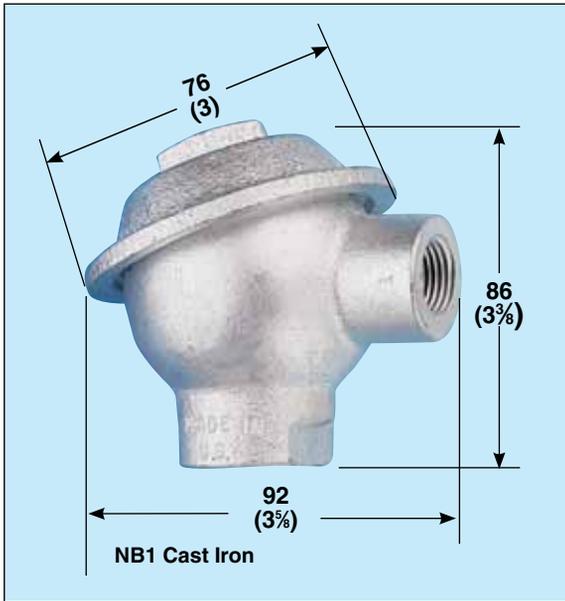
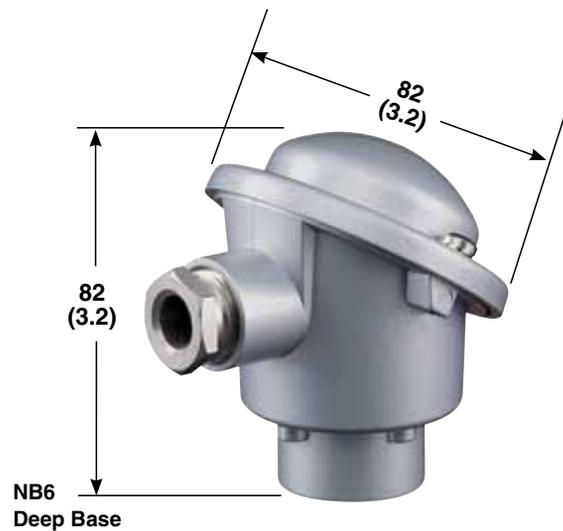
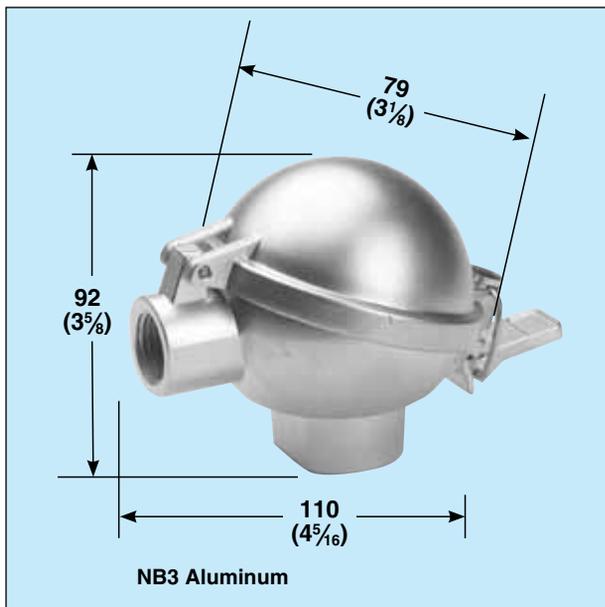
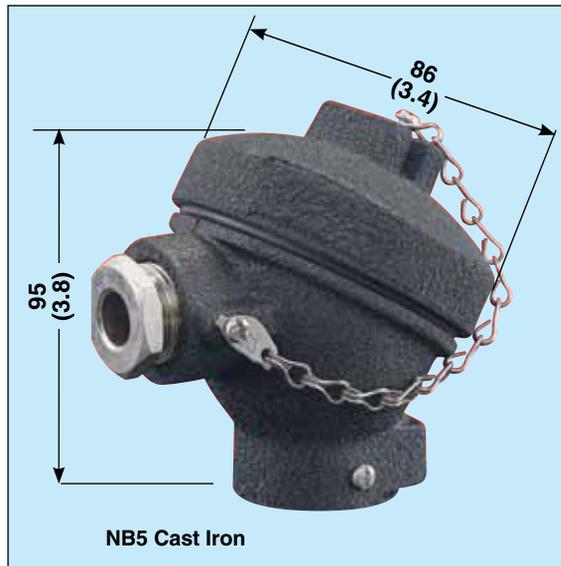
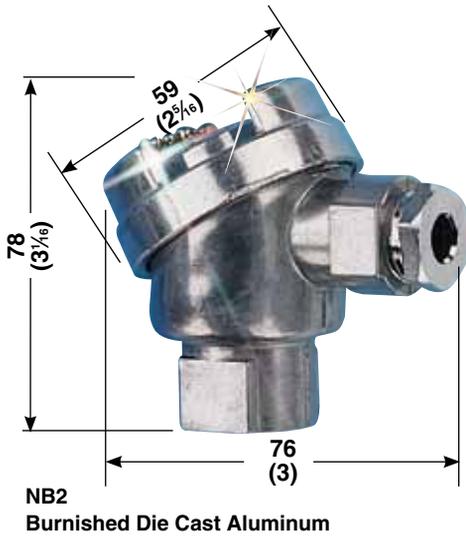


