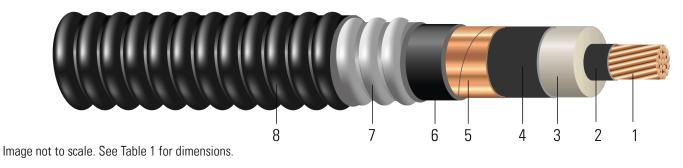


HVTECK CU 1/C 115NLEPR TS PVC AIA PVC 5KV 133% / 8KV 100% CSA

Single Conductor, 115 Mils 5KV 133% /8KV 100% Insulation Level No Lead Ethylene Propylene Rubber (NL-EPR), Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket



CONSTRUCTION:

- 1. Conductor: Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- 2. Conductor Shield: Semi-conducting cross-linked copolymer
- 3. Insulation: 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR)
- 4. Insulation Shield: Strippable semi-conducting cross-linked copolymer
- 5. Copper Tape Shield: Helically wrapped 5 mil copper tape with 25% overlap
- 6. Inner Jacket: PVC inner jacket
- 7. Armour: Aluminum Interlocked Armour (AIA)
- 8. Overall Jacket: Black Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 5kV / 8kV HVTECK is a CSA armoured cable for industrial and commercial medium voltage applications. Rated FT4, -40°C, Hazardous Locations (HL). These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload, and 250°C for short circuit conditions. Rated for 1000 lbs /FT maximum sidewall pressure. These cables feature sunlight and moisture resistance, exceptional corona resistance, resistance to most chemical soils and acids and are flame retardant.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- CSA C22.2 No. 174 Cables in Hazardous Locations
- CSA C22.2 No. 2556 & No. 0.3 Wire and Cable Test Methods
- 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 LTGG [-40°C] as per C68.10 for Cold Bend and Impact rating
- CSA HL for Hazardous Locations rating
- CSA SUN RES for Sunlight Resistant rating
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA T-29-520 Flame Test (210,000 BTU/Hr)
- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 and Larger)
- FT1 Flame Test (1,706 BTU/Hr nominal Vertical Wire Flame Test)



Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com



 AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)

SAMPLE PRINT LEGEND:

{SQMTR} {CSA} SOUTHWIRE® POWER CABLE {NESC} 1/C XXX AWG CU X.XX mm (115 mils) NL-EPR AIA 5KV 133%/8KV 100% INS LEVEL 25%TS SUN. RES. 105°C FT4 HL (-40°C) LTGG RoHS

Table 1 – Weights and Measurements

| Cond. Size | Strand | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Diameter Over Insulation Shield | Inner Jacket Thickness | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|---------------|--------|----------------------------|-----------------------------|---------------------|------------------------------------|---------------------------|---------------------|-----------------------------|---------------|------------------|-------------------|
| AWG/ Kcmil | No. | inch | inch | mil | inch | mil | inch | mil | inch | lb/1000ft | lb/1000ft |
| 1000 | 61 | 1.117 | 1.403 | 115 | 1.463 | 80 | 1.999 | 60 | 2.119 | 3117 | 4377 |

All dimensions are nominal and subject to normal manufacturing tolerances

 $\ensuremath{\diamond}$ Cable marked with this symbol is a standard stock item

1 Comply with ICEA S-93-639 Appendix C for jacket thickness determination

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

Table 2 – Electrical and Engineering Data

| Cond. Size | Min Bending Radius | Max Pull Tension | DC Resistance @ 25°C | AC Resistance @ 90°C | Capacitive Reactance @ 60Hz | Inductive Reactance @ 60Hz | Zero Sequence Impedance | Positive Sequence Impedance | Phase Short Circuit Current @ 6 Cycles | Allowable Ampacity In Air 90°C | Allowable Ampacity Directly Buried 90°C |
|---------------|--------------------------|---------------------|----------------------------|----------------------------|-----------------------------------|----------------------------------|-------------------------------|-----------------------------------|--|--------------------------------------|--|
| AWG/ Kcmil | inch | lb | Ω/1000ft | Ω/1000ft | MΩ*1000ft | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp | Amp |
| 1000 | 25.4 | 8000 | 0.011 | 0.019 | 0.010 | 0.036 | 0.336 + j0.218 | 0.020 + j0.036 | 4563 | 813 | 596 |

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

* CEC ampacities are based on:

3-1/C in air copper and aluminum: D17M

3-1/C direct buried copper and aluminum: D17A

Table 3 – Weights and Measurements (Metric)

| Cond. Size | Strand | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Diameter Over Insulation Shield | | Dia. Over Armour | Overall Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|---------------|--------|----------------------------|-----------------------------|---------------------|------------------------------------|------|---------------------|-----------------------------|---------------|------------------|-------------------|
| AWG/ Kcmil | No. | mm | mm | mm | mm | mm | mm | mm | mm | kg/km | kg/km |
| 1000 | 61 | 28.37 | 35.64 | 2.92 | 37.16 | 2.03 | 50.77 | 1.52 | 53.82 | 4639 | 6514 |

All dimensions are nominal and subject to normal manufacturing tolerances

 \Diamond Cable marked with this symbol is a standard stock item

1 Comply with ICEA S-93-639 Appendix C for jacket thickness determination

TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.



Table 4 – Electrical and Engineering Data (Metric)

| Cond. Size | Min Bending Radius | Max Pull Tension | DC Resistance @ 25°C | AC Resistance @ 90°C | Capacitive Reactance @ 60Hz | Inductive Reactance @ 60Hz | Zero Sequence Impedance | Positive Sequence Impedance | Phase Short Circuit Current @ 6 Cycles | Allowable Ampacity In Air 90°C | Allowable Ampacity Directly Buried 90°C |
|---------------|--------------------------|---------------------|----------------------------|----------------------------|-----------------------------------|----------------------------------|-------------------------------|-----------------------------------|--|--------------------------------------|--|
| AWG/ Kcmil | mm | newton | Ω/km | Ω/km | MΩ*km | Ω/km | Ω/1000ft | Ω/1000ft | Amp | Amp | Amp |
| 1000 | 645.16 | 35600 | 0.0361 | 0.06 | 0.0030 | 0.1181 | 0.336 + j0.218 | 0.020 + j0.036 | 4563 | 813 | 596 |

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

* CEC ampacities are based on:

3-1/C in air copper and aluminum: D17M

3-1/C direct buried copper and aluminum: D17A

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com