THE OKONITE COMPANY

Okoguard®-Okoseal® Type MV-105

35kV Shielded Power Cable

One Aluminum Conductor/105°C Rating
100% and 133% Insulation Level
For Cable Tray Use-Sunlight Resistant

A Uncoated Aluminum Conductor
B Strand Screen-Extruded Semiconducting EPR
C Insulation-Okoguard EPR
D Insulation Screen-Extruded Semiconducting EPR
E Shield-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 flame, 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 315.36 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 as permitted by NEC Section 315.32(3).

Specifications

Conductor: Aluminum per ASTM B-609, Class B Stranded per B-231.
Strand Screen: Extruded EPR semiconducting 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 EPR semiconducting 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, sunlight resistant, and for use in cable tray 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, CSA, AEIC, NEMA/ICEA, IEEE).
- 105°C continuous operating temperature.
- 140°C emergency rating.
- 250°C short circuit rating.
- Passes the Vertical Tray Flame Test requirements of UL 1072 and IEEE 383 and 1202.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing".
- Exceptional resistance to moisture.
- Resistant to most oils, acids, and alkalies.
- Sunlight resistant.
- For Cable Tray Use.
- Improved Temperature Rating.
- Compact constructions available upon special request.

Optional Jacket:
-FR-Okoseal® PVC.
-LT/FR Okoseal® PVC.
-LF-Okoseal® PVC-Low Friction.
-Okolon® TP-CPE.
-Okolon® TS-CPE.
-Okoclear® TP (TPPO-low smoke zero halogen).
-Okoclear® TS (XLPO)-low smoke zero halogen).
-Okolene® Polyethylene (MV-90).

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Catalog Number	Conductor Size AWG or kcmil	Conductor Size (mm^2)	Approx. Dia. over Insulation (in.)	Jacket Thickness - mils	Approx. O.D. -Inches	Approx. O.D. -mm	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	Ampacities (1) Conduit in Air	Ampacities (2) Underground Duct	Cable Tray (3)	Conduit Size Inches (4)
Okoguard Insulation: 345 mils (8.76mm), 100% Insulation Level												
135-23-3700	1/0	53.5	1.11	80	1.36	34.5	968	1086	170	165	225	4
135-23-3701	2/0	67.4	1.15	80	1.40	35.6	1037	1155	200	190	260	4
135-23-3702	3/0	85.0	1.20	80	1.45	36.8	1118	1230	225	215	300	4
135-23-3703	4/0	107.0	1.26	80	1.51	38.4	1215	1376	260	245	345	5
135-23-3704	250	127.0	1.31	80	1.56	39.6	1305	1489	290	270	380	5
135-23-3705	350	177.0	1.42	80	1.67	42.4	1504	1691	350	330	475	5
135-23-3706	500	253.0	1.55	110	1.86	47.2	1870	2074	430	400	590	6
135-23-3710	750	380.0	1.74	110	2.05	52.1	2319	2701	540	490	765	6
135-23-3713	1000	507.0	1.89	110	2.20	55.9	2715	3083	640	565	920	6
Okoguard Insulation: 420 mils (10.7mm), 133% Insulation Level												
135-23-3720	1/0	53.5	1.27	80	1.52	38.6	1182	1300	170	165	225	5
135-23-3721	2/0	67.4	1.31	80	1.56	39.6	1257	1375	200	190	260	5
135-23-3722	3/0	85.0	1.36	80	1.61	40.9	1344	1456	225	215	300	5
135-23-3723	4/0	107.0	1.41	80	1.66	42.2	1449	1610	260	245	345	5
135-23-3724	250	127.0	1.47	80	1.72	43.7	1547	1731	290	270	380	5
135-23-3725	350	177.0	1.57	110	1.88	47.8	1870	2057	350	330	475	6
135-23-3726	500	253.0	1.70	110	2.01	51.1	2154	2358	430	400	590	6
135-23-3730	750	380.0	1.90	110	2.21	56.1	2629	3011	540	490	765	8
135-23-3733	1000	507.0	2.05	110	2.40	61.0	3132	3500	640	565	920	8

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

▲**Authorized Stock Item.** Available from our Customer Service Centers. Minimum Manufacturing Quantity for non-stock items is 5000'.

Ampacities
(1) Ampacities are in accordance with Table 315.60(C)(8) of the NEC for three single Type MV-105 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.
(2) Ampacities are in accordance with Table 315.60(C)(12) of the NEC for three single 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 the NEC, IEEE/ICEA S-135 Power Cable Ampacities, or the Okonite Engineering Data Bulletin EHB for installation in duct banks, multiple point ground shields, other ambient temperatures, circuit configurations or installation requirements.

(3) Ampacities for cable in cable tray are in accordance with the NEC, Section 392.80(B)(2)(2), Table 315.60(C)(3) 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 single point grounding.
(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.

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