# Thermocouple Heads



Dimensions: mm (inch)



To Order		
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
Cast Iron	NB5	NB5-0 NB5-2 NB5-4
Aluminum	NB6	NB6-0 NB6-2 NB6-4

**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).

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"> <li>Rugged construction</li> <li>Screw cover with inside thread</li> <li>Moisture and dust resistant</li> <li>Ideal for outdoor use</li> <li>Standard size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	5 6 6½	½ NPT Standard	½ NPT with compression fitting for ¼ to ¼" OD wire	<ul style="list-style-type: none"> <li>Small and lightweight</li> <li>Good corrosion resistance</li> <li>Gasketed, weather resistant</li> <li>Burnished finish</li> <li>Safety chain on cover</li> <li>Medium size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	2½ 3½ 8 9¼ 9¾	½ NPT	½ NPT	<ul style="list-style-type: none"> <li>Hinge top</li> <li>Lightweight aluminum</li> <li>Standard size</li> </ul>
4 = duplex element  max 14-gage wire	3¾	M10 x1 works with ¾ NPT	M16 x 1.5 with compression fitting	<ul style="list-style-type: none"> <li>Metric</li> <li>Miniature size</li> <li>Good corrosion resistance</li> <li>Uses miniature barrier strip connector (optional)</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	56 57 58	½ NPT	½ NPT with compression fitting	<ul style="list-style-type: none"> <li>Rugged cast iron</li> <li>High-temperature painted finish</li> <li>Safety chain on cover</li> <li>Standard size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	8¾ 9¾ 10¾	½ NPT	½ NPT with compression fitting	<ul style="list-style-type: none"> <li>Deep base</li> <li>Lightweight aluminum</li> <li>Standard size</li> </ul>

## 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

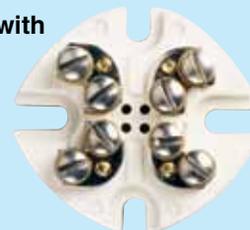
Model No.	Terminals	Wt g (oz)
CH-49	2 = single	43 (1½)
CH-50	4 = duplex	57 (2)

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



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**



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.



Bakelite  
CH-76.



Bakelite  
CH-78.



Ceramic  
CH-83.



Ceramic  
CH-84.



