35kV AL 100% TRXLPE Full Neutral LLDPE Primary UD

Single Conductor, 345 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket

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:** 345 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 full 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 35kV 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 When Specified

SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] AL 35000 VOLTS TRXLPE INSULATION 345 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	1/0 (1)	0.325	1.052	345	1.152	16x14	0.164	50	1.380	861	16.6	634
626264#	1/0 (19)	0.352	1.079	345	1.179	16x14	0.164	50	1.407	889	16.9	634
614785	1/0 (19)	0.352	1.079	345	1.179	16x14	0.164	50	1.407	889	16.9	634
613665%	1/0 (19)	0.352	1.079	345	1.179	16x14	0.164	50	1.407	889	16.9	634
627933	2/0 (19)	0.395	1.122	345	1.222	13x12	0.128	50	1.482	1029	17.8	799
TBA	3/0 (19)	0.443	1.170	345	1.270	16x12	0.104	50	1.530	1152	18.4	1007
626298#	4/0 (19)	0.498	1.225	345	1.325	20x12	0.080	50	1.629	1362	19.5	1270
627939	4/0 (19)	0.498	1.225	345	1.325	13x10	0.080	50	1.629	1362	19.5	1270
TBA	250 (37)	0.558	1.294	345	1.394	16x10	0.065	80	1.758	1614	21.1	1500
TBA	350 (37)	0.661	1.397	345	1.497	16x9	0.052	80	1.886	1947	22.6	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
# Hi-Dri-Plus® - Water Blocking Powder
% Super-Smooth Conductor Semi-Con

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
1/0 (1)	0.168	0.211	0.073	0.052	0.278	1.687	0.371+j0.078	0.213+j0.052	6004.7	160	195
1/0 (19)	0.168	0.211	0.069	0.051	0.291	1.765	0.371+j0.077	0.213+j0.051	6004.7	160	195
1/0 (19)	0.168	0.211	0.069	0.051	0.291	1.765	0.371+j0.077	0.213+j0.051	6004.7	160	195
1/0 (19)	0.168	0.211	0.069	0.051	0.291	1.765	0.371+j0.077	0.213+j0.051	6004.7	160	195
2/0 (19)	0.133	0.167	0.065	0.050	0.311	1.886	0.295+j0.063	0.170+j0.049	7751.5	185	220
3/0 (19)	0.105	0.132	0.061	0.048	0.333	2.020	0.238+j0.053	0.135+j0.047	9540.3	210	250
4/0 (19)	0.0836	0.105	0.056	0.047	0.358	2.173	0.186+j0.045	0.109+j0.046	12321.7	240	285
4/0 (19)	0.0836	0.105	0.056	0.047	0.358	2.173	0.186+j0.045	0.109+j0.046	12321.7	240	285
250 (37)	0.0707	0.089	0.052	0.046	0.390	2.363	0.156+j0.039	0.094+j0.044	15165.1		
350 (37)	0.0505	0.064	0.046	0.044	0.436	2.643	0.117+j0.035	0.070+j0.041	19124.4	315	370

* 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	1/0 (1)	8.25	26.72	8.76	29.26	16x14	0.54	1.27	35.05	1281	421.64	2821
626264#	1/0 (19)	8.94	27.41	8.76	29.95	16x14	0.54	1.27	35.74	1323	429.26	2821
614785	1/0 (19)	8.94	27.41	8.76	29.95	16x14	0.54	1.27	35.74	1323	429.26	2821
613665%	1/0 (19)	8.94	27.41	8.76	29.95	16x14	0.54	1.27	35.74	1323	429.26	2821
627933	2/0 (19)	10.03	28.50	8.76	31.04	13x12	0.42	1.27	37.64	1531	452.12	3556
TBA	3/0 (19)	11.25	29.72	8.76	32.26	16x12	0.34	1.27	38.86	1714	467.36	4481
626298#	4/0 (19)	12.65	31.12	8.76	33.65	20x12	0.26	1.27	41.38	2027	495.30	5652
627939	4/0 (19)	12.65	31.12	8.76	33.65	13x10	0.26	1.27	41.38	2027	495.30	5652
TBA	250 (37)	14.17	32.87	8.76	35.41	16x10	0.21	2.03	44.65	2402	535.94	6675
TBA	350 (37)	16.79	35.48	8.76	38.02	16x9	0.17	2.03	47.90	2897	574.04	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
# Hi-Dri-Plus® - Water Blocking Powder
% Super-Smooth Conductor Semi-Con

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
1/0 (1)	0.5512	0.69	0.0223	0.1706	0.912	5.5348	0.371+j0.078	0.213+j0.052	6004.7	160	195
1/0 (19)	0.5512	0.69	0.0210	0.1673	0.955	5.7907	0.371+j0.077	0.213+j0.051	6004.7	160	195
1/0 (19)	0.5512	0.69	0.0210	0.1673	0.955	5.7907	0.371+j0.077	0.213+j0.051	6004.7	160	195
1/0 (19)	0.5512	0.69	0.0210	0.1673	0.955	5.7907	0.371+j0.077	0.213+j0.051	6004.7	160	195
2/0 (19)	0.4364	0.55	0.0198	0.1640	1.020	6.1877	0.295+j0.063	0.170+j0.049	7751.5	185	220
3/0 (19)	0.3445	0.43	0.0186	0.1575	1.093	6.6273	0.238+j0.053	0.135+j0.047	9540.3	210	250
4/0 (19)	0.2743	0.34	0.0171	0.1542	1.175	7.1293	0.186+j0.045	0.109+j0.046	12321.7	240	285
4/0 (19)	0.2743	0.34	0.0171	0.1542	1.175	7.1293	0.186+j0.045	0.109+j0.046	12321.7	240	285
250 (37)	0.2320	0.29	0.0158	0.1509	1.280	7.7526	0.156+j0.039	0.094+j0.044	15165.1		
350 (37)	0.1657	0.21	0.0140	0.1444	1.430	8.6713	0.117+j0.035	0.070+j0.041	19124.4	315	370

* 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)