Specifications

Conductors: Solid alloys per ANSI MC 96.1.
Insulation: Flame-retardant Okoseal® (PVC) per UL Standard 13 and 2250, 15 mils nominal thickness, 105°C temperature rating.
Conductor Identification: Pigmented insulation on individual conductors negative conductor numerically printed for group identification.
Communications Wire: 22 AWG, solid bare copper conductor, 12 mils nominal flame-retardant Okoseal insulation, 105°C temperature rating.
Assembly: Pairs assembled with left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable.
Cable Shield: Aluminum/synthetic polymer tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, same size as the conductor.
Inner Jacket: Color-coded, flame-retardant Okoseal per UL Standard 13 and 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.
Loxarmor Sheath: An interlocking galvanized steel armor provides mechanical protection against cut-through and crushing. All four sides of the steel tape are galvanized to prevent corrosion.
Outer Jacket: Color-coded, flame-retardant Okoseal per UL Standard 13 and 2250.
Classification: 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. The cables comply with UL 2250 and UL 13 for CL2 and CL3.

Applications

Okonite Loxarmor Type P-OS (Pair/triad - Overall Shield - 105°C Rating) Thermocouple Extension Cable is designed for use as instrumentation and process control cables in ITC non-classified or labeled circuits 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, Division 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. The Loxarmor (interlocked steel) sheath provides the physical protection against mechanical damage as required in NEC Section 727. It may be installed in both exposed and concealed work, secured to supports not greater than 6 feet apart.

Product Features

- Passes the UL 1581 & IEEE 383-1974 vertical tray flame tests.
- Passes the IEEE 1202-1991 vertical tray flame test (8 pair and larger).
- Passes the 210,000 BTU/hr vertical tray flame test per ICEA T-29-520 and the 210,000 BTU/hr corner configuration test.
- UL listed as sunlight resistant
- UL listed for direct burial (2 PR #20 AWG and larger)
- Complete pre-packaged, factory tested wiring system-color coded.
- Loxarmor cables are quality control inspected to meet or exceed applicable UL Standards.
- Loxarmor enclosure permits installation in cable tray containing light and power cables without a barrier separator.
- Individual pairs are numbered and color coded for simplified hook-up.
- Excellent noise rejection.
- Impervious, continuous sheath excludes moisture, gases and liquids.
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- Impervious, continuous sheath excludes moisture, gases and liquids.
- Excellent compression and impact resistance.
- Lower installed system cost than conduit or EMT systems.
- OSHA Acceptable.
- Also available in aluminum.
- Suitable for low temperature installation to -40°C.
# LOXARMOR Type P-OS

## Type ITC/PLTC Armored Thermocouple Extension Cable

Multiple Pair - Overall Shield 300V - 105°C Rating

### For Cable Tray Use

Conductors: 20 AWG; Okoseal Insulation: 15 mils

### ASA/ASA Type

<table>
<thead>
<tr>
<th>Positive Wire</th>
<th>Negative Wire</th>
<th>Outer Jacket Color</th>
<th>Temperature Range°C</th>
<th>Limits of Error</th>
<th>Per UL Standard 2250</th>
</tr>
</thead>
<tbody>
<tr>
<td>EX</td>
<td>Chromel</td>
<td>Purple</td>
<td>Red</td>
<td>0 to 200°C</td>
<td>±1.7°C</td>
</tr>
<tr>
<td>JX</td>
<td>Iron</td>
<td>White</td>
<td>Red</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>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>-60 to 100°C</td>
<td>±1.0°C</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>Limits of Error</th>
<th>Wire Size (AWG)</th>
<th>Nom. Loop Resistance Per 1' @ 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>EX</td>
<td>Chromel</td>
<td>Purple</td>
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<td>20</td>
</tr>
</tbody>
</table>

### ELECTRICAL SPECIFICATIONS

- **Per UL Standard 2250**
- **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.

SX available upon request.

1 Special grade alloy conductors for JX and TX are available on special order.

1 Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.22

Aluminum Loxarmor available on special order.

**Length Tolerance:** Cut lengths of 1000 feet or longer are subject to a tolerance of ±10%; less than 1000 feet ±15%.