ENGINEERING SPECIFICATIONS

Standards
Underwriters Laboratories Standard UL-44, UL-1277, UL-1581, UL-2556; ASTM Stranding Class B3, B8, B787; Federal Specification A-A-59544, NEMA WC-70/ICEA S-95-658; NFPA 70 (NEC®) Article 336, 392; UL 1685-FT4/IEEE 1202 (70,000 Btu/hr) Flame Test; NEMA WC 57/ICEA S-73-532; ICEA T-29-520 (210,000 Btu/hr) Flame Test; ARRA 2009 Section 1605 “Buy American” Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-179429

CONSTRUCTION

Conductors
Bare, soft-annealed stranded copper conductors per ASTM-B3, ASTM-B8 and ASTM-B787

Insulation
Cross-linked polyethylene (XLPE) High Heat Water Resistant. Rated for use in wet or dry locations at temperatures not to exceed 90ºC dry or wet to meet UL-44 requirements for type XHHW-2 wire. Suitable for use in low-leaking circuits requiring a dielectric constant of 3.5 or less.

Ground Conductor
XLPE insulated green ground

Assembly
The insulated conductors are cabled together with a green insulated ground and with or without fillers as required to form a round compact core. Nylon rip-cord is supplied for easy stripping.

Color Coding
Black insulation with ICEA Method 4 printed number

APPLICATIONS

Primarily used for connecting power devices in commercial and industrial environments. Suitable for installation in channels, ducts, wireways, cable trays, and raceways. Approved for direct burial in wet or dry locations and outdoors in cable trays where sunlight-resistant rating is required. Cables constructed and listed for applications requiring TC-ER-JP rating. Approved for Class I Division II Hazardous Locations.

<table>
<thead>
<tr>
<th>Size (AWG)</th>
<th>No. of Conductors</th>
<th>Size of Ground Wire (AWG)</th>
<th>Outside Jacket Thickness PVC (in)</th>
<th>Allowable Ampacity (Amps)</th>
<th>Outside Diameter (in)</th>
<th>Approximate Net Weight (lbs/1000 ft)</th>
<th>Standard Packaging (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>3/4</td>
<td>10 AWG Green Insulated</td>
<td>0.060</td>
<td>0.060</td>
<td>40</td>
<td>50</td>
<td>55</td>
</tr>
<tr>
<td>6</td>
<td>3/4</td>
<td>8 AWG Green Insulated</td>
<td>0.060</td>
<td>0.060</td>
<td>55</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>4</td>
<td>3/4</td>
<td>8 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>70</td>
<td>85</td>
<td>95</td>
</tr>
<tr>
<td>2</td>
<td>3/4</td>
<td>6 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>85</td>
<td>115</td>
<td>130</td>
</tr>
<tr>
<td>1</td>
<td>3/4</td>
<td>6 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>95</td>
<td>130</td>
<td>145</td>
</tr>
<tr>
<td>1/0</td>
<td>3/4</td>
<td>6 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>110</td>
<td>150</td>
<td>170</td>
</tr>
<tr>
<td>2/0</td>
<td>3/4</td>
<td>6 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>125</td>
<td>175</td>
<td>195</td>
</tr>
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<td>3/0</td>
<td>3/4</td>
<td>4 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>145</td>
<td>200</td>
<td>225</td>
</tr>
<tr>
<td>4/0</td>
<td>3/4</td>
<td>4 AWG Green Insulated</td>
<td>0.080</td>
<td>0.080</td>
<td>165</td>
<td>230</td>
<td>260</td>
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</tbody>
</table>

1. Ampacity of conductors are based on NFPA 70 (NEC) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.
2. 60ºC when terminated to equipment for circuits rated 100 amperes or less or marked for size 14 AWG through 1 AWG conductor.
3. 75ºC when terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.
4. 90ºC for ampacity derating purposes.
5. When the neutral is considered current-carrying conductor, the ampacity of 4/C cables shall be reduced by a factor of 0.80 per NEC 310.15(B)(3)(a).
6. The above data is approximate and subject to normal manufacturing tolerances.
7. 8 AWG THROUGH 4/0 AWG ARE 19 STRANDS PER CONDUCTOR

**TYPE TC - POWER CABLE - W/ INSULATED GROUND**

**XHHW-2 INNERS**

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### ENGINEERING SPECIFICATIONS

#### Standards

- Underwriters Laboratories Standard UL-44, UL-1277, UL-1581, UL-2556; ASTM Stranding Class B3, B8, B787; Federal Specification W/C-57/ICEA S-73-532; NFPA 70 (NEC®) Article 336, 392; UL 1685-FT4/IEEE 1202 (70,000 Btu/hr) Flame Test; NEMA WC 57/ICEA S-73-532; ICEA T-29-520 (210,000 Btu/hr) Flame Test; ARRA 2009 Section 1605 “Buy American” Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-179429

### CONSTRUCTION

#### Conductors

- Bare, soft-annealed stranded copper conductors per ASTM-B3, ASTM-B8 and ASTM-B787

#### Insulation

- Cross-linked polyethylene (XLPE) High Heat Water Resistant. Rated for continuous use in wet or dry locations at temperatures not to exceed 90ºC dry or wet to meet UL-44 requirements for type XHHW-2 wire. Suitable for use in low-leaking circuits requiring a dielectric constant of 3.5 or less.

#### Ground Conductor

- XLPE insulated green ground

#### Assembly

- The insulated conductors are cabled together with a green insulated ground and with or without fillers as required to form a round compact core. Nylon rip-cord is supplied for easy stripping.

#### Color Coding

- Black insulation with ICEA Method 4 printed number

#### Overall Jacket

- A flame retardant, sunlight-resistant black PVC jackets is applied over shielded core. Sunlight-resistant overall jacket available in all colors by request. Also available in chlorinated polyethylene jacket (CPE) by request.

### APPLICATIONS

- Primarily used for connecting power devices in commercial and industrial environments. Suitable for installation in channels, ducts, wireways, cable trays, and conduits. Approved for direct burial in wet or dry locations and outdoors in cable trays where sunlight-resistant rating is required. Cables constructed and listed for applications requiring TC-ER-JP rating. Approved for Class I Division II Hazardous Locations.

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#### Table: Size and Specifications

<table>
<thead>
<tr>
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<th>Outside Jacket Thickness PVC (in)</th>
<th>Allowable Ampacity (Amps)</th>
<th>Outside Diameter (in)</th>
<th>Approximate Net Weight (lbs/1000 ft)</th>
<th>Standard Packaging (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>250</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>0.080</td>
<td>215</td>
<td>1.782</td>
<td>3156</td>
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<tr>
<td>300</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>0.110</td>
<td>240</td>
<td>1.968</td>
<td>3843</td>
</tr>
<tr>
<td>350</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>0.110</td>
<td>280</td>
<td>2.417</td>
<td>4857</td>
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<tr>
<td>400</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>0.110</td>
<td>320</td>
<td>2.838</td>
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<td>3</td>
<td>4</td>
<td>2</td>
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<td>350</td>
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<tr>
<td>600</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>0.110</td>
<td>400</td>
<td>3.069</td>
<td>9378</td>
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<td>4</td>
<td>1</td>
<td>0.110</td>
<td>475</td>
<td>3.347</td>
<td>11307</td>
</tr>
</tbody>
</table>

1. Ampacities of conductors are based on NFPA 70 (NEC) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.

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**PRINT LEGEND:** ENCORE WIRE CORPORATION (enc) TYPE TC-ER-JP CABLE XHHW-2 CDRS SUN-RES 600V DIR-BUR (UL) DATE/TIME/OPER/QC