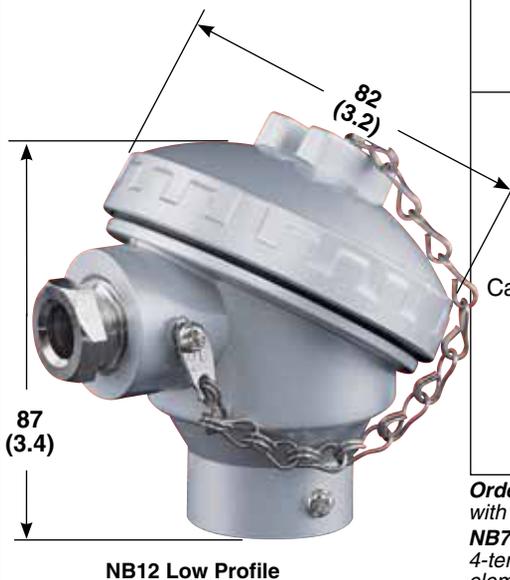
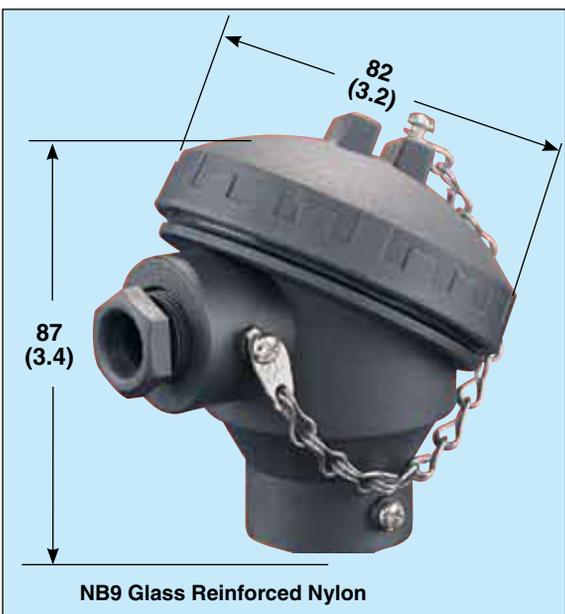
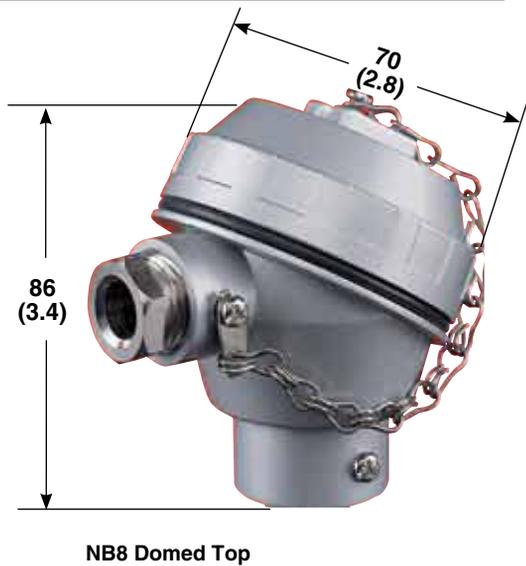
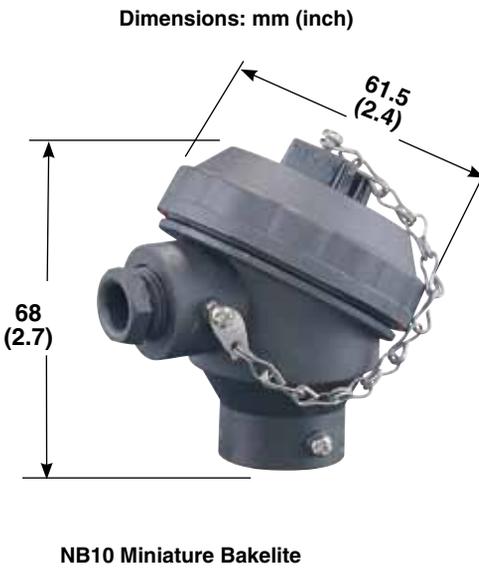
Bakelite  
CH-77.

Model No.	Description	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,	Bakelite	2	77 (2½)
CH-77	NB5, NB6,	Bakelite	3	77 (2½)
		NB, NB9		
CH-78	and NB12	Bakelite	4	77 (2½)

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

All models shown smaller than actual size.

