Okoguard®-Okolon® TS-CPE Type MV-90

2.4 kV Nonshielded Power Cable

One Okopact® (Compact Stranded)
Copper Conductor/90°C Rating Wet or Dry
For Cable Tray Use-Sunlight Resistant

A Uncoated, Okopact (Compact Stranded) Copper Conductor
B Strand Screen-Extruded Semiconducting EPR
C Insulation-Okoguard EPR
D 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 for long, problem free service.

Jacket

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

Applications

Okoguard-Okolon TS-CPE 2 .4 kV cables are heavy duty nonshielded cables designed for use at up to 2.4 kV phase-to-phase in wet or dry locations in accordance with NEC Section 310.10.

Okoguard-Okolon TS-CPE nonshielded cables are recommended for power distribution and motor circuits in generating plants and substations; in industrial and commercial buildings.

Single conductors may be installed in industrial or commercial occupancies in triplexed or random lay in any raceway or duct in wet or dry locations, or in open runs as permitted by NEC Article 396.

Sizes 1/0 AWG and larger, may be installed in cable trays where permitted by NEC Section 392.10.

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-96-659/NEMA WC71 and UL 1072.

Insulation: Meets or exceeds electrical and physical requirements of ICEA S-96-659/NEMA WC71 and UL 1072.

Jacket: Meets or exceeds electrical and physical requirements of ICEA S-96-659/NEMA WC71 for chlorinated polyethylene jackets.

UL listed as Type MV-90, sunlight resistant, -40°C and for use in cable tray in accordance with UL 1072. CSA listed as RW90 as 5kV non-shielded (FT4 1/0 and larger) -40°C in accordance with CSA C22.2 No 38.

1/C non-shielded cables can surface discharge in service when in a random phase spacing or when in contact with grounded surfaces.

Product Features

- Okoguard cables meet or exceed all recognized industry standards (UL, CSA, NEMA/ICEA, IEEE).
- 90°C continuous operating temperature.
- 130°C emergency rating.
- 250°C short circuit rating
- Passes UL and IEEE 383 and 1202 (1/0 and larger) Vertical Tray Flame Test.
- Sizes 1/0 and larger meet CSA FT4 Vertical Tray Flame Test.
- Sizes #1 and smaller meet CSA FT1.
- Excellent corona resistance.
- Radiation resistant.
- Exceptional resistance to “treeing”.
- Stress cones not required.
- Moisture resistant.
- Resistant to most oils, acids, and alkalies.
- Sunlight Resistant.
- Sizes #6 and #8 AWG are identified as FAA-L-824, Type B 5kV rated.

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Product Data
Section 2: Sheet 2

Catalog Number (1)	Conductor Size AWG or kcmil	Conductor Size -mm²	Insulation Thickness - mils	Insulation Thickness - 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 (2) Conduit in Air	Ampacities (3) Underground Duct	Ampacities (4) Cable Tray	Conductor Size Inches (5)*
*▲ 114-24-2213	8	8.4	125	3.18	80	2.03	0.60	15.1	215	250	55	64	–	2
*▲ 114-24-2217	6	13.3	125	3.18	80	2.03	0.63	16.0	260	295	75	85	–	2
▲ 114-24-2219	4	21.2	125	3.18	80	2.03	0.67	17.1	328	368	97	110	–	2
▲ 114-24-2221	2	33.6	125	3.18	80	2.03	0.73	18.6	427	492	130	145	–	2
114-24-2223	1	42.4	125	3.18	80	2.03	0.76	19.4	493	558	155	170	—	2½
▲ 114-24-2225	1/0	53.5	125	3.18	80	2.03	0.80	20.3	580	645	180	195	195	2½
▲ 114-24-2227	2/0	67.4	125	3.18	80	2.03	0.88	22.4	682	742	205	220	225	2½
114-24-2229	3/0	85.0	125	3.18	95	2.41	0.96	24.5	838	908	240	250	260	3
▲ 114-24-2231	4/0	107.0	125	3.18	95	2.41	0.97	24.6	991	1086	280	290	300	3
114-24-2233	250	127.0	140	3.56	110	2.79	1.08	27.4	1198	1293	315	320	335	3
▲ 114-24-2237	350	177.0	140	3.56	110	2.79	1.18	29.9	1555	1660	385	385	410	3½
▲ 114-24-2243	500	253.0	140	3.56	110	2.79	1.29	32.9	2075	2205	475	470	520	3½
▲ 114-24-2249	750	380.0	155	3.94	125	3.18	1.54	39.0	3034	3224	600	585	675	5
114-24-2251	1000	507.0	155	3.94	125	3.18	1.70	43.0	3891	4141	690	670	805	5

* Marked "FAA L-824 5kV Type B".

Visit Okonite's web site, www.okonite.com for the most up to date dimensions.

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

Aluminum Okopact 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-90 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 90°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 90°C, 100% Load Factor, an ambient earth temperature of 20°C, and thermal resistance (RHO) of 90.

(4) Ampacities based on single Type MV-90 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 90°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 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.

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