Okozel-Okozel® Type P-OS
Type ITC/PLTC Thermocouple Extension Cable
Single Pair - Overall Shield - 150°C Rating
For Cable Tray Use

Insulation and Jacket
Okozel is Okonite’s trade name for ETFE Fluoropolymer, a modified Ethylene Tetrafluoroethylene. Okozel is extremely rugged with excellent resistance to cut-through and abrasion. It is chemically inert. Okozel is flame-retardant and non-propogating, passes the IEEE 383 vertical tray flame test, and is rated “non-burning” under ASTM D635. It is rated for 150°C (302°F) conductor operating temperature for continuous use and retains all useful physical properties at temperatures down to -100°C (-148°F).

Specifications
Conductors: Solid alloys per ANSI MC 96.1
Insulation: Flame-retardant, radiation-resistant Okozel, a modified ETFE fluoropolymer.
Conductor Identification: Pigmented insulation on individual conductors.
Assembly: Conductors assembled with left-hand lay.
Cable Shield: Aluminum-nylon-polyester tape overlapped to provide 100% coverage, and a 7-strand coated copper drain wire, same size as conductor.
Jacket: Heavy duty, flame-retardant, radiation, oil, fuel and chemical resistant Okozel.
Cable meets or exceeds the requirements of UL Standards 13 and 2250, NEMA HP-100.
Classification: UL Listed as ITC/PLTC - Instrument Tray Cable/Power Limited Tray Cable for use in accordance with Article 727 and 725 of the National Electrical Code. The cables comply with UL 2250 and UL 13 for CL2 and CL3.

Applications
Okonite Okozel Type P-OS (Pair/triad - Overall Shield) Thermocouple Extension cables are recommended for use in fossil fueled generating stations where continuity of critical control circuits is of primary importance. 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; rated 150°C in dry locations and 75°C in wet locations; 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. Okozel thermocouple extension cables are also recommended for high ambient temperature areas up to 150°C (302°F) in industrial applications or for cold weather installations in excess of -65°C (-85°F).

Product Features
• Good noise rejection.
• Low surface friction provides easier installation.
• Smaller and lighter diameter permits more cables per tray.
• 150°C continuous operating temperature.
• Cold installation temperature in excess of -65°C.
• Exceptional abrasion resistance will not cut or tear.
• Flame-retardant and non-propogating. Passes IEEE 383 and UL Vertical Tray Flame Tests.
• Low smoke emission.
• Chemically inert-unaffected by acids, bases, solvents and cleaning agents, fuels and hydraulic fluids.
• High dielectric strength.
• Low dielectric constant.
• Special designs available that are qualified for nuclear generating stations at 90°C in accordance with IEEE Standards 383-74 and 323-74.
## Conductors: 16 AWG

Okozel Insulation: 15 mils

<table>
<thead>
<tr>
<th>ASA/ISA Type</th>
<th>Catalog Number</th>
<th>Jacket Thickness (mils)</th>
<th>Nominal Cable O.D. (in.)</th>
<th>Approx. Net Weight (lbs/1000')</th>
<th>Approx. Ship Weight (lbs/1000')</th>
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### 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>Wire Size (AWG)</th>
<th>Nom. Loop Resistance Per 1000' @ 20°C</th>
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<td>Alloy</td>
<td>Color</td>
<td>Alloy</td>
<td>Color</td>
<td>Standard</td>
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<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>
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<tr>
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<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>
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<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>
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<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>
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</tbody>
</table>

**ELECTRICAL SPECIFICATIONS**

- Per UL Standards 13 and 2260
- Insulation Test Voltage (spark test)..............5000 Volts ac
- Dielectric Test Voltage.........................1500 Volts ac for 15 sec.
- Insulation Resistance Constant @60°F minimum (natural material typical value)..............50,000 ohms-1000 ft.

SX available upon request.

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

**C-L-X products** manufactured in the United States under license granted by Kabelmetal of Hanover, Germany.

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