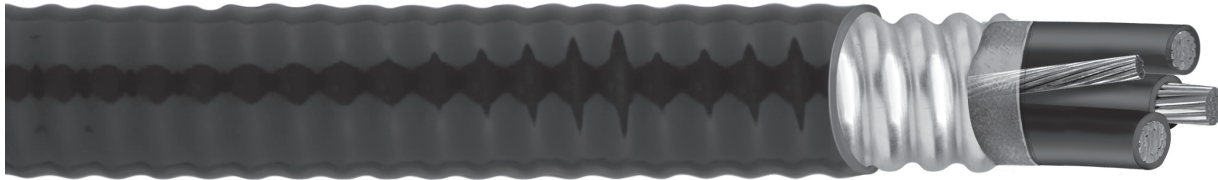


CCW® Armored Power, 3/C VFD and 4/C

UL Type MC-HL, CSA Type HL, XLPE, 600 V or 1000 V, 90°C, Cable Tray Use, Sunlight-Resistant Direct Burial, UL Marine Shipboard Cable, ABS CWCMC



Product Construction:

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

Insulation:

- Cross-linked Polyethylene (XLPE) insulation per ICEA S-95-658 and UL 44, Listed XHHW-2
- 6 AWG and smaller are color-coded per ICEA Method 1, Table E2
- 4 AWG and larger are black with printed numbers per ICEA Method 4
- Color-coded per CSA C22.2 No. 123 where applicable

Grounding Conductor(s):

- Class B stranded bare annealed copper per ASTM B3 and B8
- Where specified, single or three split grounding wires are sized in accordance with NEC Table 250.122

Cable Assembly:

- Insulated conductors and grounding wire(s) 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
- Meets CSA Low Acid Gas requirements

Applications:

- Variable Frequency Drives: 3-conductor CCW armored cables with three (3) symmetrical grounding wires are 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, 503 and 505
- 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:

- 3-conductor CCW power cables with three grounding wires are recommended for use with pulse-width modulated AC drives
- CCW armor provides an impervious barrier to moisture, gas and liquids
- CCW armor provides EMI shielding performance
- Factory assembled and tested cable for use as an alternative to cable in conduit wiring systems

Features (cont'd):

- Meets cold bend and 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
- CSA C22.2 No. 123 Metal Sheathed Cables
- CSA C22.2 No. 174 Cables and Cable Glands for Use in Hazardous Locations

Flame Tests:

- IEEE 383 (70,000 BTU/hr)
- CSA FT4
- IEEE 1202 (70,000 BTU/hr)

Compliances:

- UL Type MC-HL, XHHW-2, SUN RES, CT USE, DIR BUR, -40°C, 600V or 1000V, UL File # E90496
- UL Listed Marine Shipboard, UL File # E85994
- American Bureau of Shipping (ABS) Listed for CWCMC
- CSA certified^{1,2} 600V Type RA90, XLPE, HL, SR, FT4, and -40°C, CSA File # 7319
- RoHS Compliant

¹ Standard cables are also marked CSA Type RA90, except four (4) conductor cables which require a different color code, which may be special-ordered.

