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	0.947	6x14	0.54	50	1.175	617	8.2	502
TBA	1 (19)	0.322	0.88	260	0.98	6x14	0.54	50	1.208	639	8.5	502
TBA	1/0 (SOLID)	0.325	0.883	260	0.983	6x14	0.54	50	1.211	661	8.5	633
627867	1/0 (19)	0.352	0.902	260	0.992	6x14	0.54	50	1.22	623	8.5	633
623282^	1/0 (19)	0.352	0.902	260	0.992	6x14	0.54	50	1.22	623	8.5	633
627866	2/0 (19)	0.395	0.945	260	1.035	7x14	0.463	50	1.263	686	8.8	798
TBA	3/0 (19)	0.443	1.001	260	1.121	9x14	0.36	50	1.349	860	9.4	1006
682286	4/0 (19)	0.498	1.048	260	1.158	11x14	0.295	50	1.386	892	9.7	1269
613424!	4/0 (19)	0.498	1.048	260	1.158	11x14	0.295	50	1.386	892	9.7	1269
587055!^	4/0 (19)	0.498	1.048	260	1.158	11x14	0.295	50	1.386	892	9.7	1269
TBA	250 (37)	0.558	1.124	260	1.244	13x14	0.249	50	1.472	1078	10.3	1500
627872	350 (37)	0.661	1.221	260	1.331	18x14	0.18	50	1.559	1224	10.9	2100
276386^	350 (37)	0.661	1.221	260	1.331	18x14	0.18	50	1.559	1224	10.9	2100
613891	500 (37)	0.789	1.349	260	1.459	16x12	0.128	75	1.775	1636	12.4	3000
613716	750 (61)	0.968	1.538	260	1.648	24x12	0.085	75	1.964	2172	13.7	4500
347302	1000 (61)	1.117	1.687	260	1.827	20x10	0.064	75	2.185	2777	15.3	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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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	0.177	0.065	0.054	0.22	3.2	0.515+j0.275	0.178+j0.057	2095	140	175
1 (19)	0.211	0.289	0.061	0.052	0.24	3.4	0.626+j0.275	0.290+j0.058	2095	140	175
1/0 (SOLID)	0.102	0.14	0.06	0.052	0.24	3.4	0.477+j0.273	0.141+j0.055	2095	155	195
1/0 (19)	0.167	0.229	0.057	0.05	0.25	3.7	0.566+j0.273	0.230+j0.055	2095	155	195
1/0 (19)	0.167	0.229	0.057	0.05	0.25	3.7	0.566+j0.273	0.230+j0.055	2095	155	195
2/0 (19)	0.133	0.182	0.053	0.048	0.27	3.9	0.500+j0.227	0.183+j0.053	2444	180	220
3/0 (19)	0.105	0.144	0.05	0.047	0.29	4.2	0.423+j0.166	0.146+j0.053	3142	200	250
4/0 (19)	0.084	0.115	0.046	0.045	0.32	4.6	0.360+j0.126	0.117+j0.050	3840	235	285
4/0 (19)	0.084	0.115	0.046	0.045	0.32	4.6	0.360+j0.126	0.117+j0.050	3840	235	285
4/0 (19)	0.084	0.115	0.046	0.045	0.32	4.6	0.360+j0.126	0.117+j0.050	3840	235	285
250 (37)	0.07	0.096	0.042	0.044	0.34	4.9	0.312+j0.101	0.098+j0.050	4538	256	309
350 (37)	0.051	0.07	0.037	0.041	0.39	5.6	0.236+j0.065	0.073+j0.046	6284	310	370
350 (37)	0.051	0.07	0.037	0.041	0.39	5.6	0.236+j0.065	0.073+j0.046	6284	310	370
500 (37)	0.036	0.05	0.033	0.04	0.44	6.4	0.172+j0.044	0.055+j0.045	8865	370	445
750 (61)	0.023	0.033	0.028	0.038	0.52	7.5	0.116+j0.029	0.039+j0.041	13298	460	525
1000 (61)	0.017	0.025	0.025	0.037	0.58	8.4	0.088+j0.024	0.033+j0.039	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, Spacing: one diameter spacing center-to-center.

