

## CCW<sup>®</sup> Armored Power, 1000 V, 3/C VFD

CSA Type RA90, XLPE, 1000 V, 90°C, Cable Tray Use, Sunlight-Resistant  
Direct Burial, FT4, -40°C, AG14, HL



### Product Construction:

#### Conductor:

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

#### Insulation:

- Cross-linked Polyethylene (XLPE) insulation rated 1000 Volts, RW90 per CSA C22.2 No. 38
- Sizes 2 AWG and smaller utilize a single color insulation: black, red and blue
- Sizes 1 AWG and larger utilize black insulation with printed number/color, 1-black, 2-red, 3-blue

#### Bonding/Grounding Conductors:

- Class B stranded bare annealed copper per ASTM B3 and B8
- Three (3) symmetrical grounding wires are sized in accordance with CEC Table 16

#### Cable Assembly:

- Three symmetrical grounding wires are cabled within the interstices of the phase conductors
- 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 C22.2 No. 123

#### Jacket:

- Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC), black
- Meets CSA Low Gas Emission requirements, AG14

#### 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 industrial and commercial installations including hazardous locations in accordance with the CEC
- Can be installed in wet or dry locations, indoors or outdoors, in cable trays, in a raceway, or direct buried in accordance with the CEC

#### Features:

- 90°C, 1000 V wet or dry XLPE insulation and three (3) symmetrical grounding wires, recommended for use with pulse-width modulated AC drives
- XLPE insulation has a dielectric constant less than 3.0 to withstand momentary voltage spikes common with VFD applications

#### Features: (cont'd.)

- 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
- 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:

- CSA C22.2 No. 38 Thermoset-Insulated Wires and Cables
- CSA C22.2 No. 123 Metal Sheathed Cables
- CSA C22.2 No. 174 Cables and Cable Glands for Use in Hazardous Locations

##### Flame Tests:

- CSA FT4
- ICEA T-29-520 (210,000 BTU/hr)
- IEEE 383 (70,000 BTU/hr)
- IEEE 1202 (70,000 BTU/hr)

##### Compliances:

- CSA Certified Type RA90, XLPE, HL, SR, FT4, AG14 and -40°C, CSA File # 7319
- RoHS Compliant

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CATALOG NUMBER	COND. SIZE (AWG/kcmil)	NO. OF COND.	INSULATION THICKNESS		BARE GROUND COND. (AWG)	NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		JACKET THICKNESS		NOMINAL OVERALL O.D.		APPROXIMATE NET WEIGHT		MIN. BEND RADIUS <sup>1</sup>		90°C AMPACITY @ 30°C AMBIENT <sup>2</sup>
			mils	mm		INCHES	mm	INCHES	mm	mils	mm	INCHES	mm	LBS/1000 FT	kg/1000 m	INCHES	mm	
9675.01203318	12 (7/W) (3.31 mm <sup>2</sup> )	3	45	1.14	3 x #18	0.40	10.2	0.60	15.3	50	1.27	0.70	17.8	249	370	7.0	178	30
9675.01003316	10 (7/W) (5.26 mm <sup>2</sup> )	3	45	1.14	3 x #16	0.45	11.5	0.63	16.1	50	1.27	0.73	18.6	299	445	7.3	185	40
9675.00803314	8 (7/W) (8.36 mm <sup>2</sup> )	3	45	1.14	3 x #14	0.50	12.7	0.76	19.2	50	1.27	0.86	21.9	417	620	8.6	218	55
9675.00603312	6 (7/W) (13.3 mm <sup>2</sup> )	3	60	1.52	3 x #12	0.64	16.3	0.91	23.2	50	1.27	1.02	26.0	601	895	12.2	311	75
9675.00403312	4 (7/W) (21.2 mm <sup>2</sup> )	3	60	1.52	3 x #12	0.74	18.7	0.98	24.8	50	1.27	1.08	27.4	763	1,135	12.9	329	95
9675.00203310	2 (7/W) (33.6 mm <sup>2</sup> )	3	60	1.52	3 x #10	0.86	21.8	1.18	29.9	50	1.27	1.28	32.5	1,122	1,670	15.4	390	130
9675.00103310	1 (19/W) (42.4 mm <sup>2</sup> )	3	80	2.03	3 x #10	1.01	25.7	1.36	34.6	50	1.27	1.46	37.1	1,404	2,090	17.5	445	145
9675.11003310	1/0 (19/W) (53.5 mm <sup>2</sup> )	3	80	2.03	3 x #10	1.09	27.8	1.42	36.0	50	1.27	1.52	38.6	1,623	2,415	18.2	462	170
9675.21003310	2/0 (19/W) (67.4 mm <sup>2</sup> )	3	80	2.03	3 x #10	1.18	30.0	1.56	39.6	50	1.27	1.66	42.2	2,043	3,040	20.0	506	195
9675.41003308	4/0 (19/W) (107 mm <sup>2</sup> )	3	80	2.03	3 x #8	1.40	35.5	1.75	44.4	50	1.27	1.85	47.0	2,950	4,390	22.2	564	260
9675.25003308	250 (37/W) (127 mm <sup>2</sup> )	3	90	2.29	3 x #8	1.49	37.8	1.90	48.2	50	1.27	2.01	51.1	3,380	5,030	24.1	612	290
9675.35003308	350 (37/W) (177 mm <sup>2</sup> )	3	90	2.29	3 x #8	1.74	44.3	2.22	56.4	50	1.27	2.33	59.2	4,465	6,645	27.9	710	350
9675.50003306	500 (37/W) (253 mm <sup>2</sup> )	3	90	2.29	3 x #6	2.00	50.9	2.48	63.0	50	1.27	2.59	65.8	6,152	9,155	31.0	789	430

Dimensions and weights are nominal; subject to industry tolerances.

<sup>1</sup> Minimum bend radius per Canadian Electrical Code, Part I, Section 12-712.

<sup>2</sup> Ampacity per Table #2, Canadian Electrical Code.