### PRODUCT HIGHLIGHTS
Southwire’s 15KV 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**
- No-lead EPR (Ethylene Propylene Rubber)
  - Thickness: 0.175 inches (4.45mm) - nominal
  - Insulation level: 100% - grounded system
  - 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**
- Red PVC (optional colours available)
- Nominal Thickness:
  - No.2 AWG to 750 kcmil = 0.08 inches (2.03mm)
  - 1000 kcmil = 0.11 inches (2.79mm)

**Typical Print Legend**
- (CSA) SOUTHWIRE (NESC) #P# [#AWG or #kcmil] CU 175 EPR 15KV 100% INS LEVEL 25% TS SUN RES TC-ER 105° FT4 (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

## TABLE 1 - WEIGHTS & MEASUREMENTS

<table>
<thead>
<tr>
<th>HVTC Product Code</th>
<th>AWG or Kcmil</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. Real Weight (free and cable)**</th>
<th>Max. Real Diameter / Width **</th>
<th>Max. Length of Cable on Reel **</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU175M93-002</td>
<td>2(7)</td>
<td>0.283 inches (7.2mm)</td>
<td>0.663 inches (16.8mm)</td>
<td>0.743 inches (18.9mm)</td>
<td>0.923 inches (23.4mm)</td>
<td>11.1 inches (281mm)</td>
<td>571 lbs (850 kg)</td>
<td>3628 lbs / 1000 ft (1646 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-001</td>
<td>1(19)</td>
<td>0.322 inches (8.2mm)</td>
<td>0.702 inches (17.8mm)</td>
<td>0.782 inches (19.9mm)</td>
<td>0.962 inches (24.4mm)</td>
<td>11.5 inches (293mm)</td>
<td>648 lbs (964 kg)</td>
<td>4085 lbs / 1000 ft (1853 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-010</td>
<td>1/0(19)</td>
<td>0.362 inches (9.2mm)</td>
<td>0.742 inches (18.8mm)</td>
<td>0.822 inches (20.9mm)</td>
<td>1.002 inches (25.5mm)</td>
<td>12.0 inches (305mm)</td>
<td>738 lbs (1099 kg)</td>
<td>4630 lbs / 1000 ft (2100 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-020</td>
<td>2/0(19)</td>
<td>0.405 inches (10.3mm)</td>
<td>0.785 inches (19.9mm)</td>
<td>0.885 inches (22.0mm)</td>
<td>1.045 inches (26.5mm)</td>
<td>12.5 inches (319mm)</td>
<td>848 lbs (1263 kg)</td>
<td>5290 lbs / 1000 ft (2400 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-030</td>
<td>3/0(19)</td>
<td>0.456 inches (11.6mm)</td>
<td>0.836 inches (21.2mm)</td>
<td>0.916 inches (23.3mm)</td>
<td>1.096 inches (27.8mm)</td>
<td>13.2 inches (334mm)</td>
<td>985 lbs (1466 kg)</td>
<td>6662 lbs / 1000 ft (3022 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-040</td>
<td>4/0(19)</td>
<td>0.512 inches (13.0mm)</td>
<td>0.892 inches (22.7mm)</td>
<td>0.972 inches (24.7mm)</td>
<td>1.152 inches (29.3mm)</td>
<td>13.8 inches (351mm)</td>
<td>1153 lbs (1716 kg)</td>
<td>7689 lbs / 1000 ft (3479 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-250</td>
<td>250(37)</td>
<td>0.558 inches (14.2mm)</td>
<td>0.948 inches (24.1mm)</td>
<td>1.028 inches (26.1mm)</td>
<td>1.208 inches (30.7mm)</td>
<td>14.5 inches (368mm)</td>
<td>1249 lbs (1858 kg)</td>
<td>6242 lbs / 1000 ft (3739 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-350</td>
<td>350(37)</td>
<td>0.661 inches (16.8mm)</td>
<td>1.051 inches (26.7mm)</td>
<td>1.131 inches (28.7mm)</td>
<td>1.311 inches (33.3mm)</td>
<td>15.7 inches (390mm)</td>
<td>1679 lbs (2498 kg)</td>
<td>11231 lbs / 1000 ft (5094 kg / km)</td>
<td>7/242 (1.83/1.07)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-500</td>
<td>500(37)</td>
<td>0.709 inches (18.0mm)</td>
<td>1.179 inches (29.9mm)</td>
<td>1.258 inches (32.0mm)</td>
<td>1.439 inches (36.6mm)</td>
<td>17.3 inches (439mm)</td>
<td>2217 lbs (3300 kg)</td>
<td>14645 lbs / 1000 ft (6643 kg / km)</td>
<td>10/250 (2.64/1.44)</td>
<td>6000 feet (1829 m)</td>
</tr>
<tr>
<td>CU175M93-750</td>
<td>750(61)</td>
<td>0.908 inches (23.4mm)</td>
<td>1.368 inches (34.7mm)</td>
<td>1.448 inches (36.8mm)</td>
<td>1.628 inches (41.4mm)</td>
<td>19.5 inches (496mm)</td>
<td>3108 lbs (4626 kg)</td>
<td>16475 lbs / 1000 ft (7473 kg / km)</td>
<td>10/250 (2.74/1.79)</td>
<td>4800 feet (1463 m)</td>
</tr>
<tr>
<td>CU175M93-1000</td>
<td>1000(61)</td>
<td>1.117 inches (28.4mm)</td>
<td>1.517 inches (38.5mm)</td>
<td>1.597 inches (40.6mm)</td>
<td>1.837 inches (46.7mm)</td>
<td>22.0 inches (560mm)</td>
<td>4071 lbs (6058 kg)</td>
<td>16413 lbs / 1000 ft (7445 kg / km)</td>
<td>10/250 (2.74/1.79)</td>
<td>3650 feet (1113 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.

