THE OKONITE COMPANY

Okoguard®-Okoseal® Type MV-105

15kV Shielded Power Cable

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

A Conductor-Stranded Aluminum
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 Jackets
-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).

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Catalog Number	Conductor Size AWG or kcmil	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 (1) Conduit in Air	Ampacities (2) Underground Duct	Cable Tray (3)	Conduit Size Inches (4)*
Okoguard Insulation: 175 mils (4.45mm), 100% Insulation Level													
135-23-3202	1/0	0.75	0.82	80	2.03	1.00	25.4	562	638	170	165	225	3
135-23-3203	2/0	0.80	0.86	80	2.03	1.05	26.7	618	694	200	190	260	3*
135-23-3204	3/0	0.85	0.91	80	2.03	1.10	27.9	683	775	225	215	300	3
135-23-4021	4/0	0.90	0.96	80	2.03	1.15	29.2	763	830	260	245	345	3½
135-23-3206	250	0.97	1.03	80	2.03	1.22	31.0	846	939	290	270	380	3½*
135-23-4027	350	1.07	1.13	80	2.03	1.32	33.5	1012	1126	350	330	475	4*
135-23-4031	500	1.20	1.26	80	2.03	1.45	36.8	1237	1389	430	400	590	4*
135-23-4035	750	1.39	1.45	80	2.03	1.64	41.7	1612	1799	540	490	763	5
135-23-3210	1000	1.54	1.60	110	2.79	1.85	47.0	2059	2441	640	565	920	6
135-23-9784*	1100	1.52	1.58	110	2.79	1.83	46.5	2110	2364	675	575	1055	6
Okoguard Insulation: 220 mils (5.59mm), 133% Insulation Level													
135-23-3301	1/0	0.85	0.91	80	2.03	1.01	25.7	656	748	170	165	225	3
135-23-3302	2/0	0.89	0.95	80	2.03	1.14	29.0	715	807	200	190	260	3½
135-23-3303	3/0	0.94	1.00	80	2.03	1.19	30.2	784	877	225	215	300	3½*
▲135-23-3107	4/0	0.99	1.05	80	2.03	1.24	31.5	869	953	260	245	345	3½*
135-23-3305	250	1.06	1.12	80	2.03	1.31	33.3	958	1066	290	270	380	4
▲135-23-3174	350	1.16	1.22	80	2.03	1.41	35.8	1132	1248	350	330	475	4
▲135-23-3175	500	1.29	1.35	80	2.03	1.54	39.1	1368	1548	430	400	590	5
▲135-23-3176	750	1.49	1.55	80	2.03	1.73	43.9	1758	1967	540	490	765	5
135-23-3309	1000	1.64	1.70	110	2.79	1.95	49.5	2223	2605	640	565	920	6*
135-23-9794*	1100	1.61	1.67	110	2.79	1.92	48.8	2273	2580	675	575	1055	6

Okonite's web site, www.okonite.com contains the most up to date information.
*** 1100 kcmil Compact Round Class A Strand Aluminum**

▲**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) Table 315.60(C)(4) (Aluminum), 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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