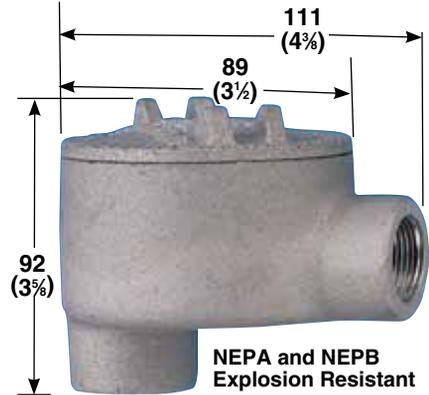
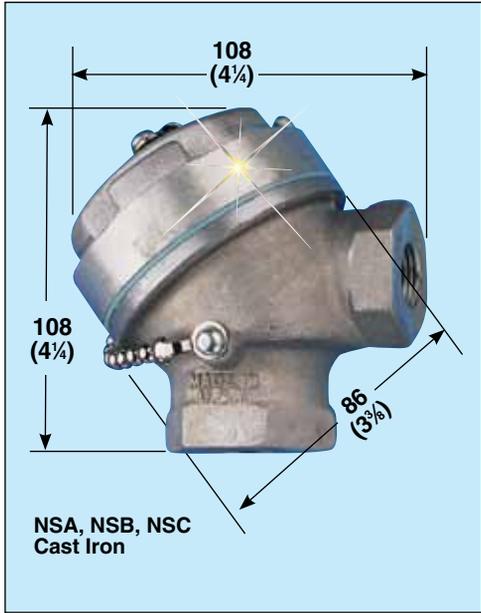
# Thermocouple Heads



To Order		
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
Cast Iron	NEPB	NEPB-0
		NEPB-2
		NEPB-4
Cast Iron	NSA	NSA-0
		NSA-2
		NSA-4
Cast Iron	NSB	NSB-0
		NSB-2
		NSB-4
Cast Iron	NSC	NSC-0
		NSC-2
		NSC-4

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

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 <sup>3</sup> / <sub>4</sub> 9 <sup>3</sup> / <sub>4</sub> 10 <sup>3</sup> / <sub>4</sub>	½ NPT	½ NPT	<ul style="list-style-type: none"> <li>Lightweight aluminum construction</li> <li>Flip top</li> <li>Moisture and dust resistant</li> <li>Ideal for outdoor use</li> <li>Standard size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	8 9 10	½ NPT	½ NPT with compression fitting	<ul style="list-style-type: none"> <li>Small and lightweight</li> <li>Domed top</li> <li>Gasketed, weather resistant</li> <li>Secure screw thread</li> <li>Safety chain on cover</li> <li>Medium size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	5 6 7	½ NPT	½ NPT with compression fitting	<ul style="list-style-type: none"> <li>Very lightweight construction</li> <li>Safety chain on cover</li> <li>Good corrosion resistance</li> <li>Standard size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	2 <sup>7</sup> / <sub>8</sub> 3 <sup>7</sup> / <sub>8</sub> 4 <sup>7</sup> / <sub>8</sub>	½ NPT	¾ NPT	<ul style="list-style-type: none"> <li>Ultra lightweight construction</li> <li>Safety chain on cover</li> <li>High temperature plastic</li> <li>Miniature size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element  max 14-gage wire	4 <sup>7</sup> / <sub>8</sub> 5 <sup>7</sup> / <sub>8</sub> 6 <sup>7</sup> / <sub>8</sub>	½ NPT	¾ NPT with compression fitting	<ul style="list-style-type: none"> <li>Miniature size</li> <li>IP 67 Sealed</li> <li>Safety chain on cover</li> <li>Lightweight construction</li> <li>Miniature size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	9 <sup>3</sup> / <sub>4</sub> 10 <sup>3</sup> / <sub>4</sub> 11 <sup>3</sup> / <sub>4</sub>	½ NPT	½ NPT	<ul style="list-style-type: none"> <li>Low profile</li> <li>Safety chain on cover</li> <li>Lightweight construction</li> <li>Standard size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	16 <sup>1</sup> / <sub>2</sub> 17 <sup>3</sup> / <sub>4</sub> 18 <sup>1</sup> / <sub>2</sub>	¾ NPT	¾ NPT	<ul style="list-style-type: none"> <li>Explosion resistant head*</li> <li>Screw cover</li> <li>Moisture and dust resistant</li> <li>Ideal for outdoor use</li> <li>Utilizes barrier strip connector (optional)</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element max 14-gage wire	21 <sup>1</sup> / <sub>2</sub> 22 <sup>3</sup> / <sub>4</sub> 23 <sup>1</sup> / <sub>4</sub>	½ NPT	½ NPT	
0 = no terminal block 2 = single element 4 = duplex element max 8-gage wire	42 46 48	½ NPT	¾ NPT	<ul style="list-style-type: none"> <li>Rugged construction</li> <li>Screw cover with inside thread</li> <li>Moisture and dust resistant</li> <li>Ideal for outdoor use</li> <li>Standard OMEGA heavy-duty head</li> <li>Cover equipped with safety chain (readily removed without tools)</li> <li>Standard size</li> </ul>
0 = no terminal block 2 = single element 4 = duplex element max 8-gage wire	40 44 46	¾ NPT	¾ NPT	
0 = no terminal block 2 = single element 4 = duplex element max 8-gage wire	36 40 42	1 NPT	¾ NPT	



