Okozel®-Okozel Type SP-OS
Type ITC/PLTC Instrumentation Cable
Multiple Shielded Pairs or Triads - Overall Shield
300 Volts - 150°C Rating
For Cable Tray Use

Specifications
Conductors: Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.
Insulation: Flame-retardant, radiation-resistant Okozel, a modified ETFE fluoropolymer. Cable meets or exceeds requirements for UL Standards 13 and 2250.
Conductor Identification: Pigmented black and white in pairs, black, white and red in triads; white conductor numerically printed for group identification.
Group Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a 7-strand coated copper drain wire, two sizes smaller than the conductor. All group shields are completely isolated from each other.
Communications Wire: 22 AWG, solid, bare copper conductor, 7 mils nominal Okozel insulation.
Assembly: Pairs or triads assembled with a 1 1/2" - 2 1/4" left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable, polyester tape overall.
Cable Shield: Aluminum-nylon-polyester tape overlapped to provide 100% coverage, and a 7-strand coated copper drain wire, same size as conductor.
Jacket: Flame-retardant, radiation, oil, fuel, and chemical-resistant Okozel. Cable meets or exceeds the requirements of UL 13 and UL 2250, NEMA HP-100 and is rated “non-burning” under ASTM D635.
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 PLTC, CL2 and CL3.

Applications
Okonite Okozel Type SP-OS (Pair/triad - Individual and Overall Shield) instrumentation 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, process control, and computer 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 maximum shielding against external interference is required, as well as shielding among groups, particularly where the cable may be subject to abnormally high current or voltage interference; 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 (FP) per NEC Code 760.
Okozel instrumentation 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
- Individual pairs or triads are numbered and color coded for simplified hook-up.
- Individual pairs or triads are completely isolated.
- Maximum noise rejection.
- Communication wire included in each cable for voice communication during installation or instrument calibration.
- 100% shield coverage for reduced electrostatic noise.
- Twisted to reduce electromagnetic pick-up.
- 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.
- Low smoke emission.
- Chemically inert - unaffected by typical 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 329-74.
## Okozel-Okozel Type SP-OS

**Type ITC/PLTC Instrumentation Cable**

Multiple Shielded Pairs or Triads - Individual and Overall Shield

300 Volts - 150°C Rating

For Cable Tray Use

### Okozel Insulation: 9 mils

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Conduct Strands</th>
<th>Number of Pairs</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>
</tr>
</thead>
<tbody>
<tr>
<td>261-40-2202</td>
<td>2</td>
<td>15</td>
<td>0.32</td>
<td>51</td>
<td>62</td>
<td></td>
</tr>
<tr>
<td>261-40-2204</td>
<td>4</td>
<td>15</td>
<td>0.37</td>
<td>81</td>
<td>92</td>
<td></td>
</tr>
<tr>
<td>261-40-2206</td>
<td>6</td>
<td>15</td>
<td>0.45</td>
<td>114</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>261-40-2208</td>
<td>8</td>
<td>20</td>
<td>0.50</td>
<td>150</td>
<td>173</td>
<td></td>
</tr>
<tr>
<td>261-40-2212</td>
<td>12</td>
<td>20</td>
<td>0.61</td>
<td>213</td>
<td>237</td>
<td></td>
</tr>
<tr>
<td>261-40-2224</td>
<td>24</td>
<td>25</td>
<td>0.85</td>
<td>408</td>
<td>472</td>
<td></td>
</tr>
<tr>
<td>261-45-2202</td>
<td>20(7X)</td>
<td>2</td>
<td>0.35</td>
<td>63</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>261-45-2204</td>
<td>4</td>
<td>15</td>
<td>0.42</td>
<td>105</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>261-45-2206</td>
<td>6</td>
<td>20</td>
<td>0.51</td>
<td>156</td>
<td>179</td>
<td></td>
</tr>
<tr>
<td>261-45-2208</td>
<td>8</td>
<td>20</td>
<td>0.56</td>
<td>197</td>
<td>221</td>
<td></td>
</tr>
<tr>
<td>261-45-2212</td>
<td>12</td>
<td>20</td>
<td>0.69</td>
<td>284</td>
<td>323</td>
<td></td>
</tr>
</tbody>
</table>

---

**ELECTRICAL SPECIFICATIONS**

Per UL Standard 13

- Conductor Resistance, maximum ........ ohms/1000 ft. @20°C @ 25°C
  - 20 AWG .......................................................... 10.8 ... 11.1

- 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 Megohms/1000 ft.
- Loop Resistance, maximum (2 cdr.) ........ ohms/1000 ft @20°C @ 25°C
  - 20 AWG .......................................................... 21.6 ... 22.2

---

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

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