**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 Retardant Cross Linked Polyethylene)
- 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
- 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 B8

**Fillers**
- Non-wicking, non-hygroscopic

**Overall Jacket**
- Red PVC (optional colours available)
- Nominal Thickness:
  - No.2 AWG to 250 kcmil = 0.11 inches (2.79mm)
  - 500 kcmil to 750 kcmil = 0.14 inches (3.56mm)

**Typical Print Legend**
- (CSA) SOUTHWIRE [NESC] #P 3/C [AWG or #kcmil] CU 175 TRXLPE 15KV 100% INS LEVEL 25% TS SUN RES TC-ER 105° FT4 (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]
### HVTC SPECIFICATIONS

#### HVTC CU 3/C 175TRXLPE 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
- ICEA S-93-639 (NEMA WC 74) 5 to 46 kV - Shielded Power Cable
- AEC 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.)
- 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

#### 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 (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 †</th>
<th>Allowable Ampacities Directly Buried in Earth ‡</th>
</tr>
</thead>
<tbody>
<tr>
<td>CU175V96-002</td>
<td>1538</td>
<td>0.162</td>
<td>0.532</td>
<td>0.203</td>
<td>0.665</td>
<td>0.1956</td>
<td>0.3592</td>
<td>0.0458</td>
<td>0.1502</td>
<td>0.0413</td>
<td>0.1354</td>
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<td>CU175V96-001</td>
<td>2009</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>0.0500</td>
<td>0.1641</td>
<td>0.0396</td>
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<td>CU175V96-010</td>
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<td>0.102</td>
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<td>0.419</td>
<td>0.1013</td>
<td>0.325</td>
<td>0.0543</td>
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<td>CU175V96-020</td>
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<td>0.333</td>
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<td>0.0945</td>
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<td>CU175V96-040</td>
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<td>0.299</td>
<td>0.0702</td>
<td>0.2304</td>
<td>0.0356</td>
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<tr>
<td>CU175V96-050</td>
<td>6000</td>
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<td>0.141</td>
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<td>0.178</td>
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<tr>
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- *Calculations are based on 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 D17N of the 2015 Canadian Electrical Code Part I (40°C Ambient Air Temperature, indoor installation)
- ‡Ampacities are based on Table D17E 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.