25kV AL 100% TRXLPE Full Neutral LLDPE Primary UD

Single Conductor, 260 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:** 260 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 25kV 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 25000 VOLTS TRXLPE INSULATION 260 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
614787	1 (1)	0.289	0.846	260	0.926	13x14	0.202	50	1.154	628	13.8	502
611733	1 (19)	0.322	0.879	260	0.959	13x14	0.202	50	1.187	658	14.2	502
TBA	1/0 (1)	0.325	0.882	260	0.962	16x14	0.164	50	1.190	701	14.3	634
586925^	1/0 (19)	0.352	0.909	260	0.989	16x14	0.164	50	1.217	727	14.6	634
610308	1/0 (19)	0.352	0.909	260	0.989	16x14	0.164	50	1.217	727	14.6	634
627928	2/0 (19)	0.395	0.952	260	1.032	13x12	0.128	50	1.297	876	15.5	799
TBA	3/0 (19)	0.443	1.000	260	1.080	16x12	0.104	50	1.340	974	16.1	1007
614125	4/0 (19)	0.498	1.055	260	1.155	13x10	0.080	50	1.464	1210	17.5	1270
TBA	250 (37)	0.558	1.124	260	1.224	16x10	0.065	50	1.528	1374	18.3	1500
TBA	350 (37)	0.661	1.227	260	1.327	16x9	0.052	50	1.656	1688	19.9	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
^ Super Smooth Conductor Shield

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 (1)	0.211	0.265	0.065	0.051	0.222	0.963	0.456+j0.093	0.267+j0.050	4758.3	140	175
1 (19)	0.211	0.265	0.061	0.049	0.237	1.026	0.456+j0.092	0.267+j0.049	4758.3	140	175
1/0 (1)	0.168	0.211	0.061	0.049	0.238	1.031	0.371+j0.074	0.213+j0.049	5856.3	155	195
1/0 (19)	0.168	0.211	0.058	0.048	0.250	1.082	0.371+j0.073	0.213+j0.048	5856.3	155	195
1/0 (19)	0.168	0.211	0.058	0.048	0.250	1.082	0.371+j0.073	0.213+j0.048	5856.3	155	195
2/0 (19)	0.133	0.167	0.054	0.047	0.268	1.162	0.296+j0.059	0.170+j0.046	7560.0	180	225
3/0 (19)	0.105	0.132	0.050	0.045	0.289	1.251	0.238+j0.048	0.136+j0.044	9304.6	205	250
4/0 (19)	0.0836	0.105	0.046	0.045	0.312	1.353	0.186+j0.042	0.110+j0.043	12017.3	235	285
250 (37)	0.0707	0.089	0.042	0.043	0.342	1.479	0.156+j0.036	0.094+j0.041	14790.5		
350 (37)	0.0505	0.064	0.038	0.041	0.385	1.666	0.117+j0.032	0.070+j0.038	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 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
614787	1 (1)	7.34	21.49	6.60	23.52	13x14	0.66	1.27	29.31	935	350.52	2234
611733	1 (19)	8.18	22.33	6.60	24.36	13x14	0.66	1.27	30.15	979	360.68	2234
TBA	1/0 (1)	8.25	22.40	6.60	24.43	16x14	0.54	1.27	30.23	1043	363.22	2821
586925^	1/0 (19)	8.94	23.09	6.60	25.12	16x14	0.54	1.27	30.91	1082	370.84	2821
610308	1/0 (19)	8.94	23.09	6.60	25.12	16x14	0.54	1.27	30.91	1082	370.84	2821
627928	2/0 (19)	10.03	24.18	6.60	26.21	13x12	0.42	1.27	32.94	1304	393.70	3556
TBA	3/0 (19)	11.25	25.40	6.60	27.43	16x12	0.34	1.27	34.04	1449	408.94	4481
614125	4/0 (19)	12.65	26.80	6.60	29.34	13x10	0.26	1.27	37.19	1801	444.50	5652
TBA	250 (37)	14.17	28.55	6.60	31.09	16x10	0.21	1.27	38.81	2045	464.82	6675
TBA	350 (37)	16.79	31.17	6.60	33.71	16x9	0.17	1.27	42.06	2512	505.46	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
^ Super Smooth Conductor Shield

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 (1)	0.6923	0.87	0.0198	0.1673	0.728	3.1594	0.456+j0.093	0.267+j0.050	4758.3	140	175
1 (19)	0.6923	0.87	0.0186	0.1608	0.778	3.3661	0.456+j0.092	0.267+j0.049	4758.3	140	175
1/0 (1)	0.5512	0.69	0.0186	0.1608	0.781	3.3825	0.371+j0.074	0.213+j0.049	5856.3	155	195
1/0 (19)	0.5512	0.69	0.0177	0.1575	0.820	3.5499	0.371+j0.073	0.213+j0.048	5856.3	155	195
1/0 (19)	0.5512	0.69	0.0177	0.1575	0.820	3.5499	0.371+j0.073	0.213+j0.048	5856.3	155	195
2/0 (19)	0.4364	0.55	0.0165	0.1542	0.879	3.8123	0.296+j0.059	0.170+j0.046	7560.0	180	225
3/0 (19)	0.3445	0.43	0.0152	0.1476	0.948	4.1043	0.238+j0.048	0.136+j0.044	9304.6	205	250
4/0 (19)	0.2743	0.34	0.0140	0.1476	1.024	4.4390	0.186+j0.042	0.110+j0.043	12017.3	235	285
250 (37)	0.2320	0.29	0.0128	0.1411	1.122	4.8524	0.156+j0.036	0.094+j0.041	14790.5		
350 (37)	0.1657	0.21	0.0116	0.1345	1.263	5.4659	0.117+j0.032	0.070+j0.038	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 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)