15kV CU 100% TRXLPE LCT LLDPE

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% 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:** 175 Mils Tree Retardant Cross Linked Polyethylene 100% 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

For information about our Cable-Rejuvenation Services please visit us at: Cable-Rejuvenation Services
You can email us at: Cable-Rejuvenation Services

APPLICATIONS AND FEATURES:

Southwire's 15kV 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

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SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] CU 15000 VOLTS TRXLPE INSULATION 175 MILS -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

Table 1 – Weights and Measurements

Stock Number	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
TBA	2 (SOLID)	0.258	0.646	175	0.726	50	0.926	956	11.1	530
TBA	2 (7)	0.283	0.671	175	0.751	50	0.951	984	11.4	530
TBA	1 (SOLID)	0.289	0.677	175	0.757	50	0.957	1043	11.5	669
TBA	1 (19)	0.322	0.71	175	0.79	50	0.99	1080	11.9	669
TBA	1/0 (SOLID)	0.325	0.713	175	0.793	50	0.993	1151	11.9	844
TBA	1/0 (19)	0.362	0.75	175	0.83	50	1.03	1192	12.4	844
TBA	2/0 (19)	0.405	0.793	175	0.873	50	1.073	1325	12.9	1064
TBA	3/0 (19)	0.456	0.844	175	0.924	50	1.124	1488	13.5	1342
TBA	4/0 (19)	0.512	0.9	175	0.98	50	1.18	1685	14.2	1692
TBA	250 (37)	0.558	0.954	175	1.034	50	1.234	1869	14.8	2000
TBA	350 (37)	0.661	1.057	175	1.137	50	1.337	2292	16	2800
TBA	500 (37)	0.789	1.185	175	1.265	50	1.465	2898	17.6	4000
TBA	750 (61)	0.968	1.374	175	1.454	75	1.704	3964	20.4	6000
662309	1000 (61)	1.117	1.517	175	1.597	75	1.917	4170	23	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
2 (SOLID)	0.162	0.221	0.053	0.051	0.16	1.4	0.538+j0.209	0.223+j0.055	3030	155	195
2 (7)	0.162	0.221	0.05	0.05	0.17	1.5	0.533+j0.203	0.223+j0.056	3115	155	195
1 (SOLID)	0.128	0.175	0.05	0.049	0.17	1.5	0.486+j0.198	0.177+j0.052	3135	175	220
1 (19)	0.128	0.175	0.046	0.048	0.19	1.6	0.480+j0.190	0.177+j0.053	3246	175	220
1/0 (SOLID)	0.102	0.139	0.046	0.047	0.19	1.6	0.443+j0.187	0.141+j0.050	3257	200	250
1/0 (19)	0.102	0.139	0.043	0.046	0.2	1.8	0.437+j0.179	0.141+j0.051	3382	200	250
2/0 (19)	0.082	0.112	0.04	0.044	0.22	1.9	0.402+j0.168	0.114+j0.049	3527	230	285
3/0 (19)	0.064	0.087	0.036	0.042	0.24	2.1	0.368+j0.157	0.089+j0.048	3700	260	320
4/0 (19)	0.051	0.07	0.034	0.041	0.26	2.2	0.342+j0.146	0.072+j0.046	3889	300	365
250 (37)	0.043	0.059	0.031	0.04	0.28	2.4	0.323+j0.136	0.061+j0.045	4072	315	396
350 (37)	0.031	0.043	0.027	0.038	0.32	2.7	0.292+j0.120	0.045+j0.043	4421	390	475
500 (37)	0.021	0.03	0.024	0.036	0.36	3.2	0.262+j0.104	0.032+j0.041	4854	470	565
750 (61)	0.014	0.021	0.02	0.035	0.43	3.8	0.232+j0.087	0.023+j0.039	5493	585	680
1000 (61)	0.011	0.018	0.018	0.034	0.49	4.3	0.215+j0.076	0.021+j0.039	5977	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)

Stock Number	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
TBA	2 (SOLID)	6.55	16.41	4.44	18.44	1.27	23.52	1423	281.94	2359
TBA	2 (7)	7.19	17.04	4.44	19.08	1.27	24.16	1464	289.56	2359
TBA	1 (SOLID)	7.34	17.20	4.44	19.23	1.27	24.31	1552	292.10	2977
TBA	1 (19)	8.18	18.03	4.44	20.07	1.27	25.15	1607	302.26	2977
TBA	1/0 (SOLID)	8.25	18.11	4.44	20.14	1.27	25.22	1713	302.26	3756
TBA	1/0 (19)	9.19	19.05	4.44	21.08	1.27	26.16	1774	314.96	3756
TBA	2/0 (19)	10.29	20.14	4.44	22.17	1.27	27.25	1972	327.66	4735
TBA	3/0 (19)	11.58	21.44	4.44	23.47	1.27	28.55	2214	342.90	5972
TBA	4/0 (19)	13.00	22.86	4.44	24.89	1.27	29.97	2508	360.68	7529
TBA	250 (37)	14.17	24.23	4.44	26.26	1.27	31.34	2781	375.92	8900
TBA	350 (37)	16.79	26.85	4.44	28.88	1.27	33.96	3411	406.40	12460
TBA	500 (37)	20.04	30.10	4.44	32.13	1.27	37.21	4313	447.04	17800
TBA	750 (61)	24.59	34.90	4.44	36.93	1.91	43.28	5899	518.16	26700
662309	1000 (61)	28.37	38.53	4.44	40.56	1.91	48.69	6206	584.20	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
2 (SOLID)	0.5315	0.73	0.0162	0.1673	0.525	4.5932	0.538+j0.209	0.223+j0.055	3030	155	195
2 (7)	0.5315	0.73	0.0152	0.1640	0.558	4.9213	0.533+j0.203	0.223+j0.056	3115	155	195
1 (SOLID)	0.4199	0.57	0.0152	0.1608	0.558	4.9213	0.486+j0.198	0.177+j0.052	3135	175	220
1 (19)	0.4199	0.57	0.0140	0.1575	0.623	5.2493	0.480+j0.190	0.177+j0.053	3246	175	220
1/0 (SOLID)	0.3346	0.46	0.0140	0.1542	0.623	5.2493	0.443+j0.187	0.141+j0.050	3257	200	250
1/0 (19)	0.3346	0.46	0.0131	0.1509	0.656	5.9055	0.437+j0.179	0.141+j0.051	3382	200	250
2/0 (19)	0.2690	0.37	0.0122	0.1444	0.722	6.2336	0.402+j0.168	0.114+j0.049	3527	230	285
3/0 (19)	0.2100	0.29	0.0110	0.1378	0.787	6.8898	0.368+j0.157	0.089+j0.048	3700	260	320
4/0 (19)	0.1673	0.23	0.0104	0.1345	0.853	7.2178	0.342+j0.146	0.072+j0.046	3889	300	365
250 (37)	0.1411	0.19	0.0094	0.1312	0.919	7.8740	0.323+j0.136	0.061+j0.045	4072	315	396
350 (37)	0.1017	0.14	0.0082	0.1247	1.050	8.8583	0.292+j0.120	0.045+j0.043	4421	390	475
500 (37)	0.0689	0.10	0.0073	0.1181	1.181	10.4987	0.262+j0.104	0.032+j0.041	4854	470	565
750 (61)	0.0459	0.07	0.0061	0.1148	1.411	12.4672	0.232+j0.087	0.023+j0.039	5493	585	680
1000 (61)	0.0361	0.06	0.0055	0.1115	1.608	14.1076	0.215+j0.076	0.021+j0.039	5977	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
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