**HVTECK SPECIFICATIONS**

**HVTECK AL 3/C 260EPR TS LSZH AIA LSZH SOLONON® 25KV 100% CSA**

**PRODUCT HIGHLIGHTS**
Southwire’s 25KV HVTECK Solonon® low smoke zero halogen jacketed cable is a CSA armoured cable for industrial and commercial medium voltage applications. Rated FT4-ST1, -25°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 encaseable.

**CONSTRUCTION**

**Conductor**
- Class B - compact stranded - 8000 Series Aluminum - ACM

**Options**
- Class B compact stranded copper
- Class B compressed stranded copper
- Strand blocking technology
- Timing on copper conductors

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

**Insulation**
- No-lead EPR (Ethylene Propylene Rubber)
- Thickness: 0.26 inches (6.60mm) - 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

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

**Overall Jacket**
- Black - Low Smoke Zero Halogen XLPE Solonon jacket
- Nominal Thickness: No.1 AWG to No.4/0 AWG = 0.075 inches (1.91mm)
  250 kcmil to 500 kcmil = 0.085 inches (2.16mm)

**Fillers**
- Non-wicking, non-hygrosopic

**Inner Jacket**
- Black PVC
- Thickness: No.1 AWG to No.4/0 AWG = 0.11 inches (2.79mm)
  250 kcmil to 500 kcmil = 0.14 inches (3.56mm)

**Typical Print Legend**
- (CSA) SOUTHWIRE [NESC] #P# 3/C [AWG or #kcmil] CPT AL 260 EPR AIA 25KV 100% INS LEVEL 25% TS SUN RES 105° FT4-ST1 LSZH SOLONON HL (-25°C) LTD RoHS YEAR [SEQUENTIAL METER MARKS]

**TABLE 1 - WEIGHTS & MEASUREMENTS**

| HVTECK Product Code | Conductor Size ** | Conductor Diameter | Diameter Over Insulation | Diameter Over Insulation Shield | Bonding Cond. Size | Diameter Over Inner Jacket | Diameter Over Armour | Approx. Overall Diameter | Minimum Bend Radius | Approx. Weight of Cable | Max. Real Weight (Reel and Cable) ** | Max. Real Diameter / Width ** | Max. Length of Cable on Reel ** |
|--------------------|------------------|--------------------|-------------------------|-------------------------------|-------------------|--------------------------|---------------------|----------------------|-------------------|----------------|----------------------------|--------------------------|--------------------------------|---------------------|
| AL260S82-001       | 1/1(19)          | 0.299              | 7.6                     | 0.849                         | 21.6              | 0.329                    | 23.6               | 6                    | 2.270            | 57.7          | 2.600                      | 66.0                     | 2.750                           | 69.8               | 19.2                 | 489              | 3043             | 4529                        | 10076                    | 4570                           | 108/70.5            | 2.74/1.79 | 2800 853 |
| AL260S82-010       | 1/0(19)          | 0.336              | 8.5                     | 0.886                         | 22.5              | 0.366                    | 24.5               | 6                    | 2.350            | 59.7          | 2.680                      | 68.1                     | 2.830                           | 71.9               | 19.8                 | 503              | 3222             | 4795                        | 10955                    | 4067                           | 108/70.5            | 2.74/1.79 | 2300 701 |
| AL260S82-020       | 2/0(19)          | 0.376              | 9.6                     | 0.926                         | 23.5              | 1.006                    | 25.6               | 6                    | 2.436            | 61.9          | 2.766                      | 70.3                     | 2.916                           | 74.1               | 20.4                 | 518              | 3426             | 5099                        | 10935                    | 4124                           | 108/70.5            | 2.74/1.79 | 2200 671 |
| AL260S82-030       | 3/0(19)          | 0.423              | 10.7                    | 0.973                         | 24.7              | 1.053                    | 26.7               | 6                    | 2.538            | 64.5          | 2.866                      | 72.8                     | 3.018                           | 76.6               | 21.1                 | 537              | 3672             | 5465                        | 10945                    | 4287                           | 108/70.5            | 2.74/1.79 | 2150 605 |
| AL260S82-040       | 4/0(19)          | 0.475              | 12.1                    | 1.025                         | 26.0              | 1.105                    | 28.1               | 6                    | 2.650            | 67.2          | 2.980                      | 75.7                     | 3.130                           | 79.5               | 21.9                 | 557              | 3960             | 5894                        | 10875                    | 3759                           | 108/70.5            | 2.74/1.79 | 1700 518 |
| AL260S82-250       | 250(37)          | 0.520              | 13.2                    | 1.080                         | 27.4              | 1.160                    | 29.5               | 4                    | 2.829            | 71.9          | 3.159                      | 80.2                     | 3.329                           | 84.6               | 23.3                 | 592              | 4966             | 6796                        | 10981                    | 4881                           | 108/70.5            | 2.74/1.79 | 1600 488 |
| AL260S82-350       | 350(37)          | 0.616              | 15.6                    | 1.176                         | 29.9              | 1.256                    | 31.9               | 4                    | 3.036            | 77.1          | 3.366                      | 85.5                     | 3.536                           | 89.8               | 24.8                 | 629              | 5170             | 7694                        | 10910                    | 4223                           | 108/70.5            | 2.74/1.79 | 1520 457 |
| AL260S82-500       | 500(37)          | 0.736              | 18.7                    | 1.296                         | 32.9              | 1.376                    | 35.0               | 3                    | 3.295            | 83.7          | 3.625                      | 92.1                     | 3.795                           | 96.4               | 26.6                 | 675              | 6029             | 8972                        | 10876                    | 3713                           | 108/70.5            | 2.74/1.79 | 1100 335 |

**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)

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**TABLE 2 - ENGINEERING SPECIFICATIONS**

<table>
<thead>
<tr>
<th>HVTECK Product</th>
<th>Maximum Pulling Tension</th>
<th>DC Resistance @ 25°C</th>
<th>AC Resistance (triplex formation) @ 60Hz</th>
<th>Inductance</th>
<th>Capacitance</th>
<th>Inductive Reactance @ 60Hz</th>
<th>Capacitive Reactance @ 60Hz</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>AL260S82-001</td>
<td>1506</td>
<td>0.211</td>
<td>0.892</td>
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<td>0.0507</td>
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<tr>
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<td>0.132</td>
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<td>0.0590</td>
<td>0.1936</td>
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<td>0.493 + j0.330</td>
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</tr>
<tr>
<td>AL260S82-040</td>
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<td>0.274</td>
<td>0.105</td>
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<td>0.1045</td>
<td>0.3427</td>
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<tr>
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</tbody>
</table>

* Calculations are based on 5 mil 25% overlap 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 D17N of the 2015 Canadian Electrical Code Part I (40°C Ambient Temperature, indoor installation)

2 Ampacities are based on Table D17E of the 2015 Canadian Electrical Code Part I

**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
- AIECS-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.)
- CSA ST1 Smoke Test - marked FT4-ST1

Operating Temperatures
- -25°C - CSA Cold Bend and Impact Temperature
- -10°C - Min. Installation Temperature
- 105°C - Max. Continuous Operating Temperature
- 140°C for Emergency Overload Temperature
- 250°C for Short Circuit Temperature