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

Insulation:
Okoguard is Okonite’s registered trade name for its exclusive ethylene-propylene rubber (EPR) base, thermostetting 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 directly 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 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 Section 336.36 and is suitable for direct burial when installed in accordance with NEC Sections 250.4(A)(5).
- 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

| Cable | Description | Insulation | ETL Listed
|-------|-------------|------------|-------------
| Okoguard Insulation: 115 mils (2.92mm), 5kV-133% or 8kV-100% Insulation Level | C-L-X® The Okonite Company | For more details, refer to the Okonite Engineering Data Bulletin for installation in duct banks, other ambient temperatures, circuit configurations or installation requirements. |

---

### Ampacities

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

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Conductor Size (AWG/kcmil)</th>
<th>Approx. Diameter over Insulation (in.)</th>
<th>Approx. Core O.D. - mm</th>
<th>Approx. O.D. - Inches</th>
<th>Approx. Thickness mm</th>
<th>Approx. Net Weight lbs./1000'</th>
</tr>
</thead>
<tbody>
<tr>
<td>571-22-3694</td>
<td>8 8.4 0.40 3x12</td>
<td>1.04 26.4 1.29 50 1.27 1.40 35.6 907 1056 66 58 90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3696</td>
<td>6 13.3 0.44 3x10</td>
<td>1.12 28.4 1.37 50 1.27 1.48 37.6 1090 1259 88 77 115</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3698</td>
<td>4 21.2 0.48 3x10</td>
<td>1.21 30.7 1.51 50 1.52 1.65 41.9 1398 1556 115 100 150</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3706</td>
<td>2 33.6 0.54 3x10</td>
<td>1.34 34.0 1.64 60 1.52 1.78 45.2 1732 1890 154 135 190</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3708</td>
<td>1 42.4 0.58 3x10</td>
<td>1.40 35.6 1.69 60 1.52 1.82 46.2 1992 2137 180 155 215</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3710</td>
<td>1/0 53.5 0.61 3x8</td>
<td>1.48 37.6 1.78 60 1.52 1.91 48.5 2273 3012 205 185 245</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3717</td>
<td>2/0 67.4 0.65 3x8</td>
<td>1.57 39.9 1.92 60 1.52 2.00 50.8 2616 4171 240 210 280</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3725</td>
<td>4/0 107.0 0.75 3x7</td>
<td>1.78 45.2 2.15 60 1.52 2.29 58.2 3613 3980 320 285 360</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3727</td>
<td>250 127.0 0.80 3x6</td>
<td>1.90 48.3 2.28 60 1.52 2.44 62.0 4175 4390 355 315 395</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3838</td>
<td>350 177.0 0.89 3x6</td>
<td>2.10 53.3 2.45 75 1.91 2.61 66.3 5328 5435 440 390 475</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3846</td>
<td>500 253.0 1.01 3x5</td>
<td>2.35 57.6 2.75 75 1.91 2.91 73.9 7095 7603 545 475 570</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3748</td>
<td>750 380.0 1.19 3x4</td>
<td>2.73 69.3 3.24 85 2.16 3.42 86.9 10134 11021 685 585 700</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>571-22-3751</td>
<td>1000 507.0 1.34 3x4</td>
<td>3.06 77.7 3.64 85 2.16 3.81 96.8 12966 14596 790 660 785</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* 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.

---

**UL**}

**THE OKONITE COMPANY**

Ramsey, New Jersey 07446

**Product Data**

Section 2: Sheet 22

**Cable Tray Use**

- Sunlight Resistant
- For Direct Burial

**Okoguard Insulation**

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

**C-L-X®** The Okonite Company

**Catalog Number**

**Conductor Size (AWG/kcmil)**

**Approx. Diameter over Insulation (in.)**

**Approx. Core O.D. - mm**

**Approx. O.D. - Inches**

**Approx. Thickness mm**

**Approx. Net Weight lbs./1000’**

**Ampacities in Air (2)**

**Ampacities in Cable Tray (3)**

**Ampacities in Direct Burial (c)**

**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 311.60(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 311.60(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 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 311.60(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. C-L-X® The Okonite Company