

15kV AL 100% TRXLPE LCT LLDPE Primary UD

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Longitudinally Corrugated Tape Shield, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

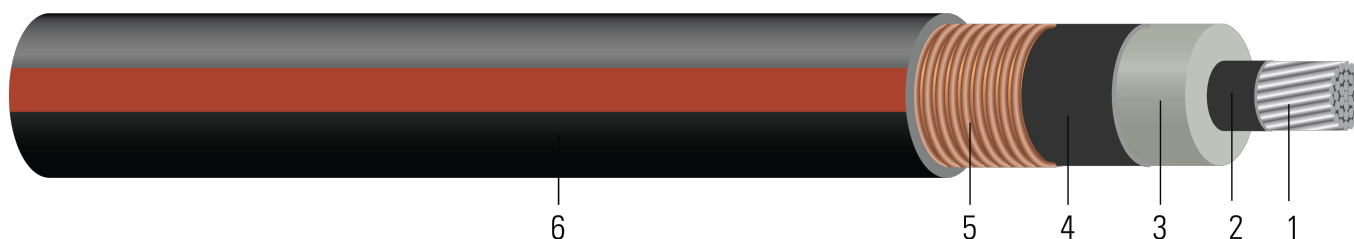


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Moisture blocked class B compressed Aluminum ASTM B231 1350 ¾ hard H16/H26 (Non Moisture Blocked Optional)
- 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
- Insulation:** 175 Mils Tree Retardant Cross Linked Polyethylene 100% insulation level
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- Tape Shield:** 10 mils Longitudinally Corrugated Tape Shield
- Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes; PowerGlide® LLDPE jacket optional

APPLICATIONS AND FEATURES:

Southwire's 15kV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, 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
- UL 1072 Listed as MV 90 When Specified
- Optional CSA: CSA 68.5 and -40C 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



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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 (1)	0.258	0.645	175	0.705	80	0.965	449	11.6	398
TBA	2 (7)	0.283	0.670	175	0.730	80	0.990	470	11.9	398
TBA	1 (1)	0.289	0.676	175	0.736	80	0.996	478	12.0	502
TBA	1 (19)	0.322	0.709	175	0.769	80	1.029	503	12.3	502
TBA	1/0 (1)	0.325	0.712	175	0.772	80	1.032	512	12.4	634
TBA	1/0 (19)	0.352	0.739	175	0.799	80	1.059	533	12.7	634
TBA	2/0 (19)	0.395	0.782	175	0.842	80	1.102	578	13.2	799
TBA	3/0 (19)	0.443	0.830	175	0.890	80	1.150	677	13.8	1007
TBA	4/0 (19)	0.498	0.885	175	0.945	80	1.205	743	14.5	1270
TBA	250 (37)	0.558	0.954	175	1.014	80	1.274	823	15.3	1500
TBA	350 (37)	0.661	1.057	175	1.117	80	1.377	970	16.5	2100
TBA	500 (37)	0.789	1.179	175	1.259	80	1.479	1227	18.1	3000
TBA	750 (61)	0.968	1.373	175	1.433	80	1.659	1560	19.9	4500
TBA	1000 (61)	1.117	1.522	175	1.582	110	1.868	1951	22.4	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



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 (1)	0.266	0.334	0.053	0.049	0.163	0.423	0.667+j0.234	0.335+j0.049	3105.4	120	150
2 (7)	0.266	0.334	0.050	0.048	0.172	0.447	0.661+j0.223	0.335+j0.048	3194.2	120	150
1 (1)	0.211	0.265	0.050	0.047	0.174	0.453	0.591+j0.221	0.266+j0.047	3215.5	140	170
1 (19)	0.211	0.265	0.046	0.046	0.187	0.486	0.584+j0.208	0.266+j0.046	3332.7	140	170
1/0 (1)	0.168	0.211	0.046	0.046	0.188	0.489	0.529+j0.207	0.212+j0.046	3343.4	155	195
1/0 (19)	0.168	0.211	0.044	0.045	0.198	0.515	0.524+j0.198	0.212+j0.045	3439.3	155	195
2/0 (19)	0.133	0.167	0.040	0.043	0.214	0.557	0.471+j0.184	0.168+j0.043	3592.0	180	220
3/0 (19)	0.105	0.132	0.037	0.042	0.232	0.604	0.426+j0.170	0.133+j0.042	3762.4	200	250
4/0 (19)	0.0836	0.105	0.034	0.040	0.253	0.657	0.389+j0.156	0.106+j0.040	3957.8	235	285
250 (37)	0.0707	0.089	0.031	0.039	0.278	0.723	0.360+j0.141	0.090+j0.039	4202.8		
350 (37)	0.0505	0.064	0.027	0.037	0.316	0.822	0.318+j0.123	0.065+j0.037	4568.6	310	375
500 (37)	0.0354	0.045	0.024	0.035	0.364	0.945	0.280+j0.105	0.046+j0.035	5023.2	375	455
750 (61)	0.0236	0.030	0.020	0.033	0.432	1.124	0.241+j0.085	0.031+j0.033	5690.8	470	560
1000 (61)	0.0177	0.023	0.018	0.032	0.487	1.265	0.217+j0.073	0.025+j0.032	6220.0	540	645