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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	24.05	6x14	1.77	1.27	29.85	918	208.28	2234
TBA	1 (19)	8.18	22.35	6.60	24.89	6x14	1.77	1.27	30.68	951	215.90	2234
TBA	1/0 (SOLID)	8.25	22.43	6.60	24.97	6x14	1.77	1.27	30.76	984	215.90	2817
627867	1/0 (19)	8.94	22.91	6.60	25.20	6x14	1.77	1.27	30.99	927	215.90	2817
623282^	1/0 (19)	8.94	22.91	6.60	25.20	6x14	1.77	1.27	30.99	927	215.90	2817
627866	2/0 (19)	10.03	24.00	6.60	26.29	7x14	1.52	1.27	32.08	1021	223.52	3551
TBA	3/0 (19)	11.25	25.43	6.60	28.47	9x14	1.18	1.27	34.26	1280	238.76	4477
682286	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.97	1.27	35.20	1327	246.38	5647
613424!	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.97	1.27	35.20	1327	246.38	5647
587055!^	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.97	1.27	35.20	1327	246.38	5647
TBA	250 (37)	14.17	28.55	6.60	31.60	13x14	0.82	1.27	37.39	1604	261.62	6675
627872	350 (37)	16.79	31.01	6.60	33.81	18x14	0.59	1.27	39.60	1822	276.86	9345
276386^	350 (37)	16.79	31.01	6.60	33.81	18x14	0.59	1.27	39.60	1822	276.86	9345
613891	500 (37)	20.04	34.26	6.60	37.06	16x12	0.42	1.91	45.08	2435	314.96	13350
613716	750 (61)	24.59	39.07	6.60	41.86	24x12	0.28	1.91	49.89	3232	347.98	20025
347302	1000 (61)	28.37	42.85	6.60	46.41	20x10	0.21	1.91	55.50	4133	388.62	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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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	0.58	0.0198	0.1772	0.722	10.4987	0.515+j0.275	0.178+j0.057	2095	140	175
1 (19)	0.6923	0.95	0.0186	0.1706	0.787	11.1549	0.626+j0.275	0.290+j0.058	2095	140	175
1/0 (SOLID)	0.3346	0.46	0.0183	0.1706	0.787	11.1549	0.477+j0.273	0.141+j0.055	2095	155	195
1/0 (19)	0.5479	0.75	0.0174	0.1640	0.820	12.1391	0.566+j0.273	0.230+j0.055	2095	155	195
1/0 (19)	0.5479	0.75	0.0174	0.1640	0.820	12.1391	0.566+j0.273	0.230+j0.055	2095	155	195
2/0 (19)	0.4364	0.60	0.0162	0.1575	0.886	12.7953	0.500+j0.227	0.183+j0.053	2444	180	220
3/0 (19)	0.3445	0.47	0.0152	0.1542	0.951	13.7795	0.423+j0.166	0.146+j0.053	3142	200	250
4/0 (19)	0.2756	0.38	0.0140	0.1476	1.050	15.0919	0.360+j0.126	0.117+j0.050	3840	235	285
4/0 (19)	0.2756	0.38	0.0140	0.1476	1.050	15.0919	0.360+j0.126	0.117+j0.050	3840	235	285
4/0 (19)	0.2756	0.38	0.0140	0.1476	1.050	15.0919	0.360+j0.126	0.117+j0.050	3840	235	285
250 (37)	0.2297	0.31	0.0128	0.1444	1.115	16.0761	0.312+j0.101	0.098+j0.050	4538	256	309
350 (37)	0.1673	0.23	0.0113	0.1345	1.280	18.3727	0.236+j0.065	0.073+j0.046	6284	310	370
350 (37)	0.1673	0.23	0.0113	0.1345	1.280	18.3727	0.236+j0.065	0.073+j0.046	6284	310	370
500 (37)	0.1181	0.16	0.0101	0.1312	1.444	20.9974	0.172+j0.044	0.055+j0.045	8865	370	445
750 (61)	0.0755	0.11	0.0085	0.1247	1.706	24.6063	0.116+j0.029	0.039+j0.041	13298	460	525
1000 (61)	0.0558	0.08	0.0076	0.1214	1.903	27.5591	0.088+j0.024	0.033+j0.039	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, Spacing: one diameter spacing center-to-center.

Concentric Neutral Calculator

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