**PRODUCT HIGHLIGHTS**
Southwire's 5KV HVTC is a CSA approved copper tape shielded cable for Industrial and Commercial medium voltage applications. FT4, -40°C, and 105°C rated for use in harsh Canadian environments. Rated for installation in cable trays, duct banks, direct burial, troughs, continuous rigid cable supports and concrete encasement. For use in cable trays, exposed run and hazardous locations as per the limitations in the Canadian Electrical Code Part I, particularly Table 19.

**CONSTRUCTION**

**Conductor**
- Class B compressed stranded copper
- in accordance with ASTM B3 and ASTM B8

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

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

**Insulation**
- TR-XLPE - (Tree Retardent Cross Linked Polyethylene)
- Thickness: 0.115 inches (2.92mm) - nominal
- Insulation level: 133%
- 105°C rated

**Insulation Shield**
- Extruded Semi-conducting thermosetting polymeric layer
- CSA 68.10 - Shield Removal/termination requirements are printed on the surface
- Meets requirement of ICEA but built to CSA standards

**Copper Tape Shield**
- Helically wrapped 5 mil copper tape with 25% overlap
- Not designed to carry ground fault current
- A separate bonding/grounding conductor may be required

**Overall Jacket**
- Orange PVC (optional colours available)
- Nominal Thickness:
  - No.2 AWG to No.1 AWG = 0.06 inches (1.52mm)
  - No.1/0 AWG to 1000 kcmil = 0.08 inches (2.03mm)

**Typical Print Legend**
- (CSA) SOUTHWIRE (NESC) #P# [#AWG or #kcmil] CU 115 TRXLPE 5KV 133% INS LEVEL 25% TS SUN RES TC-ER 105° FT4 (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

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**TABLE 1 - WEIGHTS & MEASUREMENTS**

<table>
<thead>
<tr>
<th>HVTC Product Code</th>
<th>Conductor Size</th>
<th>Conductor Diameter</th>
<th>Diameter Over Insulation</th>
<th>Diameter Over Insulation Shield</th>
<th>Approx. Overall Diameter</th>
<th>Minimum Bend Radius</th>
<th>Approx. Weight of Cable</th>
<th>Max. Reel Weight ( reel and cable ) **</th>
<th>Max. Reel Diameter / Width **</th>
<th>Max. Length of Cable on Reel **</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU115X66-002</td>
<td>2(7)</td>
<td>0.283 inches 7.2</td>
<td>0.543 inches 13.8</td>
<td>0.623 inches 15.8</td>
<td>0.763 inches 19.4</td>
<td>9.2 inches 233</td>
<td>437 lb/1000ft</td>
<td>2900 lbs</td>
<td>60/32 ft</td>
<td>1.52/0.81 m</td>
</tr>
<tr>
<td>CU115X66-001</td>
<td>1/0(19)</td>
<td>0.322 inches 8.2</td>
<td>0.582 inches 14.8</td>
<td>0.662 inches 16.8</td>