* Calculations are based on three cables triplexed / tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on Figure 7 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

‡ Ampacities are based on Figure 1 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)



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 (1)	6.55	16.38	4.44	17.91	2.03	24.51	668	294.64	1771
TBA	2 (7)	7.19	17.02	4.44	18.54	2.03	25.15	699	302.26	1771
TBA	1 (1)	7.34	17.17	4.44	18.69	2.03	25.30	711	304.80	2234
TBA	1 (19)	8.18	18.01	4.44	19.53	2.03	26.14	749	312.42	2234
TBA	1/0 (1)	8.25	18.08	4.44	19.61	2.03	26.21	762	314.96	2821
TBA	1/0 (19)	8.94	18.77	4.44	20.29	2.03	26.90	793	322.58	2821
TBA	2/0 (19)	10.03	19.86	4.44	21.39	2.03	27.99	860	335.28	3556
TBA	3/0 (19)	11.25	21.08	4.44	22.61	2.03	29.21	1007	350.52	4481
TBA	4/0 (19)	12.65	22.48	4.44	24.00	2.03	30.61	1106	368.30	5652
TBA	250 (37)	14.17	24.23	4.44	25.76	2.03	32.36	1225	388.62	6675
TBA	350 (37)	16.79	26.85	4.44	28.37	2.03	34.98	1444	419.10	9345
TBA	500 (37)	20.04	29.95	4.44	31.98	2.03	37.57	1826	459.74	13350
TBA	750 (61)	24.59	34.87	4.44	36.40	2.03	42.14	2322	505.46	20025
TBA	1000 (61)	28.37	38.66	4.44	40.18	2.79	47.45	2903	568.96	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



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 (1)	0.8727	1.10	0.0162	0.1608	0.535	1.3878	0.667+j0.234	0.335+j0.049	3105.4	120	150
2 (7)	0.8727	1.10	0.0152	0.1575	0.564	1.4665	0.661+j0.223	0.335+j0.048	3194.2	120	150
1 (1)	0.6923	0.87	0.0152	0.1542	0.571	1.4862	0.591+j0.221	0.266+j0.047	3215.5	140	170
1 (19)	0.6923	0.87	0.0140	0.1509	0.614	1.5945	0.584+j0.208	0.266+j0.046	3332.7	140	170
1/0 (1)	0.5512	0.69	0.0140	0.1509	0.617	1.6043	0.529+j0.207	0.212+j0.046	3343.4	155	195
1/0 (19)	0.5512	0.69	0.0134	0.1476	0.650	1.6896	0.524+j0.198	0.212+j0.045	3439.3	155	195
2/0 (19)	0.4364	0.55	0.0122	0.1411	0.702	1.8274	0.471+j0.184	0.168+j0.043	3592.0	180	220
3/0 (19)	0.3445	0.43	0.0113	0.1378	0.761	1.9816	0.426+j0.170	0.133+j0.042	3762.4	200	250
4/0 (19)	0.2743	0.34	0.0104	0.1312	0.830	2.1555	0.389+j0.156	0.106+j0.040	3957.8	235	285
250 (37)	0.2320	0.29	0.0094	0.1280	0.912	2.3720	0.360+j0.141	0.090+j0.039	4202.8		
350 (37)	0.1657	0.21	0.0082	0.1214	1.037	2.6969	0.318+j0.123	0.065+j0.037	4568.6	310	375
500 (37)	0.1161	0.15	0.0073	0.1148	1.194	3.1004	0.280+j0.105	0.046+j0.035	5023.2	375	455
750 (61)	0.0774	0.10	0.0061	0.1083	1.417	3.6877	0.241+j0.085	0.031+j0.033	5690.8	470	560
1000 (61)	0.0581	0.08	0.0055	0.1050	1.598	4.1503	0.217+j0.073	0.025+j0.032	6220.0	540	645

* Calculations are based on three cables triplexed / tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on Figure 7 of ICEA T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

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