

# Okoguard®-Okoseal® Type MV-105

## 25kV 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 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 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) and 315.36, 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 C68.10 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 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 UL1072 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, and LTGG (-40°C). TC (<500 kcmil) 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 alkalies.
- Sunlight resistant.
- For Cable Tray Use.
- 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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One Okopact (Compact Stranded)

Copper Conductor/ 105°C Rating

For Cable Tray Use-Sunlight Resistant



## Product Data Section 2: Sheet 58

Catalog Number (1)	Conductor size AWG or kcmil		Conductor Size -mm <sup>2</sup>		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(5) Inches*
Okoguard Insulation: 260 mils (6.60mm), 100% Insulation Level																											
115-23-3174	1/0	53.5	0.91	0.97	80	2.03	1.16	29.5	950	1062	215	215	290	3½													
115-23-3177	2/0	67.4	0.95	1.01	80	2.03	1.20	30.5	1067	1179	255	245	335	3½													
115-23-3179	3/0	85.0	0.99	1.06	80	2.03	1.25	31.8	1211	1325	290	275	385	3½													
115-23-3183	4/0	107.0	1.05	1.11	80	2.03	1.30	33.0	1387	1501	330	315	445	4													
115-23-3199	250	127.0	1.11	1.17	80	2.03	1.35	34.3	1552	1685	365	345	495	4													
115-23-3252	350	177.0	1.20	1.26	80	2.03	1.45	36.8	1932	2118	440	415	610	4													
115-23-3256	500	253.0	1.31	1.37	80	2.03	1.56	39.5	2475	2661	535	500	765	5													
115-23-3270	750	380.0	1.49	1.55	80	2.03	1.74	44.1	3388	3642	655	610	990	5													
115-23-3272	1000	507.0	1.64	1.70	110	2.79	1.95	49.5	4380	5317	755	690	1185	6													
Okoguard Insulation: 320 mils (8.13mm), 133% Insulation Level																											
115-23-3623	1/0	53.5	1.03	1.09	80	2.03	1.28	32.5	1093	1207	215	215	290	3½													
115-23-3624	2/0	67.4	1.07	1.13	80	2.03	1.32	33.5	1215	1329	255	245	335	4													
115-23-3625	3/0	85.0	1.12	1.18	80	2.03	1.37	34.8	1364	1482	290	275	385	4													
115-23-3626	4/0	107.0	1.17	1.23	80	2.03	1.42	36.1	1546	1660	330	315	445	4													
115-23-3627	250	127.0	1.23	1.29	80	2.03	1.48	37.6	1717	1903	365	345	495	4													
115-23-3628	350	177.0	1.32	1.38	80	2.03	1.57	39.9	2108	2299	440	415	610	5													
115-23-3396	500	253.0	1.44	1.49	80	2.03	1.68	42.7	2662	2916	535	500	765	5													
115-23-3622	750	380.0	1.62	1.68	110	2.79	1.93	49.0	3704	4011	655	610	990	6													
115-23-3398	1000	507.0	1.76	1.83	110	2.79	2.07	52.6	4610	5547	755	690	1185	6													

Okonite's web site, [www.okonite.com](http://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 for cable in cable tray are in accordance with the NEC, Section 392.80(B)(2)(2), Table 315.60(C)(3) (copper), for single conductor cables installed in a single layer, in uncovered tray, with a maintained spacing of 1 cable OD or more at 105°C conductor temperature and 40°C ambient temperature and single point grounding.

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.