



## C-L-X<sup>®</sup> Type MV-90 or MC-HL

**2.4 kV Okoguard<sup>®</sup> Nonshielded Power Cable-Aluminum Sheath**  
**3 Okopact<sup>®</sup> (Compact Stranded) Copper Conductors/90°C Rating**  
**100% and 133% Insulation Level**  
**For Cable Tray Use-Sunlight Resistant-For Direct Burial**



- A Uncoated, Okopact (Compact Stranded) Copper Conductor
- B Extruded Semiconducting EPR Strand Screen
- C Okoguard (EPR) Insulation
- D Three Copper Grounding Conductors
- E Phase Identification
- F Fillers and Binder Tape
- G Impervious, Continuous, Corrugated Aluminum C-L-X Sheath
- H Jacket- Low Temperature Yellow Okoseal

### Insulation

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene rubber (EPR) base, thermosetting compound, whose optimum balance of electrical and physical properties is unequalled in other solid dielectrics. Okoguard insulation, with the distinctive red color and a totally integrated EPR system, provides the optimum balance of electrical and physical properties for long, problem free service.

### Assembly

The Type MV-90 conductors are assembled with fillers and a binder tape into a round core. Three bare stranded copper grounding conductors, located in the outer interstices, is provided for grounding. A continuously corrugated welded aluminum sheath C-L-X encases the cable core. The C-L-X sheath is protected with a low temperature yellow Okoseal<sup>®</sup> (PVC) jacket. The impervious, continuous, corrugated aluminum C-L-X sheath provides complete protection against moisture, liquids and gases in addition to its excellent mechanical strength. Also, the aluminum C-L-X sheath has adequate ampacity capability to be used as a grounding conductor. The overall Okoseal (PVC) jacket allows the cable to be direct buried in the ground, embedded in concrete or areas subjected to a corrosive atmosphere.

### Applications

C-L-X power cables are recommended as an economical alternate to a wire in conduit system. They are designed specifically for use on feeders and branch circuits in industrial power distribution systems. C-L-X power cables may be installed in both exposed and concealed work, wet and dry locations, direct burial in the earth, or embedded in concrete. They may be installed on metal racks, troughs, in cable trays or secured to supports not greater than 6 feet apart. C-L-X power cables are also approved for Classes I, II and III. Divisions 1 and 2 and Class I, Zones 1 and 2 hazardous locations - NEC Articles 501, 502, 503 and 505.

2.4 kV Non-Shielded cables discharge normally in service when spacing between phases is non-uniform or when phases are in close proximity to a grounded surface.

### Specifications

**Conductors:** Annealed uncoated copper compact stranded per ASTM B-496.

**Strand Screen:** Extruded semiconducting EPR strand screen meets or exceeds electrical and physical requirements of ICEA S-96-659/NEMA WC71 and UL 1072.

**Insulation:** Okoguard meets or exceeds the electrical and physical requirements of ICEA S-96-659/NEMA WC71 and UL 1072.

**Phase Identification:** Print color code (black, red and blue).

**Grounding Conductors:** Three uncoated copper Class B in accordance with UL 1072.

**Assembly:** Cabled with fillers and ground wires, in the interstices, binder tape overall.

**Sheath:** Close fitting, impervious, continuous, corrugated aluminum C-L-X per UL 1072, and UL Listing E-60545; C-L-X is recognized as a grounding conductor by NEC.

**Jacket:** A low temperature sunlight resistant, yellow PVC jacket in accordance with UL 1072. Other color jackets are available.

UL Listed as type MV-90 or MC-HL, sunlight resistant, for use in cable tray, and for direct burial in accordance with UL 1072 and 2225. Conforms to applicable requirements of IEC 60502, 60332-3 and IEEE 1580.

### Product Features

- Tandem extruded, all EPR system.
- Complete prepackaged, color coded, factory tested wiring system.
- Okoguard C-L-X cables meet or exceed electrical and physical requirements of all recognized industry standards (UL, AEIC, NEMA/ICEA, IEEE).
- Passes the vertical tray flame test requirements of IEEE 383 and 1202, UL 1072, ICEA T-29-520(210,000 BTU/hr.
- Complies with NEC Sections 310-7 and 300-50 for direct burial.
- Complies with NEC Articles 501, 502, 503 and 505 for hazardous locations.
- Continuous sheath provides grounding safety.
- Excellent corona resistance.
- Exceptional resistance to "treeing."
- Stress cones not required.
- Minimum installation temperature of -40°C.
- Three symmetrical grounding conductors for PWM/VFD and other modern AC drive/motor applications.
- ABS listed as CWCMC Type MC-HL.

