Wire Armored Type P-OS
Type ITC/PLTC Armored Thermocouple
Extension Cable
Single Pair - Overall Shield — 105°C Rating
For Cable Tray Use

Specifications
Conductors: Solid alloys per ANSI MC 96.1.
Insulation: Flame-retardant Okoseal® (PVC) per UL Standards 13 and 2250, 15 mils nominal thickness, 105°C temperature rating.
Conductor Identification: Pigmented insulation on individual conductors
Assembly: Pairs assembled with left-hand lay.
Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, same size as the conductor.
Inner Jacket: Flame-retardant Okoseal per UL Standards 13 and 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.
Wire Armor: A serving of soft annealed galvanized steel wires, SWA, applied with a left-hand lay and 90% coverage.
Outer Jacket: Flame-retardant, low temperature Okoseal per UL Standards 13 and 2250.
Classifications: UL Listed as Type ITC/PLTC — Instrumentation Tray Cable/Power Limited Tray Cable for use in accordance with Articles 725 and 727 of the National Electrical Code. These cables comply with UL 2250 and UL 13 for CL2 and CL3.

Applications
Okonite SWA Type P-OS (Pair/triad - Overall Shield) Thermocouple Extension cables are designed for use as instrumentation and process control cables in ITC non-classified or labeled circuit up to 150 volts and 5 amps (750VA) and in Class 2 or 3 Power-Limited circuits where shielding against external interference is required, but shielding against interference among groups is not required; indoors or outdoors; in wet or dry locations with conductor operating temperatures up to 105°C; in cable trays; in raceways; supported by a messenger wire; under raised floors; for direct burial. Suitable Class I, Divisions 2, Class II, Division 2, or Class III, Division 2 hazardous locations. Also for use as Power-Limited fire protective signaling cable (FPL) per NEC Code 760.

Product Features
- Passes the UL 1581 & IEEE 383-1974 vertical tray flame tests.
- Sunlight & oil resistant.
- UL listed for direct burial
- Individual pairs or triads are color coded for simplified hook-up.
- Good noise rejection.
- Excellent weathering characteristics.
- OSHA Acceptable.
- Flexible, easy to handle terminate.
- Twisted with 100% shield coverage to reduce electromagnetic noise.
- Suitable for low temperature installation of -40°C.
Wire Armored Type P-OS  
Type ITC/PLTC Armored Thermocouple  
Extension Cable  
Single Pair - Overall Shield — 105°C Rating  
For Cable Tray Use

Conductors: 16 AWG  
Okoseal Insulation: 15 mils

<table>
<thead>
<tr>
<th>ASA/ISA Type</th>
<th>Catalog Number</th>
<th>Size AWG</th>
<th>Number of Pairs</th>
<th>Inner Jacket Thickness - mils</th>
<th>Inner Jacket Nominal O.D. - Inches</th>
<th>Armor Wires No. x SWG</th>
<th>Nominal Armor O.D. - Inches</th>
<th>Outer Jacket - mils</th>
<th>Nominal Cable O.D. - (In.)</th>
<th>Cross-Sectional Area (sq in)</th>
<th>Approxi. Net Weight (lbs/1000')</th>
<th>Approxi. Ship Weight (lbs/1000')</th>
</tr>
</thead>
<tbody>
<tr>
<td>EX</td>
<td>284-20-8181</td>
<td>16</td>
<td>1</td>
<td>35</td>
<td>.25</td>
<td>31 x 24</td>
<td>.30</td>
<td>35</td>
<td>.37</td>
<td>.11</td>
<td>114</td>
<td>125</td>
</tr>
<tr>
<td>JX</td>
<td>284-20-8281</td>
<td>16</td>
<td>1</td>
<td>35</td>
<td>.25</td>
<td>31 x 24</td>
<td>.30</td>
<td>35</td>
<td>.37</td>
<td>.11</td>
<td>114</td>
<td>125</td>
</tr>
<tr>
<td>KX</td>
<td>284-20-8381</td>
<td>16</td>
<td>1</td>
<td>35</td>
<td>.25</td>
<td>31 x 24</td>
<td>.30</td>
<td>35</td>
<td>.37</td>
<td>.11</td>
<td>114</td>
<td>125</td>
</tr>
<tr>
<td>TX</td>
<td>284-20-8481</td>
<td>16</td>
<td>1</td>
<td>35</td>
<td>.25</td>
<td>31 x 24</td>
<td>.30</td>
<td>35</td>
<td>.37</td>
<td>.11</td>
<td>114</td>
<td>125</td>
</tr>
</tbody>
</table>

ASA/ISA COLOR CODE AND LIMITS OF ERROR

<table>
<thead>
<tr>
<th>ASA/ISA Type</th>
<th>Positive Wire</th>
<th>Negative Wire</th>
<th>Outer Jacket Color</th>
<th>Temperature Range°C</th>
<th>Limits of Error</th>
<th>Nom. Loop Resistance</th>
<th>Per 100' @ 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alloy</td>
<td>Color</td>
<td>Alloy</td>
<td>Color</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EX</td>
<td>Chromel</td>
<td>Purple</td>
<td>Constantan</td>
<td>Red</td>
<td>Purple</td>
<td>0 to 200°C</td>
<td>± 1.7°C</td>
</tr>
<tr>
<td>JX</td>
<td>Iron</td>
<td>White</td>
<td>Constantan</td>
<td>Red</td>
<td>Black</td>
<td>0 to 200°C</td>
<td>± 2.2°C</td>
</tr>
<tr>
<td>KX</td>
<td>Chromel</td>
<td>Yellow</td>
<td>Alumel</td>
<td>Red</td>
<td>Yellow</td>
<td>0 to 200°C</td>
<td>± 2.2°C</td>
</tr>
<tr>
<td>TX</td>
<td>Copper</td>
<td>Blue</td>
<td>Constantan</td>
<td>Red</td>
<td>Blue</td>
<td>-60 to 100°C</td>
<td>± 1.0°C</td>
</tr>
</tbody>
</table>

SX available upon request.  
(1) Special grade alloy conductors for JX and TX are available on special order.  
Minimum Manufacturing Quantity: is 1000 ft.  
† Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.22.  
Length Tolerance: Cut lengths of 1000 feet or longer are subject to a tolerance of ± 10%; less than 1000 feet ± 15%.

ELECTRICAL SPECIFICATIONS

Per UL Standard 13 and 2200  
Insulation Test Voltage (spark test) ............. 5000 Volts ac  
Dielectric Test Voltage ......................... 1500 Volts ac for 15 sec.  
Shield Isolation Test  
Pair to Cable Shield ................................ exceeds 100 Megohms/1000 ft.  
Insulation Resistance Constant @60°F, minimum (natural material typical value) ............. 2000 Ohms-1000 ft.