15kV AL 100% TRXLPE One-Third Neutral LLDPE Primary UD

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, One-third Concentric Neutral, 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 per 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. **Concentric Neutral:** Helically applied soft drawn bare copper one-third concentric neutral
6. **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-94-649 Standard for Concentric Neutral Cables Rated 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

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Concentric Neutral	Neutral DC Resistance 25°C	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension*
	AWG/ Kcmil	inch	inch	mil	inch	No. x AWG	Ω /1000ft	mil	inch	lb /1000ft	inch	lb
TBA	2 (1)	0.258	0.645	175	0.725	6x14	0.438	50	0.953	403	11.4	398
627890	2 (7)	0.283	0.670	175	0.750	6x14	0.438	50	0.978	426	11.7	398
TBA	1 (1)	0.289	0.676	175	0.756	6x14	0.438	50	0.984	434	11.8	502
TBA	1 (19)	0.322	0.709	175	0.789	6x14	0.438	50	1.017	460	12.2	502
TBA	1/0 (1)	0.325	0.712	175	0.792	6x14	0.438	50	1.020	470	12.2	634
349415	1/0 (19)	0.352	0.739	175	0.819	6x14	0.438	50	1.047	492	12.6	634
115643	2/0 (19)	0.395	0.782	175	0.862	7x14	0.376	50	1.090	551	13.1	799
TBA	3/0 (19)	0.443	0.830	175	0.910	9x14	0.292	50	1.138	630	13.7	1007
616159^	4/0 (19)	0.498	0.885	175	0.965	11x14	0.239	50	1.193	722	14.3	1270
584354	4/0 (19)	0.498	0.885	175	0.965	11x14	0.239	50	1.193	722	14.3	1270
TBA	250 (37)	0.558	0.954	175	1.034	13x14	0.202	50	1.262	828	15.1	1500
616156^	350 (37)	0.661	1.057	175	1.157	18x14	0.146	50	1.385	1058	16.6	2100
616304	350 (37)	0.661	1.057	175	1.157	18x14	0.146	50	1.385	1058	16.6	2100
627883	500 (37)	0.789	1.185	175	1.285	16x12	0.104	50	1.545	1392	18.5	3000
620813	750 (61)	0.968	1.373	175	1.473	24x12	0.069	80	1.793	1958	21.5	4500
621478	1000 (61)	1.117	1.522	175	1.622	20x10	0.052	80	1.986	2491	23.8	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
^ Hi-Dri-Plus® - Water Blocking Powder

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	0.654+j0.230	0.335+j0.049	2196.1	120	150
2 (7)	0.266	0.334	0.050	0.047	0.172	0.447	0.653+j0.229	0.335+j0.047	2196.1	120	150
1 (1)	0.211	0.265	0.050	0.047	0.174	0.453	0.584+j0.228	0.266+j0.047	2196.1	140	175
1 (19)	0.211	0.265	0.046	0.046	0.187	0.486	0.583+j0.227	0.266+j0.046	2196.1	140	175
1/0 (1)	0.168	0.211	0.046	0.046	0.188	0.489	0.529+j0.227	0.212+j0.045	2196.1	155	195
1/0 (19)	0.168	0.211	0.044	0.044	0.198	0.515	0.529+j0.227	0.212+j0.044	2196.1	155	195
2/0 (19)	0.133	0.167	0.040	0.043	0.214	0.557	0.461+j0.187	0.168+j0.043	2562.1	180	225
3/0 (19)	0.105	0.132	0.037	0.042	0.232	0.604	0.383+j0.135	0.133+j0.041	3294.2	200	255
4/0 (19)	0.0836	0.105	0.034	0.040	0.253	0.657	0.322+j0.103	0.107+j0.040	4026.2	235	285
4/0 (19)	0.0836	0.105	0.034	0.040	0.253	0.657	0.322+j0.103	0.107+j0.040	4026.2	235	285
250 (37)	0.0707	0.089	0.031	0.039	0.278	0.723	0.279+j0.082	0.091+j0.038	4758.3		
350 (37)	0.0505	0.064	0.027	0.037	0.316	0.822	0.208+j0.055	0.066+j0.037	6588.4	310	375
350 (37)	0.0505	0.064	0.027	0.037	0.316	0.822	0.208+j0.055	0.066+j0.037	6588.4	310	375
500 (37)	0.0354	0.045	0.024	0.036	0.364	0.945	0.151+j0.040	0.048+j0.035	9304.6	370	450
750 (61)	0.0236	0.030	0.020	0.035	0.432	1.124	0.102+j0.028	0.035+j0.033	13956.9	460	545
1000 (61)	0.0177	0.023	0.018	0.034	0.487	1.265	0.077+j0.024	0.029+j0.031	18488.1	520	620

