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.

---

### 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. Reel Weight (cable and reel) **</th>
<th>Max. Reel Diameter / Width **</th>
<th>Max. Length of Cable on Reel **</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL345B56-010</td>
<td>1/0(19)</td>
<td>0.336 inches</td>
<td>8.5</td>
<td>1.056</td>
<td>26.8</td>
<td>1.136</td>
<td>29.9</td>
<td>1.316</td>
<td>33.4</td>
<td>15.8</td>
</tr>
<tr>
<td>AL345B56-020</td>
<td>2/0(19)</td>
<td>0.376 inches</td>
<td>9.6</td>
<td>1.096</td>
<td>27.8</td>
<td>1.176</td>
<td>29.9</td>
<td>1.356</td>
<td>34.4</td>
<td>16.3</td>
</tr>
<tr>
<td>AL345B56-030</td>
<td>3/0(19)</td>
<td>0.423 inches</td>
<td>10.7</td>
<td>1.143</td>
<td>29.0</td>
<td>1.223</td>
<td>31.1</td>
<td>1.403</td>
<td>35.6</td>
<td>16.8</td>
</tr>
<tr>
<td>AL345B56-040</td>
<td>4/0(19)</td>
<td>0.475 inches</td>
<td>12.1</td>
<td>1.195</td>
<td>30.4</td>
<td>1.275</td>
<td>32.4</td>
<td>1.455</td>
<td>37.0</td>
<td>17.5</td>
</tr>
<tr>
<td>AL345B56-250</td>
<td>250(37)</td>
<td>0.520 inches</td>
<td>13.2</td>
<td>1.250</td>
<td>31.8</td>
<td>1.330</td>
<td>33.8</td>
<td>1.510</td>
<td>36.4</td>
<td>18.1</td>
</tr>
<tr>
<td>AL345B56-350</td>
<td>350(37)</td>
<td>0.616 inches</td>
<td>15.6</td>
<td>1.345</td>
<td>34.2</td>
<td>1.426</td>
<td>36.2</td>
<td>1.606</td>
<td>40.8</td>
<td>19.3</td>
</tr>
<tr>
<td>AL345B56-500</td>
<td>500(37)</td>
<td>0.736 inches</td>
<td>18.7</td>
<td>1.466</td>
<td>37.2</td>
<td>1.548</td>
<td>39.3</td>
<td>1.786</td>
<td>45.4</td>
<td>21.4</td>
</tr>
<tr>
<td>AL345B56-750</td>
<td>750(61)</td>
<td>0.908 inches</td>
<td>23.1</td>
<td>1.648</td>
<td>41.9</td>
<td>1.728</td>
<td>43.9</td>
<td>1.968</td>
<td>50.0</td>
<td>23.6</td>
</tr>
<tr>
<td>AL345B56-1000</td>
<td>1000(61)</td>
<td>1.060 inches</td>
<td>26.9</td>
<td>1.800</td>
<td>45.7</td>
<td>1.880</td>
<td>47.8</td>
<td>2.120</td>
<td>53.8</td>
<td>25.4</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.

---

** Product Highlights**

Southwire’s 35KV 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 encaseable. 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 - compact stranded -8000 Series Aluminum -ACM
  - Class B compact stranded copper
  - Class B compressed stranded copper
  - Strand blocking technology
  - Tinning on copper conductors

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

- **Insulation Shield**
  - Extruded Semi-conducting thermosetting polymeric layer
  - CSA 88.10 - 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**
  - Black PVC (optional colours available)
  - Nominal Thickness: No.1/0 AWG to 350 kcmil = 0.08 inches (2.03mm)
  - 500 kcmil to 1000 kcmil = 0.11 inches (2.79mm)

** Typical Print Legend**

- (CSA) SOUTH-WIRE [NESC] #P# [#AWG or #kcmil] CPT AL 345 TRXLPE 35KV 100% INS LEVEL 25% TS SUN RES TC-ER 105° FT4 (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]
### HVTC SPECIFICATIONS

**HVTC AL 1/C 345TRXLPE TS PVC 35KV 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
- 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./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
- 250°C for Short Circuit Temperature