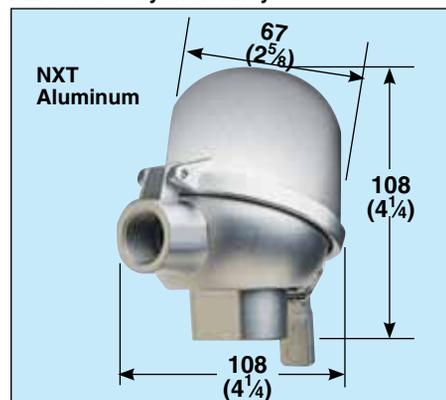
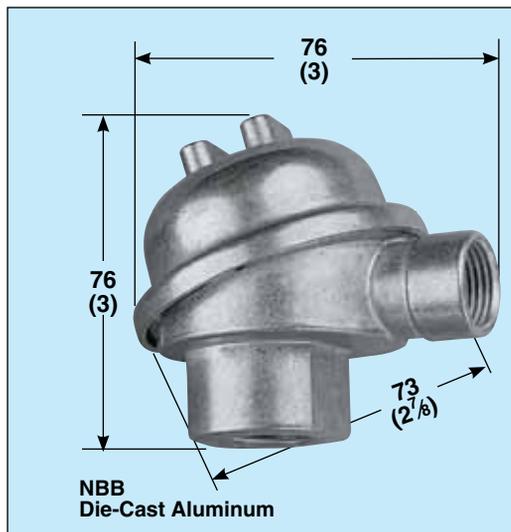
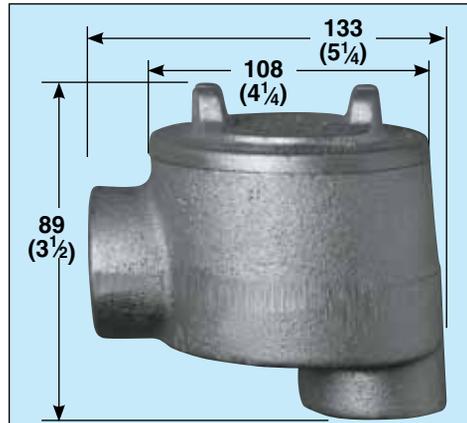
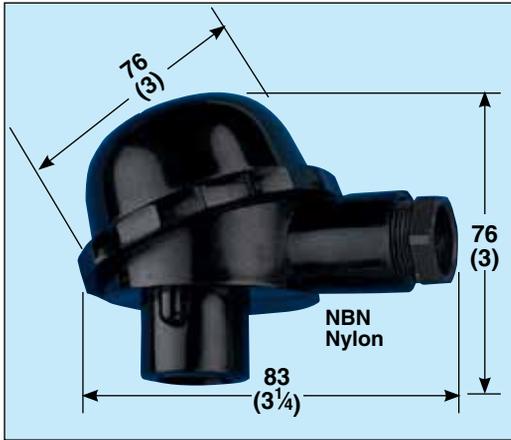
Discount Schedule	
1-10 Units . . . . Net	101 and Up, Consult Sales
11-24 Units . . . . 5%	
25-100 Units . . 10%	

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

**Sanitary Polypropelene and Stainless Steel Heads Available. Visit [omega.com/sanitary](http://omega.com/sanitary)**

*\*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.*

# Thermocouple Heads



To Order		
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
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

**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. **Ordering Example:** NEP-T4, cast iron thermocouple head with aluminum cap.

