### Applications
- Temperature Sensors
- Testing
- Laboratories
- New Plant Construction
- General Industry

### Available Options
- Metal Overbraids
- Multi-Pair Cables
- UL Listed Constructions
- TPE Insulation and Jacket
- Rated to 250°F (125°C)
- Special Color Codes
- Calibration Test Reports

### Product Features
- Continuous use up to 221°F (105°C)
- Flame Retardant
- Good Moisture, Chemical...and Solvent Resistance
- Excellent Dielectric Strength
- 100% Continuous Drain/Shield Contact
- Economical Construction

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**Product Specifications**

- **Conductors:** Solid or stranded thermocouple wire per ASTM E230 & ANSI MC96.1

- **Insulation:** Flame retardant PVC

- **Construction:** Single twisted pair

- **Pair Shield:** .002" (.05MM) aluminum/polyester tape, 25% overlap

- **Pair Drain Wire:** 7-strand tinned copper, 2 AWG sizes smaller than conductor (24 AWG smallest drain)

- **Jacket:** Flame retardant PVC with ripcord under jacket

- **Operating Temperature:** -15°F (-26°C) to +221°F (+105°C) continuous

- **Limits of Error:** Conforms to ASTM E230, IEC 584 and ANSI MC 96.1

- **Color Code:** Conforms to ASTM E230 and ANSI MC 96.1 (International Color Codes Available)

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**Ordering Code**

P/ALPTW [ ] - [ ] [ ] - [ ]

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**Conductor Size** | **Insulation Thickness (MM)** | **Jacket Thickness (MM)** | **Outer Diameter (MM)** | **Net Weight (LB/ME/KG/KM)**
---|---|---|---|---
12 | 2.05 | .020 (.51) | .025 (.64) | .308 (7.8) | 77 (115)
14 | 1.63 | .020 (.51) | .025 (.64) | .274 (7.0) | 54 (80)
14F* | 1.80 | .020 (.51) | .025 (.64) | .290 (7.4) | 60 (89)
16 | 1.29 | .015 (.38) | .020 (.51) | .218 (5.5) | 35 (52)
16F* | 1.47 | .015 (.38) | .020 (.51) | .232 (5.9) | 38 (57)
18 | 1.02 | .015 (.38) | .020 (.51) | .196 (5.0) | 25 (37)
18F* | 1.22 | .015 (.38) | .020 (.51) | .208 (5.3) | 27 (40)
20 | .81 | .015 (.38) | .020 (.51) | .180 (4.6) | 18 (27)
MANY ITEMS AVAILABLE FROM STOCK WITHIN 24 HOURS
The products referenced above represent the most popular constructions. Other constructions can be manufactured to meet individual specification and application requirements. Contact factory for additional information.

Table 1
Initial Calibration Tolerances Per ASTM E230 and ANSI MC96.1

<table>
<thead>
<tr>
<th>Thermocouple Type</th>
<th>Temperature Range F (°C)</th>
<th>Grade Designation</th>
<th>Standard Grade Limits F (°C) whichever is greater</th>
<th>Special Grade Limits F (°C) whichever is greater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermocouple Wire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T</td>
<td>32 (0) to 700 (370)</td>
<td>T</td>
<td>±1.8 (1) or ±0.75%</td>
<td>TT</td>
</tr>
<tr>
<td>J</td>
<td>32 (0) to 1400 (760)</td>
<td>J</td>
<td>±4 (2.2) or ±0.75%</td>
<td>JJ</td>
</tr>
<tr>
<td>E</td>
<td>32 (0) to 1600 (870)</td>
<td>E</td>
<td>±3.1 (1.7) or ±0.50%</td>
<td>EE</td>
</tr>
<tr>
<td>K or N</td>
<td>32 (0) to 2300 (1260)</td>
<td>K or N</td>
<td>±4 (2.2) or ±0.75%</td>
<td>KK or NN</td>
</tr>
<tr>
<td>T*</td>
<td>-328 (-200) to 32 (0)</td>
<td>T</td>
<td>±1.8 (1) or ±1.5%</td>
<td>TT</td>
</tr>
<tr>
<td>E*</td>
<td>-328 (-200) to 32 (0)</td>
<td>E</td>
<td>±3.1 (1.7) or ±1%</td>
<td>EE</td>
</tr>
<tr>
<td>K*</td>
<td>-328 (-200) to 32 (0)</td>
<td>K</td>
<td>±4 (2.2) or ±2%</td>
<td>KK</td>
</tr>
<tr>
<td>Extension Wire</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TX</td>
<td>32 (0) to 212 (100)</td>
<td>TX</td>
<td>±1.8 (1)</td>
<td>TTX</td>
</tr>
<tr>
<td>JX</td>
<td>32 (0) to 400 (200)</td>
<td>JX</td>
<td>±4 (2.2)</td>
<td>JJJ</td>
</tr>
<tr>
<td>EX</td>
<td>32 (0) to 400 (200)</td>
<td>EX</td>
<td>±3.1 (1.7)</td>
<td>EEX</td>
</tr>
<tr>
<td>KX or NX</td>
<td>32 (0) to 400 (200)</td>
<td>KX or NX</td>
<td>±4 (2.2)</td>
<td>KXX or NNX</td>
</tr>
<tr>
<td>RX or SX</td>
<td>32 (0) to 400 (200)</td>
<td>RX or SX</td>
<td>±9 (5)</td>
<td></td>
</tr>
<tr>
<td>BX</td>
<td>32 (0) to 212 (100)</td>
<td>BX****</td>
<td>±7.6 (4.2)</td>
<td></td>
</tr>
<tr>
<td>BX</td>
<td>32 (0) to 400 (200)</td>
<td>BX</td>
<td>±6.7 (3.7)</td>
<td></td>
</tr>
<tr>
<td>ALLOY***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Thermocouple material is normally supplied to meet tolerances above 0°C (32°F). If material is required to meet tolerances below 0°C (32°F), the purchase order must so state. Special selection of material is required.

** Suggested initial calibration tolerance. Requirements should be discussed between purchaser and supplier.

*** Copper vs. copper can be used as an extension for Type B thermocouples if the transition is below 100°C (212°F). Above 100°C (212°F), PCLW30-6 alloy should be used as the positive extension wire.

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