15kV AL 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 Aluminum ASTM B231 1350 ¾ hard H16/H26 (Non Moisture Blocked 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 B231 Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B609 Standard Specification for Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
- 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] AL 15000 VOLTS TRXLPE INSULATION 175 MILS -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

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
2 (Solid)	0.257	0.645	175	0.725	80	0.985	446	11.8	398
2 (7)	0.282	0.670	175	0.750	80	1.010	461	12.1	398
1 (Solid)	0.289	0.677	175	0.757	80	1.017	482	12.2	502
1 (19)	0.322	0.710	175	0.790	80	1.050	500	12.6	502
1/0 (Solid)	0.324	0.712	175	0.792	80	1.052	523	12.6	633
1/0 (19)	0.351	0.739	175	0.819	80	1.079	540	12.9	633
2/0 (19)	0.395	0.783	175	0.863	80	1.123	592	13.5	798
3/0 (19)	0.443	0.831	175	0.911	80	1.171	654	14.1	1006
4/0 (19)	0.498	0.886	175	0.966	80	1.226	728	14.7	1269
250 (37)	0.558	0.954	175	1.034	80	1.294	808	15.5	1500
350 (37)	0.661	1.057	175	1.137	80	1.397	964	16.8	2100
500 (37)	0.789	1.185	175	1.265	80	1.525	1181	18.3	3000
750 (61)	0.968	1.374	175	1.454	110	1.774	1656	21.3	4500
1000 (61)	1.117	1.523	175	1.603	110	1.923	1994	23.1	6000

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.

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	0.053	0.053	0.163	0.4	0.551 + j0.267	0.205 + j0.053	3027	120	150
2 (7)	0.266	0.336	0.050	0.051	0.172	0.4	0.678 + j0.256	0.337 + j0.051	3112	120	150
1 (Solid)	0.129	0.162	0.049	0.051	0.175	0.5	0.503 + j0.253	0.163 + j0.051	3136	140	170
1 (19)	0.211	0.266	0.046	0.049	0.187	0.5	0.601 + j0.239	0.267 + j0.049	3247	140	170
1/0 (Solid)	0.102	0.128	0.045	0.049	0.188	0.5	0.462 + j0.238	0.129 + j0.049	3254	155	195
1/0 (19)	0.167	0.211	0.043	0.047	0.199	0.5	0.540 + j0.228	0.212 + j0.048	3346	155	195
2/0 (19)	0.133	0.167	0.040	0.046	0.214	0.6	0.488 + j0.213	0.168 + j0.046	3495	180	220
3/0 (19)	0.105	0.132	0.037	0.044	0.232	0.6	0.444 + j0.198	0.133 + j0.045	3657	200	250
4/0 (19)	0.084	0.105	0.034	0.042	0.253	0.7	0.407 + j0.183	0.106 + j0.043	3843	235	285
250 (37)	0.071	0.090	0.031	0.041	0.278	0.7	0.381 + j0.166	0.091 + j0.042	4073	256	335
350 (37)	0.050	0.065	0.027	0.039	0.316	0.8	0.339 + j0.145	0.066 + j0.039	4422	310	375
500 (37)	0.035	0.046	0.023	0.037	0.363	0.9	0.301 + j0.125	0.047 + j0.037	4856	375	450
750 (61)	0.024	0.033	0.020	0.036	0.432	1.1	0.263 + j0.102	0.035 + j0.036	5495	470	550
1000 (61)	0.018	0.026	0.017	0.034	0.487	1.3	0.240 + j0.088	0.028 + j0.035	6000		630

*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.

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
2 (Solid)	6.53	16.38	4.44	18.42	2.03	25.02	664	299.72	1771
2 (7)	7.16	17.02	4.44	19.05	2.03	25.65	686	307.34	1771
1 (Solid)	7.34	17.20	4.44	19.23	2.03	25.83	717	309.88	2234
1 (19)	8.18	18.03	4.44	20.07	2.03	26.67	744	320.04	2234
1/0 (Solid)	8.23	18.08	4.44	20.12	2.03	26.72	778	320.04	2817
1/0 (19)	8.92	18.77	4.44	20.80	2.03	27.41	804	327.66	2817
2/0 (19)	10.03	19.89	4.44	21.92	2.03	28.52	881	342.90	3551
3/0 (19)	11.25	21.11	4.44	23.14	2.03	29.74	973	358.14	4477
4/0 (19)	12.65	22.50	4.44	24.54	2.03	31.14	1083	373.38	5647
250 (37)	14.17	24.23	4.44	26.26	2.03	32.87	1202	393.70	6675
350 (37)	16.79	26.85	4.44	28.88	2.03	35.48	1435	426.72	9345
500 (37)	20.04	30.10	4.44	32.13	2.03	38.73	1758	464.82	13350
750 (61)	24.59	34.90	4.44	36.93	2.79	45.06	2464	541.02	20025
1000 (61)	28.37	38.68	4.44	40.72	2.79	48.84	2967	586.74	26700

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.

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	0.0162	0.1739	0.535	1.3123	0.551 + j0.267	0.205 + j0.053	3027	120	150
2 (7)	0.8727	1.10	0.0152	0.1673	0.564	1.3123	0.678 + j0.256	0.337 + j0.051	3112	120	150
1 (Solid)	0.4232	0.53	0.0149	0.1673	0.574	1.6404	0.503 + j0.253	0.163 + j0.051	3136	140	170
1 (19)	0.6923	0.87	0.0140	0.1608	0.614	1.6404	0.601 + j0.239	0.267 + j0.049	3247	140	170
1/0 (Solid)	0.3346	0.42	0.0137	0.1608	0.617	1.6404	0.462 + j0.238	0.129 + j0.049	3254	155	195
1/0 (19)	0.5479	0.69	0.0131	0.1542	0.653	1.6404	0.540 + j0.228	0.212 + j0.048	3346	155	195
2/0 (19)	0.4364	0.55	0.0122	0.1509	0.702	1.9685	0.488 + j0.213	0.168 + j0.046	3495	180	220
3/0 (19)	0.3445	0.43	0.0113	0.1444	0.761	1.9685	0.444 + j0.198	0.133 + j0.045	3657	200	250
4/0 (19)	0.2756	0.34	0.0104	0.1378	0.830	2.2966	0.407 + j0.183	0.106 + j0.043	3843	235	285
250 (37)	0.2329	0.30	0.0094	0.1345	0.912	2.2966	0.381 + j0.166	0.091 + j0.042	4073	256	335
350 (37)	0.1640	0.21	0.0082	0.1280	1.037	2.6247	0.339 + j0.145	0.066 + j0.039	4422	310	375
500 (37)	0.1148	0.15	0.0070	0.1214	1.191	2.9528	0.301 + j0.125	0.047 + j0.037	4856	375	450
750 (61)	0.0787	0.11	0.0061	0.1181	1.417	3.6089	0.263 + j0.102	0.035 + j0.036	5495	470	550
1000 (61)	0.0591	0.09	0.0052	0.1115	1.598	4.2651	0.240 + j0.088	0.028 + j0.035	6000		630

*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.