complete assembly is either explosion proof or intrinsically safe. It is the user's responsibility to determine suitability of materials for an installation.



Discount Schedule	
1-10 Units Net	101 and Up, Consult Sales
11-24 Units 5%	
25-100 Units . . . 10%	

**NEMA 4X (IP66)
Rated Heads Available.
Please consult our
Technical Quotations
Department**

Thermocouple Heads



To Order (Specify Model No.)			
Material	Type	Model Number	
Nylon	NBN	NBN-0 NBN-2 NBN-4	
Bakelite Glass Fiber	NBG	NBG-0 NBG-2 NBG-4	
Die-Cast Aluminum	NBB	NBB-0 NBB-2 NBB-4	
NBS Cast Aluminum	NBS	NBS-0 NBS-2 NBS-4	
Cast Iron with Aluminum Cap	NEP-T	NEP-T0 NEP-T2 NEP-T4	
Aluminum	NXT	NXT-0 NXT-2 NXT-4	
Feraloy® Iron Alloy	HEP-TX	HEP-TX-0 HEP-TX-2 HEP-TX-4 HEP-TX70	

Dimensions: mm (in)

Discount Schedule	
1-10 Units Net	101 and Up, Consult Sales
11-24 Units 5%	
25-100 Units 10%	

Note: Barrier strips are utilized when more than 4 connections are required. e.g.: dual element 3-wire RTD. Transmitter may be mounted in most heads. Transmitter may not be mounted in NB4 and only the smallest transmitters can fit the NB2 head by special order. Check transmitter dimensions identified by individual product specifications as well as the internal dimensions for the head given in Section Z. **Ordering Example:** NEP-T4, cast iron thermocouple head with aluminum cap,

MOST POPULAR MODELS HIGHLIGHTED!

Bi-Metal Thermometers for Head & Well Assemblies

See Page E-14 for Additional Models

B

Terminals	Wt (oz)	Threaded Openings		Features
		Protection Tube Entry	Extension Wire Entry	
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	3 4 5	½ NPT	Supplied with nylon bushing for plastic covered extension wire to 0.24" to 0.40" OD	<ul style="list-style-type: none"> • Easy access to terminal block • Suitable for use in ambient temperatures to 121°C (250°F) • Moisture and dust-resistant • Ideal for chemical plant use • Excellent corrosion resistance • Very light weight • Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	6 7 8			½ NPT
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	6 7 8	½ NPT	½ NPT	<ul style="list-style-type: none"> • Good corrosion resistance • Lightweight • Bayonet cover readily removed without tools • Easy access to terminal block • Moisture and dust-resistant • Standard size
0 = no terminal block 2 = single element 4 = duplex element max 8-gage wire	15 18 20	½ NPT	½ NPT	<ul style="list-style-type: none"> • Good corrosion resistance • Lightweight • Cover, equipped with safety chain, easily removed • Moisture and dust-resistant • Standard size
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	75 76 76	½ NPT	½ NPT	<ul style="list-style-type: none"> • Explosion resistant head* • Rated for Class I, Group C, D Class II, Groups E, F, G Class III • Screw cover with inside thread • Moisture and dust resistant • Ideal for outdoor use • Utilizes barrier strip connector (optional)
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	11 12 ¼ 12 ¾	½ NPT	½ NPT	<ul style="list-style-type: none"> • Tall cover with hinge top • Ideal for big transmitters • Utilizes barrier strip connector (optional) • Medium size
0 = no terminal block 2 = single element 4 = duplex element 70 = for mounting TX70 Transmitter max 14-gage wire	62 64 64 66	1 NPT ¾ NPT	1 NPT ¾ NPT	<ul style="list-style-type: none"> • Explosion resistant head for 2-wire transmitter* • Rated for: Class I, Div 1&2, Groups C, D Class II, Div 1 Groups E, F, G, Class III • Moisture/dust-resistant • Utilizes barrier strip connector (optional)



Model J (Shown)

2½", 4" and 6" Lengths

Shown smaller than actual size.

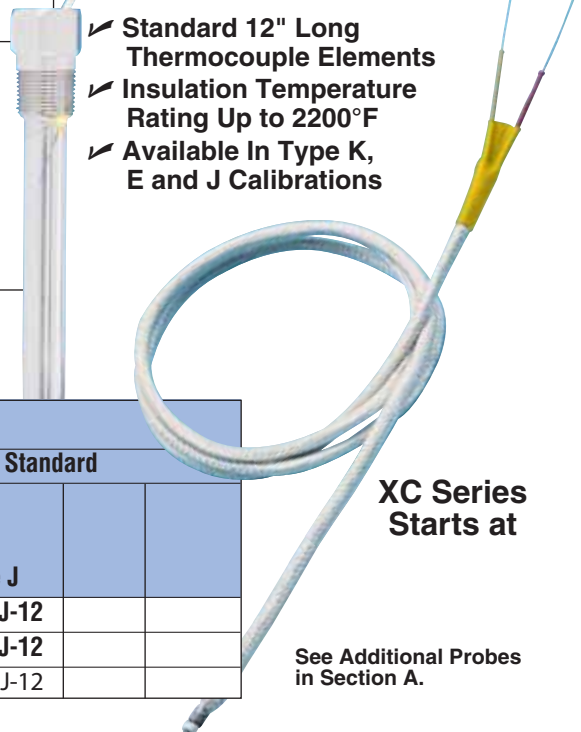
- ✓ Head Can Be Tilt-Adjusted Through a Full 90° Angle
- ✓ All Stainless Steel Welded Construction
- ✓ External Recalibration
- ✓ Rust and Corrosion Proof, Leakproof, Hermetically Sealed
- ✓ Sensitive Bi-Metal Element Silicone

- ✓ Dampened for Minimum Pointer Vibration and Maximum Heat Transfer
- ✓ Accuracy – 1% of Range
- ✓ Use of Thermowell Is Recommended for Pressure Applications
- ✓ Overrange Protection – 50% Up to 500°F

Thermowells Accept: Models A, B, G, H, L, R and S

Ceramic Fiber Insulated Thermocouple Elements for Head & Well Assemblies

- ✓ Standard 12" Long Thermocouple Elements
- ✓ Insulation Temperature Rating Up to 2200°F
- ✓ Available In Type K, E and J Calibrations



XC Series Starts at

**Note: The use of explosion resistant heads does not imply that a complete assembly is either explosion proof or intrinsically safe. It is the user's responsibility to determine suitability of materials for an installation.*

To Order (Specify Model Number)

300 mm (12") Long with Insulation, Plus 13 mm (½") Stripped Ends Standard

AWG Wire Size	Type K	Type E	Type J
14	XC-14-K-12	XC-14-E-12	XC-14-J-12
20	XC-20-K-12	XC-20-E-12	XC-20-J-12
24	XC-24-K-12	XC-24-E-12	XC-24-J-12

See Additional Probes in Section A.

* 6" = 150 mm

Ordering Example: XC-20-K-12,



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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

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• 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