



Okoguard HV - Okoseal

115/138 kV Shielded Power Cable

105°C Wet or Dry Conductor Rating: 100% Insulation Level



- A Uncoated, Okopact (Compact) or Compress Stranded Copper or Aluminum Conductor
- B Strand Screen-Extruded Semiconducting EPR
- C Insulation-Okoguard HV EPR
- D Insulation Screen-Extruded Semiconducting EPR
- E Shield- 5 Mil Uncoated Copper Tape
- F Jacket-Okoseal

Insulation

Okoguard HV is Okonite's low loss EPR insulation rated for wet or dry installations without the use water impervious sheaths or foils. Okoguard HV has the same important balance of properties as our medium voltage Okoguard but with optimized properties needed for high voltage operation.

Okoguard HV uses an all EPR insulation system whereby all three layers (strand screen, insulation, and insulation screen) are EPR, manufactured using triple tandem (1 pass) extrusion.

Okoguard HV insulation retains the distinctive red color in a totally integrated EPR system providing an optimum balance of electrical and physical properties needed for long, problem free HV installations.

Okoguard HV cables are compatible with all types of terminations, GIS connectors and splices.

Jackets

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

Applications

Okoguard HV cables are designed for use in primary circuits in both electrical utilities and industrial installations where they provide maximum circuit security and economical installation. Rated for continuous operation with a 105°C conductor temperature, Okoguard HV cables may be installed in wet or dry locations, indoors or outdoors (exposed to sunlight) in underground ducts, tunnels, directional bores, road bores or direct burial.

Specifications

Conductor: Uncoated copper sizes 750 through 1000 kcmil are compact stranding per B-496. Uncoated copper sizes larger than 1000 kcmil are compressed stranding per ASTM B-8. EC aluminum conductor sizes 750 kcmil and larger are compressed per stranding per ASTM B-231 and B-609.

Strand Screen: Thermoset, semiconducting EPR strand screen meets or exceeds the physical and electrical requirements of AEIC CS-9 and ICEA S-108-720.

Insulation: Wet or dry rated thermoset, low loss EPR insulation meets or exceeds the requirements of AEIC CS-9 and ICEA S-108-720.

Insulation Screen: Thermoset, bonded semiconducting EPR insulation screen meets or exceeds the physical and electrical requirements of AEIC CS-9 and ICEA S-108.720.

Shield: 5 mil thick uncoated copper tape, helically applied with 25% nominal overlap.

Jacket: Meets or exceeds the physical and electrical requirements of and ICEA S-108-720 for polyvinyl chloride jackets.

Optional Conductors: Available with compressed or compact round copper and aluminum conductor for sizes 750 through 1000 kcmil. Sizes larger than 1000 kcmil are only available with compressed stranding.

Note 750 kcmil is the minimum conductor size permitted by AEIC and ICEA. Filled strand copper and aluminum conductors are also available.

Optional Shields: Neutral wires, a combination of copper tape and neutral wires and LCS. Aluminum CLX armor covering is also available.

Optional Jackets: Okolene (PE or PP), Okolon TP-CPE and Okoclear TPPO (Low Smoke Zero Halogen). When specified, an additional semiconducting jacket extruded over the insulating jacket is available when field jacket integrity testing is required.

Product Features

- Moisture resistant.
- Corona Free per AEIC and ICEA.
- Exceptional resistance to "treeing".
- Sunlight resistant.
- Resistant to most oils, acids and alkalis.
- Triple tandem extruded all EPR system.

Ratings

- 105°C continuous, wet or dry, operating temperature.
- 140°C emergency.
- 250°C short circuit.
- 115 or 138 kV phase-to-phase.
- 550 or 650 kV BIL, respectively.

