

## 15kV AL 100% TRXLPE Full Neutral LLDPE Primary UD

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

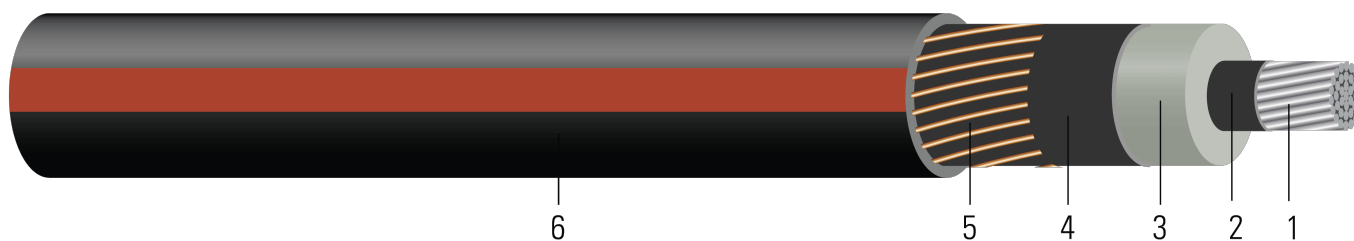


Image not to scale. See Table 1 for dimensions.

### 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
- Concentric Neutral:** Helically applied soft drawn bare copper full concentric neutral
- 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



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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	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	10x14	0.263	50	0.953	448	11.4	398
612662	2 (7)	0.283	0.670	175	0.750	10x14	0.263	50	0.978	470	11.7	398
484352 <sup>^^^</sup>	2 (7)	0.283	0.670	175	0.750	10x14	0.263	50	0.981	470	11.7	398
615973 <sup>^</sup>	2 (7)	0.283	0.670	175	0.750	10x14	0.263	50	1.013	491	11.7	398
TBA	1 (1)	0.289	0.676	175	0.756	13x14	0.202	50	0.984	511	11.8	502
621985§	1 (19)	0.322	0.709	175	0.789	20x14	0.202	50	1.017	538	12.2	502
TBA	1/0 (1)	0.325	0.712	175	0.792	16x14	0.164	50	1.020	581	12.2	634
304667 <sup>^^</sup>	1/0 (19)	0.352	0.739	175	0.819	16x14	0.164	50	1.047	603	12.6	634
611808	1/0 (19)	0.352	0.739	175	0.819	16x14	0.164	50	1.047	603	12.6	634
TBA	2/0 (19)	0.395	0.782	175	0.862	13x12	0.128	50	1.122	726	13.5	799
TBA	3/0 (19)	0.443	0.830	175	0.910	16x12	0.104	50	1.170	838	14.0	1007
678243 <sup>^^</sup>	4/0 (19)	0.498	0.885	175	0.965	20x12	0.080	50	1.269	1025	15.2	1270
115579	4/0 (19)	0.498	0.885	175	0.965	20x12	0.080	50	1.269	1025	15.2	1270
613549	4/0 (19)	0.498	0.878	175	0.968	13x10	0.080	50	1.271	1044	15.2	1270
TBA	250 (37)	0.558	0.954	175	1.034	16x10	0.065	50	1.338	1196	16.1	1500
TBA	350 (37)	0.661	1.057	175	1.157	16x9	0.052	50	1.486	1517	17.8	2100

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

<sup>^</sup> Super Smooth Conductor Shield

<sup>^^</sup> Solid Black Jacket

<sup>^^^</sup> Super Smooth Conductor Shield. HiDri Plus - Water Blocking Powder.

§ HiDri Plus - moisture absorbing powder under jacket. CSA Listed



**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	0.569+j0.122	0.336+j0.048	3660.2	120	150
2 (7)	0.266	0.334	0.050	0.047	0.172	0.447	0.569+j0.121	0.336+j0.047	3660.2	120	150
2 (7)	0.266	0.334	0.050	0.047	0.172	0.447	0.569+j0.121	0.336+j0.047	3660.2	120	150
2 (7)	0.266	0.334	0.050	0.047	0.172	0.447	0.569+j0.121	0.336+j0.047	3660.2	120	150
1 (1)	0.211	0.265	0.050	0.047	0.174	0.453	0.457+j0.088	0.267+j0.047	4758.3	140	175
1 (19)	0.211	0.265	0.046	0.046	0.187	0.486	0.456+j0.087	0.267+j0.045	4758.3	140	175
1/0 (1)	0.168	0.211	0.046	0.046	0.188	0.489	0.372+j0.069	0.214+j0.045	5856.3	155	195
1/0 (19)	0.168	0.211	0.044	0.044	0.198	0.515	0.372+j0.068	0.214+j0.044	5856.3	155	195
1/0 (19)	0.168	0.211	0.044	0.044	0.198	0.515	0.372+j0.068	0.214+j0.044	5856.3	155	195
2/0 (19)	0.133	0.167	0.040	0.044	0.214	0.557	0.296+j0.054	0.170+j0.043	7560.0	180	225
3/0 (19)	0.105	0.132	0.037	0.042	0.232	0.604	0.238+j0.044	0.136+j0.041	9304.6	205	250
4/0 (19)	0.0836	0.105	0.034	0.042	0.253	0.657	0.186+j0.038	0.110+j0.040	12017.3	235	285
4/0 (19)	0.0836	0.105	0.034	0.042	0.253	0.657	0.186+j0.038	0.110+j0.040	12017.3	235	285
4/0 (19)	0.0836	0.105	0.034	0.042	0.253	0.657	0.186+j0.038	0.110+j0.040	12017.3	235	285
250 (37)	0.0707	0.089	0.031	0.040	0.278	0.723	0.156+j0.032	0.095+j0.038	14790.5		
350 (37)	0.0505	0.064	0.027	0.039	0.316	0.822	0.117+j0.029	0.071+j0.035	18652.0	305	370

