

CCW[®] Armored Power, 3/C VFD

UL Type MC-HL, XLPE, 2000 V, 90°C, Cable Tray Use, Sunlight-Resistant, Direct Burial
UL Marine Shipboard Cable, ABS CWCMC



Product Construction:

Conductor:

- Bare annealed copper per ASTM B3
- 10 AWG and smaller are Class B compressed stranding per ASTM B8
- 8 AWG and larger are compact standing per ASTM B496

Insulation:

- Cross-linked Polyethylene (XLPE) insulation, 2000 V thicknesses per ICEA S-95-658
- Color-coded black with printed numbers per ICEA Method 4

Grounding Conductors:

- Class B stranded bare annealed copper per ASTM B3 and B8
- Three (3) split grounding wires per specification 9615 exceed the minimum required in NEC Table 250.122

Cable Assembly:

- Insulated conductors and grounding wires are cabled together with non-hygroscopic fillers when required
- A binder tape is applied over the cabled core

CCW Armor:

- Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1569 and UL 2225
- CCW armor conductivity meets the grounding requirements of NEC Article 250

Jacket:

- Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC) — Black
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C

Applications:

- Variable Frequency Drives: 3-conductor CCW armored cables with three (3) symmetrical grounding wires is the preferred wiring method for use with AC motors controlled by pulse-width modulated Inverters in VFD applications
- CCW armored cables offer an economical, rugged and reliable alternative to labor-intensive cable in conduit wiring methods
- For use in Class I, II and III, Divisions 1 and 2; and Class I, Zones 1 and 2 hazardous locations per NEC Articles 501, 502 and 503
- For use as services, feeders and branch circuits for power, lighting, control, and signal circuits in accordance with NEC Articles 330 and 725
- Installed indoors or outdoors, wet or dry locations, directly buried, embedded in concrete, in a raceway, as aerial cable on a messenger, in cable trays, or as exposed runs secured to supports in accordance with NEC Article 330
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by the American Petroleum Institute

Features:

- 90°C, 2000 V rated XLPE insulation with a dielectric constant less than 3.0 to withstand momentary voltage spikes common in certain VFD applications
- Three (3) oversized, symmetrical grounding wires recommended for use with pulse-width modulated AC drives
- CCW armor provides an impervious barrier to moisture, gas and liquids

Features: (cont'd.)

- CCW armor provides EMI shielding performance
- Factory assembled and tested cable for use as an alternative to cable in conduit wiring systems
- Meets cold impact at -40°C
- 90°C continuous operating temperature, wet or dry
- 130°C emergency rating
- 250°C short circuit rating

Specifications:

Design Adherence:

- ICEA S-95-658/WC70 Standard for Non-Shielded Power Cable, 2 kV or Less
- UL 44 Rubber Insulated Wires and Cables
- UL 1569 Metal Clad Cables
- UL 2225 Cables and Cable Fittings for Use in Hazardous Locations
- UL 1309 Marine Shipboard Cable

Flame Tests:

- ICEA T-29-520 (210,000 BTU/hr)
- IEEE 383 (70,000 BTU/hr)
- CSA FT4
- IEEE 1202 (70,000 BTU/hr)
- UL 1581 (70,000 BTU/hr)
- IEC 332-3 Cat. A

Compliances:

- UL Type MC-HL, SUN RES, CT USE, DIR BUR, -40°C, UL File # E90496
- UL Listed Marine Shipboard, UL File # E85994
- American Bureau of Shipping (ABS) Listed for CWCMC
- RoHS Compliant

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CATALOG NUMBER	COND. SIZE (AWG/kcmil)	NO. OF COND.	INSULATION THICKNESS		BARE GROUND (AWG)	NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		JACKET THICKNESS		NOMINAL OVERALL O.D.		APPROXIMATE NET WEIGHT		90°C AMPACITY @ 30°C AMBIENT ¹
			mils	mm		INCHES	mm	INCHES	mm	mils	mm	INCHES	mm	LBS/1000 FT	kg/1000 m	
9615.01403318	14 (7/W) (2.08 mm ²)	3	60	1.52	3 x #18	0.44	11.1	0.62	15.2	50	1.27	0.73	17.9	267	397	15
9615.01203316	12 (7/W) (3.31 mm ²)	3	60	1.52	3 x #16	0.47	11.9	0.66	16.2	50	1.27	0.77	18.9	324	482	20
9615.01003314	10 (7/W) (5.26 mm ²)	3	60	1.52	3 x #14	0.53	13.3	0.73	17.8	50	1.27	0.84	20.5	400	595	30
9615.00803314	8 (7/W) (8.36 mm ²)	3	70	1.78	3 x #14	0.65	16.5	0.86	21.1	50	1.27	0.97	23.8	524	780	55
9615.00603312	6 (7/W) (13.3 mm ²)	3	70	1.78	3 x #12	0.71	18.0	0.96	23.4	50	1.27	1.07	26.1	697	1,037	75
9615.00403312	4 (7/W) (21.2 mm ²)	3	70	1.78	3 x #12	0.81	20.6	1.09	26.6	50	1.27	1.23	30.1	1,000	1,488	95
9615.00203310	2 (7/W) (33.6 mm ²)	3	70	1.78	3 x #10	0.94	23.9	1.25	30.6	50	1.27	1.36	33.3	1,285	1,912	130
9615.00103310	1 (19/W) (42.4 mm ²)	3	90	2.29	3 x #10	1.13	28.7	1.48	36.1	50	1.27	1.59	38.8	1,595	2,374	150
9615.11003310	1/0 (19/W) (53.5 mm ²)	3	90	2.29	3 x #10	1.21	30.6	1.55	38.0	60	1.52	1.68	41.2	1,930	2,872	170
9615.21003306	2/0 (19/W) (67.4 mm ²)	3	90	2.29	3 x #6	1.30	32.9	1.68	41.0	60	1.52	1.81	44.2	2,507	3,731	195
9615.41003304	4/0 (19/W) (107 mm ²)	3	90	2.29	3 x #4	1.53	38.7	1.91	46.7	60	1.52	2.04	49.9	3,590	5,342	260
9615.25003304	250 (37/W) (127 mm ²)	3	105	2.67	3 x #4	1.71	43.4	2.12	51.8	60	1.52	2.25	55.1	4,150	6,176	290
9615.35003302	350 (37/W) (177 mm ²)	3	105	2.67	3 x #2	1.93	48.9	2.41	58.9	75	1.91	2.57	62.8	5,214	7,759	350
9615.50003301	500 (37/W) (253 mm ²)	3	105	2.67	3 x #1	2.20	55.8	2.68	65.5	75	1.91	2.84	69.5	6,977	10,382	430

Dimensions and weights are nominal; subject to industry tolerances.

¹ Ampacities in accordance with NEC Article 310 and Table 310.15(B)(16).

