HVTECK SPECIFICATIONS
HVTECK CU 3/C 115EPR TS LSZH AIA LSZH SOLONON® 5KV 133% CSA

PRODUCT HIGHLIGHTS
Southwire’s 5KV HVTECK Solonon® low smoke zero halogen jacketed cable is a CSA armoured cable for industrial and commercial medium voltage applications. Rated FT4-ST1, -25°C, Hazardous Locations (HL) and 105°C for use in harsh Canadian environments. For installation in cable trays, duct banks, direct burial, troughs, continuous rigid cable supports and concrete encasable.

CONSTRUCTION
Conductor
- Class B compressed stranded copper
- Tinning on copper conductors

Options
- Class B compact stranded - 8000 Series Aluminum - ACM
- Class B compact stranded copper
- Strand wrapping technology
- Bonding Conductor
- No lead EPR (Ethylene Propylene Rubber)
- Insulation level: 133%
- 105°C rated
- CSA 68.10 - Shield Removal/termination requirements are printed on the surface
- Phase identification as per ICEA Method 3, using printed circuit numbers
- Meets requirement of ICEA but built to CSA standards

Copper Tape Shield
- Helically wrapped 5 mil copper tape with 25% overlap

Bonding Conductor
- Class B compressed stranded bare copper
- In accordance with ASTM B3 and B9

Fillers
- Non-wicking, non-hygrosopic

Inner Jacket
- Black PVC
- Thickness: No.2 AWG to No.1 AWG = 0.08 inches (2.03mm)
- No.1/0 AWG to 350 kcmil = 0.11 inches (2.79mm)

Insulation Shield
- Extruded semi-conducting thermosetting polymeric layer

Insulation
- Extruded semi-conducting thermosetting polymeric layer

Armour
- Aluminum Interlocked Armour (AIA)
- Optional Galvanized Steel Interlocked Armour (GSIA)

Typical Print Legend
- (CSA) SOUTHWIRE (NESC) #3/3/3 (#AWG or #kcmil) CU 115 EPR AIA 5KV 133% INS LEVEL 25% TS SUN RES 105° FT4-ST1 LSZH SOLONON HL (-25°C) LTDY RoHS YEAR (SEQUENTIAL METER MARKS)

