



C-L-X[®] Type MV-105 or MC-HL

15kV Okoguard[®] Shielded Power Cable-Aluminum Sheath

3 Okopact[®] (Compact Stranded) Copper Conductors/105°C Rating
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-Red 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 red Okoseal[®] 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 sheath has adequate ampacity capability to be used as a 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 or branch circuits 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, and III, Divisions 1 and 2 and Class I, Zones 1 and 2 hazardous locations - NEC Articles 501, 502 and 503.

Specifications

Conductors: 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-93-639/NEMA WC74 and UL 1072.

Insulation: Okoguard meets or exceeds the electrical and physical requirements of ICEA S-93-639/NEMA WC74 and UL 1072. The insulated conductors are tested in accordance with AEIC CS8.

Insulation Screen: Extruded semiconducting EPR insulation screen 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 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 recognized as a grounding conductor by NEC.

Jacket: A low temperature, sunlight resistant, red PVC jacket in accordance with UL 1072 and CSA C22.2. 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. Conforms to applicable requirements of IEC 60502, 60332-3 and IEEE 1580. CSA Listed to C68.3.

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 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.
- Screens are clean stripping.
- Exceptional resistance to "treeing".
- Minimum installation temperature of -40°C.
- Improved Temperature Rating.
- ABS listed as CWCMC Type MC-HL.
- CSA listed as FT4 and LTGG (-40°C).

C-L-X Type MV-105 or MC-HL

Product Data Section 2: Sheet 24

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3 Okopact (Compact Stranded) Copper Conductors/105°C Rating
133% Insulation Level
For Cable Tray Use-Sunlight Resistant-For Direct Burial
Okoguard Insulation: 220 mils (5.59mm)



Catalog Number (1)	Conductor Size (AWG/kcmil)		Conductor Size - mm ²	Approx. Diameter over Insulation (In.)	Grounding Conductor Size (AWG/kcmil)		Approx. Core O.D. - Inches	Approx. Core O.D. - mm	C-L-X O.D. - Inches	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)
With Red Okoseal Jacket																		
▲ 571-23-3504	2	33.6	0.76	6	1.79	45.5	2.15	60	1.52	2.28	57.9	2420	3147	185	165	200		
571-23-3508	1	42.4	0.79	4	1.86	47.3	2.23	60	1.52	2.36	60.0	2706	3404	210	185	225		
571-23-3512	1/0	53.5	0.83	4	1.94	49.3	2.32	75	1.91	2.48	63.0	3076	3674	240	215	255		
▲ 571-23-3516	2/0	67.4	0.87	4	2.03	51.6	2.41	75	1.91	2.57	65.3	3434	4219	275	245	290		
▲ 571-23-3524	4/0	107.0	0.97	3	2.24	57.0	2.63	75	1.91	2.79	70.9	4460	5385	360	320	345		
571-23-3528	250	127.0	1.03	2	2.36	60.0	2.76	75	1.91	2.92	74.2	5078	5845	400	350	410		
▲ 571-23-3536	350	177.0	1.12	2	2.56	65.0	2.98	75	2.16	3.14	79.8	6264	7305	490	430	495		
▲ 571-23-3544	500	253.0	1.24	1	2.81	71.4	3.32	85	2.16	3.51	89.2	8269	9946	600	525	590		
▲ 571-23-3548	750	380.0	1.41	1/0	3.19	81.0	3.76	85	2.16	3.94	100.0	11317	13087	745	635	720		

Visit Okonite's web site, www.okonite.com for the most up to date dimensions.

▲ **Authorized stock item.** Available from our Customer Service Centers.

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