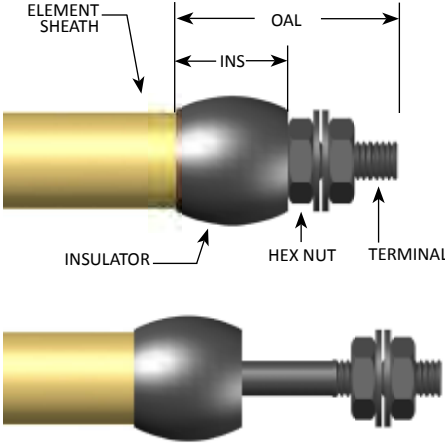
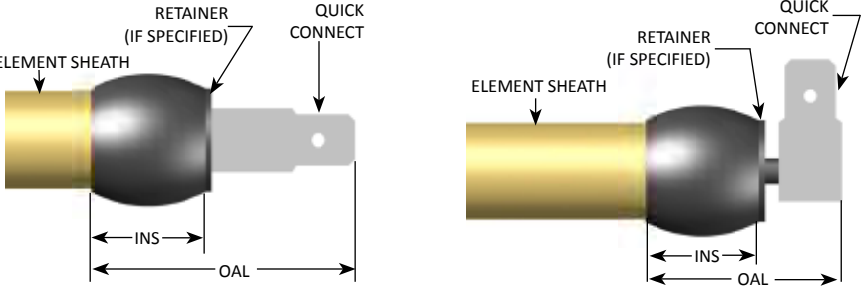
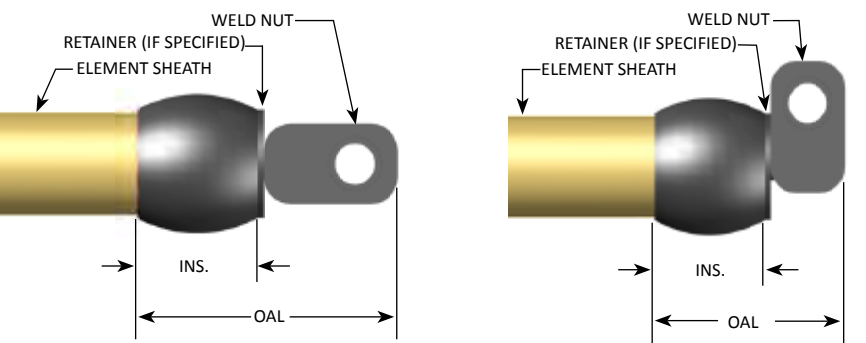


Terminals, Insulators & Seals

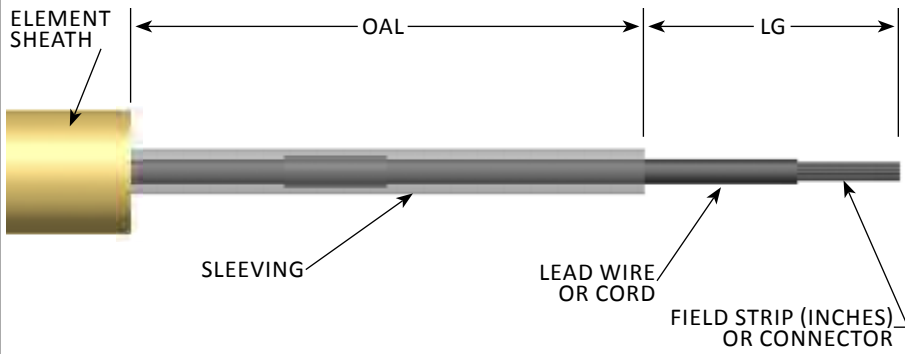
Except as noted, various terminations, insulators and seals can be combined as required to fit the application.