<td>0.820 inches 20.4</td>
<td>9.6 inches 244</td>
<td>507 lbs/1000ft</td>
<td>3244 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-010</td>
<td>1/0(19)</td>
<td>0.362 inches 9.2</td>
<td>0.622 inches 15.8</td>
<td>0.702 inches 17.8</td>
<td>0.882 inches 22.4</td>
<td>10.6 inches 269</td>
<td>642 lbs/1000ft</td>
<td>3943 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-020</td>
<td>2/0(19)</td>
<td>0.405 inches 10.3</td>
<td>0.665 inches 16.9</td>
<td>0.745 inches 18.9</td>
<td>0.925 inches 23.5</td>
<td>11.1 inches 282</td>
<td>729 lbs/1000ft</td>
<td>4571 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-030</td>
<td>3/0(19)</td>
<td>0.456 inches 11.6</td>
<td>0.716 inches 18.2</td>
<td>0.796 inches 20.2</td>
<td>0.976 inches 24.8</td>
<td>11.7 inches 297</td>
<td>859 lbs/1000ft</td>
<td>5354 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-040</td>
<td>4/0(19)</td>
<td>0.512 inches 13.0</td>
<td>0.772 inches 19.6</td>
<td>0.852 inches 21.6</td>
<td>1.032 inches 26.2</td>
<td>12.4 inches 315</td>
<td>1020 lbs/1000ft</td>
<td>6319 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-250</td>
<td>250(37)</td>
<td>0.558 inches 14.2</td>
<td>0.828 inches 21.0</td>
<td>0.908 inches 23.1</td>
<td>1.088 inches 27.6</td>
<td>13.1 inches 332</td>
<td>1108 lbs/1000ft</td>
<td>7401 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-350</td>
<td>350(37)</td>
<td>0.661 inches 16.8</td>
<td>0.931 inches 23.6</td>
<td>1.011 inches 25.7</td>
<td>1.191 inches 30.3</td>
<td>14.3 inches 363</td>
<td>1525 lbs/1000ft</td>
<td>9902 lbs</td>
<td>72/42 ft</td>
<td>1.83/1.07 m</td>
</tr>
<tr>
<td>CU115X66-500</td>
<td>500(37)</td>
<td>0.798 inches 20.0</td>
<td>1.058 inches 26.9</td>
<td>1.139 inches 28.9</td>
<td>1.319 inches 33.5</td>
<td>15.8 inches 402</td>
<td>2048 lbs/1000ft</td>
<td>13447 lbs</td>
<td>96/54.5 ft</td>
<td>2.44/1.38 m</td>
</tr>
<tr>
<td>CU115X66-750</td>
<td>750(61)</td>
<td>0.968 inches 24.6</td>
<td>1.248 inches 31.7</td>
<td>1.328 inches 33.7</td>
<td>1.508 inches 38.3</td>
<td>18.1 inches 460</td>
<td>2915 lbs/1000ft</td>
<td>16423 lbs</td>
<td>108/70.5 ft</td>
<td>2.74/1.79 m</td>
</tr>
<tr>
<td>CU115X66-1000</td>
<td>1000(61)</td>
<td>1.117 inches 28.4</td>
<td>1.397 inches 35.5</td>
<td>1.477 inches 37.5</td>
<td>1.657 inches 42.1</td>
<td>19.9 inches 505</td>
<td>3758 lbs/1000ft</td>
<td>16398 lbs</td>
<td>108/70.5 ft</td>
<td>2.74/1.79 m</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. #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.
## HVTC SPECIFICATIONS

