



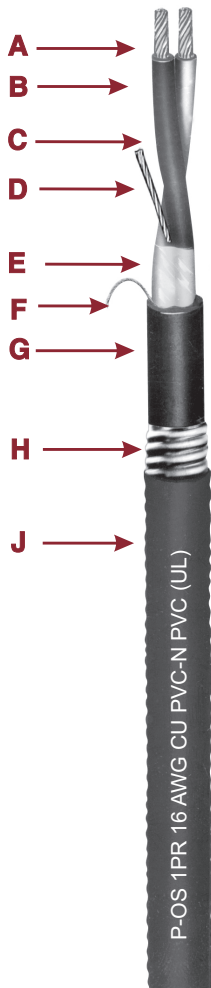
### C-L-X<sup>®</sup> Okoseal-N<sup>®</sup> P-OS

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

Single Pair or Triad-Overall Shield

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

For Cable Tray Use - Sunlight Resistant - For Direct Burial



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

**Jacket:** Nylon per UL 83, 8 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.

**Cable Shield:** Aluminum/Polyester tape overlapped to provide 100% coverage, and a #16 AWG stranded tinned copper drain wire.

**Inner Jacket:** Black, flame-retardant Okoseal per UL 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 1569.

#### Applications

Okonite C-L-X Single 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 discrete 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 hazardous locations per NEC Articles 501, 502, 503, and 505.

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 physical protection against mechanical damage as well as complete protection against moisture or gases entering the cable.

For dc service in wet locations, X-Olene insulation is recommended.

#### Product Features

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.

Impervious, continuous sheath excludes moisture, gases and liquids.

Excellent compression and impact resistance. Lower installed system cost than conduit or EMT systems.

Suitable for low temperature installation to -40°C.

#### Applicable Standards

- UL listed for cable tray use, direct burial and sunlight resistant.
- Vertical Tray Flame Tests.  
IEEE 383-1974, FT4/IEEE 1202,  
ICEA T-29-520 (210,000 BTU)
- American Bureau of Shipping Type approved as CWCMC Type MC-HL.
- API Standards 14F and 14FZ.
- UL 2225 Type MC-HL
- UL 1309 (CWCMC) Marine Shipboard
- UL certified as Marine Shipboard in accord with IEEE 1580, rated 600/1000 volts.
- NPLF per NEC Article 760.
- CSA C22.2 No. 230 Type TC
- CSA C22.2 No. 239 Type ACIC

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Conductors: #16 AWG; Okoseal Insulation: 15 mils; Nylon Jacket: 8 mils

## Product Data Section 5: Sheet 40



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

Catalog Number	Number of Pairs	Number of Triads	Inner Jacket Thickness-mils	Inner Jacket Nominal O.D. - inches	C-L-X O.D. - inches	Outer Jacket Thickness-mils	Nominal Jacket O.D. - inches	Cross-Sectional Area* Sq. in.	Net Weight Lbs./1000'	Ship Weight Lbs./1000'
▲ 564-60-3401	1	66	.35	.53	50	.64	0.32	182	221	
▲ 564-65-3401	1	58	.35	.53	50	.64	0.32	190	229	

#### ELECTRICAL SPECIFICATIONS

Conductor Resistance, maximum.....ohms/1000 ft.	
.....@20°C	@25°C
16 AWG .....	4.10.....4.18
Insulation Test Voltage (spark test).....6000 Volts ac	
Dielectric Test Voltage .....	2000 Volts ac
Shield Isolation Test	
Pair to Cable Shield.....exceeds 100 Megohms-1000 ft.	
Insulation Resistance Constant @60°F minimum	
(natural material typical value.....2000 Ohms-1000 ft.	
Loop Resistance, nominal (2 conductors).....ohms/1000 ft.	
.....@20°C.....@25°C	
16 AWG .....	8.20.....8.36
Mutual Capacitance (PF/ft.)*	
#16.....	60
*Typical Value	

▲ **Authorized Stock Item.** Available from our Customer Service Centers.

\* **Cross-sectional** area for calculation of cable tray fill in accordance with NEC Section 392.22.

**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 (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 feet + \ -15%.