Applicable Industry Standards:

AEIC
ASTM
ICEA
NEMA

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115/138 kV Shielded Power Cable

105°C Wet or Dry Conductor Rating

100% Insulation Level

Product Data

Section 2: Sheet 55

Catalog Number	Conductor size AWG or kcmil	Approx. Dia. over Insulation (in.)	Approx. Dia. over Screen (in.)	Jacket Thickness - mils	Approx. O.D. -Inches	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	Ampacities (1) Direct Burial	Ampacities (1) Underground Duct
115kV Copper Conductor - Okoguard HV Insulation = 800 mils									
108-25-3234	750	2.61	2.71	140	3.02	5745	6505	757	691
108-25-3236	1000	2.75	2.85	140	3.16	6720	7640	877	803
108-25-3239	1250	2.95	3.05	140	3.35	8450	9380	978	895
108-25-3241	1500	3.07	3.17	140	3.48	8860	9790	1066	973
108-25-3243	1750	3.24	3.34	140	3.65	10035	11100	1135	1040
108-25-3245	2000	3.34	3.44	140	3.75	11000	12100	1197	1098
108-25-3247	2250	3.46	3.56	140	3.87	11900	13500	1253	1149
108-25-3249	2500	3.53	3.63	140	3.93	12900	14500	1297	1190
115kV Aluminum Conductor - Okoguard HV Insulation = 800 mils									
128-25-3235	750	2.68	2.78	140	3.09	4295	4770	597	544
128-25-3237	1000	2.83	2.93	140	3.24	4795	5450	698	637
128-25-3239	1250	2.95	3.05	140	3.35	5240	5890	783	716
128-25-3241	1500	3.07	3.17	140	3.48	5710	6360	862	787
128-25-3243	1750	3.24	3.34	140	3.65	6250	7275	927	850
128-25-3245	2000	3.34	3.44	140	3.75	6675	7755	987	905
128-25-3247	2250	3.43	3.53	140	3.84	7075	8625	1038	952
128-25-3249	2500	3.53	3.63	140	3.94	7500	9050	1087	997
128-25-3251	2750	3.64	3.74	140	4.05	7940	9490	1134	1039
128-25-3253	3000	3.72	3.82	140	4.13	8315	9865	1174	1076

Catalog Number	Conductor size AWG or kcmil	Approx. Dia. over Insulation (in.)	Approx. Dia. over Screen (in.)	Jacket Thickness - mils	Approx. O.D. -Inches	Approx. Net Weight lbs./1000'	Approx. Ship Weight lbs./1000'	Ampacities (1) Direct Burial	Ampacities (1) Underground Duct
138kV Copper Conductor - Okoguard HV Insulation = 850 mils									
108-26-3234	750	2.71	2.81	140	3.12	5990	6755	752	687
108-26-3236	1000	2.86	2.96	140	3.27	7010	7945	871	798
108-26-3239	1250	3.05	3.15	140	3.46	8140	9075	971	889
108-26-3241	1500	3.18	3.28	140	3.59	9145	10200	1058	967
108-26-3243	1750	3.35	3.45	140	3.75	10300	11400	1126	1033
108-26-3245	2000	3.44	3.54	140	3.85	11300	12900	1188	1090
108-26-3247	2250	3.56	3.66	140	3.97	13000	14600	1243	1141
108-26-3249	2500	3.63	3.73	140	4.04	13300	14800	1287	1181
138kV Aluminum Conductor - Okoguard HV Insulation = 850 mils									
128-26-3235	750	2.78	2.88	140	3.19	4550	5190	592	541
128-26-3237	1000	2.93	3.03	140	3.34	5060	5715	691	633
128-26-3239	1250	3.05	3.15	140	3.46	5515	6165	777	711
128-26-3241	1500	3.18	3.28	140	3.59	5995	6695	856	782
128-26-3243	1750	3.35	3.45	140	3.75	6550	7625	920	844
128-26-3245	2000	3.44	3.54	140	3.85	6985	8535	979	899
128-26-3247	2250	3.53	3.63	140	3.94	7390	8935	1030	946
128-26-3249	2500	3.63	3.73	140	4.04	7820	9370	1079	990
128-26-3251	2750	3.74	3.84	140	4.15	8265	9815	1124	1032
128-26-3253	3000	3.83	3.93	140	4.23	8650	10600	1165	1068

(1) Ampacity per IEEE Std 835; Geometry k for Duct Burial and g for duct. Tc=90°C, Ta=20°C, LF=100%

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