Southwire’s 8KV HVTECK is a CSA armoured cable for industrial and commercial medium voltage applications. Rated FT4, -40°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 encasement. When used in a 3 phase system, the combination of each bond conductor from each single conductor cable provide a 100% bonded system to ground.

**CONSTRUCTION**

**Conductor**
- Class B compressed stranded copper
  - in accordance with ASTM B3 and ASTM B9

**Options**
- Class B compact stranded -8000 Series Aluminum -ACM
- Class B compact stranded copper

**Conductor Shield**
- Exuded semi-conducting thermosetting polymeric layer

**Insulation**
- No-lead EPR (Ethylene Propylene Rubber)
- Thickness: 0.115 inches (2.92mm) - nominal
- Insulation level: 100%
- 105°C rated

**Insulation Shield**
- Extruded Semi-conducting thermosetting polymeric layer
- CSA B8.10 - Shield Removal/termination requirements are printed on the surface
- Meets requirement of IEC but built to CSA standards

**Copper Full Bond Wire Shield**
- Concentrically applied copper bond / shield wires
- *** Complies with greater than the minimum requirement as per Table 44, CSA Standard C80.10 and Table 16A, Canadian Electrical Code Part 1

**Inner Jacket**
- Black PVC
- Thickness:
  - No.2 AWG = 0.06 inches (1.52mm)
  - No.1 AWG to 750 kcmil = 0.08 inches (2.03mm)
  - 1000 kcmil = 0.11 inches (2.79mm)

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

**Overall Jacket**
- Black PVC (optional colours available)
- Nominal Thickness:
  - No.2 AWG to 250 kcmil = 0.06 inches (1.27mm)
  - 350 kcmil to 1000 kcmil = 0.11 inches (2.79mm)

**Typical Print Legend**
- (CSA) SOUTHWIRE [NESC] P# [AWG or kcmil] CU 115 EPR AIA 8KV 100% INS LEVEL CB [No. x SIZE] AWG SUN RES 105° FT4 HL (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

**TABLE 1 - WEIGHTS & MEASUREMENTS**

<table>
<thead>
<tr>
<th>HVTECK Product Code</th>
<th>AWG or Kcmil</th>
<th>Diameter Over Insulation</th>
<th>Diameter Over Insulation Shield</th>
<th>CB Shield ***</th>
<th>Diameter Over Inner Jacket</th>
<th>Diameter Over Armour</th>
<th>Approx. Overall Diameter</th>
<th>Approx. Overall Weight of Cable</th>
<th>Max. Real Weight of Cable and Cable**</th>
<th>Max. Real Weight / Width **</th>
<th>Max. Real Length of Cable on Reel **</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU115B94-002</td>
<td>27/1</td>
<td>0.283 inches</td>
<td>7.2 inches</td>
<td>0.543 inches</td>
<td>13.8 inches</td>
<td>0.623 inches</td>
<td>15.8 inches</td>
<td>0.794 inches</td>
<td>20.2 inches</td>
<td>1.114 inches</td>
<td>28.3 inches</td>
</tr>
<tr>
<td>CU115B94-010</td>
<td>2/0 AWG</td>
<td>0.362 inches</td>
<td>9.2 inches</td>
<td>0.622 inches</td>
<td>15.8 inches</td>
<td>0.702 inches</td>
<td>17.8 inches</td>
<td>0.913 inches</td>
<td>23.2 inches</td>
<td>1.233 inches</td>
<td>31.3 inches</td>
</tr>
<tr>
<td>CU115B94-020</td>
<td>3/0 AWG</td>
<td>0.405 inches</td>
<td>10.3 inches</td>
<td>0.665 inches</td>
<td>16.9 inches</td>
<td>0.745 inches</td>
<td>18.9 inches</td>
<td>0.956 inches</td>
<td>24.3 inches</td>
<td>1.276 inches</td>
<td>32.4 inches</td>
</tr>
<tr>
<td>CU115B94-030</td>
<td>4/0 AWG</td>
<td>0.456 inches</td>
<td>11.6 inches</td>
<td>0.716 inches</td>
<td>18.2 inches</td>
<td>0.796 inches</td>
<td>20.2 inches</td>
<td>1.007 inches</td>
<td>25.6 inches</td>
<td>1.327 inches</td>
<td>33.7 inches</td>
</tr>
<tr>
<td>CU115B94-040</td>
<td>5/0 AWG</td>
<td>0.512 inches</td>
<td>13.0 inches</td>
<td>0.772 inches</td>
<td>19.6 inches</td>
<td>0.852 inches</td>
<td>21.6 inches</td>
<td>1.063 inches</td>
<td>27.0 inches</td>
<td>1.383 inches</td>
<td>35.1 inches</td>
</tr>
<tr>
<td>CU115B94-050</td>
<td>6/0 AWG</td>
<td>0.661 inches</td>
<td>16.8 inches</td>
<td>0.931 inches</td>
<td>23.6 inches</td>
<td>1.011 inches</td>
<td>26.7 inches</td>
<td>1.235 inches</td>
<td>31.4 inches</td>
<td>1.555 inches</td>
<td>39.5 inches</td>
</tr>
<tr>
<td>CU115B94-060</td>
<td>7/0 AWG</td>
<td>0.789 inches</td>
<td>20.0 inches</td>
<td>1.059 inches</td>
<td>26.9 inches</td>
<td>1.139 inches</td>
<td>28.9 inches</td>
<td>1.363 inches</td>
<td>34.6 inches</td>
<td>1.683 inches</td>
<td>42.7 inches</td>
</tr>
<tr>
<td>CU115B94-070</td>
<td>8/0 AWG</td>
<td>0.988 inches</td>
<td>24.6 inches</td>
<td>1.248 inches</td>
<td>31.7 inches</td>
<td>1.328 inches</td>
<td>33.7 inches</td>
<td>1.552 inches</td>
<td>39.4 inches</td>
<td>1.882 inches</td>
<td>47.8 inches</td>
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<tr>
<td>CU115B94-080</td>
<td>9/0 AWG</td>
<td>1.117 inches</td>
<td>28.4 inches</td>
<td>1.397 inches</td>
<td>35.5 inches</td>
<td>1.477 inches</td>
<td>37.5 inches</td>
<td>1.781 inches</td>
<td>44.7 inches</td>
<td>2.091 inches</td>
<td>53.1 inches</td>
</tr>
</tbody>
</table>

