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 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)	0.257	0.645	175	0.725	80	0.985	547	11.8	530
TBA	2 (7)	0.282	0.670	175	0.750	80	1.010	560	12.1	530
TBA	1 (Solid)	0.289	0.677	175	0.757	80	1.017	619	12.2	669
TBA	1 (19)	0.322	0.710	175	0.790	80	1.050	637	12.6	669
TBA	1/0 (Solid)	0.324	0.712	175	0.792	80	1.052	704	12.6	844
TBA	1/0 (19)	0.361	0.749	175	0.829	80	1.089	725	13.1	844
TBA	2/0 (19)	0.405	0.793	175	0.873	80	1.133	836	13.6	1064
TBA	3/0 (19)	0.456	0.844	175	0.924	80	1.184	971	14.2	1342
TBA	4/0 (19)	0.512	0.900	175	0.980	80	1.240	1138	14.9	1692
TBA	250 (37)	0.558	0.954	175	1.034	80	1.294	1290	15.5	2000
TBA	350 (37)	0.661	1.057	175	1.137	80	1.397	1658	16.8	2800
TBA	500 (37)	0.789	1.185	175	1.265	80	1.525	2193	18.3	4000
TBA	750 (61)	0.968	1.374	175	1.454	110	1.774	3184	21.3	6000
662309	1000 (61)	1.117	1.517	175	1.597	110	1.917	4170	23.0	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

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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	0.204	0.062	0.053	0.080	0.69	0.258 + j0.771	0.204 + j0.051	2064	155	195
2 (7)	0.162	0.204	0.058	0.051	0.085	0.74	0.258 + j0.770	0.204 + j0.052	2133	155	195
1 (Solid)	0.128	0.162	0.057	0.051	0.086	0.74	0.216 + j0.766	0.162 + j0.048	2153	175	220
1 (19)	0.128	0.162	0.053	0.049	0.093	0.81	0.216 + j0.764	0.162 + j0.049	2244	175	220
1/0 (Solid)	0.102	0.128	0.053	0.049	0.093	0.81	0.182 + j0.761	0.128 + j0.047	2250	200	250
1/0 (19)	0.102	0.128	0.049	0.047	0.101	0.87	0.182 + j0.760	0.128 + j0.047	2352	200	250
2/0 (19)	0.081	0.102	0.045	0.045	0.109	0.94	0.156 + j0.755	0.102 + j0.046	2474	230	285
3/0 (19)	0.064	0.081	0.041	0.044	0.119	1.03	0.135 + j0.751	0.081 + j0.044	2616	260	320
4/0 (19)	0.051	0.065	0.038	0.042	0.130	1.13	0.119 + j0.746	0.065 + j0.042	2771	300	365
250 (37)	0.043	0.056	0.036	0.041	0.137	1.19	0.111 + j0.742	0.056 + j0.041	2920	315	396
350 (37)	0.031	0.041	0.031	0.039	0.156	1.35	0.095 + j0.734	0.041 + j0.039	3206	390	475
500 (37)	0.022	0.030	0.027	0.037	0.180	1.56	0.084 + j0.726	0.030 + j0.037	3561	470	565
750 (61)	0.014	0.023	0.023	0.036	0.210	1.82	0.077 + j0.714	0.023 + j0.036	4084	585	680
1000 (61)	0.011	0.019	0.021	0.034	0.237	2.05	0.073 + j0.707	0.019 + j0.034	4497	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.

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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)	6.53	16.38	4.44	18.42	2.03	25.02	814	299.72	2359
TBA	2 (7)	7.16	17.02	4.44	19.05	2.03	25.65	833	307.34	2359
TBA	1 (Solid)	7.34	17.20	4.44	19.23	2.03	25.83	921	309.88	2977
TBA	1 (19)	8.18	18.03	4.44	20.07	2.03	26.67	948	320.04	2977
TBA	1/0 (Solid)	8.23	18.08	4.44	20.12	2.03	26.72	1048	320.04	3756
TBA	1/0 (19)	9.17	19.02	4.44	21.06	2.03	27.66	1079	332.74	3756
TBA	2/0 (19)	10.29	20.14	4.44	22.17	2.03	28.78	1244	345.44	4735
TBA	3/0 (19)	11.58	21.44	4.44	23.47	2.03	30.07	1445	360.68	5972
TBA	4/0 (19)	13.00	22.86	4.44	24.89	2.03	31.50	1694	378.46	7529
TBA	250 (37)	14.17	24.23	4.44	26.26	2.03	32.87	1920	393.70	8900
TBA	350 (37)	16.79	26.85	4.44	28.88	2.03	35.48	2467	426.72	12460
TBA	500 (37)	20.04	30.10	4.44	32.13	2.03	38.73	3264	464.82	17800
TBA	750 (61)	24.59	34.90	4.44	36.93	2.79	45.06	4738	541.02	26700
662309	1000 (61)	28.37	38.53	4.44	40.56	2.79	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

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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	0.67	0.0189	0.1739	0.262	2.2638	0.258 + j0.771	0.204 + j0.051	2064	155	195
2 (7)	0.5315	0.67	0.0177	0.1673	0.279	2.4278	0.258 + j0.770	0.204 + j0.052	2133	155	195
1 (Solid)	0.4199	0.53	0.0174	0.1673	0.282	2.4278	0.216 + j0.766	0.162 + j0.048	2153	175	220
1 (19)	0.4199	0.53	0.0162	0.1608	0.305	2.6575	0.216 + j0.764	0.162 + j0.049	2244	175	220
1/0 (Solid)	0.3346	0.42	0.0162	0.1608	0.305	2.6575	0.182 + j0.761	0.128 + j0.047	2250	200	250
1/0 (19)	0.3346	0.42	0.0149	0.1542	0.331	2.8543	0.182 + j0.760	0.128 + j0.047	2352	200	250
2/0 (19)	0.2657	0.33	0.0137	0.1476	0.358	3.0840	0.156 + j0.755	0.102 + j0.046	2474	230	285
3/0 (19)	0.2100	0.27	0.0125	0.1444	0.390	3.3793	0.135 + j0.751	0.081 + j0.044	2616	260	320
4/0 (19)	0.1673	0.21	0.0116	0.1378	0.427	3.7073	0.119 + j0.746	0.065 + j0.042	2771	300	365
250 (37)	0.1411	0.18	0.0110	0.1345	0.449	3.9042	0.111 + j0.742	0.056 + j0.041	2920	315	396
350 (37)	0.1017	0.13	0.0094	0.1280	0.512	4.4291	0.095 + j0.734	0.041 + j0.039	3206	390	475
500 (37)	0.0722	0.10	0.0082	0.1214	0.591	5.1181	0.084 + j0.726	0.030 + j0.037	3561	470	565
750 (61)	0.0459	0.08	0.0070	0.1181	0.689	5.9711	0.077 + j0.714	0.023 + j0.036	4084	585	680
1000 (61)	0.0361	0.06	0.0064	0.1115	0.778	6.7257	0.073 + j0.707	0.019 + j0.034	4497	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.