C-L-X® 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 13 and 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.
Communication 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 13 and 2250. A rip cord is laid longitudinally under the jacket to facilitate removal.
C-L-X Sheath: A close fitting, impervious, continuously welded and corrugated aluminum sheath provides complete protection against moisture, liquids, and gases, has excellent mechanical strength and provides equipment grounding through the sheath.
Outer Jacket: Black, flame-retardant, low temperature Okoseal per UL 13 and 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. Cables comply with UL 2250 and UL 13 for PLTC, CL2 and CL3.

Applications
Okonite Type C-L-X P-OS (Pairs/triads - Overall Shield) instrumentation cables are designed for use in instrumentation, process control 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 150°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 and Class I, Zone 2 hazardous locations. Also for use as power-Limited fire protective signaling cable (FPL) per NEC Code 760. The C-L-X 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 1581 & 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.
- UL listed for direct burial (2 PR #20 AWG and larger).
- Complete prepackaged, factory-tested wiring system-color coded.
- C-L-X cables are quality control inspected to meet or exceed applicable UL Standards.
- C-L-X enclosure permits installation in cable tray containing light and power cables without a barrier separator.
- Individual pairs or triads are numbered and color coded for simplified hook-up.
- Excellent noise rejection.
- Impervious, continuous sheath excludes moisture, gases and liquids.
- In addition, the aluminum CLX sheath exceeds the equipment grounding requirements of NEC Section 250.118 and 250.122, and can be used as the equipment grounding conductor.
- Excellent compression and impact resistance.
- Lower installed system cost than conduit or EMT systems.
- OSHA acceptable.
- Meets API Standards 14F and 14FZ.
- Suitable for low temperature installation to -40°C.
### C-L-X Type P-OS

**Type ITC/PLTC Armored Instrumentation Cable**

*Multiple Pairs or Triads - Overall Shield 300V - 105°C Rating*  
*For Cable Tray Use*

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Strand Size (AWG)</th>
<th>Number of Pairs</th>
<th>Inner Jacket Thickness (mils)</th>
<th>Nominal Core O.D. - Inches</th>
<th>Nominal Cable O.D. - Inches</th>
<th>C-L-X O.D. - Inches</th>
<th>Cross-Sectional Area (sq in)</th>
<th>Approx. Net Weight (lb/1000')</th>
<th>Approx. Ship Weight (lb/1000')</th>
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**ELECTRICAL SPECIFICATIONS**

*Per UL Standard 13 & 2250*

- **Conductor Resistance, nominal**
  - ohms/1000 ft. @ 20°C
  - 20 AWG ................................................. 2.4
  - 18 AWG ................................................. 3.8
  - 16 AWG ................................................. 4.1

- **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 1000 ohms/1000 ft.

- **Loop Resistance**
  - Nominal (2 conductors).....ohms/1000 ft. @ 20°C
  - 20 AWG ................................................. 2.0
  - 18 AWG ................................................. 1.6
  - 16 AWG ................................................. 1.3

- **Mutual Capacitance (PF/ft)***
  - #20 ................................................. 0.37
  - #18 ................................................. 0.41
  - #18 ................................................. 0.44

*Typical Value

### Jackets - Optional jacket types available - consult local sales office.

- Copper or bronze C-L-X available on special order.

To order C-L-X Type P-OS without the outer Okoseal jacket, change the sixth digit of the catalog number from 3 to 1. For example, to order 1 pr. 20 AWG with a bare aluminum C-L-X, the catalog number would be 564-10-3212.

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...