



### C-L-X<sup>®</sup> Type SP-OS Type ITC/PLTC Armored Thermoset



#### Instrumentation Cable

Multiple Shielded Pairs or Triads - Overall Shield — 300 Volts - 90°C Rating  
For Cable Tray Use



- A Bare Stranded Copper Conductor
- B X-olene Insulation
- C Tinned Stranded Copper group Drain Wire
- D Aluminum/Polyester Tape
- E Twisted Shielded Pairs/Triads
- F Communication Wire
- G Aluminum/Polyester Tape
- H Tinned Stranded Copper Drain Wire
- J Rip Cord
- K Inner Black Okoseal Jacket
- L Impervious, Continuous Corrugated Aluminum C-L-X Sheath
- M Outer Black Okoseal Jacket

#### Specifications

**Conductors:** Bare soft annealed copper, Class B, 7-strand concentric per ASTM B-8.

**Insulation:** X-Olene<sup>®</sup> (XLP) per UL 13 and UL Standard 2250, 15 mils nominal thickness, 90°C temperature rating.

**Conductor Identification:** Pigmented black and white in pairs, black, red and white in triads; white conductor numerically printed for group identification.

**Group Shield:** Aluminum/Polyester tape overlapped to provide 100% coverage, and a 7-strand tinned copper drain wire, two sizes smaller than the conductor. All group shields are completely isolated from each other.

**Communications Wire:** 20 AWG, solid bare copper conductor, 15 mils nominal X-Olene insulation, 90°C temperature rating.

**Assembly:** Pairs or triads assembled with left-hand lay. 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 the conductor.

**Inner Jacket:** Black, flame-retardant, low temperature Okoseal<sup>®</sup> (PVC) per UL 13 and UL Standard 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 UL Standard 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.

These cables comply with UL Standard 2250 and UL 13 for PLTC, CL2 and CL3.

#### Applications

Okonite Type C-L-X SP-OS (Pair/Triad - Individual and Overall Shield) instrumentation cables are 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; in wet or dry 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, Class III, Division 2 or 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.

#### Product Features

- Passes the UL 1581, IEEE 383-1974, & IEEE 1202 vertical tray flame tests.
- Passes the 210,000 BTU/hr vertical tray flame test per ICEA T-29-520.
- Recommended for dc applications in wet environments.
- UL listed for direct burial.
- C-L-X enclosure permits installation in cable tray containing light and power cables without a barrier separator.
- Impervious, continuous sheath excludes moisture, gasses and liquids.
- C-L-X sheath exceeds equipment grounding conductor requirements of NEC Article 250.
- Excellent compression and impact resistance.
- Meets API Standards 14F and 14FZ.
- Lower installed system cost than conduit or EMT systems.
- UL listed as Marine Shipboard cable.
- Listed by American Bureau of Shipping (ABS) as CWCMC-PLTC and CWCMC-ITC.
- Recognized by US Coast Guard as Type MC or CWCMC.
- Suitable for low temperature installation to -40°C.

# C-L-X Type SP-OS Type ITC/PLTC Armored Thermoset Instrumentation Cable



## Product Data Section 5: Sheet 6

Multiple Shielded Pairs or Triads - Overall Shield 300V - 90°C Rating  
For Cable Tray Use

X-Olene Insulation: 15 mils

Catalog Number	Strand Size (AWG)	Number of Pairs	Number of Triads	Inner Jacket Thickness-mils	Inner Jacket Nominal O.D. - Inches	C-L-X O.D. - Inches	Outer Jacket - (mils)	Nominal Cable O.D. - Inches	Cross-Sectional Area † (sq in)	Approx Net Weight (lbs/1000')	Approx Ship Weight (lbs/1000')
567-86-3402	16(7X)	2	50	0.45	0.67	50	0.78	0.48	255	335	
567-86-3404		4	50	0.53	0.75	50	0.86	0.58	324	404	
567-86-3408		8	60	0.71	0.93	50	1.04	0.85	512	592	
567-86-3412		12	60	0.83	1.06	50	1.17	1.08	659	765	
567-86-3424		24	70	1.13	1.42	50	1.53	1.84	1218	1361	
567-86-3436		36	80	1.33	1.64	60	1.78	2.49	1638	1802	
567-86-3450		50	80	1.58	1.96	60	2.09	3.43	2125	2381	
567-87-3402		2	50	0.50	0.71	50	0.82	0.53	288	368	
567-87-3404		4	50	0.60	0.84	50	0.95	0.71	390	470	
567-87-3408		8	60	0.81	1.06	50	1.17	1.08	618	698	
567-87-3412		12	70	0.98	1.24	50	1.35	1.43	870	976	
567-87-3424		24	80	1.30	1.60	60	1.73	2.35	1581	1745	
567-87-3436	36	80	1.53	1.87	60	2.00	3.14	2113	2369		
567-87-3450	50	90	1.79	2.19	60	2.32	4.23	2955	3290		

### ELECTRICAL SPECIFICATIONS Per UL Standard 13 & 2250

Conductor Resistance, nominal .....ohms/1000 ft. @20°C  
16 AWG ..... 4.1  
Insulation Test Voltage (spark test).....5000 Volts ac  
Dielectric Test Voltage ..... 1500 Volts ac  
Insulation Resistance Constant @60°F, minimum  
(natural material typical value).....10,000 Megohms-1000 ft.  
Loop Resistance, nominal (2 conductor) ohms-1000 ft @20°C  
16 AWG ..... 8.2

† Cross-sectional area for calculation of cable tray fill in accordance with NEC Section 392.9

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 SP-OS without the outer Okoseal jacket, change the sixth digit of the catalog number from 3 to 1.

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%.