Table V

| <p>Terminal #1:</p> <p>Threaded Terminal (standard)</p> <p>Description: Stainless steel stud with threaded length</p> <p>Optional: Insulators available in silicone rubber (std) or optional mica or ceramic where available</p> <p>Use: For lead attachment in the field. 600V rating</p> |  <table border="1" data-bbox="1117 470 1531 695"> <thead> <tr> <th>Thread Sizes*</th> <th>OAL Standard</th> <th>INS Standard (Insulator Dim)</th> </tr> </thead> <tbody> <tr> <td>6-32</td> <td rowspan="4">1"</td> <td rowspan="4">0.50"</td> </tr> <tr> <td>8-32</td> </tr> <tr> <td>10-32</td> </tr> <tr> <td>1/4-20</td> </tr> </tbody> </table> <p>* 6-32 thread is standard for .250 and .260 Element Diameters, 10-32 thread is standard for all other Diameters. Other thread size, INS and OAL lengths available upon request.</p> | Thread Sizes* | OAL Standard | INS Standard (Insulator Dim) | 6-32 | 1" | 0.50" | 8-32 | 10-32 | 1/4-20 | | | |
|--|---|--------------------------------|----------------------------------|--------------------------------|------------------------------|--------|--------|--------|-------|----------|--------|--------|-----|
| Thread Sizes* | OAL Standard | INS Standard (Insulator Dim) | | | | | | | | | | | |
| 6-32 | 1" | 0.50" | | | | | | | | | | | |
| 8-32 | | | | | | | | | | | | | |
| 10-32 | | | | | | | | | | | | | |
| 1/4-20 | | | | | | | | | | | | | |
| <p>Terminal #2:</p> <p>Quick Connect Terminal</p> <p>Description: Standard 1/4" plated steel quick connect configuration</p> <p>Optional: Insulators available in silicone rubber (std) or optional mica or ceramic where available</p> <p>Use: For connection to matching female terminal on field finished lead. 30 amp max, see table for voltage rating</p> |  <table border="1" data-bbox="740 1230 1531 1360"> <thead> <tr> <th>Voltage Range</th> <th>OAL Standard (Straight terminal)</th> <th>OAL Standard (90 Deg terminal)</th> <th>INS Standard (Insulator Dim)</th> </tr> </thead> <tbody> <tr> <td>0-250V</td> <td>0.75"</td> <td>0.813"</td> <td>0.25</td> </tr> <tr> <td>251-600V</td> <td>1"</td> <td>1.063"</td> <td>0.5</td> </tr> </tbody> </table> | Voltage Range | OAL Standard (Straight terminal) | OAL Standard (90 Deg terminal) | INS Standard (Insulator Dim) | 0-250V | 0.75" | 0.813" | 0.25 | 251-600V | 1" | 1.063" | 0.5 |
| Voltage Range | OAL Standard (Straight terminal) | OAL Standard (90 Deg terminal) | INS Standard (Insulator Dim) | | | | | | | | | | |
| 0-250V | 0.75" | 0.813" | 0.25 | | | | | | | | | | |
| 251-600V | 1" | 1.063" | 0.5 | | | | | | | | | | |
| <p>Terminal #3:</p> <p>Weld Nut</p> <p>Description: Tab with internal thread is welded to terminal pin and furnished with terminal screw</p> <p>Use: Where it is more convenient to use this terminal orientation.</p> |  <table border="1" data-bbox="691 1770 1479 1917"> <thead> <tr> <th>Voltage Range</th> <th>OAL Standard (Straight terminal)</th> <th>OAL Standard (90 Deg terminal)</th> <th>INS Standard (Insulator Dim)</th> </tr> </thead> <tbody> <tr> <td>0-250V</td> <td>0.813"</td> <td>0.563"</td> <td>0.25</td> </tr> <tr> <td>251-600V</td> <td>1.063"</td> <td>0.813"</td> <td>0.5</td> </tr> </tbody> </table> | Voltage Range | OAL Standard (Straight terminal) | OAL Standard (90 Deg terminal) | INS Standard (Insulator Dim) | 0-250V | 0.813" | 0.563" | 0.25 | 251-600V | 1.063" | 0.813" | 0.5 |
| Voltage Range | OAL Standard (Straight terminal) | OAL Standard (90 Deg terminal) | INS Standard (Insulator Dim) | | | | | | | | | | |
| 0-250V | 0.813" | 0.563" | 0.25 | | | | | | | | | | |
| 251-600V | 1.063" | 0.813" | 0.5 | | | | | | | | | | |

Terminals, Insulators & Seals

Table V (continued)

