Okoguard®-Okoseal® Type MV-105

5/8kV Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor/105°C Rating

5kV-133% or 8kV-100% Insulation Level

Insulation

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene rubber (EPR) based, 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. The triple tandem extrusion of the screens with the insulation provides optimum electrical characteristics.

Jacket

The Okoseal (PVC) jacket supplied with this cable is mechanically rugged and has excellent resistance to oil, acids and most chemicals.

Applications

Okoguard shielded Okoseal Type MV-105 power cables are recommended for distribution circuits, and for feeders or branch circuits. Type MV cables may be installed in wet or dry locations, indoors or outdoors (exposed to sunlight), in any raceway or underground duct, directly buried if installed in a system with a grounding conductor in close proximity that conforms with NEC Section 250.4(A)(5), or messenger supported in industrial establishments and electric utilities.

Specifications

Conductor: 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-93-639/NEMA WC74 & S-97-682, AEIC CS8, CSA C68.10 and UL 1072.

Insulation: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8, CSA C68.10 and UL 1072.

Insulation Screen: Extruded semiconducting EPR insulation screen applied directly over the insulation. Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8, CSA C68.10 and UL 1072.

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

Jacket: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682. CSA C68.10 and UL 1072 for polyvinyl chloride jackets.

UL Listed as Type MV-105 and sunlight resistant, in accordance with UL 1072. CSA C68.10 listed as FT1, SR, and LTDD (-25°C).

Product Features

- Triple tandem extruded, all EPR system.
- Okoguard cables meet or exceed all recognized industry standards (UL, AEIC, NEMA/ICEA, IEEE).
- 105°C continuous operating temperature.
- 140°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to “treeing”.
- Exceptional resistance to moisture.
- Resistant to most oils, acids, and alkalies.
- Sunlight resistant.
- Improved Temperature Rating.

A Uncoated, Okopact (Compact Stranded) Copper Conductor
B Strand Screen-Extruded Semiconducting EPR
C Insulation-Okoguard EPR
D Insulation Screen-Extruded Semiconducting EPR
E Shielding-Copper Tape
F Jacket-Okoseal
Okoguard-Okooseal Type MV-105
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Okoguard Insulation: 115 mils (2.92mm), 5kV—133% or 8kV—100% Insulation Level

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Conductor Size AWG or kcmil</th>
<th>Approx. Dia. over Screen (in.)</th>
<th>Jacket Thickness - mils</th>
<th>Approx. O.D. - mm</th>
<th>Approx. O.D. - mm</th>
<th>Approx. Net Weight lbs/1000</th>
<th>Ampacities Underground Duct (3)</th>
<th>Ampacities in Conduit in Air (2)</th>
<th>Conduit Size Inches (4)*</th>
<th>Approx. Ship Weight lbs/1000</th>
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Okonite’s web site, www.okonite.com contains the most up to date information.

- **Authorized stock item** Available from our Customer Service Center.
- Minimum Manufacturing Quantity for non-stock items is 5000'.
- **Aluminum Conductors**
  - (1) Aluminum conductors are available on special order.
- **Ampacities**
  - (2) Ampacities are in accordance with Table 310.60(C)(73) of the NEC for three single Type MV-105 5kV conductors or single conductors twisted together (triplexed) and installed in an isolated conduit in air at an ambient temperature of 40°C and a conductor temperature of 105°C. Refer to Table 310.60(C)(73) for 8kV ampacities.
  - (3) Ampacities are in accordance with Table 310.60(C)(77) of the NEC for three single 5kV conductors or triplexed cable in one underground raceway, three feet deep with a conductor temperature of 105°C, 100% Load Factor, an ambient earth temperature of 20°C and thermal resistance (RHO) of 90. Refer to Table 310.60(C)(77) for 8kV ampacities.
  - (4) Recommended size of rigid or nonmetallic conduit for three conductors based on 40% maximum fill.
  - *The jam ratio, conduit I.D. to cable O.D. should be checked to avoid possible jamming.*

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