

## CCW<sup>®</sup> Armored Control With Grounding Conductor

UL Type MC-HL, XLPE, 600 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
- Compressed Class B stranding per ASTM B8

#### Insulation:

- Cross-Linked Polyethylene (XLPE) insulation per ICEA S-73-532 and UL 44, Listed XHHW-2
- Color-coded per ICEA Method 1, Table E2, full-colored insulation with stripes
- Color-coded per CSA C22.2 No. 123 where applicable

#### Grounding Conductor:

- Class B stranded bare annealed copper per ASTM B3 and B8
- Cross-Linked Polyethylene (XLPE) insulation, green
- Sized in accordance with NEC Table 250.122

#### Cable Assembly:

- Insulated conductors and grounding wire are cabled together with non-hygroscopic fillers when required
- A binder tape, when required, 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:

- CCW armored Control 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:

- 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:

- ICEA S-73-532/WC-57 Standard for Control, Thermocouple Extension and Instrumentation Cables
- 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:

- 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 60332-3 Cat. A

#### Compliances:

- UL Type MC-HL, XHHW-2, SUN RES, CT USE, DIR BUR, -40°C, UL File # E69797
- UL Listed Marine Shipboard, UL File # E85994
- American Bureau of Shipping (ABS) Listed for CWCMC
- CSA certified Type RA90, XLPE, HL, SR, FT4, and -40°C, CSA File # 7319

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

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| CATALOG NUMBER | COND. SIZE (AWG) | NO. OF COND. | GREEN INSULATED GROUND (AWG) | INSULATION THICKNESS |    | NOMINAL CORE O.D. |    | NOMINAL ARMOR O.D. |    | JACKET THICKNESS |    | NOMINAL OVERALL O.D. |    | CROSS-SECTIONAL AREA <sup>1</sup> (SQ. IN.) | APPROXIMATE NET WEIGHT |           | 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 |   |

**14 AWG 7W (2.08 mm<sup>2</sup>) MULTI-CONDUCTOR CONTROL CABLE WITH GREEN INSULATED GROUNDING CONDUCTOR**

|               |    |    |    |    |      |      |      |      |      |    |      |      |      |      |     |       |    |
|---------------|----|----|----|----|------|------|------|------|------|----|------|------|------|------|-----|-------|----|
| 9500.01402114 | 14 | 2  | 14 | 30 | 0.76 | 0.30 | 7.6  | 0.49 | 12.4 | 50 | 1.27 | 0.60 | 15.2 | 0.29 | 163 | 243   | 15 |
| 9500.01403114 | 14 | 3  | 14 | 30 | 0.76 | 0.33 | 8.4  | 0.53 | 13.5 | 50 | 1.27 | 0.64 | 16.3 | 0.33 | 192 | 286   | 15 |
| 9500.01404114 | 14 | 4  | 14 | 30 | 0.76 | 0.37 | 9.4  | 0.58 | 14.7 | 50 | 1.27 | 0.69 | 17.5 | 0.38 | 222 | 330   | 15 |
| 9500.01405114 | 14 | 5  | 14 | 30 | 0.76 | 0.39 | 9.9  | 0.60 | 15.2 | 50 | 1.27 | 0.71 | 18.0 | 0.40 | 245 | 365   | 15 |
| 9500.01406114 | 14 | 6  | 14 | 30 | 0.76 | 0.41 | 10.4 | 0.62 | 15.7 | 50 | 1.27 | 0.73 | 18.5 | 0.42 | 267 | 397   | 15 |
| 9500.01408114 | 14 | 8  | 14 | 30 | 0.76 | 0.49 | 12.4 | 0.71 | 18.0 | 50 | 1.27 | 0.82 | 20.8 | 0.54 | 321 | 478   | 15 |
| 9500.01411114 | 14 | 11 | 14 | 30 | 0.76 | 0.57 | 14.5 | 0.80 | 20.3 | 50 | 1.27 | 0.91 | 23.1 | 0.66 | 395 | 588   | 12 |
| 9500.01418114 | 14 | 18 | 14 | 30 | 0.76 | 0.69 | 17.5 | 0.93 | 23.6 | 50 | 1.27 | 1.04 | 26.4 | 0.86 | 554 | 824   | 12 |
| 9500.01436114 | 14 | 36 | 14 | 30 | 0.76 | 0.97 | 24.6 | 1.24 | 31.5 | 50 | 1.27 | 1.35 | 34.3 | 1.45 | 948 | 1,411 | 10 |

