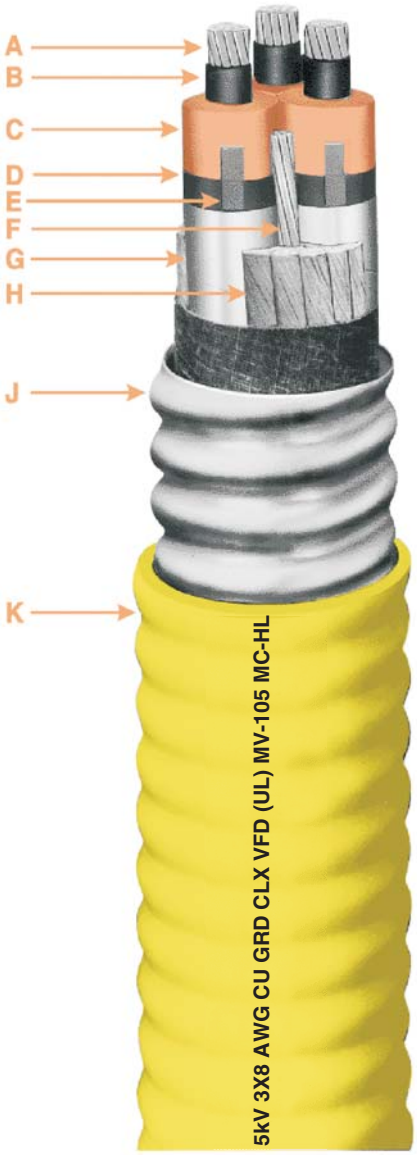
C-L-X® VFD Type MV-105 or MC-HL

5/8kV Okoguard® Shielded Power Cable-Aluminum Sheath

3 Okopact (Compact Stranded) Copper Conductors/105°C Rating
5kV-133% or 8kV-100% Insulation Level
For Cable Tray Use-Sunlight Resistant-For Direct Burial



A Uncoated (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 Three Copper Grounding Conductors
G Uncoated Copper Shield
H Fillers and Binder Tape
J Impervious, continuous, Corrugated Aluminum C-L-X Sheath
K Jacket-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 unequaled 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

Type MV-105 conductors are assembled with fillers, three bare stranded grounding conductors 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 yellow 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 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 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, directly buried 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, Division 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 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 per ICEA S-93-639/NEMA WC74, AEIC CS8 and UL 1072.

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

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

Grounding Conductors: Three uncoated copper 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; 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-105 or MC-HL, sunlight resistant for use in cable tray, and for direct burial in accordance with UL 1072 & 2225. CSA Listed to 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”.
- Minimum installation temperature of -40°C.
- Improved Temperature Rating.
- Three symmetrical grounding conductors with the CLX sheath provide a superior low resistance return path for VFD and other modern ac drive/motor applications.
- ABS listed as CWCMC Type MC-HL.
- CSA listed as FT4, SR, HL and LTGG (-40°C).

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

5/8kV Okoguard Shielded Power Cable-Aluminum Sheath

3 Okopact (Compact Stranded) Copper Conductors/105°C Rating
100% and 133% Insulation Level

For Cable Tray Use-Sunlight Resistant-For Direct Burial

Okoguard Insulation: 115 mils (2.92mm), 5kV-133% or 8kV-100% Insulation Level

Catalog Number (1)	Conductor Size (AWG/kcmil)	Conductor Size - mm²	Approx. Diameter over Insulation (in.)	Grounding Conductors No. x 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 Yellow Okoseal Jacket																
*571-22-3694	8	8.4	0.40	3x12	1.04	26.4	1.29	50	1.27	1.40	35.6	907	1056	66	58	90
571-22-3696	6	13.3	0.44	3x10	1.12	28.4	1.37	50	1.27	1.48	37.6	1090	1259	88	77	115
▲ 571-22-3698	4	21.2	0.48	3x10	1.21	30.7	1.51	60	1.52	1.65	41.9	1398	1556	115	100	150
▲ 571-22-3706	2	33.6	0.54	3x10	1.34	34.0	1.64	60	1.52	1.78	45.2	1732	1890	154	135	190
571-22-3708	1	42.4	0.58	3x8	1.40	35.6	1.69	60	1.52	1.82	46.2	1992	2137	180	155	215
571-22-3710	1/0	53.5	0.61	3x8	1.48	37.6	1.78	60	1.52	1.91	48.5	2273	3012	205	185	245
▲ 571-22-3717	2/0	67.4	0.65	3x8	1.57	39.9	1.92	60	1.52	2.00	50.8	2616	4171	240	210	280
▲ 571-22-3725	4/0	107.0	0.75	3x7	1.78	45.2	2.15	60	1.52	2.29	58.2	3613	3980	320	285	360
571-22-3727	250	127.0	0.80	3x6	1.90	48.3	2.28	60	1.52	2.44	62.0	4175	4390	355	315	395
▲ 571-22-3838	350	177.0	0.89	3x6	2.10	53.3	2.45	75	1.91	2.61	66.3	5328	5435	440	390	475
▲ 571-22-3846	500	253.0	1.01	3x5	2.35	57.6	2.75	75	1.91	2.91	73.9	7095	7603	545	475	570
571-22-3748	750	380.0	1.19	3x4	2.73	69.3	3.24	85	2.16	3.42	86.9	10134	11021	685	585	700
571-22-3751	1000	507.0	1.34	3x4	3.06	77.7	3.64	85	2.16	3.81	96.8	12966	14596	790	660	785

* This cable is only rated 5kV (133%), due to UL limitations, it cannot be rated 8kV.

Okonite's web site, www.okonite.com contains the most up to date information.

For 8kV ampacities refer to the NEC tables referenced below in the columns listed 5001-35,000 Volts

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

Copper or bronze C-L-X and non-jacketed C-L-X are 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 310.60(C)(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(C)(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 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.