TABLE 1 - WEIGHTS & MEASUREMENTS

<table>
<thead>
<tr>
<th>HVTECK Product Code</th>
<th>AWG Insulation</th>
<th>Diameter Over Insulation</th>
<th>Diameter Over Insulation Shield</th>
<th>Bonding Cond. Dia.</th>
<th>Diameter Over Inner Jacket</th>
<th>Diameter Over Armour</th>
<th>Approx. Overall Diameter</th>
<th>Minimum Bend Radius</th>
<th>Approx. Weight of Cable</th>
<th>Max. Real Weight (reel and cable)**</th>
<th>Max. Real Diameter / Width **</th>
<th>Max. Real Length of Cable on Reel **</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU115M44-002</td>
<td>2/0 (1/0)</td>
<td>0.283</td>
<td>7.2</td>
<td>0.543</td>
<td>13.8</td>
<td>0.623</td>
<td>15.8</td>
<td>6</td>
<td>1.549</td>
<td>39.3</td>
<td>1.604</td>
<td>22.55</td>
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<tr>
<td>CU115M44-001</td>
<td>1/0 (1/0)</td>
<td>0.322</td>
<td>8.5</td>
<td>0.582</td>
<td>14.8</td>
<td>0.662</td>
<td>16.8</td>
<td>6</td>
<td>1.633</td>
<td>41.5</td>
<td>1.963</td>
<td>49.9</td>
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<tr>
<td>CU115M44-010</td>
<td>1/0 (1/0)</td>
<td>0.362</td>
<td>9.2</td>
<td>0.622</td>
<td>15.8</td>
<td>0.702</td>
<td>17.8</td>
<td>6</td>
<td>1.780</td>
<td>45.2</td>
<td>2.110</td>
<td>53.6</td>
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<tr>
<td>CU115M44-020</td>
<td>2/0 (1/0)</td>
<td>0.405</td>
<td>10.3</td>
<td>0.665</td>
<td>16.9</td>
<td>0.745</td>
<td>18.9</td>
<td>6</td>
<td>1.872</td>
<td>47.6</td>
<td>2.202</td>
<td>55.9</td>
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<td>CU115M44-030</td>
<td>3/0 (1/0)</td>
<td>0.456</td>
<td>11.6</td>
<td>0.716</td>
<td>18.2</td>
<td>0.796</td>
<td>20.2</td>
<td>4</td>
<td>1.983</td>
<td>50.0</td>
<td>2.313</td>
<td>58.7</td>
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<tr>
<td>CU115M44-040</td>
<td>4/0 (1/0)</td>
<td>0.512</td>
<td>13.0</td>
<td>0.772</td>
<td>19.6</td>
<td>0.852</td>
<td>21.6</td>
<td>4</td>
<td>2.104</td>
<td>53.4</td>
<td>2.434</td>
<td>61.8</td>
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<tr>
<td>CU115M44-250</td>
<td>250 (37)</td>
<td>0.558</td>
<td>14.2</td>
<td>0.829</td>
<td>21.0</td>
<td>0.908</td>
<td>23.1</td>
<td>4</td>
<td>2.224</td>
<td>56.5</td>
<td>2.564</td>
<td>65.6</td>
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<tr>
<td>CU115M44-350</td>
<td>350 (37)</td>
<td>0.681</td>
<td>16.8</td>
<td>0.931</td>
<td>23.6</td>
<td>1.011</td>
<td>26.7</td>
<td>3</td>
<td>2.447</td>
<td>62.2</td>
<td>2.777</td>
<td>70.5</td>
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<td>CU115M44-500</td>
<td>500 (37)</td>
<td>0.789</td>
<td>20.0</td>
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<td>26.9</td>
<td>1.139</td>
<td>29.9</td>
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<td>2.783</td>
<td>70.7</td>
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<td>CU115M44-750</td>
<td>750 (16)</td>
<td>0.988</td>
<td>24.6</td>
<td>1.248</td>
<td>31.7</td>
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<td>33.7</td>
<td>2</td>
<td>3.192</td>
<td>81.1</td>
<td>3.522</td>
<td>89.5</td>
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<td>CU115M44-1000</td>
<td>1000 (16)</td>
<td>1.117</td>
<td>28.4</td>
<td>1.397</td>
<td>35.5</td>
<td>1.477</td>
<td>37.5</td>
<td>3</td>
<td>3.514</td>
<td>89.2</td>
<td>3.844</td>
<td>97.6</td>
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</tbody>
</table>

NOTE: These are minimum average dimensions as per CSA Standards.
* Other conductor sizes and outer jacket colours are available upon request. (#s in brackets represent # of strands / conductor)
** Longer maximum lengths may be possible. Standard sizes and lengths may be supplied. Reel sizes are not guaranteed. The factory reserves the right to make changes as necessary to optimize manufacturing requirements.
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**HVTECK CU 3/C 115EPR TS LSZH AIA LSZH SOLONON® 5KV 133% CSA**

**DESIGN**

Qualification Standards
- CSA C22.2 No. 2568 & No. 0.3. - Wire and Cable Test Methods
- CSA LTDD (-25°C) - as per C288.10 - for Cold Bend and Impact rating
- CSA HL - for Hazardous Locations rating
- CSA FT4 - for Flame Retardancy rating
- CSA SUN RES - for Sunlight Resistant rating

Flame Test Ratings
- FT1 - Flame Test - (1,706 BTU/Hr. nominal - Vertical Wire Flame Test)
- FT4, Flame Test - (70,000 BTU/Hr. - Vertical Tray Flame Test)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Flame Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr.)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000 BTU/Hr.)

