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

3 Conductor, 115 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket

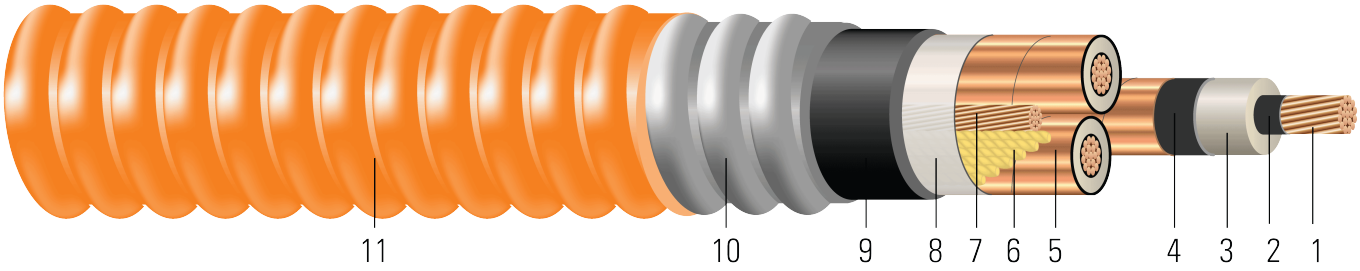


Image not to scale. See Table 1 for dimensions.

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 Tree Retardant Cross Linked Polyethylene 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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UPDATED: Dec. 11, 2023, 9:29 p.m.UTC REVISION: 1.000.000

- 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 TRXLPE 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 Size	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
AWG/ Kcmil	No.	inch	inch	mil	inch	AWG	mil	inch	mil	inch	lb/1000ft	lb/1000ft
2	7	0.282	0.550	115	0.610	6	80	1.877	60	1.997	738	2028
1	19	0.322	0.590	115	0.650	6	80	1.963	60	2.083	902	2282
1/0	19	0.361	0.629	115	0.689	6	110	2.107	60	2.227	1108	2695
2/0	19	0.405	0.673	115	0.733	6	110	2.202	60	2.322	1368	3062
3/0	19	0.456	0.724	115	0.784	4	110	2.313	75	2.463	1744	3637
4/0	19	0.512	0.780	115	0.840	4	110	2.434	75	2.584	2156	4190
250	37	0.558	0.834	115	0.894	4	110	2.550	75	2.700	2519	4699
350	37	0.661	0.937	115	0.997	3	110	2.773	75	2.923	3495	5945
500	37	0.789	1.065	115	1.125	3	110	3.049	85	3.219	4904	7758
750	61	0.968	1.254	115	1.314	2	125	3.487	85	3.657	7294	10798
1000	61	1.117	1.403	115	1.463	1	125	3.809	85	3.979	9693	13639

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

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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	14.0	1592	0.162	0.204	0.040	0.040	0.574 + j0.516	0.204 + j0.041	1920	172	201
1	14.6	2008	0.128	0.162	0.037	0.039	0.535 + j0.492	0.162 + j0.039	2044	197	228
1/0	15.6	2534	0.102	0.128	0.030	0.037	0.502 + j0.471	0.128 + j0.037	2165	225	257
2/0	16.3	3194	0.081	0.102	0.030	0.036	0.477 + j0.449	0.102 + j0.036	2302	260	292
3/0	17.2	4027	0.064	0.081	0.030	0.030	0.456 + j0.424	0.081 + j0.035	2459	297	330
4/0	18.1	5078	0.051	0.065	0.030	0.030	0.439 + j0.399	0.065 + j0.034	2633	342	372
250	18.9	6000	0.043	0.056	0.020	0.030	0.428 + j0.376	0.056 + j0.033	2800	376	410
350	20.5	8400	0.030	0.041	0.020	0.030	0.406 + j0.338	0.410 + j0.032	3120	460	487
500	22.5	12000	0.020	0.030	0.020	0.030	0.385 + j0.297	0.030 + j0.030	3516	556	573
750	25.6	18000	0.014	0.020	0.020	0.030	0.360 + j0.248	0.023 + j0.029	4102	678	668
1000	27.9	24000	0.011	0.020	0.013	0.030	0.341 + j0.217	0.020 + j0.028	4563	798	772

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

Table 3 – Weights and Measurements (Metric)

Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground Size	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
AWG/ Kcmil	No.	mm	mm	mm	mm	AWG	mm	mm	mm	mm	kg/km	kg/km
2	7	7.16	13.97	2.92	15.49	6	2.03	47.68	1.52	50.72	1098	3018
1	19	8.18	14.99	2.92	16.51	6	2.03	49.86	1.52	52.91	1342	3396
1/0	19	9.17	15.98	2.92	17.50	6	2.79	53.52	1.52	56.57	1649	4011
2/0	19	10.29	17.09	2.92	18.62	6	2.79	55.93	1.52	58.98	2036	4557
3/0	19	11.58	18.39	2.92	19.91	4	2.79	58.75	1.91	62.56	2595	5412
4/0	19	13.00	19.81	2.92	21.34	4	2.79	61.82	1.91	65.63	3208	6235
250	37	14.17	21.18	2.92	22.71	4	2.79	64.77	1.91	68.58	3749	6993
350	37	16.79	23.80	2.92	25.32	3	2.79	70.43	1.91	74.24	5201	8847
500	37	20.04	27.05	2.92	28.58	3	2.79	77.44	2.16	81.76	7298	11545
750	61	24.59	31.85	2.92	33.38	2	3.18	88.57	2.16	92.89	10855	16069
1000	61	28.37	35.64	2.92	37.16	1	3.18	96.75	2.16	101.07	14425	20297

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

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

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	355.60	7084	0.5315	0.67	0.0122	0.1312	0.574 + j0.516	0.204 + j0.041	1920	172	201
1	370.84	8936	0.4199	0.53	0.0113	0.1280	0.535 + j0.492	0.162 + j0.039	2044	197	228
1/0	396.24	11276	0.3346	0.42	0.0091	0.1214	0.502 + j0.471	0.128 + j0.037	2165	225	257
2/0	414.02	14213	0.2657	0.33	0.0091	0.1181	0.477 + j0.449	0.102 + j0.036	2302	260	292
3/0	436.88	17920	0.2100	0.27	0.0091	0.0984	0.456 + j0.424	0.081 + j0.035	2459	297	330
4/0	459.74	22597	0.1673	0.21	0.0091	0.0984	0.439 + j0.399	0.065 + j0.034	2633	342	372
250	480.06	26700	0.1411	0.18	0.0061	0.0984	0.428 + j0.376	0.056 + j0.033	2800	376	410
350	520.70	37380	0.0984	0.13	0.0061	0.0984	0.406 + j0.338	0.410 + j0.032	3120	460	487
500	571.50	53400	0.0656	0.10	0.0061	0.0984	0.385 + j0.297	0.030 + j0.030	3516	556	573
750	650.24	80100	0.0459	0.07	0.0061	0.0984	0.360 + j0.248	0.023 + j0.029	4102	678	668
1000	708.66	106800	0.0361	0.07	0.0040	0.0984	0.341 + j0.217	0.020 + j0.028	4563	798	772

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