25kV AL 100% TRXLPE Full Neutral LLDPE

Single Conductor, 260 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:

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, 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
614787	1 (1)	0.289	0.839	260	0.929	13x14	0.249	50	1.157	642	8.1	502
619983!§	1 (1)	0.289	0.839	260	0.929	13x14	0.249	50	1.157	642	8.1	502
604073!	1 (1)	0.289	0.839	260	0.929	13x14	0.249	50	1.157	642	8.1	502
611733	1 (19)	0.322	0.872	260	0.962	13x14	0.249	50	1.19	668	8.3	502
663245	1/0 (1)	0.325	0.875	260	0.965	16x14	0.203	50	1.193	719	8.4	633
610308	1/0 (19)	0.352	0.902	260	0.992	16x14	0.203	50	1.22	742	8.5	633
586925^	1/0 (19)	0.352	0.902	260	0.992	16x14	0.203	50	1.22	742	8.5	633
477026Y	1/0 (19)	0.352	0.902	260	0.992	16x14	0.203	50	1.22	742	8.5	633
627928	2/0 (19)	0.395	0.945	260	1.035	13x12	0.157	50	1.297	877	9.1	798
TBA	3/0 (19)	0.443	1.001	260	1.121	25x14	0.13	50	1.349	1074	9.4	1006
614125	4/0 (19)	0.498	1.048	260	1.158	20x12	0.102	50	1.42	1170	9.9	1269
TBA	250 (37)	0.558	1.124	260	1.244	24x12	0.085	50	1.506	1401	10.5	1500
TBA	350 (37)	0.661	1.227	260	1.347	21x10	0.061	75	1.701	1840	11.9	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
^ SuperSmooth conductor shield
§ Black jacket.
! CSA Listed
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 (1)	0.129	0.177	0.064	0.054	0.23	3.3	0.395+j0.106	0.179+j0.056	4538	140	170
1 (1)	0.129	0.177	0.064	0.054	0.23	3.3	0.395+j0.106	0.179+j0.056	4538	140	170
1 (1)	0.129	0.177	0.064	0.054	0.23	3.3	0.395+j0.106	0.179+j0.056	4538	140	170
1 (19)	0.211	0.289	0.06	0.052	0.24	3.5	0.507+j0.107	0.291+j0.057	4538	140	170
1/0 (1)	0.102	0.14	0.06	0.052	0.24	3.5	0.324+j0.081	0.143+j0.054	5585	155	195
1/0 (19)	0.167	0.229	0.057	0.05	0.25	3.7	0.413+j0.082	0.232+j0.055	5585	155	195
1/0 (19)	0.167	0.229	0.057	0.05	0.25	3.7	0.413+j0.082	0.232+j0.055	5585	155	195
1/0 (19)	0.167	0.229	0.057	0.05	0.25	3.7	0.413+j0.082	0.232+j0.055	5585	155	195
2/0 (19)	0.133	0.182	0.053	0.049	0.27	3.9	0.330+j0.062	0.186+j0.053	7203	180	220
3/0 (19)	0.105	0.144	0.05	0.047	0.29	4.2	0.268+j0.050	0.148+j0.052	8727	205	250
4/0 (19)	0.084	0.115	0.046	0.046	0.32	4.6	0.214+j0.040	0.120+j0.049	11082	235	285
250 (37)	0.07	0.096	0.042	0.045	0.34	4.9	0.179+j0.036	0.102+j0.048	13298	254	307
350 (37)	0.051	0.07	0.038	0.043	0.38	5.6	0.130+j0.029	0.079+j0.045	18496	305	365

*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
614787	1 (1)	7.34	21.31	6.60	23.60	13x14	0.82	1.27	29.39	955	205.74	2234
619983!§	1 (1)	7.34	21.31	6.60	23.60	13x14	0.82	1.27	29.39	955	205.74	2234
604073!	1 (1)	7.34	21.31	6.60	23.60	13x14	0.82	1.27	29.39	955	205.74	2234
611733	1 (19)	8.18	22.15	6.60	24.43	13x14	0.82	1.27	30.23	994	210.82	2234
663245	1/0 (1)	8.25	22.22	6.60	24.51	16x14	0.67	1.27	30.30	1070	213.36	2817
610308	1/0 (19)	8.94	22.91	6.60	25.20	16x14	0.67	1.27	30.99	1104	215.90	2817
586925^	1/0 (19)	8.94	22.91	6.60	25.20	16x14	0.67	1.27	30.99	1104	215.90	2817
477026Y	1/0 (19)	8.94	22.91	6.60	25.20	16x14	0.67	1.27	30.99	1104	215.90	2817
627928	2/0 (19)	10.03	24.00	6.60	26.29	13x12	0.52	1.27	32.94	1305	231.14	3551
TBA	3/0 (19)	11.25	25.43	6.60	28.47	25x14	0.43	1.27	34.26	1598	238.76	4477
614125	4/0 (19)	12.65	26.62	6.60	29.41	20x12	0.33	1.27	36.07	1741	251.46	5647
TBA	250 (37)	14.17	28.55	6.60	31.60	24x12	0.28	1.27	38.25	2085	266.70	6675
TBA	350 (37)	16.79	31.17	6.60	34.21	21x10	0.20	1.91	43.21	2738	302.26	9345

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
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^ SuperSmooth conductor shield
§ Black jacket.
! CSA Listed
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 (1)	0.4232	0.58	0.0195	0.1772	0.755	10.8268	0.395+j0.106	0.179+j0.056	4538	140	170
1 (1)	0.4232	0.58	0.0195	0.1772	0.755	10.8268	0.395+j0.106	0.179+j0.056	4538	140	170
1 (1)	0.4232	0.58	0.0195	0.1772	0.755	10.8268	0.395+j0.106	0.179+j0.056	4538	140	170
1 (19)	0.6923	0.95	0.0183	0.1706	0.787	11.4829	0.507+j0.107	0.291+j0.057	4538	140	170
1/0 (1)	0.3346	0.46	0.0183	0.1706	0.787	11.4829	0.324+j0.081	0.143+j0.054	5585	155	195
1/0 (19)	0.5479	0.75	0.0174	0.1640	0.820	12.1391	0.413+j0.082	0.232+j0.055	5585	155	195
1/0 (19)	0.5479	0.75	0.0174	0.1640	0.820	12.1391	0.413+j0.082	0.232+j0.055	5585	155	195
1/0 (19)	0.5479	0.75	0.0174	0.1640	0.820	12.1391	0.413+j0.082	0.232+j0.055	5585	155	195
2/0 (19)	0.4364	0.60	0.0162	0.1608	0.886	12.7953	0.330+j0.062	0.186+j0.053	7203	180	220
3/0 (19)	0.3445	0.47	0.0152	0.1542	0.951	13.7795	0.268+j0.050	0.148+j0.052	8727	205	250
4/0 (19)	0.2756	0.38	0.0140	0.1509	1.050	15.0919	0.214+j0.040	0.120+j0.049	11082	235	285
250 (37)	0.2297	0.31	0.0128	0.1476	1.115	16.0761	0.179+j0.036	0.102+j0.048	13298	254	307
350 (37)	0.1673	0.23	0.0116	0.1411	1.247	18.3727	0.130+j0.029	0.079+j0.045	18496	305	365

*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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