\* Calculations are based on three cables triplexed / concentric shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohm-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	10x14	0.86	1.27	24.21	667	289.56	1771
612662	2 (7)	7.19	17.02	4.44	19.05	10x14	0.86	1.27	24.84	699	297.18	1771
484352 <sup>^^^</sup>	2 (7)	7.19	17.02	4.44	19.05	10x14	0.86	1.27	24.92	699	297.18	1771
615973 <sup>^</sup>	2 (7)	7.19	17.02	4.44	19.05	10x14	0.86	1.27	25.73	731	297.18	1771
TBA	1 (1)	7.34	17.17	4.44	19.20	13x14	0.66	1.27	24.99	760	299.72	2234
621985§	1 (19)	8.18	18.01	4.44	20.04	20x14	0.66	1.27	25.83	801	309.88	2234
TBA	1/0 (1)	8.25	18.08	4.44	20.12	16x14	0.54	1.27	25.91	865	309.88	2821
304667 <sup>^^</sup>	1/0 (19)	8.94	18.77	4.44	20.80	16x14	0.54	1.27	26.59	897	320.04	2821
611808	1/0 (19)	8.94	18.77	4.44	20.80	16x14	0.54	1.27	26.59	897	320.04	2821
TBA	2/0 (19)	10.03	19.86	4.44	21.89	13x12	0.42	1.27	28.50	1080	342.90	3556
TBA	3/0 (19)	11.25	21.08	4.44	23.11	16x12	0.34	1.27	29.72	1247	355.60	4481
678243 <sup>^^</sup>	4/0 (19)	12.65	22.48	4.44	24.51	20x12	0.26	1.27	32.23	1525	386.08	5652
115579	4/0 (19)	12.65	22.48	4.44	24.51	20x12	0.26	1.27	32.23	1525	386.08	5652
613549	4/0 (19)	12.65	22.30	4.44	24.59	13x10	0.26	1.27	32.28	1554	386.08	5652
TBA	250 (37)	14.17	24.23	4.44	26.26	16x10	0.21	1.27	33.99	1780	408.94	6675
TBA	350 (37)	16.79	26.85	4.44	29.39	16x9	0.17	1.27	37.74	2258	452.12	9345

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

<sup>^</sup> Super Smooth Conductor Shield

<sup>^^</sup> Solid Black Jacket

<sup>^^^</sup> Super Smooth Conductor Shield. HiDri Plus - Water Blocking Powder.

§ HiDri Plus - moisture absorbing powder under jacket. CSA Listed



**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	0.569+j0.122	0.336+j0.048	3660.2	120	150
2 (7)	0.8727	1.10	0.0152	0.1542	0.564	1.4665	0.569+j0.121	0.336+j0.047	3660.2	120	150
2 (7)	0.8727	1.10	0.0152	0.1542	0.564	1.4665	0.569+j0.121	0.336+j0.047	3660.2	120	150
2 (7)	0.8727	1.10	0.0152	0.1542	0.564	1.4665	0.569+j0.121	0.336+j0.047	3660.2	120	150
1 (1)	0.6923	0.87	0.0152	0.1542	0.571	1.4862	0.457+j0.088	0.267+j0.047	4758.3	140	175
1 (19)	0.6923	0.87	0.0140	0.1509	0.614	1.5945	0.456+j0.087	0.267+j0.045	4758.3	140	175
1/0 (1)	0.5512	0.69	0.0140	0.1509	0.617	1.6043	0.372+j0.069	0.214+j0.045	5856.3	155	195
1/0 (19)	0.5512	0.69	0.0134	0.1444	0.650	1.6896	0.372+j0.068	0.214+j0.044	5856.3	155	195
1/0 (19)	0.5512	0.69	0.0134	0.1444	0.650	1.6896	0.372+j0.068	0.214+j0.044	5856.3	155	195
2/0 (19)	0.4364	0.55	0.0122	0.1444	0.702	1.8274	0.296+j0.054	0.170+j0.043	7560.0	180	225
3/0 (19)	0.3445	0.43	0.0113	0.1378	0.761	1.9816	0.238+j0.044	0.136+j0.041	9304.6	205	250
4/0 (19)	0.2743	0.34	0.0104	0.1378	0.830	2.1555	0.186+j0.038	0.110+j0.040	12017.3	235	285
4/0 (19)	0.2743	0.34	0.0104	0.1378	0.830	2.1555	0.186+j0.038	0.110+j0.040	12017.3	235	285
4/0 (19)	0.2743	0.34	0.0104	0.1378	0.830	2.1555	0.186+j0.038	0.110+j0.040	12017.3	235	285
250 (37)	0.2320	0.29	0.0094	0.1312	0.912	2.3720	0.156+j0.032	0.095+j0.038	14790.5		
350 (37)	0.1657	0.21	0.0082	0.1280	1.037	2.6969	0.117+j0.029	0.071+j0.035	18652.0	305	370

\* Calculations are based on three cables triplexed / concentric shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohm-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)