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## HVTC Specifications

### HVTC CU 1/C 175EPR TS PVC 15KV 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. 230 - Tray Cables
  - IEEE 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./ft. 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.)
- 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
- 140°C for Emergency Overload Temperature
- 250°C for Short Circuit Temperature

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

**Product Ratings**
- CSA C22.2 No. 2558 & No. 0.3 - Wire and Cable Test Methods
- CSA UL-GS - (40°C) - as per CSA 10.10 - 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)***

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- FT1 - Flame Test - (1,706 BTU/Hr./ft. nominal - Vertical Wire Flame Test)
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- IEEE 1202 - Flame Test - (70,000 BTU/Hr. - Vertical Tray Test)
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- -40°C - CSA Cold Bend and Impact Temperature
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- 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>90°C 60Hz</th>
<th>Inductance L</th>
<th>Capacitance C</th>
<th>Inductive Reactance @ 60Hz</th>
<th>Capacitive Reactance @ 60Hz</th>
<th>Positive - 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>CU175M93-002</td>
<td>531</td>
<td>0.162</td>
<td>0.532</td>
<td>0.203</td>
<td>0.685</td>
<td>0.1095</td>
<td>0.392</td>
<td>0.0577</td>
<td>0.1984</td>
<td>0.0413</td>
<td>0.1354</td>
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<tr>
<td>CU175M93-001</td>
<td>670</td>
<td>0.129</td>
<td>0.423</td>
<td>0.161</td>
<td>0.530</td>
<td>0.1051</td>
<td>0.348</td>
<td>0.0631</td>
<td>0.2089</td>
<td>0.0396</td>
<td>0.1300</td>
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<tr>
<td>CU175M93-010</td>
<td>845</td>
<td>0.102</td>
<td>0.335</td>
<td>0.128</td>
<td>0.419</td>
<td>0.1013</td>
<td>0.325</td>
<td>0.0685</td>
<td>0.2247</td>
<td>0.0382</td>
<td>0.1253</td>
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<tr>
<td>CU175M93-020</td>
<td>1065</td>
<td>0.081</td>
<td>0.266</td>
<td>0.101</td>
<td>0.333</td>
<td>0.0979</td>
<td>0.321</td>
<td>0.0743</td>
<td>0.2437</td>
<td>0.0369</td>
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<tr>
<td>CU175M93-030</td>
<td>1342</td>
<td>0.064</td>
<td>0.211</td>
<td>0.081</td>
<td>0.264</td>
<td>0.0945</td>
<td>0.301</td>
<td>0.0811</td>
<td>0.2560</td>
<td>0.0356</td>
<td>0.1169</td>
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<td>CU175M93-040</td>
<td>1693</td>
<td>0.051</td>
<td>0.167</td>
<td>0.064</td>
<td>0.210</td>
<td>0.0914</td>
<td>0.299</td>
<td>0.0885</td>
<td>0.2905</td>
<td>0.0345</td>
<td>0.1131</td>
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<tr>
<td>CU175M93-050</td>
<td>2000</td>
<td>0.043</td>
<td>0.141</td>
<td>0.054</td>
<td>0.178</td>
<td>0.0899</td>
<td>0.294</td>
<td>0.0927</td>
<td>0.3042</td>
<td>0.0339</td>
<td>0.1112</td>
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<tr>
<td>CU175M93-060</td>
<td>2600</td>
<td>0.031</td>
<td>0.101</td>
<td>0.039</td>
<td>0.129</td>
<td>0.0856</td>
<td>0.286</td>
<td>0.1060</td>
<td>0.3477</td>
<td>0.0324</td>
<td>0.1062</td>
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<tr>
<td>CU175M93-070</td>
<td>3500</td>
<td>0.022</td>
<td>0.071</td>
<td>0.028</td>
<td>0.082</td>
<td>0.0821</td>
<td>0.262</td>
<td>0.1224</td>
<td>0.4015</td>
<td>0.0309</td>
<td>0.1015</td>
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<tr>
<td>CU175M93-080</td>
<td>4773</td>
<td>0.017</td>
<td>0.044</td>
<td>0.019</td>
<td>0.064</td>
<td>0.0787</td>
<td>0.258</td>
<td>0.1421</td>
<td>0.4662</td>
<td>0.0297</td>
<td>0.0973</td>
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<tr>
<td>CU175M93-100</td>
<td>6000</td>
<td>0.014</td>
<td>0.047</td>
<td>0.019</td>
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<td>0.258</td>
<td>0.1421</td>
<td>0.4662</td>
<td>0.0297</td>
<td>0.0973</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

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