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

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-CopperTape
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 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.

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

Catalog Number (1)	Conductor Size AWG or kcmil	Conductor Size -mm2	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)	Conduit Size Inches (4)*
▲ 114-23-3817	6	13.3	0.44	0.50	60	1.52	0.64	16.3	285	320	84	92	2
▲ 114-23-3819	4	21.2	0.48	0.54	60	1.52	0.69	17.5	355	385	110	120	2
▲ 114-23-3821	2	33.6	0.54	0.60	60	1.52	0.74	18.8	455	495	145	155	2
114-23-3823	1	42.4	0.58	0.63	60	1.52	0.77	19.5	530	570	175	180	2½
▲ 114-23-3825	1/0	53.5	0.61	0.67	60	1.52	0.81	20.6	610	645	200	210	2½
▲ 114-23-3827	2/0	67.4	0.65	0.71	60	1.52	0.85	12.6	710	765	225	235	2½
114-23-3829	3/0	85.0	0.70	0.75	80	2.03	0.93	23.6	880	935	270	270	3
▲ 114-23-3831	4/0	107.0	0.75	0.81	80	2.03	0.99	25.1	1035	1100	305	310	3
▲ 114-23-3833	250	127.0	0.80	0.86	80	2.03	1.04	26.4	1180	1245	355	345	3
▲ 114-23-3837	350	177.0	0.89	0.95	80	2.03	1.14	29.0	1535	1625	430	415	3½
▲ 114-23-3843	500	253.0	1.01	1.07	80	2.03	1.25	31.8	2050	2150	530	505	3½
▲ 114-23-3849	750	380.0	1.19	1.25	80	2.03	1.43	36.8	2935	3110	665	630	4
114-23-3851	1000	507.0	1.33	1.39	80	2.03	1.57	39.9	3650	3825	770	720	5

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.

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.

(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.

THE OKONITE COMPANY
Ramsey, New Jersey 07446