



C-L-X X-Olene® P-OS, SP-OS

Type MC-HL PLTC & Type ITC-HL Instrumentation Cable

Single Pair/Triads or Multiple Shielded Pairs/Triads - Overall Shield

600 Volts 90°C Rating: MC-HL

300 Volts 90°C Rating: PLTC & ITC-HL

For Cable Tray Use Sunlight Resistant For Direct Burial -50°C



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

Specifications

Conductors: Bare copper, Class B, stranded per ASTM B-8.

Insulation: X-Olene (XLPE), per UL 13, 2250 & 1569, 30 mils nominal thickness, 90°C temperature rating. Meets MIL-DTL-1377H, section 4.8.4.1.2 Cold Bend at -66°C and ASTM D746-04 brittlepoint at -76°C.

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

Pair Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a Class B tinned copper drain wire, two sizes smaller than the conductor. All multi-pair shields are isolated from each other.

Multiple Pair Assembly: Pairs assembled with a left-hand lay. Cable fillers included where required to provide a round cable.

Multiple Pair Cable Shield: Aluminum/Polyester tape overlapped to provide 100% coverage, and a class B strand tinned copper drain wire, same size as conductor.

Inner Jacket: Black, flame-retardant, low temperature Okoseal® (PVC) per UL 13 and UL Standard 2250. The inner jacket meets the thickness requirements of UL standard 1277. 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 PLTC-Power Limited Tray Cable and as ITC-HL - Instrument Tray Cable/Hazardous Locations for use in accordance with Article 725 (Class 1, 2 & 3) and Article 727 of the National

Electrical Code. UL listed as MC-HL for use in Class I, II, and III, Divisions 1 and 2 hazardous location in accordance with NEC Articles 501, 502, 503, 504 & 505.

Applications

ITC-HL and MC-HL cables eliminate the need for conduit when installed in accordance with NEC Article 501.10(A)(1)(d) "ITC-HL" or 501.10(A)(1)(C) "MC-HL" installations.

The isolated individual shields over each pair, in SP-OS cables, when properly grounded, prevent crosstalk or capacitive coupling between adjacent pairs which occurs with ac signals, particularly the pulse type.

The overall shield eliminates most of the static interference from the electrical field radiated by power cables and other electrical equipment.

The C-L-X sheath provides additional electrical shielding and physical protection against mechanical damage as well as complete protection against moisture or gases entering the cable.

Product Features

- Passes the UL 1581 and IEEE 383 vertical tray flame tests.
- Passes IEEE 1202 vertical tray flame test.
- UL listed at -50°C. Also meets the CSA 22.2 No. 3 Cold Impact Test at -45°C.
- UL listed for direct burial and sunlight resistant.
- Complete pre-packaged, factory-tested wiring system-color coded.
- C-L-X enclosure permits installation in cable tray containing lighting and power cables without a barrier separator.
- Individual pairs are completely isolated.
- Impervious, continuous sheath excludes moisture, gases and liquids.
- Lower installed system cost than conduit or EMT systems.

C-L-X X-Olene P-OS, SP-OS



Product Data Section 5: Sheet 49

Type MC-HL, PLTC & Type ITC-HL Instrumentation Cable

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600 V 90°C Rating: MC-HL

300 V 90°C Rating: PLTC & ITC-HL

For Cable Tray Use Sunlight Resistant For Direct Burial -50°C

#16 AWG

Catalog Number	Number of Pairs	Number of Triads	Inner Jacket Thickness - mils	Nominal Core 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')
567-75-3401	1		45	0.35	0.58	50	0.69	0.37	180	219
567-70-3402	2		60	0.58	0.80	50	0.91	0.65	325	405
567-70-3404	4		60	0.70	0.93	50	1.04	0.85	424	504
567-70-3408	8		80	0.92	1.19	50	1.30	1.33	650	752
567-70-3412	12		80	1.10	1.37	50	1.48	1.73	842	985
567-70-3424	24		80	1.44	1.78	60	1.91	2.87	1450	1640
567-70-3436	36		110	1.82	2.19	60	2.32	4.23	2145	2480
567-76-3401		1	45	0.37	0.58	50	0.69	0.37	195	234
567-71-3402		2	60	0.64	0.89	50	1.00	0.79	376	456
567-71-3404		4	60	0.75	1.02	50	1.13	1.00	500	580
567-71-3408		8	80	1.06	1.34	50	1.45	1.64	800	945
567-71-3412		12	80	1.26	1.56	60	1.69	2.24	1090	1235

#18 AWG

567-70-3302	2		45	0.50	0.71	50	0.82	0.53	253	333
567-70-3304	4		60	0.67	0.89	50	1.00	0.79	365	445
567-70-3308	8		60	0.83	1.06	50	1.17	1.08	503	583
567-70-3312	12		80	1.00	1.29	50	1.40	1.54	693	799
567-70-3324	24		80	1.34	1.64	60	1.78	2.48	1125	1290
567-70-3336	36		80	1.55	1.92	60	2.05	3.29	1545	1835
567-71-3302		2	60	0.62	0.84	50	0.95	0.71	326	406
567-71-3304		4	60	0.73	0.97	50	1.08	0.92	428	508
567-71-3308		8	80	0.98	1.24	50	1.35	1.43	658	764
567-71-3312		12	80	1.15	1.47	50	1.58	1.96	860	1003
567-71-3324		24	80	1.58	1.96	60	2.09	3.42	1505	1760

ELECTRICAL SPECIFICATIONS

Conductor Resistance, nominal - ohms/1000 ft.@20°C@25°C
 16 AWG4.344.43
 18 AWG6.937.07

Insulation Test Voltage (spark test)7500 Volts ac

Dielectric Test Voltage3000 Volts ac

Insulation Resistance Constant @60°F minimum ...10,000 ohms-1000 ft.

Loop Resistance, nominal (2 cdr.) - ohms/1000 ft .@20°C@25°C
 16 AWG8.688.86
 18 AWG13.914.2

Mutual Capacitance (PF/ft.)*
 #1623
 #1821

*Typical Value

† **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 without the outer Okoseal jacket (not "HL" listed), change the sixth digit of the catalog number from 3 to 1, for example to order 1 pr. 16 AWG with a bare aluminum C-L-X, the catalog number would be 567-75-1401.

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