Operating Temperatures
- -25°C - CSA Cold Bend and Impact Temperature
- -10°C - Min. Installation Temperature
- 105°C - Max Continuous Operating Temperature
- 140°C for Emergency Overload Temperature
- 250°C for Short Circuit Temperature

Product Ratings
- CSA C22.2 No. 2568 & No. 0.3. - Wire and Cable Test Methods
- CSA LTDD (-25°C) - as per C288.10 - for Cold Bend and Impact rating
- CSA HL - for Hazardous Locations rating
- CSA FT4 - for Flame Retardancy rating
- CSA SUN RES - for Sunlight Resistant rating

**TABLE 2 - ENGINEERING SPECIFICATIONS**

<table>
<thead>
<tr>
<th>HVTECK Product Code</th>
<th>Maximum Pulling Tension</th>
<th>DC Resistance @ 25°C Rv</th>
<th>AC Resistance @ 50°C 60 Hz (triplex formation) Rv</th>
<th>Inductance L</th>
<th>Capacitance C</th>
<th>Inductive Reactance @ 60Hz (triplexed) X</th>
<th>Capacitive Reactance @ 60Hz (triplexed) X</th>
<th>Positive - Impedance</th>
<th>Zero - Sequence Impedance</th>
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</thead>
<tbody>
<tr>
<td>CU11sM44-001</td>
<td>1593</td>
<td>0.162</td>
<td>0.532</td>
<td>0.0973</td>
<td>0.3192</td>
<td>0.0754</td>
<td>0.2474</td>
<td>0.0367</td>
<td>0.1204</td>
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<tr>
<td>CU11sM44-002</td>
<td>2009</td>
<td>0.129</td>
<td>0.423</td>
<td>0.0937</td>
<td>0.3073</td>
<td>0.0830</td>
<td>0.2724</td>
<td>0.0353</td>
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<tr>
<td>CU11sM44-010</td>
<td>2534</td>
<td>0.102</td>
<td>0.335</td>
<td>0.0906</td>
<td>0.2972</td>
<td>0.0908</td>
<td>0.2975</td>
<td>0.0341</td>
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<tr>
<td>CU11sM44-020</td>
<td>3194</td>
<td>0.081</td>
<td>0.266</td>
<td>0.0878</td>
<td>0.2881</td>
<td>0.0991</td>
<td>0.2352</td>
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<td>CU11sM44-030</td>
<td>4027</td>
<td>0.064</td>
<td>0.211</td>
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<td>0.2791</td>
<td>0.1089</td>
<td>0.3574</td>
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<td>CU11sM44-040</td>
<td>5079</td>
<td>0.051</td>
<td>0.167</td>
<td>0.0826</td>
<td>0.2710</td>
<td>0.1197</td>
<td>0.3927</td>
<td>0.0311</td>
<td>0.1022</td>
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<tr>
<td>CU11sM44-050</td>
<td>6000</td>
<td>0.043</td>
<td>0.141</td>
<td>0.0816</td>
<td>0.2678</td>
<td>0.1245</td>
<td>0.4086</td>
<td>0.0308</td>
<td>0.0911</td>
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<tr>
<td>CU11sM44-060</td>
<td>7300</td>
<td>0.031</td>
<td>0.101</td>
<td>0.0784</td>
<td>0.2547</td>
<td>0.1435</td>
<td>0.4708</td>
<td>0.0296</td>
<td>0.0782</td>
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<tr>
<td>CU11sM44-070</td>
<td>9400</td>
<td>0.022</td>
<td>0.071</td>
<td>0.0755</td>
<td>0.2477</td>
<td>0.1670</td>
<td>0.5479</td>
<td>0.0285</td>
<td>0.0677</td>
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<tr>
<td>CU11sM44-080</td>
<td>12000</td>
<td>0.018</td>
<td>0.056</td>
<td>0.0776</td>
<td>0.2424</td>
<td>0.1805</td>
<td>0.6347</td>
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<tr>
<td>CU11sM44-090</td>
<td>16000</td>
<td>0.014</td>
<td>0.047</td>
<td>0.0731</td>
<td>0.2397</td>
<td>0.1934</td>
<td>0.6347</td>
<td>0.0275</td>
<td>0.0593</td>
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<tr>
<td>CU11sM44-100</td>
<td>24000</td>
<td>0.011</td>
<td>0.035</td>
<td>0.0712</td>
<td>0.2336</td>
<td>0.2197</td>
<td>0.7209</td>
<td>0.0268</td>
<td>0.0581</td>
</tr>
</tbody>
</table>

* Calculations are based on 5 mil 25% overlap copper tape / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

1 Ampacities are based on Table D17E of the 2015 Canadian Electrical Code Part I

2 Ampacities are based on Table D17E of the 2015 Canadian Electrical Code Part I

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