HVTECK CU 3/C 320TRXLPE TS PVC AIA PVC 25kV 133% CSA

3 Conductor, 320 Mils Tree Retardant Cross Linked Polyethylene, 133% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Inner Jacket, Aluminum Interlocked Armour (AIA), Polyvinyl Chloride (PVC) Jacket

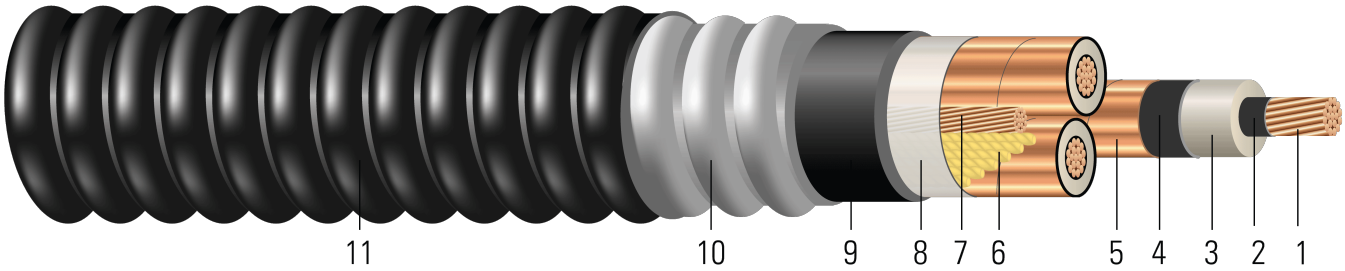

Image not to scale. See Table 1 for dimensions.

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:** 320 Mils Tree Retardant Cross Linked Polyethylene 133% 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. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
7. **Filler:** Non-wicking, non-hygroscopic and flame retardant polypropylene filler
8. **Binder:** Polypropylene tape
9. **Inner Jacket:** PVC inner jacket
10. **Armour:** Aluminum Interlocked Armour (AIA)
11. **Overall Jacket:** Black Polyvinyl Chloride (PVC) Jacket

APPLICATIONS AND FEATURES:

Southwire's 25kV 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 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)

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray 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 320 TRXLPE AIA 25kV 133% INS LEVEL 25% TS SUN RES 105°C FT4 HL (-40°C) LTGG RoHS YEAR [SEQUENTIAL METER MARKS]

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Conduit Size*
	AWG/ Kcmil	No.	inch	inch	mil	inch	No. x AWG	mil	inch	mil	inch	lb/ 1000ft	lb/ 1000ft	inch
TBA	1	19	0.322	1	320	1.06	1x6	110	2.846	75	2.996	1128	3477	4
TBA	1/0	19	0.362	1.04	320	1.1	1x6	110	2.932	75	3.082	1344	3806	4
139407	2/0	19	0.405	1.084	320	1.144	1x6	110	3.135	85	3.305	1623	5051	4.5
TBA	3/0	19	0.456	1.134	320	1.194	1x4	125	3.165	85	3.335	1997	4793	4.5
678745	4/0	19	0.512	1.19	320	1.25	1x4	125	3.364	85	3.534	2430	6162	4.5
TBA	250	37	0.558	1.244	320	1.304	1x4	125	3.403	85	3.573	2794	5920	4.5
138182	350	37	0.661	1.327	320	1.387	1x3	125	3.66	85	3.83	3791	7915	5
137995!	350	37	0.661	1.327	320	1.387	1x3	125	3.66	85	3.83	3791	7927	5
678737	500	37	0.789	1.475	320	1.535	1x3	125	3.979	85	4.149	5230	9786	5.5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
! Gray Jacket Color
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
1	21	2008	0.128	0.175	0.07	0.033	0.541+j0.380	0.175+j0.050	3315	202	226
1/0	21.6	2534	0.102	0.139	0.065	0.032	0.503+j0.365	0.139+j0.048	3439	231	256
2/0	23.1	3194	0.082	0.112	0.061	0.03	0.473+j0.350	0.112+j0.046	3576	265	290
3/0	23.3	4027	0.064	0.087	0.057	0.028	0.445+j0.335	0.087+j0.044	3730	303	327
4/0	24.7	5078	0.051	0.07	0.053	0.026	0.424+j0.318	0.070+j0.043	3904	348	369
250	25	6000	0.043	0.059	0.049	0.025	0.409+j0.303	0.059+j0.042	4071	384	408
350	26.8	8400	0.031	0.043	0.043	0.023	0.386+j0.282	0.043+j0.039	4328	468	485
350	26.8	8400	0.031	0.043	0.043	0.023	0.386+j0.282	0.043+j0.039	4328	468	485
500	29	12000	0.021	0.03	0.039	0.021	0.361+j0.250	0.030+j0.037	4787	565	571

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

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

3/C in air copper and aluminum: D17N
3/C direct buried copper and aluminum: D17E

Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Strand	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Ground	Inner Jacket Thickness	Dia. Over Armour	Overall Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Conduit Size*
	AWG/ Kcmil	No.	mm	mm	mm	mm	No. x AWG	mm	mm	mm	mm	kg/km	kg/km	inch
TBA	1	19	8.18	25.40	8.13	26.92	1x6	2.79	72.29	1.91	76.10	1679	5174	4
TBA	1/0	19	9.19	26.42	8.13	27.94	1x6	2.79	74.47	1.91	78.28	2000	5664	4
139407	2/0	19	10.29	27.53	8.13	29.06	1x6	2.79	79.63	2.16	83.95	2415	7517	4.5
TBA	3/0	19	11.58	28.80	8.13	30.33	1x4	3.18	80.39	2.16	84.71	2972	7133	4.5
678745	4/0	19	13.00	30.23	8.13	31.75	1x4	3.18	85.45	2.16	89.76	3616	9170	4.5
TBA	250	37	14.17	31.60	8.13	33.12	1x4	3.18	86.44	2.16	90.75	4158	8810	4.5
138182	350	37	16.79	33.71	8.13	35.23	1x3	3.18	92.96	2.16	97.28	5642	11779	5
137995!	350	37	16.79	33.71	8.13	35.23	1x3	3.18	92.96	2.16	97.28	5642	11797	5
678737	500	37	20.04	37.47	8.13	38.99	1x3	3.18	101.07	2.16	105.38	7783	14563	5.5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
! Gray Jacket Color
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
1	533.40	8936	0.4199	0.57	0.0213	0.1083	0.541+j0.380	0.175+j0.050	3315	202	226
1/0	548.64	11276	0.3346	0.46	0.0198	0.1050	0.503+j0.365	0.139+j0.048	3439	231	256
2/0	586.74	14213	0.2690	0.37	0.0186	0.0984	0.473+j0.350	0.112+j0.046	3576	265	290
3/0	591.82	17920	0.2100	0.29	0.0174	0.0919	0.445+j0.335	0.087+j0.044	3730	303	327
4/0	627.38	22597	0.1673	0.23	0.0162	0.0853	0.424+j0.318	0.070+j0.043	3904	348	369
250	635.00	26700	0.1411	0.19	0.0149	0.0820	0.409+j0.303	0.059+j0.042	4071	384	408
350	680.72	37380	0.1017	0.14	0.0131	0.0755	0.386+j0.282	0.043+j0.039	4328	468	485
350	680.72	37380	0.1017	0.14	0.0131	0.0755	0.386+j0.282	0.043+j0.039	4328	468	485
500	736.60	53400	0.0689	0.10	0.0119	0.0689	0.361+j0.250	0.030+j0.037	4787	565	571

* 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

Copyright © 2026 Southwire Company, LLC. All Rights Reserved