Okoguard®-Okoseal® Type MV-105

25kV Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor/105°C Rating
100% and 133% 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 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 oil 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 315.36 and 250.4(A)(5), or messenger supported in industrial establishments and electric utilities.

Specifications

Conductor: Annealed uncoated copper compact stranded per 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. 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 UL1072 for polyvinyl chloride jackets and when specified, a Low Friction LF-OKOSEAL PVC jacket.

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."
- Moisture resistant.
- Resistant to most oils, acids, and alkalies.
- Sunlight resistant.
- Improved Temperature Rating.
- A flame retardant construction, size 1/0 AWG and larger, for installation in cable tray is available on special order.

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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Copper Conductor/ 105°C Rating

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 (2) Conduit in Air	Ampacities (3) Direct Burial	Ampacities (4) Underground Duct	Conduit Size(5) Inches*
Okoguard Insulation: 260 mils (6.60mm), 100% Insulation Level														
115-23-3198	1	42.4	0.87	0.93	80	2.03	1.11	28.2	830	920	190	260	185	3
115-23-3200	1/0	53.5	0.91	0.97	80	2.03	1.15	29.2	925	1015	215	295	215	3½
115-23-3201	2/0	67.4	0.95	1.01	80	2.03	1.19	30.2	1040	1125	255	335	245	3½
115-23-3202	3/0	85.0	0.99	1.05	80	2.03	1.24	31.4	1185	1280	290	380	275	3½
115-23-3203	4/0	107.0	1.05	1.11	80	2.03	1.29	32.8	1365	1455	330	435	315	4
115-23-3208	250	127.0	1.10	1.17	80	2.03	1.35	34.3	1530	1630	365	475	345	4
115-23-3204	350	177.0	1.19	1.25	80	2.03	1.44	36.6	1905	2050	440	575	415	4
115-23-3205	500	253.0	1.31	1.37	80	2.03	1.56	39.5	2450	2595	535	700	500	5
115-23-3207	750	380.0	1.49	1.55	80	2.03	1.74	44.1	3365	3595	655	865	610	5
115-23-3209	1000	507.0	1.64	1.70	110	2.79	1.94	49.4	4350	4615	755	1005	690	6
Okoguard Insulation: 320 mils (8.13mm), 133% Insulation Level														
115-23-3480	1	42.4	1.00	1.06	80	2.03	1.24	31.5	977	1091	190	260	185	3½
115-23-3613	1/0	53.5	1.03	1.10	80	2.03	1.28	32.5	1077	1191	215	295	215	3½
115-23-3614	2/0	67.4	1.07	1.15	80	2.03	1.32	33.5	1198	1312	255	335	245	4
115-23-3615	3/0	85.0	1.12	1.19	80	2.03	1.37	34.8	1346	1469	290	380	275	4
115-23-3616	4/0	107.0	1.17	1.25	80	2.03	1.42	36.1	1527	1679	330	435	315	4
115-23-3617	250	127.0	1.23	1.30	80	2.03	1.47	37.3	1698	1859	365	475	345	4
115-23-3618	350	177.0	1.32	1.39	80	2.03	1.57	39.9	2087	2271	440	575	415	5
115-23-3619	500	253.0	1.44	1.51	80	2.03	1.68	42.7	2648	2835	535	700	500	5
115-23-3620	750	380.0	1.62	1.69	110	2.79	1.93	49.0	3691	4013	655	865	610	6
115-23-3621	1000	507.0	1.77	1.84	110	2.79	2.07	52.6	4592	4965	755	1005	690	6

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

Aluminum Conductors
(1) Aluminum conductors are available on special order.
Ampacities
(2) Ampacities are in accordance with Table 315.60(C)(7) 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.
(3) Ampacities are in accordance with Table 315.60(C)(15) of the NEC for an insulated single conductor directly buried with a conductor temperature rating of 105°C, ambient earth temperature of 20°C, 100% Load Factor, thermal resistance (RHO) of 90, 7 1/2 inch spacing between conductor center lines, and 24 inch spacing between circuits.
(4) Ampacities are in accordance with Table 315.60(C)(11) 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.
ambient temperature of 40°C and a conductor temperature rating of 105°C.
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.
(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.

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