**Design**
- **Qualification Standards**
  - CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 kV
  - CSA C68.3 - Shielded & Concenteric Neutral Power Cable - 5 to 46 kV
  - CSA C22.2 No. 230 - Tray Cables
  - 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)
- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
- IEEE 383 - Flame Test - (70,000 BTU/Hr./Tray)
- ICEA T-29-520 - Vertical Cable Tray Flame Test - (210,000 BTU/Hr./Tray)

**Product Ratings**
- CSA C22.2 No. 2568 & No. 0.3 - Wire and Cable Test Methods
- CSA UL1584 (40°C) - as per C68.10 - for Cold Bend and Impact rating
- CSA FT4 - for Flame Retardancy rating
- CSA SUN RES - for Sunlight Resistant rating
- CSA TC-ER (marked TC for No. 1/0 AWG and larger)**

**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**

### TABLE 2 - ENGINEERING SPECIFICATIONS

<table>
<thead>
<tr>
<th>HVTC Product Code</th>
<th>Maximum Pulling Tension</th>
<th>DC Resistance @ 25°C</th>
<th>AC Resistance @ 90°C/60 Hz (triplex formation)</th>
<th>Inductance</th>
<th>Capacitance</th>
<th>Inductive Reactance @ 60Hz (triplex)</th>
<th>Capacitive Reactance @ 60Hz (triplexed)</th>
<th>Positive - Sequence Impedance*</th>
<th>Zero - Sequence Impedance*</th>
<th>Short Circuit Current (each phase conductor) @ 60Hz</th>
<th>Allowable Ampacities in Ventilated Cable Tray</th>
<th>Allowable Ampacities Directly Buried in Earth</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU115X6-002</td>
<td>531</td>
<td>0.162</td>
<td>0.532</td>
<td>0.0973</td>
<td>0.3192</td>
<td>0.0599</td>
<td>0.0135</td>
<td>0.203 + j0.044</td>
<td>0.569 + j0.506</td>
<td>4.8</td>
<td>215</td>
<td>221</td>
</tr>
<tr>
<td>CU115X6-001</td>
<td>670</td>
<td>0.129</td>
<td>0.423</td>
<td>0.0659</td>
<td>0.2161</td>
<td>0.0353</td>
<td>0.0123</td>
<td>0.162 + j0.043</td>
<td>0.531 + j0.484</td>
<td>6.0</td>
<td>245</td>
<td>247</td>
</tr>
<tr>
<td>CU115X6-010</td>
<td>845</td>
<td>0.102</td>
<td>0.335</td>
<td>0.0341</td>
<td>0.1120</td>
<td>0.0268</td>
<td>0.0112</td>
<td>0.128 + j0.042</td>
<td>0.498 + j0.462</td>
<td>7.6</td>
<td>278</td>
<td>275</td>
</tr>
<tr>
<td>CU115X6-020</td>
<td>1065</td>
<td>0.081</td>
<td>0.266</td>
<td>0.0331</td>
<td>0.1086</td>
<td>0.0337</td>
<td>0.0103</td>
<td>0.102 + j0.041</td>
<td>0.473 + j0.441</td>
<td>9.6</td>
<td>317</td>
<td>306</td>
</tr>
<tr>
<td>CU115X6-030</td>
<td>1342</td>
<td>0.064</td>
<td>0.211</td>
<td>0.0651</td>
<td>0.2311</td>
<td>0.0864</td>
<td>0.0332</td>
<td>0.1052</td>
<td>0.452 + j0.417</td>
<td>12.1</td>
<td>357</td>
<td>335</td>
</tr>
<tr>
<td>CU115X6-040</td>
<td>1693</td>
<td>0.051</td>
<td>0.176</td>
<td>0.0279</td>
<td>0.0885</td>
<td>0.0279</td>
<td>0.0085</td>
<td>0.065 + j0.038</td>
<td>0.434 + j0.352</td>
<td>15.2</td>
<td>404</td>
<td>365</td>
</tr>
<tr>
<td>CU115X6-250</td>
<td>2600</td>
<td>0.043</td>
<td>0.141</td>
<td>0.0408</td>
<td>0.1310</td>
<td>0.0269</td>
<td>0.0082</td>
<td>0.055 + j0.037</td>
<td>0.422 + j0.370</td>
<td>18.0</td>
<td>456</td>
<td>412</td>
</tr>
<tr>
<td>CU115X6-350</td>
<td>3000</td>
<td>0.031</td>
<td>0.101</td>
<td>0.0784</td>
<td>0.2574</td>
<td>0.1138</td>
<td>0.0397</td>
<td>0.040 + j0.035</td>
<td>0.401 + j0.332</td>
<td>25.2</td>
<td>537</td>
<td>456</td>
</tr>
<tr>
<td>CU115X6-500</td>
<td>4000</td>
<td>0.023</td>
<td>0.082</td>
<td>0.0755</td>
<td>0.2477</td>
<td>0.1324</td>
<td>0.0435</td>
<td>0.029 + j0.033</td>
<td>0.379 + j0.292</td>
<td>36.0</td>
<td>616</td>
<td>497</td>
</tr>
<tr>
<td>CU115X6-750</td>
<td>6000</td>
<td>0.014</td>
<td>0.064</td>
<td>0.0804</td>
<td>0.2534</td>
<td>0.1534</td>
<td>0.0504</td>
<td>0.020 + j0.032</td>
<td>0.353 + j0.244</td>
<td>53.9</td>
<td>706</td>
<td>551</td>
</tr>
<tr>
<td>CU115X6-1000</td>
<td>8000</td>
<td>0.011</td>
<td>0.055</td>
<td>0.0815</td>
<td>0.2386</td>
<td>0.1743</td>
<td>0.0571</td>
<td>0.016 + j0.031</td>
<td>0.334 + j0.214</td>
<td>71.9</td>
<td>813</td>
<td>596</td>
</tr>
</tbody>
</table>

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

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

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

*** For use in cable trays, exposed run and hazardous locations as per the limitations in the Canadian Electrical Code Part I, particularly Table 19.