² CSA Type RA90 listed at 600V only

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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.		CROSS- SECTIONAL AREA ¹ SQ. IN.	APPROXIMATE NET WEIGHT		90°C AMPACITY @ 30°C AMBIENT ²
			mils	mm		IN	mm	IN	mm	mils	mm	IN	mm		LBS/ 1000 FT	kg/ 1000 m	
9600.01403318	"14 (7/W) (2.08 mm ²)"	3	30	0.76	3 x #18	0.29	7.3	0.45	11.5	50	1.27	0.56	14.1	0.24	189	282	15
9600.01404318	"12 (7/W) (3.31 mm ²)"	4	30	0.76	3 x #18	0.34	8.6	0.54	13.6	50	1.27	0.64	16.2	0.32	230	341	15
9600.01203316	"12 (7/W) (3.31 mm ²)"	3	30	0.76	3 x #16	0.34	8.6	0.54	13.6	50	1.27	0.64	16.2	0.32	246	366	20
9600.01204316	"12 (7/W) (3.31 mm ²)"	4	30	0.76	3 x #16	0.37	9.5	0.60	15.1	50	1.27	0.70	17.8	0.38	290	432	20
9600.01003314	"10 (7/W) (5.26 mm ²)"	3	30	0.76	3 x #14	0.43	10.9	0.65	16.5	50	1.27	0.75	19.2	0.45	320	476	30
9600.01004314	"10 (7/W) (5.26 mm ²)"	4	30	0.76	3 x #14	0.44	11.1	0.65	16.4	50	1.27	0.75	19.0	0.44	349	520	30
9600.00803314	"8 (7/W) (8.36 mm ²)"	3	45	1.14	3 x #14	0.50	12.8	0.72	18.4	50	1.27	0.83	21.0	0.54	413	615	55
9600.00804110	"8 (7/W) (8.36 mm ²)"	4	45	1.14	1 x #10	0.60	15.2	0.84	21.3	50	1.27	0.94	24.0	0.70	496	738	44
9600.00603312	"6 (7/W) (13.3 mm ²)"	3	45	1.14	3 x #12	0.57	14.5	0.82	20.9	50	1.27	0.93	23.5	0.67	565	840	75
9600.00604108	"6 (7/W) (13.3 mm ²)"	4	45	1.14	1 x #8	0.68	17.2	0.94	23.9	50	1.27	1.05	26.6	0.86	713	1062	60
9600.00403312	"4 (7/W) (21.2 mm ²)"	3	45	1.14	3 x #12	0.68	17.2	0.94	23.9	50	1.27	1.05	26.6	0.86	775	1153	95
9600.00404108	"4 (7/W) (21.2 mm ²)"	4	45	1.14	1 x #8	0.75	18.9	1.00	25.5	50	1.27	1.11	28.1	0.96	918	1366	76
9600.00203310	"2 (7/W) (33.6 mm ²)"	3	45	1.14	3 x #10	0.77	19.5	1.02	26.0	50	1.27	1.13	28.6	1.00	1057	1573	130
9600.00204106	"2 (7/W) (33.6 mm ²)"	4	45	1.14	1 x #6	0.87	22.0	1.12	28.5	50	1.27	1.23	31.2	1.18	1304	1940	104
9600.00103310	"1 (19/W) (42.4 mm ²)"	3	55	1.40	3 x #10	0.90	22.9	1.16	29.4	50	1.27	1.26	32.1	1.25	1295	1927	150
9600.00104106	"1 (19/W) (42.4 mm ²)"	4	55	1.40	1 x #6	0.99	25.1	1.26	32.1	50	1.27	1.37	34.7	1.47	1363	2028	120
9600.11003310	"1/0 (19/W) (53.5 mm ²)"	3	55	1.40	3 x #10	0.97	24.6	1.24	31.5	50	1.27	1.34	34.1	1.42	1558	2318	170
9600.11004106	"1/0 (19/W) (53.5 mm ²)"	4	55	1.40	1 x #6	1.12	28.4	1.37	34.8	50	1.27	1.48	37.6	1.72	1862	2771	136
9600.21003310	"2/0 (19/W) (67.4 mm ²)"	3	55	1.40	3 x #10	1.05	26.8	1.34	34.1	50	1.27	1.45	36.7	1.64	1838	2735	195
9600.21004106	"2/0 (19/W) (67.4 mm ²)"	4	55	1.40	1 x #6	1.22	30.9	1.51	38.2	60	1.52	1.63	41.4	2.09	2440	3631	156
9600.31003308	"3/0 (19/W) (85.0 mm ²)"	3	55	1.40	3 x #8	1.19	30.1	1.46	37.1	50	1.27	1.57	39.9	1.93	2421	3602	225
9600.31004104	"3/0 (19/W) (85.0 mm ²)"	4	55	1.40	1 x #4	1.36	34.5	1.65	41.9	60	1.52	1.78	45.2	2.49	2921	4346	180
9600.41003308	"4/0 (19/W) (107 mm ²)"	3	55	1.40	3 x #8	1.29	32.8	1.58	40.2	60	1.52	1.71	43.5	2.30	2899	4313	260
9600.41004104	"4/0 (19/W) (107 mm ²)"	4	55	1.40	1 x #4	1.44	36.7	1.78	45.2	60	1.52	1.91	48.5	2.86	3609	5370	208
9600.25003308	"250 (37/W) (127 mm ²)"	3	65	1.65	3 x #8	1.43	36.3	1.74	44.1	60	1.52	1.87	47.4	—	3352	4987	290
9600.25004104	"250 (37/W) (127 mm ²)"	4	65	1.65	1 x #4	1.60	40.7	1.96	49.8	60	1.52	2.09	53.1	—	4142	6163	232
9600.35003307	"350 (37/W) (177 mm ²)"	3	65	1.65	3 x #7	1.63	41.4	1.95	49.5	60	1.52	2.08	52.8	—	4501	6698	350
9600.35004103	"350 (37/W) (177 mm ²)"	4	65	1.65	1 x #3	1.81	46.0	2.15	54.7	75	1.91	2.28	58.0	—	5668	8434	280
9600.50003306	"500 (37/W) (253 mm ²)"	3	65	1.65	3 x #6	1.89	48.1	2.27	57.8	75	1.91	2.43	61.8	—	6225	9263	430
9600.50004102	"500 (37/W) (253 mm ²)"	4	65	1.65	1 x #2	2.12	53.8	2.48	63.1	75	1.91	2.65	67.2	—	8006	11912	344
9600.75003305	"750 (61/W) (380 mm ²)"	3	80	2.03	3 x #5	2.33	59.3	2.75	69.9	75	1.91	2.91	74.0	—	9086	13520	535
9600.75004101	"750 (61/W) (380 mm ²)"	4	80	2.03	1 x #1	2.61	66.3	3.03	77.0	85	2.16	3.21	81.5	—	11449	17037	428
9600.10003111	"1000 (61/W) (507 mm ²)"	3	80	2.03	1 x #1/0	2.67	67.8	3.11	79.0	85	2.16	3.30	83.8	—	11611	17280	615
9600.10004111	"1000 (61/W) (507 mm ²)"	4	80	2.03	1 x #1/0	3.07	78.0	3.63	92.2	85	2.16	3.81	96.8	—	15377	22883	492

Dimensions and weights are nominal; subject to industry tolerances.

¹ Cross-sectional area for cable tray fill is in accordance with NEC Section 392.22.

² Ampacities in accordance with NEC Article 310 and Table 310.15(B)(16).

Note: Three (3) conductors, 6 AWG and smaller are also marked CSA Type RA90. One (1) AWG and larger are also marked CSA Type RA90.

