



25kV AL 100% TRXLPE LCT LLDPE

Single Conductor, 260 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Longitudinally Corrugated Tape Shield, 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. **Tape Shield:** 10 mils Longitudinally Corrugated Tape Shield
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-97-682 Standard for Shielded Utility Cable Rated for 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: -40°C and MV 90°C 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





Table 1 – Weights and Measurements

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
	AWG/ Kcmil	inch	inch	mil	inch	mil	inch	lb /1000ft	inch	lb
TBA	1 (Solid)	0.289	0.847	260	0.927	80	1.187	639	14.2	502
TBA	1 (19)	0.322	0.880	260	0.960	80	1.220	662	14.6	502
TBA	1/0 (Solid)	0.324	0.882	260	0.962	80	1.222	685	14.7	633
TBA	1/0 (19)	0.351	0.909	260	0.989	80	1.249	705	15.0	633
TBA	2/0 (19)	0.395	0.953	260	1.033	80	1.293	764	15.5	798
TBA	3/0 (19)	0.443	1.001	260	1.081	80	1.341	832	16.1	1006
TBA	4/0 (19)	0.498	1.056	260	1.136	80	1.396	914	16.8	1269
TBA	250 (37)	0.558	1.124	260	1.204	80	1.464	1003	17.6	1500
612885 [^]	350 (37)	0.661	1.221	260	1.301	80	1.550	1197	18.6	2100
TBA	500 (37)	0.789	1.355	260	1.435	110	1.755	1511	21.1	3000
614489 [^]	750 (61)	0.968	1.538	260	1.618	110	1.938	1864	23.3	4500
612890 [^]	1000 (61)	1.117	1.687	260	1.767	110	2.087	2229	25.0	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

[^] 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 (Solid)	0.129	0.162	0.064	0.054	0.223	1.0	0.471 + j0.204	0.163 + j0.055	3711	140	170
1 (19)	0.211	0.266	0.060	0.052	0.237	1.0	0.569 + j0.194	0.267 + j0.053	3823	140	170
1/0 (Solid)	0.102	0.128	0.060	0.052	0.238	1.0	0.431 + j0.193	0.129 + j0.053	3830	155	195
1/0 (19)	0.167	0.211	0.057	0.051	0.250	1.1	0.509 + j0.186	0.212 + j0.051	3921	155	195
2/0 (19)	0.133	0.167	0.053	0.049	0.268	1.2	0.458 + j0.175	0.168 + j0.049	4070	180	220
3/0 (19)	0.105	0.132	0.049	0.047	0.289	1.3	0.415 + j0.163	0.133 + j0.048	4233	200	250
4/0 (19)	0.084	0.105	0.046	0.045	0.312	1.4	0.379 + j0.152	0.106 + j0.046	4419	235	285
250 (37)	0.071	0.090	0.042	0.044	0.341	1.5	0.354 + j0.140	0.091 + j0.044	4649	256	335
350 (37)	0.050	0.065	0.037	0.041	0.388	1.7	0.314 + j0.124	0.066 + j0.042	4977	310	375
500 (37)	0.035	0.046	0.032	0.040	0.438	1.9	0.279 + j0.108	0.048 + j0.041	5431	375	450
750 (61)	0.024	0.033	0.027	0.038	0.521	2.3	0.245 + j0.090	0.035 + j0.038	6051	470	550
1000 (61)	0.018	0.026	0.024	0.036	0.583	2.5	0.223 + j0.079	0.028 + j0.037	6555		630

*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.





Table 3 – Weights and Measurements (Metric)

Stock Number	Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
	AWG/ Kcmil	mm	mm	mm	mm	mm	mm	kg/km	mm	newton
TBA	1 (Solid)	7.34	21.51	6.60	23.55	2.03	30.15	951	360.68	2234
TBA	1 (19)	8.18	22.35	6.60	24.38	2.03	30.99	985	370.84	2234
TBA	1/0 (Solid)	8.23	22.40	6.60	24.43	2.03	31.04	1019	373.38	2817
TBA	1/0 (19)	8.92	23.09	6.60	25.12	2.03	31.72	1049	381.00	2817
TBA	2/0 (19)	10.03	24.21	6.60	26.24	2.03	32.84	1137	393.70	3551
TBA	3/0 (19)	11.25	25.43	6.60	27.46	2.03	34.06	1238	408.94	4477
TBA	4/0 (19)	12.65	26.82	6.60	28.85	2.03	35.46	1360	426.72	5647
TBA	250 (37)	14.17	28.55	6.60	30.58	2.03	37.19	1493	447.04	6675
612885 [^]	350 (37)	16.79	31.01	6.60	33.05	2.03	39.37	1781	472.44	9345
TBA	500 (37)	20.04	34.42	6.60	36.45	2.79	44.58	2249	535.94	13350
614489 [^]	750 (61)	24.59	39.07	6.60	41.10	2.79	49.23	2774	591.82	20025
612890 [^]	1000 (61)	28.37	42.85	6.60	44.88	2.79	53.01	3317	635.00	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

[^] 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 (Solid)	0.4232	0.53	0.0195	0.1772	0.732	3.2808	0.471 + j0.204	0.163 + j0.055	3711	140	170
1 (19)	0.6923	0.87	0.0183	0.1706	0.778	3.2808	0.569 + j0.194	0.267 + j0.053	3823	140	170
1/0 (Solid)	0.3346	0.42	0.0183	0.1706	0.781	3.2808	0.431 + j0.193	0.129 + j0.053	3830	155	195
1/0 (19)	0.5479	0.69	0.0174	0.1673	0.820	3.6089	0.509 + j0.186	0.212 + j0.051	3921	155	195
2/0 (19)	0.4364	0.55	0.0162	0.1608	0.879	3.9370	0.458 + j0.175	0.168 + j0.049	4070	180	220
3/0 (19)	0.3445	0.43	0.0149	0.1542	0.948	4.2651	0.415 + j0.163	0.133 + j0.048	4233	200	250
4/0 (19)	0.2756	0.34	0.0140	0.1476	1.024	4.5932	0.379 + j0.152	0.106 + j0.046	4419	235	285
250 (37)	0.2329	0.30	0.0128	0.1444	1.119	4.9213	0.354 + j0.140	0.091 + j0.044	4649	256	335
350 (37)	0.1640	0.21	0.0113	0.1345	1.273	5.5774	0.314 + j0.124	0.066 + j0.042	4977	310	375
500 (37)	0.1148	0.15	0.0098	0.1312	1.437	6.2336	0.279 + j0.108	0.048 + j0.041	5431	375	450
750 (61)	0.0787	0.11	0.0082	0.1247	1.709	7.5459	0.245 + j0.090	0.035 + j0.038	6051	470	550
1000 (61)	0.0591	0.09	0.0073	0.1181	1.913	8.2021	0.223 + j0.079	0.028 + j0.037	6555		630

*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.

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