25kV AL 100% TRXLPE LCT LLDPE Primary UD

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, 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-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
- 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

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 (1)	0.289	0.846	260	0.906	80	1.166	629	14.0	502
TBA	1 (19)	0.322	0.879	260	0.939	80	1.199	657	14.4	502
TBA	1/0 (1)	0.325	0.882	260	0.942	80	1.202	667	14.4	634
TBA	1/0 (19)	0.352	0.909	260	0.969	80	1.229	691	14.7	634
TBA	2/0 (19)	0.395	0.952	260	1.012	80	1.272	740	15.3	799
TBA	3/0 (19)	0.443	1.000	260	1.060	80	1.320	800	15.8	1007
TBA	4/0 (19)	0.498	1.055	260	1.115	80	1.375	872	16.5	1270
TBA	250 (37)	0.558	1.124	260	1.184	80	1.444	959	17.3	1500
612885^	350 (37)	0.661	1.227	260	1.287	80	1.550	1201	18.6	2100
TBA	500 (37)	0.789	1.355	260	1.415	80	1.641	1381	19.7	3000
614489^	750 (61)	0.968	1.543	260	1.603	110	1.938	1854	22.7	4500
612890^	1000 (61)	1.117	1.692	260	1.752	110	2.087	2220	24.5	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
^ 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	0.556+j0.176	0.266+j0.051	3819.3	140	170
1 (19)	0.211	0.265	0.061	0.049	0.237	1.026	0.550+j0.167	0.266+j0.049	3936.5	140	170
1/0 (1)	0.168	0.211	0.061	0.049	0.238	1.031	0.495+j0.166	0.212+j0.049	3947.1	155	195
1/0 (19)	0.168	0.211	0.058	0.048	0.250	1.082	0.490+j0.159	0.212+j0.048	4043.0	155	195
2/0 (19)	0.133	0.167	0.054	0.047	0.268	1.162	0.438+j0.149	0.168+j0.046	4195.7	180	220
3/0 (19)	0.105	0.132	0.050	0.045	0.289	1.251	0.395+j0.140	0.133+j0.045	4366.2	200	250
4/0 (19)	0.0836	0.105	0.046	0.043	0.312	1.353	0.359+j0.129	0.106+j0.043	4561.5	235	285
250 (37)	0.0707	0.089	0.042	0.042	0.342	1.479	0.332+j0.118	0.090+j0.042	4806.5		
350 (37)	0.0505	0.064	0.038	0.040	0.385	1.666	0.293+j0.104	0.065+j0.040	5172.3	310	375
500 (37)	0.0354	0.045	0.033	0.037	0.438	1.897	0.258+j0.091	0.046+j0.037	5626.9	375	455
750 (61)	0.0236	0.030	0.028	0.036	0.516	2.235	0.222+j0.075	0.032+j0.036	6294.6	470	560
1000 (61)	0.0177	0.023	0.025	0.034	0.578	2.501	0.202+j0.066	0.025+j0.034	6823.7	540	645

* Calculations are based on three cables triplexed / tape 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 P-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 P-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	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 (1)	7.34	21.49	6.60	23.01	2.03	29.62	936	355.60	2234
TBA	1 (19)	8.18	22.33	6.60	23.85	2.03	30.45	978	365.76	2234
TBA	1/0 (1)	8.25	22.40	6.60	23.93	2.03	30.53	993	365.76	2821
TBA	1/0 (19)	8.94	23.09	6.60	24.61	2.03	31.22	1028	373.38	2821
TBA	2/0 (19)	10.03	24.18	6.60	25.70	2.03	32.31	1101	388.62	3556
TBA	3/0 (19)	11.25	25.40	6.60	26.92	2.03	33.53	1191	401.32	4481
TBA	4/0 (19)	12.65	26.80	6.60	28.32	2.03	34.93	1298	419.10	5652
TBA	250 (37)	14.17	28.55	6.60	30.07	2.03	36.68	1427	439.42	6675
612885^	350 (37)	16.79	31.17	6.60	32.69	2.03	39.37	1787	472.44	9345
TBA	500 (37)	20.04	34.42	6.60	35.94	2.03	41.68	2055	500.38	13350
614489^	750 (61)	24.59	39.19	6.60	40.72	2.79	49.23	2759	576.58	20025
612890^	1000 (61)	28.37	42.98	6.60	44.50	2.79	53.01	3304	622.30	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 (1)	0.6923	0.87	0.0198	0.1673	0.728	3.1594	0.556+j0.176	0.266+j0.051	3819.3	140	170
1 (19)	0.6923	0.87	0.0186	0.1608	0.778	3.3661	0.550+j0.167	0.266+j0.049	3936.5	140	170
1/0 (1)	0.5512	0.69	0.0186	0.1608	0.781	3.3825	0.495+j0.166	0.212+j0.049	3947.1	155	195
1/0 (19)	0.5512	0.69	0.0177	0.1575	0.820	3.5499	0.490+j0.159	0.212+j0.048	4043.0	155	195
2/0 (19)	0.4364	0.55	0.0165	0.1542	0.879	3.8123	0.438+j0.149	0.168+j0.046	4195.7	180	220
3/0 (19)	0.3445	0.43	0.0152	0.1476	0.948	4.1043	0.395+j0.140	0.133+j0.045	4366.2	200	250
4/0 (19)	0.2743	0.34	0.0140	0.1411	1.024	4.4390	0.359+j0.129	0.106+j0.043	4561.5	235	285
250 (37)	0.2320	0.29	0.0128	0.1378	1.122	4.8524	0.332+j0.118	0.090+j0.042	4806.5		
350 (37)	0.1657	0.21	0.0116	0.1312	1.263	5.4659	0.293+j0.104	0.065+j0.040	5172.3	310	375
500 (37)	0.1161	0.15	0.0101	0.1214	1.437	6.2238	0.258+j0.091	0.046+j0.037	5626.9	375	455
750 (61)	0.0774	0.10	0.0085	0.1181	1.693	7.3327	0.222+j0.075	0.032+j0.036	6294.6	470	560
1000 (61)	0.0581	0.08	0.0076	0.1115	1.896	8.2054	0.202+j0.066	0.025+j0.034	6823.7	540	645

* Calculations are based on three cables triplexed / tape 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 P-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 P-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)