25kV AL 100% TRXLPE One-Third Neutral LLDPE

Single Conductor, 260 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 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 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 25kV cables are suited for use in wet and dry areas, conduits, ducts, 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 (Qualification Test Requirements)
- Rural Utility Standard RUS 1728F-U1 or 1728.204 (Electric standards and specifications for materials and construction)
- UL 1072 Listed as MV 90 When Specified
- Optional CSA 68.5: -40ºC and MV 90ºC optional marking available upon request

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

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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	1 (Solid)	0.289	0.847	260	0.937	6x14	0.438	50	1.165	590	9.3	502
TBA	1 (19)	0.322	0.880	260	0.970	6x14	0.438	50	1.198	609	9.6	502
TBA	1/0 (Solid)	0.324	0.882	260	0.972	6x14	0.438	50	1.200	632	9.6	633
627867	1/0 (19)	0.351	0.902	260	0.992	6x14	0.438	50	1.220	622	9.8	633
623282^	1/0 (19)	0.351	0.902	260	0.992	6x14	0.438	50	1.220	622	9.8	633
627866	2/0 (19)	0.395	0.945	260	1.035	7x14	0.375	50	1.263	686	10.1	798
TBA	3/0 (19)	0.443	1.001	260	1.111	9x14	0.292	50	1.339	824	10.7	1006
613424!	4/0 (19)	0.498	1.048	260	1.158	11x14	0.239	50	1.386	892	11.1	1269
682286	4/0 (19)	0.498	1.048	260	1.158	11x14	0.239	50	1.386	892	11.1	1269
587055!^	4/0 (19)	0.498	1.048	260	1.158	11x14	0.239	50	1.386	892	11.1	1269
TBA	250 (37)	0.558	1.124	260	1.234	13x14	0.202	50	1.462	1035	11.7	1500
627872	350 (37)	0.661	1.221	260	1.331	18x14	0.146	50	1.559	1224	12.5	2100
276386	350 (37)	0.661	1.227	260	1.337	18x14	0.146	50	1.565	1261	12.5	2100
613891	500 (37)	0.789	1.349	260	1.459	16x12	0.103	75	1.774	1637	14.2	3000
613716	750 (61)	0.968	1.538	260	1.648	24x12	0.069	75	1.963	2173	15.7	4500
347302	1000 (61)	1.117	1.687	260	1.827	20x10	0.052	75	2.184	2779	17.5	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
§ SuperSmooth Conductor Shield and CSA Listed
! SuperSmooth Conductor Shield
^ Solid Black Jacket

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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 (Solid)	0.129	0.162	0.073	0.054	0.114	1.65	0.216 + j0.759	0.162 + j0.052	2092	140	175
1 (19)	0.211	0.266	0.068	0.052	0.121	1.75	0.320 + j0.758	0.266 + j0.052	2092	140	175
1/0 (Solid)	0.102	0.128	0.067	0.052	0.122	1.76	0.182 + j0.755	0.128 + j0.050	2092	155	195
1/0 (19)	0.167	0.211	0.064	0.050	0.129	1.86	0.265 + j0.754	0.211 + j0.050	2092	155	195
1/0 (19)	0.167	0.211	0.064	0.050	0.129	1.86	0.265 + j0.754	0.211 + j0.050	2092	155	195
2/0 (19)	0.133	0.167	0.059	0.049	0.139	2.01	0.221 + j0.750	0.167 + j0.048	2441	180	220
3/0 (19)	0.105	0.132	0.055	0.047	0.150	2.17	0.186 + j0.745	0.132 + j0.047	3138	200	250
4/0 (19)	0.084	0.105	0.051	0.045	0.163	2.35	0.159 + j0.740	0.105 + j0.045	3836	235	285
4/0 (19)	0.084	0.105	0.051	0.045	0.163	2.35	0.159 + j0.740	0.105 + j0.045	3836	235	285
4/0 (19)	0.084	0.105	0.051	0.045	0.163	2.35	0.159 + j0.740	0.105 + j0.045	3836	235	285
250 (37)	0.071	0.090	0.047	0.044	0.175	2.53	0.144 + j0.736	0.090 + j0.044	4533	256	309
350 (37)	0.050	0.065	0.042	0.042	0.198	2.86	0.119 + j0.729	0.065 + j0.042	6277	310	370
350 (37)	0.050	0.065	0.042	0.042	0.198	2.86	0.119 + j0.729	0.065 + j0.042	6277	310	370
500 (37)	0.035	0.046	0.036	0.040	0.226	3.26	0.100 + j0.719	0.046 + j0.041	8865	370	445
750 (61)	0.024	0.033	0.031	0.038	0.262	3.78	0.087 + j0.709	0.033 + j0.038	13298	460	525
1000 (61)	0.018	0.026	0.028	0.037	0.294	4.24	0.080 + j0.702	0.026 + j0.037	17615	520	575

