25kV CU 133% TRXLPE LCT LLDPE

Single Conductor, 320 Mils Tree Retardant Cross Linked Polyethylene, 133% Insulation Level, Longitudinally Corrugated Tape Shield, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Moisture blocked class B compressed stranded soft drawn bare copper per ASTM B3 and ASTM B8 (Conductor moisture block optional and tinned copper per ASTM B33 optional)
2. **Conductor Shield:** Conventional Semi-conducting cross-linked copolymer; Supersmooth conductor shield optional; A conductor tape is used for cable size larger than or equal to 1500 Kcmil
3. **Insulation:** 320 Mils Tree Retardant Cross Linked Polyethylene 133% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Tape Shield:** 10 mils Longitudinally Corrugated Copper Tape Shield
6. **Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes; PowerGlide® LLDPE jacket optional

APPLICATIONS AND FEATURES:

Southwire's 25kV cables are suited for use in wet and dry areas, conduits, ducts, direct burial, sunlight, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation. 130°C for emergency overload, and 250°C for short circuit conditions. Jacket types available that can be installed in conduit without the aid of lubrication. Rated for 1000 lbs./FT maximum sidewall pressure.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- Rural Utility Standard RUS 1728F-U1 or 1728.204 (Electric standards and specifications for materials and construction)
- UL 1072 Listed as MV 90 When Specified
- Optional CSA 68.5: -40ºC and MV 90ºC optional marking available upon request

SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] CU 25000 VOLTS TRXLPE INSULATION 320 MILS -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

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Table 1 – Weights and Measurements

Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
AWG/ Kcmil	inch	inch	mil	inch	mil	inch	lb /1000ft	inch	lb
1 (SOLID)	0.289	0.967	320	1.047	50	1.247	1477	15	669
1 (19)	0.322	1	320	1.08	50	1.28	1522	15.4	669
1/0 (SOLID)	0.325	1.003	320	1.083	50	1.283	1593	15.4	844
1/0 (19)	0.362	1.04	320	1.12	50	1.32	1644	15.8	844
2/0 (19)	0.405	1.083	320	1.163	50	1.363	1788	16.4	1064
3/0 (19)	0.456	1.134	320	1.214	50	1.414	1965	17	1342
4/0 (19)	0.512	1.19	320	1.27	50	1.47	2176	17.6	1692
250 (37)	0.558	1.244	320	1.324	50	1.524	2372	18.3	2000
350 (37)	0.661	1.347	320	1.427	75	1.677	2896	20.1	2800
500 (37)	0.789	1.475	320	1.555	75	1.805	3540	21.7	4000
750 (61)	0.968	1.664	320	1.744	75	1.994	4588	23.9	6000
1000 (61)	1.117	1.813	320	1.893	75	2.143	5574	25.7	8000

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Pulling tension based on pulling eye directly connected to conductor
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	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Charging Current	Dielectric Loss	Zero Sequence Impedance	Positive Sequence Impedance	Short Circuit Current @ 30 Cycle	Allowable Ampacity in Duct 90°C	Allowable Ampacity Directly Buried 90°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	A/1000ft	W/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1 (SOLID)	0.128	0.175	0.074	0.055	0.2	2.8	0.437+j0.147	0.177+j0.058	4116	175	220
1 (19)	0.128	0.175	0.07	0.053	0.21	3	0.432+j0.143	0.177+j0.059	4228	175	220
1/0 (SOLID)	0.102	0.139	0.069	0.053	0.21	3	0.396+j0.140	0.141+j0.057	4238	200	250
1/0 (19)	0.102	0.139	0.065	0.051	0.22	3.2	0.39+j0.136	0.141+j0.057	4363	200	250
2/0 (19)	0.082	0.112	0.061	0.05	0.24	3.4	0.357+j0.129	0.114+j0.055	4509	230	285
3/0 (19)	0.064	0.087	0.057	0.048	0.26	3.7	0.326+j0.122	0.089+j0.053	4681	260	320
4/0 (19)	0.051	0.07	0.053	0.046	0.27	4	0.302+j0.114	0.072+j0.052	4871	300	365
250 (37)	0.043	0.059	0.049	0.045	0.29	4.2	0.284+j0.108	0.061+j0.050	5053	315	396
350 (37)	0.031	0.043	0.044	0.043	0.33	4.8	0.257+j0.097	0.045+j0.048	5402	390	475
500 (37)	0.021	0.03	0.039	0.041	0.37	5.4	0.231+j0.086	0.033+j0.046	5835	470	565
750 (61)	0.014	0.021	0.033	0.038	0.44	6.3	0.205+j0.073	0.024+j0.043	6475	585	680
1000 (61)	0.011	0.018	0.03	0.037	0.49	7	0.191+j0.065	0.021+j0.042	6979	670	750

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center.