**NOTE:** These are minimum average dimensions as per CSA Standards.

* Other conductor sizes and outer jacket colours are available upon request. (# 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.
*** Concentric 1/3 Bond size values are available on request

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### HVTECK SPECIFICATIONS

**HVTECK CU 1/C 115EPR CB PVC AIA PVC 8KV 100% CSA**

#### DESIGN

**Qualification Standards**
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications  - 5 to 46 kV
- CSA C68.3 - Shielded & Concentric Neutral Power Cable - 5 to 46 kV
- CSA C22.2 No. 174 - Cables in Hazardous Locations
- ICEA S-93-639 (NEMA WC 74) 5 to 46 kV - Shielded Power Cable
- AEIC CS-8 - Qualification Testing Requirements

**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)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000 BTU/Hr)

**Operating Temperatures**
- -40°C - CSA Cold Bend and Impact Temperature
- -25°C - Min. Installation Temperature
- 105°C - Max. Continuous Operating Temperature
- 250°C for Short Circuit Temperature
- 140°C for Emergency Overload Temperature

**Product Ratings**
- CSA C22.2 No. 2556 & No. 0.3 - Wire and Cable Test Methods
- CSA LTGS (-40°C) - as per C68.10 - 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</th>
<th>AC Resistance @ 50°C (triplex formation)</th>
<th>Inductance L</th>
<th>Capacitance C</th>
<th>Inductive Reactance @ 60Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>lb Newtons</td>
<td>Ω / km</td>
<td>Ω / 1000 ft.</td>
<td>µF / km</td>
<td>Ω / km</td>
<td>MΩ / km</td>
</tr>
<tr>
<td>CU115894-002</td>
<td>531</td>
<td>0.162</td>
<td>0.532</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<tr>
<td>CU115894-001</td>
<td>670</td>
<td>0.129</td>
<td>0.423</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<tr>
<td>CU115894-010</td>
<td>845</td>
<td>0.102</td>
<td>0.335</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<tr>
<td>CU115894-020</td>
<td>1065</td>
<td>0.081</td>
<td>0.266</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<tr>
<td>CU115894-030</td>
<td>1342</td>
<td>0.064</td>
<td>0.211</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<td>CU115894-040</td>
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<td>0.167</td>
<td>0.0973</td>
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<td>0.0367</td>
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<tr>
<td>CU115894-050</td>
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<td>0.043</td>
<td>0.141</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<tr>
<td>CU115894-060</td>
<td>2325</td>
<td>0.031</td>
<td>0.101</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<td>CU115894-070</td>
<td>2668</td>
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<td>0.081</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
</tr>
<tr>
<td>CU115894-080</td>
<td>3000</td>
<td>0.014</td>
<td>0.056</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
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<tr>
<td>CU115894-100</td>
<td>3856</td>
<td>0.011</td>
<td>0.035</td>
<td>0.0973</td>
<td>0.0754</td>
<td>0.0367</td>
</tr>
</tbody>
</table>

* Calculations are based on three cables triplexed / 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on Table D17M of the 2015 Canadian Electrical Code Part I (40°C Ambient Air Temperature, indoor installation)

‡ Ampacities are based on Table D17A of the 2015 Canadian Electrical Code Part I