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

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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 (Solid)	7.34	21.51	6.60	23.80	6x14	1.44	1.27	29.59	878	236.22	2234
TBA	1 (19)	8.18	22.35	6.60	24.64	6x14	1.44	1.27	30.43	906	243.84	2234
TBA	1/0 (Solid)	8.23	22.40	6.60	24.69	6x14	1.44	1.27	30.48	941	243.84	2817
627867	1/0 (19)	8.92	22.91	6.60	25.20	6x14	1.44	1.27	30.99	926	248.92	2817
623282^	1/0 (19)	8.92	22.91	6.60	25.20	6x14	1.44	1.27	30.99	926	248.92	2817
627866	2/0 (19)	10.03	24.00	6.60	26.29	7x14	1.23	1.27	32.08	1021	256.54	3551
TBA	3/0 (19)	11.25	25.43	6.60	28.22	9x14	0.96	1.27	34.01	1226	271.78	4477
613424!	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.78	1.27	35.20	1327	281.94	5647
682286	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.78	1.27	35.20	1327	281.94	5647
587055!^	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.78	1.27	35.20	1327	281.94	5647
TBA	250 (37)	14.17	28.55	6.60	31.34	13x14	0.66	1.27	37.13	1540	297.18	6675
627872	350 (37)	16.79	31.01	6.60	33.81	18x14	0.48	1.27	39.60	1822	317.50	9345
276386	350 (37)	16.79	31.17	6.60	33.96	18x14	0.48	1.27	39.75	1877	317.50	9345
613891	500 (37)	20.04	34.26	6.60	37.06	16x12	0.34	1.91	45.06	2436	360.68	13350
613716	750 (61)	24.59	39.07	6.60	41.86	24x12	0.23	1.91	49.86	3234	398.78	20025
347302	1000 (61)	28.37	42.85	6.60	46.41	20x10	0.17	1.91	55.47	4136	444.50	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
§ SuperSmooth Conductor Shield and CSA Listed
! SuperSmooth Conductor Shield
^ Solid Black Jacket

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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 (Solid)	0.4232	0.53	0.0223	0.1772	0.374	5.4134	0.216 + j0.759	0.162 + j0.052	2092	140	175
1 (19)	0.6923	0.87	0.0207	0.1706	0.397	5.7415	0.320 + j0.758	0.266 + j0.052	2092	140	175
1/0 (Solid)	0.3346	0.42	0.0204	0.1706	0.400	5.7743	0.182 + j0.755	0.128 + j0.050	2092	155	195
1/0 (19)	0.5479	0.69	0.0195	0.1640	0.423	6.1024	0.265 + j0.754	0.211 + j0.050	2092	155	195
1/0 (19)	0.5479	0.69	0.0195	0.1640	0.423	6.1024	0.265 + j0.754	0.211 + j0.050	2092	155	195
2/0 (19)	0.4364	0.55	0.0180	0.1608	0.456	6.5945	0.221 + j0.750	0.167 + j0.048	2441	180	220
3/0 (19)	0.3445	0.43	0.0168	0.1542	0.492	7.1194	0.186 + j0.745	0.132 + j0.047	3138	200	250
4/0 (19)	0.2756	0.34	0.0155	0.1476	0.535	7.7100	0.159 + j0.740	0.105 + j0.045	3836	235	285
4/0 (19)	0.2756	0.34	0.0155	0.1476	0.535	7.7100	0.159 + j0.740	0.105 + j0.045	3836	235	285
4/0 (19)	0.2756	0.34	0.0155	0.1476	0.535	7.7100	0.159 + j0.740	0.105 + j0.045	3836	235	285
250 (37)	0.2329	0.30	0.0143	0.1444	0.574	8.3005	0.144 + j0.736	0.090 + j0.044	4533	256	309
350 (37)	0.1640	0.21	0.0128	0.1378	0.650	9.3832	0.119 + j0.729	0.065 + j0.042	6277	310	370
350 (37)	0.1640	0.21	0.0128	0.1378	0.650	9.3832	0.119 + j0.729	0.065 + j0.042	6277	310	370
500 (37)	0.1148	0.15	0.0110	0.1312	0.741	10.6955	0.100 + j0.719	0.046 + j0.041	8865	370	445
750 (61)	0.0787	0.11	0.0094	0.1247	0.860	12.4016	0.087 + j0.709	0.033 + j0.038	13298	460	525
1000 (61)	0.0591	0.09	0.0085	0.1214	0.965	13.9108	0.080 + j0.702	0.026 + j0.037	17615	520	575

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

CN Calculator