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Table 3 – Weights and Measurements (Metric)

Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
AWG/ Kcmil	mm	mm	mm	mm	mm	mm	kg/km	mm	newton
1 (SOLID)	7.34	24.56	8.13	26.59	1.27	31.67	2198	381.00	2977
1 (19)	8.18	25.40	8.13	27.43	1.27	32.51	2265	391.16	2977
1/0 (SOLID)	8.25	25.48	8.13	27.51	1.27	32.59	2371	391.16	3756
1/0 (19)	9.19	26.42	8.13	28.45	1.27	33.53	2447	401.32	3756
2/0 (19)	10.29	27.51	8.13	29.54	1.27	34.62	2661	416.56	4735
3/0 (19)	11.58	28.80	8.13	30.84	1.27	35.92	2924	431.80	5972
4/0 (19)	13.00	30.23	8.13	32.26	1.27	37.34	3238	447.04	7529
250 (37)	14.17	31.60	8.13	33.63	1.27	38.71	3530	464.82	8900
350 (37)	16.79	34.21	8.13	36.25	1.91	42.60	4310	510.54	12460
500 (37)	20.04	37.47	8.13	39.50	1.91	45.85	5268	551.18	17800
750 (61)	24.59	42.27	8.13	44.30	1.91	50.65	6828	607.06	26700
1000 (61)	28.37	46.05	8.13	48.08	1.91	54.43	8295	652.78	35600

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Pulling tension based on pulling eye directly connected to conductor
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	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Charging Current	Dielectric Loss	Zero Sequence Impedance*	Positive Sequence Impedance*	Short Circuit Current @ 30 Cycle	Allowable Ampacity in Duct 90°C	Allowable Ampacity Directly Buried 90°C
AWG/ Kcmil	Ω/km	Ω/km	MΩ*km	Ω/km	A/km	W/km	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1 (SOLID)	0.4199	0.57	0.0226	0.1804	0.656	9.1864	0.437+j0.147	0.177+j0.058	4116	175	220
1 (19)	0.4199	0.57	0.0213	0.1739	0.689	9.8425	0.432+j0.143	0.177+j0.059	4228	175	220
1/0 (SOLID)	0.3346	0.46	0.0210	0.1739	0.689	9.8425	0.396+j0.140	0.141+j0.057	4238	200	250
1/0 (19)	0.3346	0.46	0.0198	0.1673	0.722	10.4987	0.39+j0.136	0.141+j0.057	4363	200	250
2/0 (19)	0.2690	0.37	0.0186	0.1640	0.787	11.1549	0.357+j0.129	0.114+j0.055	4509	230	285
3/0 (19)	0.2100	0.29	0.0174	0.1575	0.853	12.1391	0.326+j0.122	0.089+j0.053	4681	260	320
4/0 (19)	0.1673	0.23	0.0162	0.1509	0.886	13.1234	0.302+j0.114	0.072+j0.052	4871	300	365
250 (37)	0.1411	0.19	0.0149	0.1476	0.951	13.7795	0.284+j0.108	0.061+j0.050	5053	315	396
350 (37)	0.1017	0.14	0.0134	0.1411	1.083	15.7480	0.257+j0.097	0.045+j0.048	5402	390	475
500 (37)	0.0689	0.10	0.0119	0.1345	1.214	17.7165	0.231+j0.086	0.033+j0.046	5835	470	565
750 (61)	0.0459	0.07	0.0101	0.1247	1.444	20.6693	0.205+j0.073	0.024+j0.043	6475	585	680
1000 (61)	0.0361	0.06	0.0091	0.1214	1.608	22.9659	0.191+j0.065	0.021+j0.042	6979	670	750

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
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