HVTECK CU 3/C 115NLEPR TS PVC AIA PVC 8kV 100% CSA

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

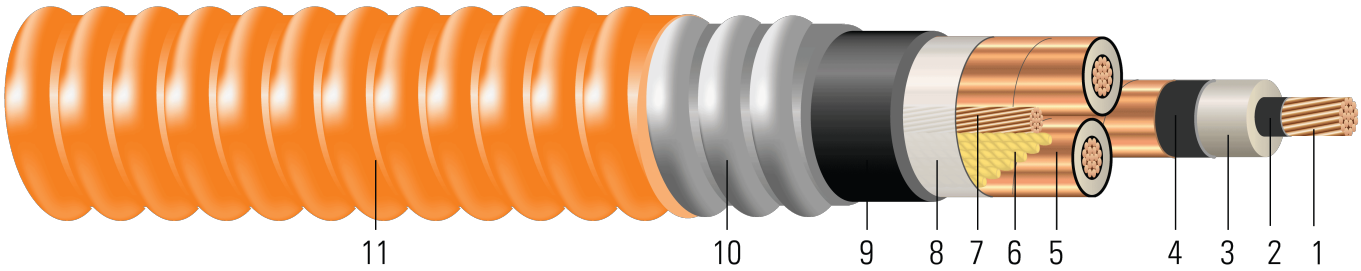


Image not to scale. See Table 1 for dimensions.

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) 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Filler:** Interstices filled with non-hydroscoping/non-wicking fillers
7. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
8. **Binder:** Polypropylene tape
9. **Inner Jacket:** PVC inner jacket
10. **Armour:** Aluminum Interlocked Armour (AIA)
11. **Overall Jacket:** Orange Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 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)

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- IEEE 383 Flame Test (70,000 btu)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 and Larger)
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- FT1 Flame Test (1,706 BTU/Hr nominal - Vertical Wire Flame Test)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)

SAMPLE PRINT LEGEND:

(CSA) SOUTHWIRE (NESC) #P# 3/C [#AWG or #kcmil] CU 115 NLEPR AIA 8kV 100% INS LEVEL 25% TS SUN RES 105°C FT4 HL (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

Table 1 – Weights and Measurements

Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground	Ground Size	Inner Jacket Thickness	Dia. Over Inner Jacket	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Conduit Size*
AWG/ Kcmil	No.	inch	inch	mil	inch	No. x AWG	AWG	mil	inch	inch	mil	inch	lb/ 1000ft	lb/ 1000ft	inch
2	7	0.283	0.551	115	0.611	1x6	6	80	1.506	1.816	60	1.936	856	1769	2.5
1	19	0.322	0.59	115	0.65	1x6	6	80	1.59	1.9	60	2.02	1026	2000	2.5
1/0	19	0.362	0.63	115	0.69	1x6	6	110	1.736	2.046	60	2.166	1242	2295	2.5
2/0	19	0.405	0.673	115	0.733	1x6	6	110	1.829	2.139	60	2.259	1510	2630	3
3/0	19	0.456	0.724	115	0.784	1x4	4	110	1.939	2.249	60	2.369	1895	3095	3
4/0	19	0.512	0.78	115	0.84	1x4	4	110	2.06	2.37	75	2.52	2318	3672	3
250	37	0.558	0.834	115	0.894	1x4	4	110	2.177	2.487	75	2.637	2692	4147	3.5
350	37	0.661	0.937	115	0.997	1x3	3	110	2.4	2.71	75	2.86	3688	5313	3.5
500	37	0.789	1.065	115	1.125	1x3	3	110	2.676	2.986	75	3.136	5123	6958	4
750	61	0.968	1.254	115	1.314	1x2	2	125	3.114	3.424	85	3.594	7551	9798	4.5
1000	61	1.117	1.403	115	1.463	1x1	1	125	3.436	3.746	85	3.916	9980	12482	5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ 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.

