**TYPE MC - ALUMINUM CONDUCTOR - ALUMINUM ARMOR - 600V**

**THHN/THWN-2 CONDUCTORS (6 AWG - 4/0 AWG)**

**ENGINEERING SPECIFICATIONS**

**Standards**
- Underwriters Laboratories® Standards UL-83, UL-1569, UL-1581, UL-2556 for type MC; Federal Specification AA-59544; NFPA 70 (NEC®) Article 330; NEMA RV-1 2014; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; RoHS Compliant;
- MasterSpec Division 26 Sections 260519, 260523, UL Listing #E - 301130

**APPLICATIONS**
Type MC cable shall be permitted as follows:
- Permitted use for services, feeders, and branch circuits in residential, commercial and industrial locations;
- Permitted for use in non-patient care areas of health care facilities (NEC 517.12);
- Acceptable for power, lighting, control, and signal circuits;
- Allowable in concealed or exposed installations;
- Permitted use in dry locations or when embedded in plaster finish on brick or other masonry except in damp or wet locations;
- Utilized for environmental air-handling spaces (NEC 300.22(C));
- Allowable in assembly occupancies (NEC 518.4);
- Permissible in theaters, audience areas of motion pictures, television studios and similar locations (NEC 520.5);
- Allowable installations in approved raceways and cable trays (NEC 392);
- Suitable for installations under raised floors for IT equipment (NEC 645.5(E));
- Permitted in Class I Div. 2, Class II Div. 2, and Class III Div. 1 Hazardous Locations and listed for use in UL 1, 2, and 3-Hour Through-Penetration Firestop Systems.

**CONSTRUCTION**
Available in sizes 6 AWG through 750 KCMIL, Encore Wire’s Metal-Clad Cable is constructed with Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836. Type THHN/THWN-2 conductors rated 90°C dry. Sizes 6 AWG through 750 KCMIL contain a bare aluminum ground wire. All conductors are cabled together with separator tape, which contains the identification print legend. Interlocked aluminum armor is applied over the assembly. AVAILABLE WITH LIGHTWEIGHT GALVANIZED STEEL ARMOR.

### Phase Conductors

<table>
<thead>
<tr>
<th>AWG or KCMIL/</th>
<th>No. of</th>
<th>Insulation</th>
<th>Nylon</th>
<th>Bare</th>
<th>No. of</th>
<th>Outside</th>
<th>Approximate</th>
<th>75°C</th>
<th>90°C</th>
<th>Coils</th>
<th>Reels</th>
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</thead>
<tbody>
<tr>
<td>No. of Conductors</td>
<td>Strands</td>
<td>Thickness</td>
<td>Thickness</td>
<td>Ground</td>
<td>Strands</td>
<td>Diameter</td>
<td>Net Weight (lbs/1000 ft)</td>
<td>100°C</td>
<td>100°F</td>
<td>(ft)</td>
<td>(ft)</td>
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<tr>
<td>6/3</td>
<td>7</td>
<td>0.030</td>
<td>0.050</td>
<td>6 AWG</td>
<td>7</td>
<td>0.741</td>
<td>215</td>
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<td>125</td>
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<td>1000'</td>
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<td>0.050</td>
<td>6 AWG</td>
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<td>125</td>
<td>500'</td>
<td>1000'</td>
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<td>0.040</td>
<td>0.060</td>
<td>6 AWG</td>
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<td>0.874</td>
<td>295</td>
<td>65</td>
<td>100'</td>
<td>500'</td>
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<td>4/4</td>
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<td>0.060</td>
<td>6 AWG</td>
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<td>65</td>
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<td>500'</td>
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<td>75</td>
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<td>500'</td>
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<td>0.060</td>
<td>4 AWG</td>
<td>7</td>
<td>0.998</td>
<td>406</td>
<td>90</td>
<td>100'</td>
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<tr>
<td>2/4</td>
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<td>0.060</td>
<td>4 AWG</td>
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<td>1.092</td>
<td>504</td>
<td>90</td>
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<tr>
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<td>0.050</td>
<td>0.070</td>
<td>4 AWG</td>
<td>7</td>
<td>1.129</td>
<td>555</td>
<td>100</td>
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<td>1000'</td>
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<td>0.070</td>
<td>4 AWG</td>
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<td>1.214</td>
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<td>135</td>
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<td>0.070</td>
<td>4 AWG</td>
<td>7</td>
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<td>760</td>
<td>120</td>
<td>135</td>
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<td>4 AWG</td>
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<td>705</td>
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<td>150</td>
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<td>2/0-4</td>
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<td>0.070</td>
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<td>891</td>
<td>135</td>
<td>150</td>
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<td>3/0-4</td>
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<td>4 AWG</td>
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<td>175</td>
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<td>3/0-5</td>
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<td>0.050</td>
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<td>175</td>
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<tr>
<td>4/0-5</td>
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<td>2 AWG</td>
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<td>205</td>
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<tr>
<td>4/0-4</td>
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<td>0.070</td>
<td>2 AWG</td>
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<td>1.689</td>
<td>1282</td>
<td>180</td>
<td>205</td>
<td>-</td>
<td>1000'</td>
</tr>
</tbody>
</table>

**Allowable Ampacity (Amps)**
- Standard Packaging (ft)

**FEATURES**
- Installation costs reduced up to 50% over conduit and wire; aluminum armor weight is up to 45% less than steel; while not required by Section 330.40, insulating anti-short bushings are supplied with each reel; for ease of installation and pulling, cable is reverse wound on reels.

**Standard Conductor Color Coding**
- Black/White
- Black/Red/White
- Black/Red/Blue/White
- Ground

**Ampacity of conductors are based on the National Electrical Code (NFPA 70) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.**

NEC Article 110.14(B)(2)(a) for ambient temperature correction factors for temperatures other than 30°C (86°F).
NEC Article 310.15(B)(3)(a) for ampacity adjustment factors, as applicable, for more than three current-carrying conductors.
NEC Article 110.14(C) for conductor temperature limitations for equipment rated 100 amps or less, or for equipment rated for more than 100 amps. The above data is approximate and subject to manufacturing tolerances.
### ENGINEERING SPECIFICATIONS

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### Standards
- **Neutral Conductor**: 500/3, 400/3, 300/3, 250/3, 200/3, 150/3, 100/3, 75/3, 50/3, 35/3, 30/3, 25/3, 20/3, 16/3, 12/3, 10/3, 8/3, 6/3, 4/3, 3/3, 2/3, 1/3
- **Phase Conductor**: 750/4, 500/4, 400/4, 350/4, 300/4, 250/4, 200/4, 150/4, 100/4, 75/4, 50/4, 40/4, 36/4, 30/4, 25/4, 20/4, 15/4, 12/4, 10/4, 8/4, 6/4, 4/4, 3/4, 2/4, 1/4

### Table of Dimensions

<table>
<thead>
<tr>
<th>No. of Conductors</th>
<th>AWG or KCMIL/No. of Conductors</th>
<th>No. of Strands</th>
<th>Insulation Thickness (in)</th>
<th>Nylon Thickness (in)</th>
<th>Bare Ground (AWG)</th>
<th>No. of Strands</th>
<th>Outside Diameter over Armor (in)</th>
<th>Approximate Net Weight (lbs/1000 ft)</th>
<th>Allowable Ampacity (Amps)</th>
<th>Standard Packaging (ft)</th>
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<tbody>
<tr>
<td>2</td>
<td>120V/208V/240V</td>
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<td></td>
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<td></td>
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