| <p>Terminal #4:</p> <p>Neoprene Insulated Leads</p> <p>Description: Standard Bare Copper or Tin Plated Copper Conductors insulated with Neoprene. 90°C Neoprene insulation with thickness of 5/64" or 1/16".</p> <p>Use: Used primarily for internal wiring or wiring of defrost and refrigeration applications up to 600V. See Neoprene and Epoxy filled Terminal #5 for applications that require protection for wet (immersed) refrigeration type applications. <i>Neoprene exhibits supreme abrasion, cut-through oil, and solvent resistance. Neoprene is also known for its long service life and wide ranges of temperature and usability. It is remarkably flame retardant and self-extinguishing. (Military products often incorporate Neoprene.)</i></p> | <p>PVC Insulated Leads</p> <p>Description: Standard Bare Copper or Tin Plated Copper Conductors insulated with PVC. 105°C PVC insulation with thickness of 1/32".</p> <p>Use: Used primarily for internal wiring of appliances up to 600V or with thickness of 1/16" for internal wiring of refrigeration equipment. See Valox Terminal #5 for applications that require protection for moist refrigeration type applications. <i>PVC is relatively inexpensive, with the potential to be used in diverse applications. It is flame, moisture, and abrasion resistant. It also holds up against gasoline, ozone, acids, and solvents. PVC should not be used when flexibility and an extended flex life are required at low temperatures.</i></p> | <p>Silicone Insulated Leads with Glass Braid (SRG)</p> <p>Description: Stranded Tin Plated Copper Conductors insulated with Silicone Rubber and Glass Braid. 200°C Silicone Rubber insulation with thickness of 1/32".</p> <p>Use: Used primarily for internal wiring of appliances up to 600V. SRG is the standard supplied insulation material, with the exception of defrost and refrigeration applications.</p> | | | | | | | | | |
|--|--|--|----|----|----|----|----|----|----|----|---|
|  <p>The diagram illustrates a lead wire assembly. On the left is a yellow cylindrical 'ELEMENT SHEATH'. To its right is a grey 'SLEEVE'. Further right is a thin 'LEAD WIRE OR CORD'. The 'FIELD STRIP (INCHES) OR CONNECTOR' is the section where the sleeve and lead wire meet. Dimension lines indicate 'OAL' (Overall Assembly Length) from the start of the sleeve to the end of the field strip, and 'LG' (Lead Wire Length) from the start of the lead wire to the end of the field strip.</p> <table border="1" data-bbox="170 1633 771 1858"> <thead> <tr> <th>Standard Supplied Wire Gauge</th> <th>Limit Amps</th> </tr> </thead> <tbody> <tr> <td>18</td> <td>10</td> </tr> <tr> <td>16</td> <td>15</td> </tr> <tr> <td>14</td> <td>20</td> </tr> <tr> <td>12</td> <td>30</td> </tr> </tbody> </table> | Standard Supplied Wire Gauge | Limit Amps | 18 | 10 | 16 | 15 | 14 | 20 | 12 | 30 | <p>Type TGGT Leads</p> <p>Description: Stranded Nickel-Clad Copper Conductors insulated with PTFE tapes and Glass Braid. 250°C PTFE tapes with thickness of 1/64" covered by wrapped fiberglass yarns and a treated glass braid jacket.</p> <p>Use: Used where the leadwire is exposed to high temperatures such as in industrial processing up to 600V.</p> |
| Standard Supplied Wire Gauge | Limit Amps | | | | | | | | | | |
| 18 | 10 | | | | | | | | | | |
| 16 | 15 | | | | | | | | | | |
| 14 | 20 | | | | | | | | | | |
| 12 | 30 | | | | | | | | | | |
| <p>Mica Insulated Leads with Glass Braid (MGT)</p> <p>Description: Stranded Nickel-Clad Copper Conductors insulated with Mica Glass Tapes and Glass Braid. 450°C Glass reinforced Mica tapes with thickness of 1/32" and a treated glass braid jacket.</p> <p>Use: Used where the leadwire is exposed to extremely high temperatures up to 600V.</p> | | | | | | | | | | | |

Terminals, Insulators & Seals

Table V (continued)

Terminal #5:

Defrost Terminal

Description:
Neoprene or Valox, Injection Molded overmold terminal

OR

Epoxy Filled Metal Cup Terminal

Description:
Epoxy resin fills a metallic adapter enclosing the connection between lead wire and element cold pin.

Use:
Primarily defrost applications and others where water may drop on the terminal end. UL Recognized under File SA3254.

| Type | Material | Type | Element Sizes | OD | OAL | Location | Description |
|--------------|-------------|----------|---------------|--------|--------|----------|--------------|
| Overmold QC | Neoprene | One-Pass | 0.250 - 0.315 | 0.4375 | 1.0625 | Moist | T Series |
| Epoxy Cup SM | Epoxy/Metal | One-Pass | 0.315 | 0.5625 | 1.25 | Wet | Blank Series |
| Epoxy Cup LG | Epoxy/Metal | One-Pass | 0.475 | 0.5625 | 1.75 | Wet | Blank Series |
| Overmold | Neoprene | One-Pass | 0.250 - 0.375 | 0.4375 | 1.75 | Wet | W Series |
| Overmold | Neoprene | One-Pass | 0.430 - 0.490 | 0.75 | 1.75 | Wet | W Series* |
| Overmold | Valox | One-Pass | 0.250 - 0.315 | 0.4375 | 1.75 | Moist | J39 Series |
| Overmold | Valox | One-Pass | 0.375 - 0.430 | 0.5625 | 1.75 | Moist | J39 Series |
| Overmold | Valox | One-Pass | 0.475 | 0.75 | 1.5 | — | —* |
| Epoxy Cup LG | Epoxy/Metal | Two-Pass | 0.475 | 0.5625 | 1.75 | — | —* |
| Overmold | Neoprene | Two-Pass | 0.430 - 0.490 | 0.75 | 1.5 | Moist | X Series |

