



## C-L-X<sup>®</sup> Type MV-105 or MC-HL

**35kV Okoguard<sup>®</sup> Shielded Power Cable-Aluminum Sheath**  
 3 Okopact<sup>®</sup> (Compact Stranded) Copper Conductors/105°C Rating  
 100% and 133% Insulation Level  
**For Cable Tray Use-Sunlight Resistant-For Direct Burial**



- A Uncoated, Okopact (Compact Stranded) Copper Conductors
- B Extruded Semiconducting EPR Strand Screen
- C Okoguard Insulation (EPR)
- D Extruded Semiconducting EPR Insulation Screen
- E Phase Identification Tape
- F Copper Grounding Conductor
- G Uncoated Copper Shield
- H Fillers and Binder Tape
- J Impervious, Continuous, Corrugated Aluminum C-L-X Sheath
- K Jacket-Orange Low Temperature 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-105 conductors are assembled with fillers, one bare stranded grounding conductor and a binder tape into a round core. A continuously corrugated welded aluminum sheath (C-L-X) encases the cable core. The C-L-X sheath is protected with a low temperature orange Okoseal<sup>®</sup> 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. 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. The Okoseal jacket allows the cable to be direct buried in the ground, embedded in concrete or areas subjected to corrosive atmospheres.

### Applications

C-L-X power cables are recommended as an economical alternate to a wire in conduit system. They are designed specifically for use as feeders in industrial and utility 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 Type MC-HL cables are also approved for Classes I, II, III, Divisions 1 and 2, and Class I, Zones 1 and 2 hazardous locations NEC Articles 501, 502, 503 and 505.

### Specifications

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

**Strand Screen:** Extruded semiconducting EPR conductor stress relief meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 and UL 1072.

**Insulation:** Okoguard meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 and UL 1072. The in-

ulated conductors are tested in accordance with AEIC CS8.

**Insulation Screen:** Extruded semiconducting EPR stress relief layer meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 and UL 1072.

**Shield:** 5 mil uncoated copper tape with 12.5% nominal overlap.

**Phase Identification:** Color coded (black, red, blue) polyester ribbon laid longitudinally under the copper shield tape.

**Grounding Conductor:** Uncoated copper class B in accordance with UL 1072.

**Assembly:** Cabled with fillers and ground wire 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 approved as a grounding conductor by NEC.

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

UL Listed as Type MV-105 or MC-HL, sunlight resistant, for use in cable tray, and for direct burial in accordance with UL 1072 and 2225. UL certified to IEEE 1580. CSA Listed C68.10.

### Product Features

- Triple tandem extruded, all EPR system.
- Complete prepackaged, color coded, factory tested wiring system.
- Okoguard C-L-X cables meet or exceed 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 Articles 300.50 and 310.10(F) for direct burial.
- Complies with NEC Articles 501, 502, 503 and 505 for hazardous locations.
- Continuous sheath provides grounding safety.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing".
- Min. installation temperature of -40°C.
- Improved Temperature Rating.
- ABS listed as CWCMC Type MC-HL.
- CSA listed as FT4, SR, HL and LTGG (-40°C).

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# Product Data Section 2: Sheet 26



Catalog Number (1)	Conductor Size (AWG/kcmil)		Conductor Size - mm <sup>2</sup>	Approx. Diameter over Insulation (in.)		Grounding Conductor Size (AWG/kcmil)		Grounding Conductor Size - mm <sup>2</sup>	Approx. Core O.D. - Inches		C-L-X O.D. - mm		Jacket Thickness (mils)		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>Okoguard Insulation: 345 mils (8.76mm) 100% Level - With Orange Okoseal Jacket</b>																														
571-23-3812	1/0	53.5	1.09	4	21.2	2.52	64.0	2.93	75	1.91	3.10	78.7	4228	4867	240	215	255													
571-23-3816	2/0	67.4	1.13	4	21.2	2.60	66.0	3.03	85	2.16	3.21	81.5	4693	5346	275	245	290													
571-23-3824	4/0	107.0	1.23	3	26.7	2.84	72.1	3.32	85	2.16	3.50	88.9	5962	6984	360	320	375													
571-23-3828	250	127.0	1.27	2	33.6	2.92	74.2	3.41	85	2.16	3.59	91.2	6508	7530	400	350	410													
571-23-3836	350	177.0	1.36	2	33.6	3.12	79.2	3.67	85	2.16	3.85	97.8	7951	9760	490	430	495													
571-23-3844	500	253.0	1.48	1	42.4	3.43	87.1	4.02	85	2.16	4.20	106.7	9952	11761	600	525	590													
<b>Okoguard Insulation: 420 mils (10.67mm) 133% Level - With Orange Okoseal Jacket</b>																														
571-23-3852	1/0	53.5	1.24	4	21.2	2.84	72.1	3.32	85	2.16	3.50	88.9	5163	6972	240	215	255													
571-23-3856	2/0	67.4	1.28	4	21.2	2.93	74.4	3.63	85	2.16	3.64	92.5	5727	7536	275	245	290													
571-23-3864	4/0	107.0	1.38	3	26.7	3.19	81.0	3.76	85	2.16	3.94	100.1	6985	8794	360	320	375													
571-23-3876	350	177.0	1.52	2	33.6	3.45	87.6	4.02	85	2.16	4.20	106.7	8837	10646	490	430	495													
571-23-3884	500	253.0	1.63	1	42.4	3.70	94.0	4.32	85	2.16	4.50	114.3	10814	14614	600	525	590													
571-23-3888	750	380.0	1.81	1/0	53.5	4.21	106.9	4.83	85	2.16	5.01	127.3	14411	18211	745	635	720													

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

### Jackets

Optional jacket types available - consult local sales office.  
Copper or bronze C-L-X and non-jacketed C-L-X are available on special order.

### Aluminum Conductors

1) Aluminum conductors are available on special order.

### Ampacities

2) Ampacities are in accordance with Table 310.60(B)(71) of the NEC for an insulated three conductor cable, isolated in air, with a conductor operating temperature of 105°C and an ambient air temperature of 40°C.

3) Ampacities are in accordance with Table 310.60(B)(75) of the NEC for a three conductor Type MV-105 or MC cable installed in uncovered cable tray in accordance with Section 392.80(B) of the NEC with a conductor operating temperature of 105°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 310.60(B)(83) of the NEC for an insulated three conductor cable directly buried in the earth with a conductor operating temperature of 105°C, ambient earth temperature of 20°C, 100% Load Factor, 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