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# Product Data Section 2: Sheet 21

Okoguard Insulation: 90 mils (2.29mm)

Catalog Number (1)	Conductor Size (AWG/kcmil)		Conductor Size - mm <sup>2</sup>	Approx. Diameter over Insulation (in.)	Grounding Conductors No. x Size (AWG/kcmil)		Approx. Core O.D. - Inches		C-L-X O.D. - mm		Jacket Thickness mils		Jacket Thickness mm		Approx. O.D. - Inches		Approx. O.D. - mm		Approx. Net Weight lbs./1000'		Approx. Ship Weight lbs./1000'		Ampacities In Air (2)		Ampacities Cable Tray (3)		Ampacities Direct Burial (4)	
<b>With Yellow Okoseal Jacket</b>																												
571-21-3193	8	8.4	0.36	3x12	0.77	19.6	0.97	50	1.27	1.08	27.4	565	630	59	52	85												
571-21-3196	6	13.3	0.39	3x10	0.85	21.6	1.06	50	1.27	1.17	29.7	740	820	79	69	105												
▲ 571-21-3200	4	21.2	0.44	3x10	0.97	24.6	1.19	50	1.27	1.30	33.0	960	1050	105	91	135												
▲ 571-21-3204	2	33.6	0.44	3x10	1.10	27.9	1.34	50	1.27	1.45	36.8	1270	1470	140	125	180												
571-21-3208	1	42.4	0.52	3x8	1.16	29.4	1.42	50	1.27	1.53	38.9	1520	1660	160	140	200												
571-21-3212	1/0	53.5	0.56	3x8	1.23	31.2	1.51	60	1.52	1.65	41.9	1835	1980	185	165	230												
▲ 571-21-3217	2/0	67.4	0.60	3x8	1.33	33.8	1.60	60	1.52	1.73	43.9	2160	2325	215	190	260												
▲ 571-21-3224	4/0	107.0	0.70	3x7	1.53	38.9	1.83	60	1.52	1.96	49.8	3075	3340	285	255	335												
571-21-3228	250	127.0	0.75	3x7	1.64	41.7	1.96	60	1.52	2.09	53.1	3470	3725	320	280	365												
▲ 571-21-3236	350	177.0	0.85	3x6	1.86	47.2	2.19	60	1.52	2.32	58.9	4705	5265	395	350	440												
▲ 571-21-3244	500	253.0	0.96	3x5	2.10	53.3	2.45	75	1.91	2.61	66.3	6405	6965	485	425	530												
571-21-3248	750	380.0	1.14	3x4	2.51	63.8	2.93	75	1.91	3.10	78.7	9220	9980	615	525	650												
571-21-3252	1000	507.0	1.29	3x4	2.90	73.7	3.41	85	2.16	3.59	91.2	12075	13155	705	590	730												

Visit Okonite's web site, [www.okonite.com](http://www.okonite.com) for the most up to date dimensions.

▲ **Authorized stock item.** Available from our Customer Service Centers.  
**Copper or bronze and non-jacketed C-L-X is available on special order.**

**Jackets**

Optional jacket types available - consult local sales office.

**Aluminum Conductors**

(1) Aluminum conductors are available on special order.

**Ampacities**

(2) Ampacities are in accordance with Table 310.71 of the NEC for an insulated three conductor cable, isolated in air, with a conductor operating temperature of 90°C and an ambient air temperature of 40°C.

(3) Ampacities are in accordance with Table 310.75 of the NEC for a three conductor Type MV-90 or MC cable installed in uncovered cable tray in accordance with Section 392.13 of the NEC with a conductor operating temperature of 90°C and ambient air temperature of 40°C. Where the cable tray is covered for more than six feet with solid unventilated covers, the ampacities shall not be more than 95% of the values shown above.

(4) Ampacities are in accordance with Table 310.83 of the NEC for an insulated three conductor cable directly buried in the earth with a conductor operating temperature of 90°C, ambient earth temperature of 20°C, 100% load factor and thermal resistance (RHO) of 90.

Refer to the NEC, IEEE/ICEA S-135 Power Cable Ampacity Tables, or the Okonite Engineering Data Bulletin for installation in duct banks, other ambient temperatures, circuit configurations or installation requirements.

C-L-X® The Okonite Company