



Okoguard®-Okoseal® 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- 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 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 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 336.36 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 311.32(2).

Specifications

Conductor: Annealed uncoated copper compact stranded per ASTM B-496.

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), 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 alkalis.
- Sunlight resistant.
- For Cable Tray Use.
- Improved Temperature Rating.

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Product Data Section 2: Sheet 8

Catalog Number (1)	Conductor Size AWG or komil	Conductor Size -mm ²	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)	Underground Duct Ampacities (4)	Cable Tray Conduit Size Inches (5)*
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Okoguard Insulation: 175 mils (4.45mm), 100% Insulation Level

115-23-3064	1/0	53.5	0.74	0.80	80	2.03	0.98	24.8	760	825	215	215	220	3
115-23-3066	2/0	67.4	0.78	0.84	80	2.03	1.02	25.8	870	935	255	245	250	3
115-23-3067	3/0	85.0	0.83	0.89	80	2.03	1.07	27.1	1005	1070	290	275	290	3
115-23-3069	4/0	107.0	0.88	0.94	80	2.03	1.12	28.4	1160	1240	330	315	335	3
115-23-3074	250	127.0	0.93	0.98	80	2.03	1.17	29.7	1330	1415	365	345	370	3½
115-23-3076	350	177.0	1.03	1.07	80	2.03	1.26	32.0	1700	1800	440	415	460	3½
115-23-3090	500	253.0	1.14	1.19	80	2.03	1.38	35.1	2230	2275	535	500	575	4
115-23-3091	750	380.0	1.32	1.37	80	2.03	1.55	39.4	3105	3340	655	610	745	5
115-23-3092	1000	507.0	1.47	1.52	80	2.03	1.71	43.4	3960	4215	755	690	890	5

Okoguard Insulation: 220 mils (5.59mm), 133% Insulation Level

▲ 115-23-3230	1/0	53.5	0.83	0.88	80	2.03	1.10	28.0	905	975	215	215	220	3
▲ 115-23-3232	2/0	67.4	0.87	0.92	80	2.03	1.11	28.2	970	1030	255	245	250	3
115-23-3234	3/0	85.0	0.92	0.98	80	2.03	1.16	29.4	1100	1185	290	275	290	3½
▲ 115-23-3236	4/0	107.0	0.96	1.02	80	2.03	1.21	30.7	1280	1370	330	315	335	3½
▲ 115-23-3238	250	127.0	1.01	1.07	80	2.03	1.26	32.0	1435	1520	365	345	370	3½
▲ 115-23-3240	350	177.0	1.11	1.17	80	2.03	1.35	34.3	1810	1940	440	415	460	4
▲ 115-23-3242	500	253.0	1.22	1.28	80	2.03	1.47	37.3	2350	2535	535	500	575	4
▲ 115-23-3243	750	380.0	1.40	1.46	80	2.03	1.65	41.9	3240	3480	655	610	745	5
▲ 115-23-3244	1000	507.0	1.55	1.60	110	2.79	1.86	47.1	4220	4490	755	690	890	6

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'.

Aluminum Conductors

(1) Aluminum conductors are available on special order. To order aluminum conductors, change the first three digits of the catalog number from 115 to 135.

Ampacities

(2) Ampacities are in accordance with Table 311.60(C)(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 311.60(C)(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.

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.

(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 392.80(B) of the NEC at an ambient temperature of 40°C and a conductor temperature rating of 105°C. In accordance with NEC Section 392.80(B)(2)(1) (copper conductors), the values are 75% of the values given in table 311.60(C)(69). 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.

(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.