



## Okoguard®-Okoclear®-TS Type MV-105

### 5/8kV Shielded Power Cable

One Okopact® (Compact Stranded)  
Copper Conductor/105°C Rating Wet or Dry

For Cable Tray Use - Sunlight Resistant - Oil Res I & II



- 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-Okoclear TS (XLPO-LSZH)

#### 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 for long, problem free service.

#### Jacket

The Okoclear-TS jacket on this cable is a low smoke, non-halogenated, vulcanized crosslinked polyolefin (XLPO) based compound. It provides excellent resistance to mechanical abuse, flame, weathering, most oils, acids and alkalis.

#### Applications

Okoguard shielded Okoclear-TS 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, where a cable with low smoke/zero halogen characteristics is needed.

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 315.36 and 250.4(A)(5), or messenger supported in industrial establishments and electric utilities.

May be installed in cable trays where permitted by NEC Section 315.32(3).

#### Specifications

**Conductor:** 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 and CSA C68.10 for Type II crosslinked polyolefin 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-ST1, HALOGEN-FREE, SR, LTDD (-25°C), and TC-ER.

#### Product Features

- Low smoke/zero halogen jacket.
- Okoguard cables meet or exceed all recognized industry standards (UL, NEMA/ICEA and IEEE).
- Triple tandem extruded, all EPR system.
- 105°C continuous operating temperature.
- 140°C emergency rating.
- 250°C short circuit rating.
- Excellent corona resistance.
- Exceptional resistance to "treeing".
- Screens are clean stripping.
- Exceptional resistance to moisture.
- Resistant to most oils, acids, and alkalis.
- UL listed: MV-105, Sunlight Resistant, Cable Tray Use, and Oil Res I & II.
- Passes the UL & IEEE 383-1974 and FT4/IEEE 1202 Vertical Tray Flame Test.

# Okoguard-Okoclear-TS Type MV-105

## 5/8kV Shielded Power Cable

One Okopact (Compact Stranded)

Copper Conductor/105°C Rating

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

For Cable Tray Use - Sunlight Resistant - Oil Res I & II

## Product Data Section 2: Sheet 52



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

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 Ampacities (4)		Conduit Size Inches (5)*				
114-23-2012	1/0	53.5	0.61	0.67	80	2.03	0.93	23.6	704	759	215	215	290	3																			
114-23-2013	2/0	67.4	0.64	0.72	80	2.03	0.96	24.4	800	851	255	245	335	3																			
114-23-2014	3/0	85.0	0.70	0.76	80	2.03	1.02	25.9	950	1020	290	275	385	3																			
114-23-2015	4/0	107.0	0.75	0.81	80	2.03	1.06	26.9	1105	1185	330	315	445	3																			
114-23-2020	250	127.0	0.80	0.86	80	2.03	1.12	28.4	1255	1335	365	345	495	3																			
114-23-2022	350	177.0	0.89	0.95	80	2.03	1.21	30.7	1615	1705	440	415	610	3½																			
114-23-2025	500	253.0	1.03	1.07	80	2.03	1.32	33.5	2135	2270	535	500	765	3½																			
114-23-2030	750	380.0	1.19	1.25	80	2.03	1.50	38.1	3005	3245	655	610	990	4																			
114-23-2040	1000	507.0	1.34	1.42	80	2.03	1.66	42.2	3870	4050	755	690	1185	5																			

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 5kV 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. Refer to Table 315.60(C)(7) for 8kV ampacities.

(3) Ampacities are in accordance with Table 315.60(C)(11) of the NEC for three single 5kV 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 Table 315.60(C)(11) for 8kV ampacities

(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 in-

stalled 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.