* Calculations are based on three cables triplexed / concentric 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	Concentric Neutral	Neutral DC Resistance 25°C	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension*
	AWG/ Kcmil	mm	mm	mm	mm	No. x AWG	Ω/km	mm	mm	kg/km	mm	newton
TBA	2 (1)	6.55	16.38	4.44	18.42	6x14	1.44	1.27	24.21	600	289.56	1771
627890	2 (7)	7.19	17.02	4.44	19.05	6x14	1.44	1.27	24.84	634	297.18	1771
TBA	1 (1)	7.34	17.17	4.44	19.20	6x14	1.44	1.27	24.99	646	299.72	2234
TBA	1 (19)	8.18	18.01	4.44	20.04	6x14	1.44	1.27	25.83	685	309.88	2234
TBA	1/0 (1)	8.25	18.08	4.44	20.12	6x14	1.44	1.27	25.91	699	309.88	2821
349415	1/0 (19)	8.94	18.77	4.44	20.80	6x14	1.44	1.27	26.59	732	320.04	2821
115643	2/0 (19)	10.03	19.86	4.44	21.89	7x14	1.23	1.27	27.69	820	332.74	3556
TBA	3/0 (19)	11.25	21.08	4.44	23.11	9x14	0.96	1.27	28.91	938	347.98	4481
616159^	4/0 (19)	12.65	22.48	4.44	24.51	11x14	0.78	1.27	30.30	1074	363.22	5652
584354	4/0 (19)	12.65	22.48	4.44	24.51	11x14	0.78	1.27	30.30	1074	363.22	5652
TBA	250 (37)	14.17	24.23	4.44	26.26	13x14	0.66	1.27	32.05	1232	383.54	6675
616156^	350 (37)	16.79	26.85	4.44	29.39	18x14	0.48	1.27	35.18	1574	421.64	9345
616304	350 (37)	16.79	26.85	4.44	29.39	18x14	0.48	1.27	35.18	1574	421.64	9345
627883	500 (37)	20.04	30.10	4.44	32.64	16x12	0.34	1.27	39.24	2072	469.90	13350
620813	750 (61)	24.59	34.87	4.44	37.41	24x12	0.23	2.03	45.54	2914	546.10	20025
621478	1000 (61)	28.37	38.66	4.44	41.20	20x10	0.17	2.03	50.44	3707	604.52	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
^ Hi-Dri-Plus® - Water Blocking Powder

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	0.654+j0.230	0.335+j0.049	2196.1	120	150
2 (7)	0.8727	1.10	0.0152	0.1542	0.564	1.4665	0.653+j0.229	0.335+j0.047	2196.1	120	150
1 (1)	0.6923	0.87	0.0152	0.1542	0.571	1.4862	0.584+j0.228	0.266+j0.047	2196.1	140	175
1 (19)	0.6923	0.87	0.0140	0.1509	0.614	1.5945	0.583+j0.227	0.266+j0.046	2196.1	140	175
1/0 (1)	0.5512	0.69	0.0140	0.1509	0.617	1.6043	0.529+j0.227	0.212+j0.045	2196.1	155	195
1/0 (19)	0.5512	0.69	0.0134	0.1444	0.650	1.6896	0.529+j0.227	0.212+j0.044	2196.1	155	195
2/0 (19)	0.4364	0.55	0.0122	0.1411	0.702	1.8274	0.461+j0.187	0.168+j0.043	2562.1	180	225
3/0 (19)	0.3445	0.43	0.0113	0.1378	0.761	1.9816	0.383+j0.135	0.133+j0.041	3294.2	200	255
4/0 (19)	0.2743	0.34	0.0104	0.1312	0.830	2.1555	0.322+j0.103	0.107+j0.040	4026.2	235	285
4/0 (19)	0.2743	0.34	0.0104	0.1312	0.830	2.1555	0.322+j0.103	0.107+j0.040	4026.2	235	285
250 (37)	0.2320	0.29	0.0094	0.1280	0.912	2.3720	0.279+j0.082	0.091+j0.038	4758.3		
350 (37)	0.1657	0.21	0.0082	0.1214	1.037	2.6969	0.208+j0.055	0.066+j0.037	6588.4	310	375
350 (37)	0.1657	0.21	0.0082	0.1214	1.037	2.6969	0.208+j0.055	0.066+j0.037	6588.4	310	375
500 (37)	0.1161	0.15	0.0073	0.1181	1.194	3.1004	0.151+j0.040	0.048+j0.035	9304.6	370	450
750 (61)	0.0774	0.10	0.0061	0.1148	1.417	3.6877	0.102+j0.028	0.035+j0.033	13956.9	460	545
1000 (61)	0.0581	0.08	0.0055	0.1115	1.598	4.1503	0.077+j0.024	0.029+j0.031	18488.1	520	620

* Calculations are based on three cables triplexed / concentric 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)