



## Okoguard® Okoseal® Type MV-105



### 5/8kV Okoguard Shielded Power Cable

3 Okopact® (Compact Stranded) Copper Conductors/105°C Rating  
5kV-133% or 8kV-100% Insulation Level

For Cable Tray Use-Sunlight Resistant-For Direct Burial



- A Uncoated Okopact (Compact Stranded) Copper Conductors
- B Extruded Semiconducting EPR Strand Screen
- C Okoguard Insulation (EPR)
- D Extruded Semiconducting EPR Insulation Screen
- E Phase Identification Tape
- F Okopact Compact Copper Grounding Conductor
- G Uncoated Copper Shield
- H Fillers and Binder Tape
- J Jacket-Black Okoseal

#### Insulation

Okoguard is Okonite's registered trade name for its exclusive ethylene-propylene rubber (EPR) base, 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.

#### Assembly

The Type MV-105 conductors are assembled with fillers and a binder tape overall. One bare stranded copper ground conductor is placed in one of the outer interstices.

#### Jacket

The Okoseal (PVC) jacket supplied with this cable is mechanically rugged and has excellent resistance to oil and most chemicals.

#### Applications

Okoguard shielded three conductor Type MV-105 power cables are recommended for distribution circuits, and for feeders or branch circuits in industrial & utility power distribution systems. Type MV cables may be installed in wet or dry locations, indoors or outdoors (exposed to sunlight), in any race-way or underground duct, directly buried, cable tray, or messenger supported in industrial establishments and electric utilities.

#### Specifications

**Conductors:** 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, CSA C68.10 and UL 1072.

**Insulation:** Okoguard meets or exceeds the electrical and physical requirements of ICEA S-93-639/NEMA WC74, CSA C68.10 and UL 1072. The insulated conductors are tested in accordance with AEIC CS8.

**Insulation Screen:** Extruded semiconducting EPR insulation screen per ICEA S-93-639/NEMA WC74, AEIC CS8, CSA C68.10 and UL 1072.

**Shield:** 5 mil uncoated copper tape helically applied with 12.5% nominal overlap.

**Phase Identification:** Color coded (black, red, blue) polyester ribbon laid longitudinally under the copper shield.

**Grounding Conductor:** Uncoated copper compact stranded per ASTM B-496 and sized in accordance with UL 1072.

**Assembly:** Cabled with fillers and ground wire in the interstices, binder tape overall.

**Jacket:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74, CSA C68.10 and UL 1072 for polyvinyl chloride jackets. UL Listed as Type MV-105, sunlight resistant for use in cable tray, and for direct burial in accordance with UL 1072. Cables listed to CSA C68.10.

#### Product Features

- Triple tandem extruded, all EPR system.
- Complete prepackaged, color coded, factory tested wiring system.
- Passes the UL 1072, IEEE 383 and IEEE 1202/FT4 Vertical Tray Flame Tests.
- Complies with NEC Sections 310-7 and 710-4(b) for direct burial.
- Minimum installation temperature of -40°C.
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing".
- Improved Temperature Rating.
- Sizes 4/0 AWG and larger are CSA listed as FT4, SR, and LTGG (-40°C).
- Sizes smaller than 4/0 AWG are CSA listed as FT4, SR, and LTDD (-25°C).

# Okoguard Okoseal Type MV-105



## Product Data Section 2: Sheet 19

### 5/8kV Okoguard Shielded Power Cable

3 Okopact (Compact Stranded) Copper Conductors/105°C Rating

5kV-133% or 8kV-100% Insulation Level

For Cable Tray Use-Sunlight Resistant-For Direct Burial

Okoguard Insulation: 115 mils (2.92mm), 5kV-133% or 8kV-100% Insulation Level

Catalog Number (1)	Conductor Size (AWG/kcmil)		Conductor Size - mm <sup>2</sup>	Approx. Diameter over Insulation (in.)		Grounding Conductor Size (AWG/kcmil)		Grounding Conductor Size - mm <sup>2</sup>		Approx. Core O.D. - Inches		Approx. Core O.D. - mm		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 In Air (2)			Ampacities Cable Tray (3)			Ampacities Direct Burial (4)						
▲ 114-23-3630	6	13.3	0.44	6	13.3	1.10	27.9	80	2.03	1.29	32.8	1015	1115	88	77	115																						
114-23-3633	4	21.2	0.48	6	13.3	1.19	30.2	80	2.03	1.38	35.1	1235	1390	115	100	150																						
▲ 114-23-3640	2	33.6	0.54	6	13.3	1.32	33.5	80	2.03	1.51	38.3	1560	1715	155	135	190																						
114-23-3642	1/0	53.5	0.61	4	21.2	1.46	37.0	80	2.03	1.65	41.9	2090	2250	205	185	245																						
▲ 114-23-3648	2/0	67.4	0.65	4	21.2	1.55	39.4	110	2.79	1.80	45.7	2513	2695	240	210	280																						
▲ 114-23-3736	4/0	107.0	0.75	3	26.7	1.77	45.0	110	2.79	2.02	51.3	3455	3780	320	285	360																						
114-23-3770	250	127.0	0.80	3	26.7	1.88	47.8	110	2.79	2.13	54.1	3971	4245	355	315	395																						
▲ 114-23-3772	350	177.0	0.89	2	33.6	2.08	52.8	110	2.79	2.33	59.2	5116	5665	440	390	475																						
▲ 114-23-3782	500	253.0	1.01	1	42.4	2.33	59.2	110	2.79	2.59	65.8	6799	7430	545	475	570																						

Okonite's web site, [www.okonite.com](http://www.okonite.com) contains the most up to date information.

▲ **Authorized stock item.** Available from our Customer Service Centers.

#### Aluminum Conductors

(1) Aluminum conductors available on special orders.

#### Ampacities

(2) Ampacities are in accordance with Table 310.60(C)(71) of the NEC for an insulated three conductor cable, isolated in air, with a conductor operating temperature of 105°C and an ambient air temperature of 40°C.

(3) Ampacities are in accordance with Table 310.60(C)(75) of the NEC for a three conductor Type MV-105 cable installed in uncovered cable tray in accordance with Section 392.80(B) of the NEC with a conductor operating temperature of 105°C and ambient air temperature of 40°C. Where the cable tray is covered for more than six feet with solid unventilated covers, the ampacities shall not be more than 95% of the values shown above.

(4) Ampacities are in accordance with Table 310.60(C)(83) of the NEC for an insulated three conductor cable directly buried in the earth with a conductor operating temperature of 105°C, ambient earth temperature of 20°C, 100% load factor and thermal resistance (RHO) of 90.

Refer to the NEC, IEEE/ICEA S-135 Power Cable Ampacities, or the Okonite Engineering Data Bulletin for installation in duct banks, other ambient temperatures, circuit configurations or installation requirements.