* May be recognized under E78533

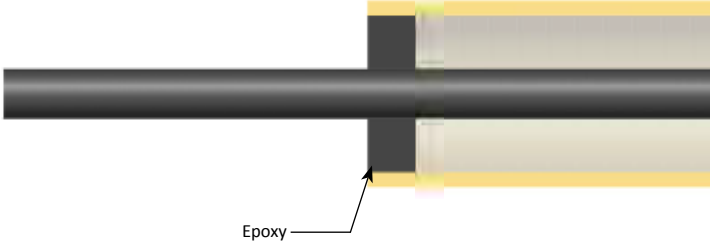
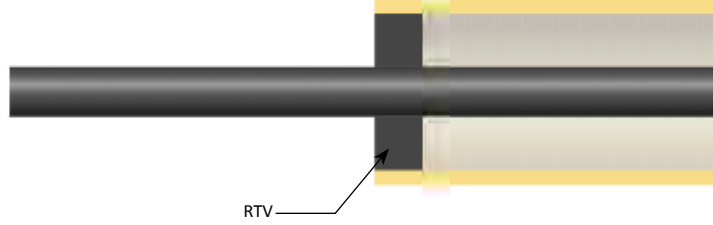
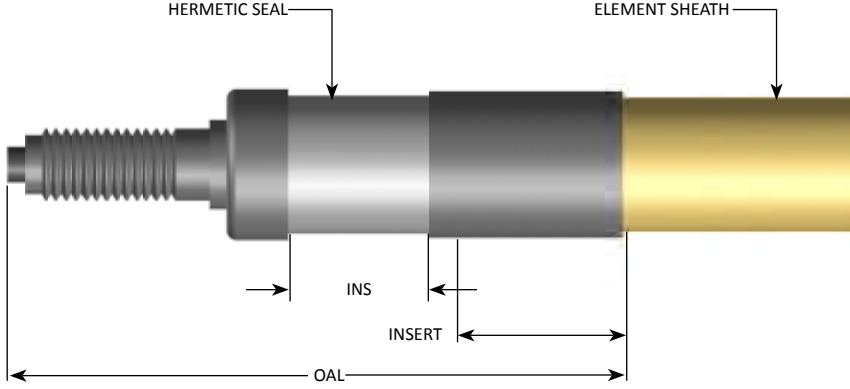
Grounding Strap (Optional)

Description:
To ground long straight single-pass finned tubular elements, eliminating arcing due to secondary currents.

Use:
Recommended for straight single-pass finned tubular elements over on expansion end. Verify adequate expansion clearances.

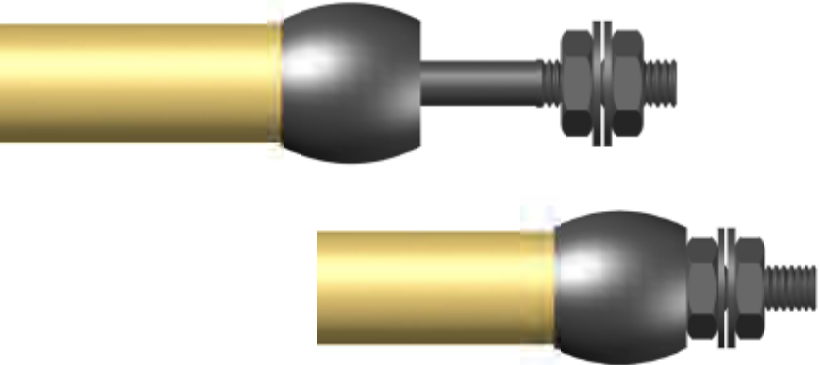
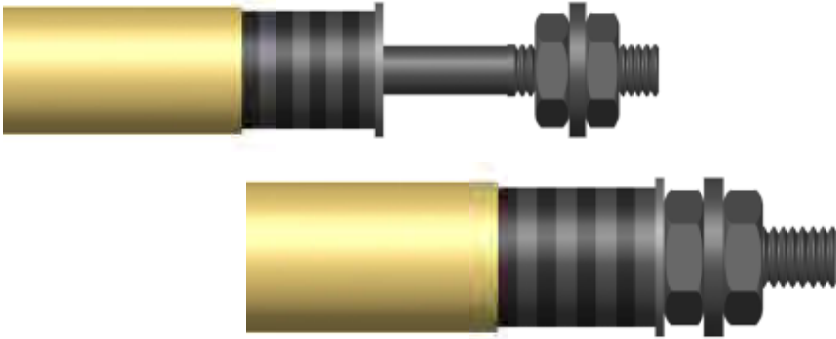
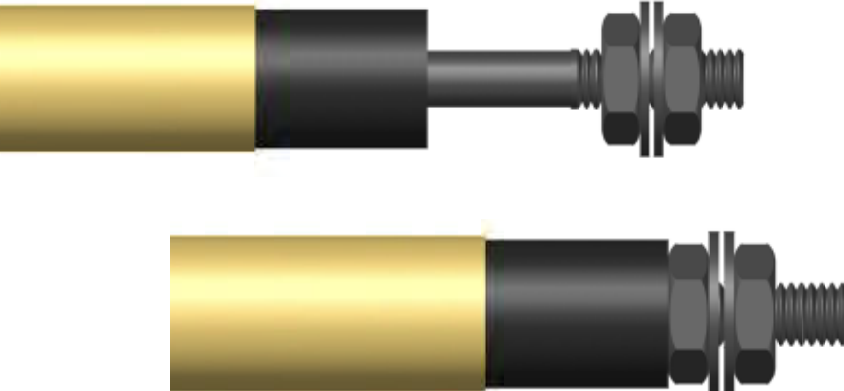
Terminals, Insulators & Seals

