



Okoguard®-Okolon® Type MV-105

15kV Shielded Power Cable

One Okopact® (Compact Stranded) Copper Conductor/105°C Rating
100% and 133% Insulation Level

For Cable Tray Use-Sunlight Resistant



- 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-Coated Copper Tape
- F Jacket-Okolon

Insulation

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene (EPR) based, thermosetting compound, whose optimum balance of electrical and physical properties is unequalled 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 Okolon jacket on this cable is a vulcanized chlorosulfonated polyethylene base compound which is mechanically rugged, flame, radiation, and oil resistant.

Applications

Okoguard shielded Okolon 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 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.

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 C68.3 and UL 1072.

Insulation: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8, CSA C68.3 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 C68.3 and UL 1072.

Shield: 5 mil coated copper tape helically applied, with 25% nominal overlap.

Jacket: Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, CSA C68.3 and UL 1072 for chlorosulfonated polyethylene jackets.

UL listed as Type MV-105, sunlight resistant and for use in cable tray in accordance with UL 1072.

CSA listed meeting the requirements of C68.3 and rated FT4 (1/0 AWG and larger) and -25°C.

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 UL and IEEE 383 and 1202 (1/0 AWG & larger) Vertical Tray Flame Tests.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing."
- Moisture resistant.
- Resistant to most oils, acids, and alkalis.
- Sunlight resistant.
- For Cable Tray Use; 1/0 AWG and larger.
- CSA FT4 and -25°C.
- Improved Temperature Rating.

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Product Data Section 2: Sheet 11

Catalog Number (1)	Conductor Size AWG or kcmil		Conductor Size - mm ²		Approx. Dia. over Insulation (in.)		Approx. Dia. over Screen (in.)		Jacket Thickness - mils		Approx. O.D. - mm		Approx. O.D. - Inches		Approx. Net Weight (lbs./1000')		Approx. Ship Weight (lbs./1000')		Ampacities (2) Conduit in Air		Ampacities (3) Underground		Ampacities (4) Cable Tray		Conduit (5) Size Inches*				
Okoguard Insulation: 175 mils (4.45mm), 100% Insulation Level																													
115-23-2011	2	33.6	0.67	0.73	60	1.52	0.97	24.5	625	735	165	165	—	3	115-23-2013	1	42.4	0.70	0.76	80	2.03	1.00	25.3	700	805	190	185	—	3
115-23-2015	1/0	53.5	0.74	0.80	80	2.03	1.04	26.3	790	900	215	215	220	3	115-23-2017	2/0	67.4	0.78	0.84	80	2.03	1.07	27.2	900	1010	255	245	250	3
115-23-2019	3/0	85.0	0.83	0.89	80	2.03	1.12	28.5	1040	1150	290	275	290	3	115-23-2021	4/0	107.0	0.88	0.94	80	2.03	1.18	29.8	1210	1335	330	315	335	3½
115-23-2023	250	127.0	0.93	0.99	80	2.03	1.22	30.9	1360	1485	365	345	370	3½	115-23-2027	350	177.0	1.03	1.10	80	2.03	1.32	33.5	1730	1880	440	415	460	4
115-23-2031	500	253.0	1.14	1.22	80	2.03	1.45	36.9	2290	2505	535	500	575	4	115-23-2035	750	380.0	1.32	1.40	80	2.03	1.64	41.5	3185	3590	655	610	745	5
115-23-2038	1000	507.0	1.47	1.55	80	2.03	1.81	46.0	4155	4600	755	690	890	5															

Okoguard Insulation: 220 mils (5.59mm), 133% Insulation Level																													
115-23-2111	2	33.6	0.76	0.82	80	2.03	1.06	26.9	715	825	165	165	—	3	115-23-2113	1	42.4	0.79	0.85	80	2.03	1.09	27.7	790	840	190	185	—	3
115-23-2115	1/0	53.5	0.83	0.89	80	2.03	1.13	28.6	885	995	215	215	220	3½	115-23-2117	2/0	67.4	0.87	0.93	80	2.03	1.17	29.6	1000	1125	255	245	250	3½
115-23-2119	3/0	85.0	0.92	0.98	80	2.03	1.22	30.9	1140	1270	290	275	290	3½	115-23-2121	4/0	107.0	0.97	1.03	80	2.03	1.27	32.2	1315	1460	330	315	335	3½
115-23-2123	250	127.0	1.03	1.09	80	2.03	1.30	33.3	1465	1620	365	345	370	4	115-23-2127	350	177.0	1.12	1.20	80	2.03	1.43	36.3	1890	2085	440	415	460	4
▲ 115-23-2131	500	253.0	1.24	1.31	80	2.03	1.55	39.3	2415	2630	535	500	575	5	▲ 115-23-2135	750	380.0	1.41	1.49	80	2.03	1.68	42.7	3325	3494	655	610	745	5
115-23-2138	1000	507.0	1.56	1.66	110	2.79	1.92	48.9	4355	4800	755	690	890	6	115-23-2144	1250	633.5	1.75	1.85	110	4.33	2.13	53.4	5400	5700	845	770	995	6
115-23-2145	1500	760.2	1.90	1.98	110	4.33	2.25	57.1	6250	6800	925	845	1090	8															

Visit Okonite's web site, www.okonite.com for the most up to date dimensions.

▲ **Authorized Stock Item.** Available from our Customer Service Centers.

Aluminum Conductors

(1) Aluminum conductors are available on special order.

Ampacities

(2) Ampacities are in accordance with Table 310.73 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 310.77 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.

(4) Ampacities based on single Type MV-105 conductors, or single conductors twisted together (triplexed, quadruplexed, etc.), size 1/0 AWG and larger, installed in uncovered cable tray in accordance with Section 392.13 of the NEC at an ambient temperature of 40°C and a conductor temperature rating of

105°C. In accordance with NEC Section 392.13(b), the ampacities are 75% of the values given in NEC Table 310.69 (copper conductors). Where the cable tray is covered for more than six feet with solid unventilated covers, the ampacities shall not exceed 93% of the values shown above.

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.