



C-L-X[®] Okoseal-N[®] P-OS

UL Type MC-HL and cUL Type ACIC-TC Instrumentation Cable

Multiple Pairs or Triads-Overall Shield

600 Volts 90°C Rating - 600/1000V Marine Cable

For Cable Tray Use-Sunlight Resistant-For Direct Burial



- A Bare Stranded Copper
- B Okoseal Insulation/Nylon Jacket
- C Twisted Pairs/Triads
- D Aluminum Polymer Face
- E Tinned Stranded Copper Drain Wire
- F Rip Cord
- G Inner Black Okoseal Jacket
- H Impervious, Continuous, Corrugated Aluminum C-L-X Sheath
- I Outer Black Okoseal Jacket

Specifications

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

Insulation: Flame-retardant Okoseal (PVC) per UL 83, 15 mils nominal thickness, 90°C temperature rating.

Insulation Jacket: Nylon per UL 83, 4 mils nominal thickness.

Conductor Identification: Pigmented black and white in pairs, black, white and red in triads.

Assembly: Pairs or triads assembled with left-hand lay. 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 Okoseal per UL Standard 1569. 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 meeting UL 1569 provides complete protection against moisture, liquids, and gases, has excellent mechanical strength, and provides equipment grounding through the sheath.

Outer Jacket: Black, flame-retardant Okoseal per UL Standard 1569.

Classifications: UL Listed as Type MC-HL Articles 501, 502, and 503 of the National Electrical Code. These cables comply with UL requirements for CL1, CL2 and CL3.

Applications

Okonite C-L-X multiple pair or triad type P-OS instrumentation cables are designed for use on Class 1 Remote-Control Signaling circuits or where a 600V cable is desired, as instrumentation, process control, or computer cable transmitting signals at levels above 100 milli-volts in circuits where shielding against external interference is required, but shielding against interference among groups is not required. For use indoors or outdoors; wet or dry locations; in cable trays; in raceways; supported by a messenger wire; for direct burial; in Classes I, II, and III, Divisions 1 and 2 and Class I, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505; in Zone 2, Class II Div 2, Class III Div 1 and Class III Div 2 per CEC. Listed by American Bureau of Shipping (ABS) as CWCMC-MC-HL and by UL as Marine Shipboard. Also for use as non power limited fire protective signaling cable (NPLF) per NEC Code 760.

The overall shield eliminates most of the static interference from the electric field radiated by power cables and other electrical equipment. The C-L-X sheath provides the physical protection against mechanical damage as required in NEC Section 725-18 as well as complete protection against moisture or gases entering the cable.

For dc service in wet locations, X-Olene insulation having an overall aluminum C-L-X armor construction is recommended.

Product Features

- UL Listed for cable tray use, direct burial and sunlight resistant.
- Passes the IEEE 383-1974 and IEEE 1202 vertical tray flame tests.
- Passes the 210,000 BTU per ICEA T-29-520 Vertical Tray Flame Test.
- Complete pre-packaged, factory-tested wiring system—color coded.
- 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.
- 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 in non-HL areas.
- Excellent compression and impact resistance.
- Lower installed system cost than conduit or EMT systems.
- OSHA Acceptable.
- Complies with Articles 501, 502 & 503 for hazardous locations.
- UL listed as Type MC-HL.
- UL 1309 listed (Okon-Marine) & UL classified in accord with IEEE 1580 as Marine Shipboard Cable rated 600/1000 volts.
- American Bureau of Shipping listed as CWCMC Type MC-HL.
- Meets API Standards 14F and 14FZ.
- Suitable for low temperature installation of -40°C.
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 239 Type ACIC
- cUL Type ACIC-TC complies with CEC Zone 2, Class II Div 2, Class III Div 1 and Class III Div 2 Hazardous Locations.

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Product Data Section 5: Sheet 41

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600V 90°C Rating - 600/1000V Marine Cable

For Cable Tray Use - Sunlight Resistant - For Direct Burial

Conductors: #16 AWG; Okoseal Insulation: 15 mils; Nylon Jacket: 4 mils

#16 AWG — Multi Pair & Triad (P-OS) Type MC-HL

Catalog Number	Number of Pairs	Number of Triads	Core O.D. - NOM	C-L-X O.D. - NOM	Outer Jacket Thickness	Nominal OD	Approx. Weight Lbs./1000 FT	Approx. Ship Weight Lbs./1000 FT
564-60-3402	2		0.387	0.579	50	0.689	202	290
564-60-3404	4		0.500	0.709	50	0.819	283	354
564-60-3406	6		0.611	0.843	50	0.953	375	428
564-60-3408	8		0.659	0.886	50	0.996	434	568
564-60-3410	10		0.753	1.020	50	1.130	516	564
564-60-3412	12		0.787	1.020	50	1.130	565	746
564-60-3416	16		0.864	1.106	50	1.216	697	803
564-60-3420	20		0.964	1.236	50	1.346	826	1028
564-60-3424	24		1.060	1.337	50	1.447	948	1091
564-60-3436	36		1.308	1.644	60	1.776	1350	1537
564-60-3450	50		1.499	1.868	60	2.000	1833	2125
564-65-3404	4		0.576	0.799	50	0.909	371	531
564-65-3408	8		0.701	0.929	50	1.039	537	617
564-65-3412	12		0.839	1.106	50	1.216	739	845
564-65-3416	16		0.934	1.193	50	1.303	905	1011
564-65-3424	24		1.133	1.421	50	1.531	1247	1473
564-65-3436	36		1.388	1.739	60	1.871	1790	2213

ELECTRICAL SPECIFICATIONS

Conductor Resistance, maximum - ohms/1000 ft. @20°C@25°C
 16 AWG4.34 . . . 4.43
 Insulation Test Voltage (spark test)6000 Volts ac
 Dielectric Test Voltage2000 Volts ac
 Insulation Resistance Constant @60°F minimum
 (natural material typical value)2000 ohms-1000 ft.
 Loop Resistance, nominal (2 cdr.) - ohms/1000 ft @20°C@25°C
 16 AWG8.68 . . . 8.86
 Mutual Capacitance (PF/ft.)*
 #1654
 *Typical Value

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

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

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

To order C-L-X Type P-OS 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. 20 AWG with a bare aluminum C-L-X, the catalog number would be 564-10-1212.

Length Tolerance: Cut lengths of 1000 ft. or longer are subject to a tolerance of +\ -10%; less than 1000 ft. +\ -15%