



Okoguard®-Okoseal® Type MV-105 5/8kV Shielded Power Cable



Aluminum Conductor/105°C Rating
5kV-133% or 8kV-100% Insulation Level



- A Uncoated Aluminum Conductor
- B Strand Screen-Extruded Semiconducting EPR
- C Insulation-Okoguard EPR
- D Insulation Screen-Extruded Semiconducting EPR
- E Shielding-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 311.36 and 250.4(A)(5), or messenger supported in industrial establishments and electric utilities.

Specifications

Conductor: Aluminum per ASTM B-609, Class B stranded per B-231.

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 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 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.

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).

A flame retardant construction, size 1/0 AWG and larger, for installation in cable tray is available on special order that is UL labeled "MV-105 FOR CT USE". 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".
- Exceptional resistance to moisture.
- Resistant to most oils, acids, and alkalis.
- Sunlight resistant.
- Improved Temperature Rating.
- Compact constructions available upon special request.

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Product Data

Section 2: Sheet 60

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 Conduit in Air (1)	Ampacities Direct Burial (2)	Ampacities Underground Duct (3)	Conduit Size Inches (4)*
Okoguard Insulation: 115 mils (2.92mm), 5kV-133% or 8kV-100% Insulation													
134-23-3824	6	0.45	0.51	60	1.52	0.65	16.5	239	260	72	110	75	2
134-23-3825	4	0.50	0.56	60	1.52	0.70	17.8	278	307	94	140	98	2
134-23-3826	2	0.55	0.61	60	1.52	0.76	19.3	330	359	130	175	130	2
134-23-3827	1	0.59	0.65	60	1.52	0.80	20.3	364	393	150	200	145	2½
134-23-3828	1/0	0.63	0.69	60	1.52	0.84	21.3	406	439	170	230	165	2½
134-23-3829	2/0	0.67	0.73	80	2.03	0.92	23.4	487	524	200	260	190	2½
134-23-3830	3/0	0.72	0.78	80	2.03	0.97	24.6	546	597	225	295	215	3
134-23-3831	4/0	0.78	0.84	80	2.03	1.02	25.9	619	676	260	340	245	3
134-23-3832	250	0.84	0.90	80	2.03	1.09	27.7	694	761	290	370	270	3
134-23-3840	350	0.95	1.01	80	2.03	1.19	30.2	847	914	350	450	330	3½
134-23-3843	500	1.08	1.14	80	2.03	1.32	33.5	1060	1174	430	545	400	3½
134-23-3849	750	1.27	1.33	80	2.03	1.51	38.4	1412	1596	540	680	490	4
134-23-3954	1000	1.42	1.48	80	2.03	1.66	42.2	1735	1922	640	795	565	5

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

Ampacities

(1) Ampacities are in accordance with Table 311.60(C)(74) 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 311.60(C)(82) 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.

(3) Ampacities are in accordance with Table 311.60(C)(78) 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/CEA 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.

(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.