**12 AWG 7W (3.31 mm<sup>2</sup>) MULTI-CONDUCTOR CONTROL CABLE WITH GREEN INSULATED GROUNDING CONDUCTOR**

|               |    |    |    |    |      |      |      |      |      |    |      |      |      |      |       |       |    |
|---------------|----|----|----|----|------|------|------|------|------|----|------|------|------|------|-------|-------|----|
| 9500.01202112 | 12 | 2  | 12 | 30 | 0.76 | 0.34 | 8.6  | 0.53 | 13.5 | 50 | 1.27 | 0.64 | 16.3 | 0.33 | 200   | 298   | 20 |
| 9500.01203112 | 12 | 3  | 12 | 30 | 0.76 | 0.37 | 9.4  | 0.58 | 14.7 | 50 | 1.27 | 0.69 | 17.5 | 0.38 | 239   | 356   | 20 |
| 9500.01204112 | 12 | 4  | 12 | 30 | 0.76 | 0.45 | 11.4 | 0.67 | 17.0 | 50 | 1.27 | 0.78 | 19.8 | 0.48 | 310   | 461   | 20 |
| 9500.01205112 | 12 | 5  | 12 | 30 | 0.76 | 0.46 | 11.7 | 0.67 | 17.0 | 50 | 1.27 | 0.78 | 19.8 | 0.48 | 324   | 482   | 20 |
| 9500.01206112 | 12 | 6  | 12 | 30 | 0.76 | 0.47 | 11.9 | 0.67 | 17.0 | 50 | 1.27 | 0.78 | 19.8 | 0.48 | 338   | 503   | 20 |
| 9500.01208112 | 12 | 8  | 12 | 30 | 0.76 | 0.56 | 14.2 | 0.80 | 20.3 | 50 | 1.27 | 0.91 | 23.1 | 0.66 | 426   | 634   | 20 |
| 9500.01211112 | 12 | 11 | 12 | 30 | 0.76 | 0.65 | 16.5 | 0.89 | 22.6 | 50 | 1.27 | 1.00 | 25.4 | 0.80 | 519   | 772   | 15 |
| 9500.01218112 | 12 | 18 | 12 | 30 | 0.76 | 0.78 | 19.8 | 1.02 | 25.9 | 50 | 1.27 | 1.13 | 28.7 | 1.02 | 739   | 1,100 | 15 |
| 9500.01236112 | 12 | 36 | 12 | 30 | 0.76 | 1.10 | 27.9 | 1.37 | 34.8 | 50 | 1.27 | 1.48 | 37.6 | 1.74 | 1,302 | 1,938 | 12 |

**10 AWG 7W (5.26 mm<sup>2</sup>) MULTI-CONDUCTOR CONTROL CABLE WITH GREEN INSULATED GROUNDING CONDUCTOR**

|               |    |    |    |    |      |      |      |      |      |    |      |      |      |      |     |       |    |
|---------------|----|----|----|----|------|------|------|------|------|----|------|------|------|------|-----|-------|----|
| 9500.01002110 | 10 | 2  | 10 | 30 | 0.76 | 0.39 | 9.9  | 0.58 | 14.7 | 50 | 1.27 | 0.69 | 17.5 | 0.38 | 253 | 377   | 30 |
| 9500.01003110 | 10 | 3  | 10 | 30 | 0.76 | 0.41 | 10.4 | 0.62 | 15.7 | 50 | 1.27 | 0.73 | 18.5 | 0.42 | 303 | 451   | 30 |
| 9500.01004110 | 10 | 4  | 10 | 30 | 0.76 | 0.45 | 11.4 | 0.67 | 17.0 | 50 | 1.27 | 0.78 | 19.8 | 0.48 | 348 | 518   | 30 |
| 9500.01006110 | 10 | 6  | 10 | 30 | 0.76 | 0.54 | 13.7 | 0.75 | 19.1 | 50 | 1.27 | 0.86 | 21.8 | 0.59 | 451 | 671   | 28 |
| 9500.01008110 | 10 | 8  | 10 | 30 | 0.76 | 0.65 | 16.5 | 0.89 | 22.6 | 50 | 1.27 | 1.00 | 25.4 | 0.80 | 568 | 845   | 28 |
| 9500.01011110 | 10 | 11 | 10 | 30 | 0.76 | 0.75 | 19.1 | 0.97 | 24.6 | 50 | 1.27 | 1.08 | 27.4 | 0.93 | 704 | 1,048 | 20 |

Dimensions and weights are nominal; subject to industry tolerances.

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

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

Note: Standard cables with up to and including six (6) conductors are also marked CSA Type RA90. All others are special order.



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