



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
For Cable Tray Use-Sunlight Resistant



- 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

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 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.

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 use as feeder circuits, in electric utility generating stations, for distribution circuits, and for feeders or branch circuits in industrial and commercial installations. 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 311.36 and 250.4(A)(5), or messenger supported in industrial establishments and electric utilities. Sizes 1/0 AWG and larger may also be installed in cable tray.

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 25% minimum 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 FT4, SR, LTGG (-40°C), TC (< 500 kcmil) and TC-ER (≥ 500 kcmil).

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.
- Passes UL and IEEE 383 and 1202 (1/0 AWG and larger) Vertical Tray Flame Test.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing".
- Exceptional resistance to moisture.
- Resistant to most oils, acids, and alkalis.
- Sunlight resistant.
- For Cable Tray Use.
- Improved Temperature Rating.

Okoguard-Okoseal Type MV-105

5/8kV Shielded Power Cable

One Okopact (Compact Stranded)

Copper Conductor/ 105°C Rating Wet

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

For Cable Tray Use-Sunlight Resistant



Product Data

Section 2: Sheet 3

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

Catalog Number (1)	Conductor size AWG or kcmil		Conductor Size -mm ²		Approx. Dia. over Insulation (in.)		Approx. Dia. over Screen (in.)		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 Conduit in Air (2)			Ampacities Underground Duct (3)	Ampacities Cable Tray (4)	Conduit Size Inches (5)*
▲ 114-23-3824	1/0	53.5	0.61	0.67	60	1.52	0.81	20.6	615	655	200	210	290	2½												
▲ 114-23-3826	2/0	67.4	0.65	0.71	60	1.52	0.85	21.6	720	775	225	235	335	2½												
114-23-3865	3/0	85.0	0.70	0.76	80	2.03	0.95	24.1	895	950	270	270	385	3												
▲ 114-23-3832	4/0	107.0	0.75	0.81	80	2.03	0.99	25.2	1030	1090	305	310	445	3												
▲ 114-23-3834	250	127.0	0.80	0.86	80	2.03	1.05	26.7	1185	1250	355	345	495	3												
▲ 114-23-3838	350	177.0	0.89	0.95	80	2.03	1.14	29.0	1540	1625	430	415	610	3½												
▲ 114-23-3846	500	253.0	1.01	1.07	80	2.03	1.26	32.0	2055	2155	530	505	765	3½												
▲ 114-23-3873	750	380.0	1.19	1.26	80	2.03	1.45	36.9	2940	3120	665	630	990	4												
114-23-3855	1000	507.0	1.34	1.40	80	2.03	1.59	40.4	3781	3960	770	720	1185	4												

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

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

Aluminum Conductors

(1) Aluminum conductors are available on special order.

Ampacities

(2) Ampacities are in accordance with Table 311.60(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 311.60(C)(73) for 8kV ampacities.

(3) Ampacities are in accordance with Table 311.60(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 311.60(C)(77) for 8kV ampacities.

(4) Ampacities for cable in cable tray are in accordance with the NEC, Section 392.80(B)(2)(2), Table 311.60(C)(69) (copper), for single conductor cables installed in a single layer, in uncovered tray, with a maintained spacing of 1 cable OD or more at 105°C conductor temperature and 40°C ambient temperature and multi-point grounding.

Refer to 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.

(5) 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.