



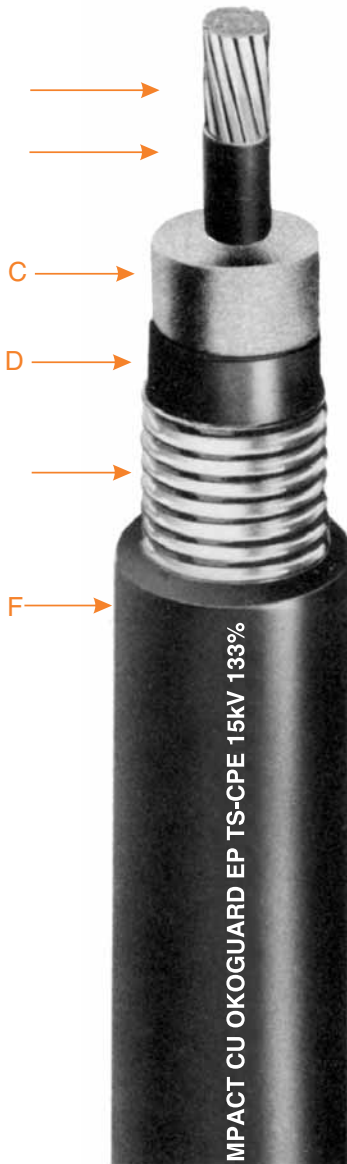
## Okoguard®-Okolon® TS-CPE Type MV-105

### 15kV LCS 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-5 Mil LCS Coated Copper Tape
- F Jacket-Okolon TS-CPE

#### 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.

#### Shield

A 5 mil copper longitudinal corrugated shield (LCS) is applied over the extruded semiconducting insulation screen. The LCS resistance is also extremely stable during load cycling.

#### Jacket

The Okolon TS-CPE jacket on this cable is a vulcanized chlorinated polyethylene base compound which is mechanically rugged, flame, radiation, and oil resistant.

#### Applications

Okoguard shielded Okolon TS-CPE 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), 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 C68.3 and UL 1072.

**Insulation:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682, AEIC CS8, CSA C68.3 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 C68.3 and UL 1072.

**Shield:** 5 mil longitudinal corrugated, coated copper shield with a 0.25" overlap.

**Jacket:** Meets or exceeds electrical and physical requirements of ICEA S-93-639/NEMA WC74 & S-97-682 and UL 1072 for chlorinated polyethylene jackets.

UL Listed as Type MV-105, sunlight resistant and for cable tray in accordance with UL 1072.

CSA C68.3 listed and rated FT4 and -40°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.
- Flame retardant - passes UL and IEEE 383 Vertical Tray Flame Test and 1202 (1/0 AWG & larger).
- Excellent corona resistance.
- Screens are clean stripping.
- Exceptional resistance to "treeing."
- Low shield resistance.
- Moisture resistant.
- Resistant to most oils, acids and alkalis.
- Sunlight resistant.
- For Cable Tray Use; 1/0 AWG and larger.
- CSA FT4 and -40°C
- Improved Temperature Rating.
- The LCS shield design is also available on 5, 25, 35, 46 and 69kV rated cables.
- An Okolene (PE) jacket is also available for non-CT rated cables.

# Okoguard-Okolon TS-CPE Type MV-105

## 15kV LCS Shielded Power Cable

One Okopact (Compact Stranded )

Copper Conductor/105°C Rating

100% and 133% Insulation Level

For Cable Tray Use-Sunlight Resistant

# Product Data Section 2: Sheet 12



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 (in.)	Jacket Thickness - mils	Approx. O.D. - mm	Approx. O.D. - Inches	Approx. O.D. - mm	Approx. O.D. - Inches	Approx. Net Weight (lbs./1000')	Approx. Ship Weight (lbs./1000')	Ampacities (2)	Conduit in Air	Ampacities (3)	Underground Cable Tray	Ampacities (4)	Conduit Size (5) Inches*	
<b>Okoguard Insulation: 175 mils (4.45mm), 100% Insulation Level</b>																			
115-23-6011	2	33.6	0.66	0.72	60	1.52	0.90	22.8	595	655	165	165	—	3					
115-23-6013	1	42.4	0.69	0.75	80	2.03	0.97	24.6	710	770	190	185	—	3					
115-23-6015	1/0	53.5	0.73	0.79	80	2.03	1.01	25.6	800	875	215	215	220	3					
115-23-6017	2/0	67.4	0.77	0.83	80	2.03	1.05	26.6	915	990	255	245	250	3					
115-23-6019	3/0	85.0	0.81	0.87	80	2.03	1.10	27.8	1150	1125	290	275	290	3½					
115-23-6021	4/0	107.0	0.87	0.93	80	2.03	1.15	29.2	1220	1320	330	315	335	3½					
115-23-6023	250	127.0	0.92	0.98	80	2.03	1.20	30.5	1375	1465	365	345	370	3½					
115-23-6027	350	177.0	1.01	1.07	80	2.03	1.29	32.8	1740	1855	440	415	460	4					
115-23-6031	500	253.0	1.13	1.19	80	2.03	1.41	35.8	2275	2405	535	500	575	4					
115-23-6035	750	380.0	1.31	1.37	80	2.03	1.59	40.3	3155	3395	655	610	745	5					

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

115-23-6111	2	33.6	0.75	0.81	80	2.03	1.03	26.2	725	785	165	165	—	3					
115-23-6113	1	42.4	0.78	0.84	80	2.03	1.06	27.0	800	875	190	185	—	3					
115-23-6115	1/0	53.5	0.82	0.88	80	2.03	1.10	27.9	895	970	215	215	220	3½					
115-23-6117	2/0	67.4	0.86	0.92	80	2.03	1.14	29.0	1010	1090	255	245	250	3½					
115-23-6119	3/0	85.0	0.91	0.97	80	2.03	1.19	30.1	1150	1255	290	275	290	3½					
115-23-6121	4/0	107.0	0.96	1.02	80	2.03	1.24	31.5	1325	1425	330	315	335	3½					
115-23-6123	250	127.0	1.01	1.07	80	2.03	1.29	32.8	1485	1570	365	345	370	4					
115-23-6127	350	177.0	1.10	1.16	80	2.03	1.38	35.2	1855	1990	440	415	460	4					
115-23-6131	500	253.0	1.22	1.28	80	2.03	1.50	38.2	2400	2585	535	500	575	5					
115-23-6135	750	380.0	1.40	1.46	80	2.03	1.68	42.6	3300	3555	655	610	745	5					

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

### Aluminum Conductors

(1) Aluminum conductors are available on special order.

### Ampacities

(2) Ampacities are in accordance with Table 310.60(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 310.60(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.

(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)(a) the ampacities are 75% of the values given in NEC Table 310.60(C)(69) (copper conductors). 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.

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 installations 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.