Table V (continued)

| <p>End Seal #1:</p> <p>Epoxy Barrier</p> <p>Description: Epoxy resin fills a 1/4" cavity above the magnesium oxide insulation, to form a barrier against moisture.</p> <p>Use: For applications where low to moderate humidity may be present in the terminal area. For use at 266°F maximum for 0.315 element and above. 194°F maximum for 0.260 elements and below.</p> |  <p style="text-align: center;">Epoxy</p> | | | | | | | | | |
|---|--|-------------------------|---|--------------|-------|-----|--------|-------|-----|--------|
| <p>End Seal #2:</p> <p>RTV Barrier</p> <p>Description: RTV sealant forms a barrier against moisture.</p> <p>Use: For high temperature applications where temperatures may range up to 392°F or 428°F.</p> |  <p style="text-align: center;">RTV</p> | | | | | | | | | |
| <p>End Seal #3:</p> <p>Hermetic Seal</p> <p>Description: Ceramic to metal hermetic seal is soldered to the element sheath and cold pin.</p> <p>Use: Absolute moisture seal up to 1000°F.</p> <p>Element Sheath: Available in element diameters .430 and .475, consult factory for other availability.</p> |  <table border="1" data-bbox="737 1654 1382 1829"> <thead> <tr> <th>Element Sheath Diameter</th> <th>INS Standard (Integral Ceramic Insulator Dim)</th> <th>OAL Standard</th> </tr> </thead> <tbody> <tr> <td>0.430</td> <td>0.5</td> <td>2.125"</td> </tr> <tr> <td>0.475</td> <td>0.5</td> <td>2.125"</td> </tr> </tbody> </table> <p style="text-align: center;">Alternate element sheath diameters available upon request.</p> | Element Sheath Diameter | INS Standard (Integral Ceramic Insulator Dim) | OAL Standard | 0.430 | 0.5 | 2.125" | 0.475 | 0.5 | 2.125" |
| Element Sheath Diameter | INS Standard (Integral Ceramic Insulator Dim) | OAL Standard | | | | | | | | |
| 0.430 | 0.5 | 2.125" | | | | | | | | |
| 0.475 | 0.5 | 2.125" | | | | | | | | |

Terminals, Insulators & Seals

Table V (continued)

| | |
|---|--|
| <p>Insulator #1:</p> <p><u>Silicone Rubber (standard)</u></p> <p>Description: General applications where terminal temperatures do not exceed 400°F. 1/4" thick insulation furnished up to 250V; 1/2" thick up to 600V. (Standard insulator unless otherwise specified)</p> |  |
| <p>Insulator #2:</p> <p><u>Mica</u></p> <p>Description: Applications where terminal temperatures do not exceed 900°F. 1/4" thick insulation furnished up to 250V; 1/2" thick up to 600V.</p> |  |
| <p>Insulator #3:</p> <p><u>Ceramic</u></p> <p>Description: Applications where terminal temperatures do not exceed 1400°F. 1/4" thick insulation furnished up to 250V; 1/2" thick up to 600V.</p> |  |