Dimensions: mm (inch)

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

## Bi-Metal Thermometers for Head and Well Assemblies

Additional Models Available.



**Model J (Shown)**  
2½, 4 and 6" Lengths

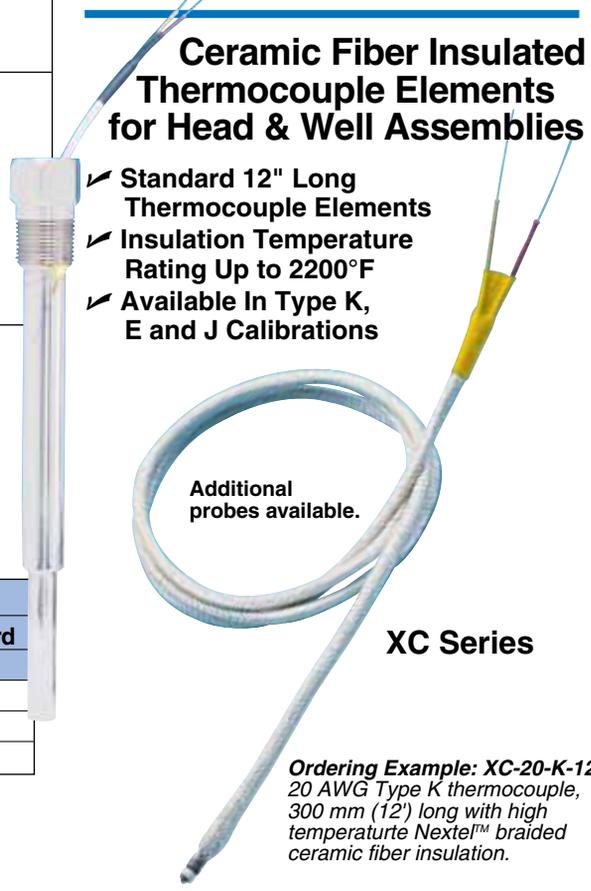
Shown smaller than actual size.

- ✓ 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

Additional probes available.

### XC Series

**Ordering Example: XC-20-K-12,** 20 AWG Type K thermocouple, 300 mm (12") long with high temperature Nextel™ braided ceramic fiber insulation.

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"> <li>• Easy access to terminal block</li> <li>• Suitable for use in ambient temperatures to 121°C (250°F)</li> <li>• Moisture and dust-resistant</li> <li>• Ideal for chemical plant use</li> <li>• Excellent corrosion resistance</li> <li>• Very light weight</li> <li>• Standard size</li> </ul>
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"> <li>• Noncombustible</li> <li>• Heat proof</li> <li>• Acid resistant</li> <li>• Alkali resistant</li> <li>• Standard size</li> </ul>
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"> <li>• Good corrosion resistance</li> <li>• Lightweight</li> <li>• Bayonet cover readily removed without tools</li> <li>• Easy access to terminal block</li> <li>• Moisture and dust-resistant</li> <li>• Standard size</li> </ul>
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"> <li>• Explosion resistant head*</li> <li>• Screw cover with inside thread</li> <li>• Moisture and dust resistant</li> <li>• Ideal for outdoor use</li> <li>• Utilizes barrier strip connector (optional)</li> </ul>
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"> <li>• Tall cover with hinge top</li> <li>• Ideal for big transmitters</li> <li>• Utilizes barrier strip connector (optional)</li> <li>• Medium size</li> </ul>
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"> <li>• Explosion resistant head for 2-wire transmitter*</li> <li>• Rated for: Class I, Div 1&amp;2, Groups C, D Class II, Div 1 Groups E, F, G, Class III</li> <li>• Moisture/dust-resistant</li> <li>• Utilizes barrier strip connector (optional)</li> </ul>

*\*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			
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

\* 6" = 150 mm \*\* Silica models also available, see omega.com