#### CSA TRAY RATED

### 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 L</th>
<th>Capacitance C</th>
<th>Inductive Reactance @ 60Hz (triplexed)</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 ¹</th>
<th>Allowable Ampacities Directly Buried in Earth ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>AL345B56-010</td>
<td>634 lb</td>
<td>0.168 Ω/1000 ft.</td>
<td>0.211 Ω/km</td>
<td>0.1274 Ω/1000 ft.</td>
<td>0.0340 mH/1000 ft.</td>
<td>0.0490 Ω/1000 ft.</td>
<td>0.0779 mH/1000 ft.</td>
<td>0.212 + j0.053 kAmps</td>
<td>0.563 + j0.312 kAmps</td>
<td>5.0 kAmps</td>
<td>221 Amps</td>
<td>219 Amps</td>
</tr>
<tr>
<td>AL345B56-020</td>
<td>799 lb</td>
<td>0.133 Ω/1000 ft.</td>
<td>0.167 Ω/km</td>
<td>0.1228 Ω/1000 ft.</td>
<td>0.0384 mH/1000 ft.</td>
<td>0.0463 Ω/1000 ft.</td>
<td>0.0728 mH/1000 ft.</td>
<td>0.168 + j0.051 kAmps</td>
<td>0.515 + j0.300 kAmps</td>
<td>6.3 kAmps</td>
<td>253 Amps</td>
<td>246 Amps</td>
</tr>
<tr>
<td>AL345B56-030</td>
<td>1007 lb</td>
<td>0.105 Ω/1000 ft.</td>
<td>0.132 Ω/km</td>
<td>0.1182 Ω/1000 ft.</td>
<td>0.0392 mH/1000 ft.</td>
<td>0.0446 Ω/1000 ft.</td>
<td>0.0676 mH/1000 ft.</td>
<td>0.133 + j0.049 kAmps</td>
<td>0.476 + j0.286 kAmps</td>
<td>7.9 kAmps</td>
<td>288 Amps</td>
<td>275 Amps</td>
</tr>
<tr>
<td>AL345B56-040</td>
<td>1270 lb</td>
<td>0.084 Ω/1000 ft.</td>
<td>0.105 Ω/km</td>
<td>0.1136 Ω/1000 ft.</td>
<td>0.0345 mH/1000 ft.</td>
<td>0.0429 Ω/1000 ft.</td>
<td>0.0628 mH/1000 ft.</td>
<td>0.106 + j0.047 kAmps</td>
<td>0.444 + j0.272 kAmps</td>
<td>9.9 kAmps</td>
<td>327 Amps</td>
<td>305 Amps</td>
</tr>
<tr>
<td>AL345B56-050</td>
<td>1500 lb</td>
<td>0.071 Ω/1000 ft.</td>
<td>0.099 Ω/km</td>
<td>0.1110 Ω/1000 ft.</td>
<td>0.0340 mH/1000 ft.</td>
<td>0.0419 Ω/1000 ft.</td>
<td>0.0597 mH/1000 ft.</td>
<td>0.080 + j0.048 kAmps</td>
<td>0.422 + j0.258 kAmps</td>
<td>11.8 kAmps</td>
<td>367 Amps</td>
<td>343 Amps</td>
</tr>
<tr>
<td>AL345B56-060</td>
<td>2100 lb</td>
<td>0.053 Ω/1000 ft.</td>
<td>0.084 Ω/km</td>
<td>0.1052 Ω/1000 ft.</td>
<td>0.0393 mH/1000 ft.</td>
<td>0.0397 Ω/1000 ft.</td>
<td>0.0532 mH/1000 ft.</td>
<td>0.064 + j0.044 kAmps</td>
<td>0.388 + j0.236 kAmps</td>
<td>16.5 kAmps</td>
<td>443 Amps</td>
<td>399 Amps</td>
</tr>
<tr>
<td>AL345B56-070</td>
<td>3000 lb</td>
<td>0.035 Ω/1000 ft.</td>
<td>0.051 Ω/km</td>
<td>0.0451 Ω/1000 ft.</td>
<td>0.0316 mH/1000 ft.</td>
<td>0.0375 Ω/1000 ft.</td>
<td>0.0518 mH/1000 ft.</td>
<td>0.046 + j0.042 kAmps</td>
<td>0.356 + j0.213 kAmps</td>
<td>23.5 kAmps</td>
<td>529 Amps</td>
<td>451 Amps</td>
</tr>
<tr>
<td>AL345B56-080</td>
<td>4500 lb</td>
<td>0.024 Ω/1000 ft.</td>
<td>0.030 Ω/km</td>
<td>0.0389 Ω/1000 ft.</td>
<td>0.0264 mH/1000 ft.</td>
<td>0.0354 Ω/1000 ft.</td>
<td>0.0406 mH/1000 ft.</td>
<td>0.031 + j0.039 kAmps</td>
<td>0.324 + j0.183 kAmps</td>
<td>35.3 kAmps</td>
<td>633 Amps</td>
<td>565 Amps</td>
</tr>
<tr>
<td>AL345B56-1000</td>
<td>6000 lb</td>
<td>0.018 Ω/1000 ft.</td>
<td>0.023 Ω/km</td>
<td>0.0289 Ω/1000 ft.</td>
<td>0.0215 mH/1000 ft.</td>
<td>0.0339 Ω/1000 ft.</td>
<td>0.0246 mH/1000 ft.</td>
<td>0.024 + j0.038 kAmps</td>
<td>0.303 + j0.183 kAmps</td>
<td>47.0 kAmps</td>
<td>711 Amps</td>
<td>544 Amps</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

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