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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
2	13.6	1592	0.162	0.221	0.028	0.024	0.577+j0.556	0.221+j0.041	1924	172	201
1	14.1	2008	0.128	0.175	0.026	0.022	0.536+j0.534	0.175+j0.039	2045	197	228
1/0	15.2	2534	0.102	0.139	0.024	0.021	0.503+j0.513	0.139+j0.037	2169	225	257
2/0	15.8	3194	0.082	0.112	0.022	0.02	0.479+j0.492	0.112+j0.036	2302	260	292
3/0	16.6	4027	0.064	0.087	0.02	0.019	0.457+j0.468	0.087+j0.035	2460	297	330
4/0	17.6	5078	0.051	0.07	0.018	0.017	0.441+j0.443	0.070+j0.034	2634	342	372
250	18.5	6000	0.043	0.059	0.017	0.017	0.430+j0.421	0.059+j0.033	2801	376	410
350	20	8400	0.031	0.043	0.015	0.015	0.412+j0.382	0.043+j0.032	3120	460	487
500	22	12000	0.021	0.03	0.013	0.014	0.392+j0.340	0.030+j0.030	3517	556	573
750	25.2	18000	0.014	0.021	0.011	0.013	0.370+j0.288	0.021+j0.029	4102	678	668
1000	27.4	24000	0.011	0.018	0.009	0.012	0.355+j0.255	0.018+j0.028	4564	798	772

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:
3/C in air copper and aluminum: D17N
3/C direct buried copper and aluminum: D17E

Table 3 – Weights and Measurements (Metric)

Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground	Ground Size	Inner Jacket Thickness	Dia. Over Inner Jacket	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Conduit Size*
AWG/ Kcmil	No.	mm	mm	mm	mm	No. x AWG	AWG	mm	mm	mm	mm	mm	kg/km	kg/km	inch
2	7	7.19	14.00	2.92	15.52	1x6	6	2.03	38.25	46.13	1.52	49.17	1274	2633	2.5
1	19	8.18	14.99	2.92	16.51	1x6	6	2.03	40.39	48.26	1.52	51.31	1527	2976	2.5
1/0	19	9.19	16.00	2.92	17.53	1x6	6	2.79	44.09	51.97	1.52	55.02	1848	3415	2.5
2/0	19	10.29	17.09	2.92	18.62	1x6	6	2.79	46.46	54.33	1.52	57.38	2247	3914	3
3/0	19	11.58	18.39	2.92	19.91	1x4	4	2.79	49.25	57.12	1.52	60.17	2820	4606	3
4/0	19	13.00	19.81	2.92	21.34	1x4	4	2.79	52.32	60.20	1.91	64.01	3450	5465	3
250	37	14.17	21.18	2.92	22.71	1x4	4	2.79	55.30	63.17	1.91	66.98	4006	6171	3.5
350	37	16.79	23.80	2.92	25.32	1x3	3	2.79	60.96	68.83	1.91	72.64	5488	7907	3.5
500	37	20.04	27.05	2.92	28.58	1x3	3	2.79	67.97	75.84	1.91	79.65	7624	10355	4
750	61	24.59	31.85	2.92	33.38	1x2	2	3.18	79.10	86.97	2.16	91.29	11237	14581	4.5
1000	61	28.37	35.64	2.92	37.16	1x1	1	3.18	87.27	95.15	2.16	99.47	14852	18575	5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ 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.

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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
2	345.44	7084	0.5315	0.73	0.0085	0.0787	0.577+j0.556	0.221+j0.041	1924	172	201
1	358.14	8936	0.4199	0.57	0.0079	0.0722	0.536+j0.534	0.175+j0.039	2045	197	228
1/0	386.08	11276	0.3346	0.46	0.0073	0.0689	0.503+j0.513	0.139+j0.037	2169	225	257
2/0	401.32	14213	0.2690	0.37	0.0067	0.0656	0.479+j0.492	0.112+j0.036	2302	260	292
3/0	421.64	17920	0.2100	0.29	0.0061	0.0623	0.457+j0.468	0.087+j0.035	2460	297	330
4/0	447.04	22597	0.1673	0.23	0.0055	0.0558	0.441+j0.443	0.070+j0.034	2634	342	372
250	469.90	26700	0.1411	0.19	0.0052	0.0558	0.430+j0.421	0.059+j0.033	2801	376	410
350	508.00	37380	0.1017	0.14	0.0046	0.0492	0.412+j0.382	0.043+j0.032	3120	460	487
500	558.80	53400	0.0689	0.10	0.0040	0.0459	0.392+j0.340	0.030+j0.030	3517	556	573
750	640.08	80100	0.0459	0.07	0.0034	0.0427	0.370+j0.288	0.021+j0.029	4102	678	668
1000	695.96	106800	0.0361	0.06	0.0027	0.0394	0.355+j0.255	0.018+j0.028	4564	798	772

* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
***** CEC ampacities are based on:
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3/C direct buried copper and aluminum: D17E

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