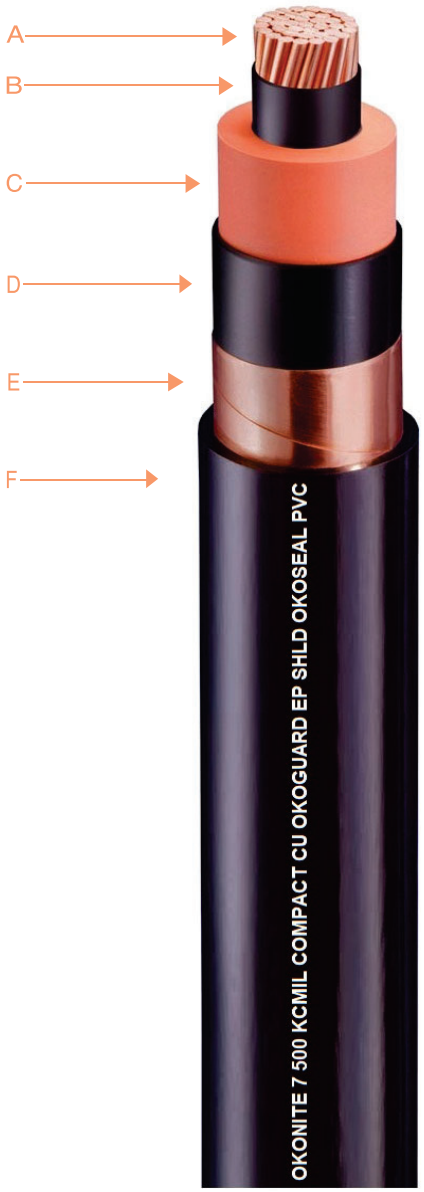
Okoguard®-Okoseal® Type MV-105

15kV 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, 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 315.36 and 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, 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 UL 1072 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.

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 Inches (5)*
Okoguard Insulation: 175 mils (4.45mm), 100% Insulation Level														
115-23-3011	2	33.6	0.67	0.73	60	1.52	0.87	22.1	555	610	165	225	165	3
115-23-3013	1	42.4	0.70	0.76	80	2.03	0.94	23.9	665	720	190	260	185	3
115-23-3015	1/0	53.5	0.74	0.80	80	2.03	0.98	24.8	755	820	215	295	215	3
115-23-3017	2/0	67.4	0.78	0.84	80	2.03	1.02	25.8	865	930	255	335	245	3
115-23-3019	3/0	85.0	0.83	0.89	80	2.03	1.07	27.2	1000	1070	290	380	275	3
115-23-3021	4/0	107.0	0.88	0.94	80	2.03	1.12	28.3	1170	1250	330	435	315	3
115-23-3023	250	127.0	0.93	0.99	80	2.03	1.18	30.0	1325	1405	365	475	345	3½
115-23-3027	350	177.0	1.03	1.07	80	2.03	1.26	32.0	1700	1800	440	575	415	3½
115-23-3031	500	253.0	1.14	1.19	80	2.03	1.38	35.1	2240	2385	535	700	500	4
115-23-3035	750	380.0	1.32	1.37	80	2.03	1.55	39.4	3105	3340	655	865	610	5
115-23-3037	1000	507.0	1.47	1.52	80	2.03	1.71	43.4	3950	4185	755	1005	690	5
Okoguard Insulation: 220 mils (5.59mm), 133% Insulation Level														
115-23-3111	2	33.6	0.76	0.81	80	2.03	1.00	25.4	670	720	165	225	165	3
115-23-3113	1	42.4	0.79	0.85	80	2.03	1.04	26.4	755	820	190	260	185	3
115-23-3115	1/0	53.5	0.83	0.89	80	2.03	1.07	27.1	845	915	215	295	215	3
115-23-3117	2/0	67.4	0.87	0.92	80	2.03	1.11	28.2	950	1020	255	335	245	3
115-23-3119	3/0	85.0	0.92	0.98	80	2.03	1.16	29.3	1000	1180	290	380	275	3½
115-23-3121	4/0	107.0	0.96	1.02	80	2.03	1.20	30.5	1260	1360	330	435	315	3½
115-23-3123	250	127.0	1.01	1.07	80	2.03	1.26	32.0	1415	1500	365	475	345	3½
115-23-3127	350	177.0	1.11	1.16	80	2.03	1.35	34.3	1790	1920	440	575	415	4
115-23-3131	500	253.0	1.22	1.28	80	2.03	1.47	37.3	2325	2510	535	700	500	4
115-23-3135	750	380.0	1.40	1.46	80	2.03	1.64	41.7	3220	3455	655	865	610	5
115-23-3139	1000	507.0	1.54	1.60	110	2.79	1.84	46.7	4075	4340	755	1005	690	6
Low Friction OKOSEAL PVC Jacket														
115-23-3937	350	177.0	1.11	1.16	80	2.03	1.35	34.3	1789	1939	440	575	415	4
▲115-23-3154	500	253.0	1.22	1.28	80	2.03	1.47	37.3	2328	2513	535	700	500	4

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

▲Authorized Stock Item

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.
Refer to the NEC, IEEE/ICEA or the Okonite Engineering Handbook 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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