Loxarmor Type P-OS
Type ITC/PLTC Armored Instrumentation Cable
Multiple Pairs or Triads - Overall Shield
300 Volts - 105°C Rating
For Cable Tray Use

Specifications
Conductors: Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.
Insulation: Flame-retardant Okoseal® (PVC) per UL Standard 13 and UL 2250, 15 mils nominal thickness, 105°C temperature rating.
Conductor Identification: Pigmented black and white in pairs, black, red and white in triads; white 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 or triads assembled with left-hand lay. Flame-retardant, non-wicking fillers included where required to provide a round cable.
Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, same size as conductor.
Inner Jacket: Black, flame-retardant, low temperature Okoseal per UL Subject 13 and UL 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: Black, flame-retardant, low temperature Okoseal per UL 13 and UL 2250.
Classifications: UL Listed as ITC/PLTC - Instrument Tray Cable/Power Limited Tray Cable for use in accordance with Article 727 and Article 725 of the National Electrical Code.
The Cables comply with UL 2250 and UL 13 for PLTC, CL2 and CL3.
Applications
Okonite Loxarmor Type P-OS (Pairs/triads - Overall Shield) instrumentation cables are designed for use as instrumentation, process control in ITC non-classified or labeled 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; or direct burial. Suitable in 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 physical protection against mechanical damage. It may be installed in both exposed and concealed work, secured to supports not greater than 6 feet apart.
The overall shield eliminates most of the static interference from the electric field radiated by power cables and other electrical equipment.
For dc service in wet locations X-Olene® insulation is recommended.

Product Features
- Passes the UL 13 & IEEE 383-1974 vertical tray flame tests.
- Passes the IEEE 1202-1991 vertical tray flame test (2 pr #18 AWG 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.
- Excellent noise rejection.
- 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 of -40°C.
## Electrical Specifications

**Per UL Subject 13 & 2260**

<table>
<thead>
<tr>
<th>Condutor Resistance, nominal</th>
<th>ohms/1000 ft. @ 20°C</th>
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<tbody>
<tr>
<td>20 AWG</td>
<td>10.4</td>
</tr>
<tr>
<td>18 AWG</td>
<td>6.5</td>
</tr>
<tr>
<td>16 AWG</td>
<td>4.1</td>
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</tbody>
</table>

**Insulation Test Voltage (spark test):** 5000 Volts ac.

**Dielectric Test Voltage:** 15000 Volts ac for 15 sec.

**Shield Isolation Test:**

- Pair to cable shield: exceeds 100M ohms/1000 ft.
- Insulation Resistance Constant @ 60°F, minimum (natural material typical values):
  - 2.00 Megohms/1000 ft.
- Loop Resistance, nominal (2 conductors): ohms/1000 ft @ 60°C
- **Mutual Capacitance (PF/ft.):**
  - #20: 0.48
  - #18: 0.43
  - #16: 0.40

*Typical Value*