25kV AL 100% TRXLPE One-Third Neutral LLDPE Primary UD

Single Conductor, 260 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, One-third Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket

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, 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-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
- UL 1072 - Listed Listed as MV 90 When Specified

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	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 (1)	0.289	0.846	260	0.926	6x14	0.438	50	1.154	550	13.8	502
TBA	1 (19)	0.322	0.879	260	0.959	6x14	0.438	50	1.187	580	14.2	502
TBA	1/0 (1)	0.325	0.882	260	0.962	6x14	0.438	50	1.190	590	14.3	634
627867	1/0 (19)	0.352	0.909	260	0.989	6x14	0.438	50	1.217	616	14.6	634
627866	2/0 (19)	0.395	0.952	260	1.032	7x14	0.376	50	1.260	679	15.1	799
TBA	3/0 (19)	0.443	1.000	260	1.080	9x14	0.292	50	1.308	763	15.7	1007
682286	4/0 (19)	0.498	1.055	260	1.155	11x14	0.239	50	1.383	882	16.6	1270
TBA	250 (37)	0.558	1.124	260	1.224	13x14	0.202	50	1.452	996	17.4	1500
627872	350 (37)	0.661	1.227	260	1.327	18x14	0.146	50	1.555	1218	18.7	2100
613891	500 (37)	0.789	1.355	260	1.455	16x12	0.104	80	1.775	1635	21.3	3000
613716	750 (61)	0.968	1.543	260	1.643	24x12	0.069	80	1.963	2162	23.6	4500
347302	1000 (61)	1.117	1.692	260	1.822	20x10	0.052	80	2.186	2765	26.2	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

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	0.580+j0.234	0.266+j0.051	2196.1	140	175
1 (19)	0.211	0.265	0.061	0.049	0.237	1.026	0.580+j0.233	0.266+j0.049	2196.1	140	175
1/0 (1)	0.168	0.211	0.061	0.049	0.238	1.031	0.526+j0.233	0.212+j0.049	2196.1	155	195
1/0 (19)	0.168	0.211	0.058	0.048	0.250	1.082	0.525+j0.232	0.212+j0.048	2196.1	155	195
2/0 (19)	0.133	0.167	0.054	0.046	0.268	1.162	0.458+j0.192	0.168+j0.046	2562.1	180	225
3/0 (19)	0.105	0.132	0.050	0.045	0.289	1.251	0.382+j0.140	0.133+j0.045	3294.2	200	255
4/0 (19)	0.0836	0.105	0.046	0.044	0.312	1.353	0.321+j0.108	0.107+j0.043	4026.2	235	285
250 (37)	0.0707	0.089	0.042	0.042	0.342	1.479	0.279+j0.087	0.091+j0.042	4758.3		
350 (37)	0.0505	0.064	0.038	0.040	0.385	1.666	0.208+j0.059	0.066+j0.039	6588.4	310	375
500 (37)	0.0354	0.045	0.033	0.039	0.438	1.897	0.151+j0.043	0.048+j0.038	9304.6	370	450
750 (61)	0.0236	0.030	0.028	0.037	0.516	2.235	0.102+j0.030	0.035+j0.035	13956.9	460	545
1000 (61)	0.0177	0.023	0.025	0.036	0.578	2.501	0.077+j0.027	0.029+j0.033	18488.1	520	620

* Calculations are based on three cables triplexed / concentric 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 T-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 T-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	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 (1)	7.34	21.49	6.60	23.52	6x14	1.44	1.27	29.31	818	350.52	2234
TBA	1 (19)	8.18	22.33	6.60	24.36	6x14	1.44	1.27	30.15	863	360.68	2234
TBA	1/0 (1)	8.25	22.40	6.60	24.43	6x14	1.44	1.27	30.23	878	363.22	2821
627867	1/0 (19)	8.94	23.09	6.60	25.12	6x14	1.44	1.27	30.91	917	370.84	2821
627866	2/0 (19)	10.03	24.18	6.60	26.21	7x14	1.23	1.27	32.00	1010	383.54	3556
TBA	3/0 (19)	11.25	25.40	6.60	27.43	9x14	0.96	1.27	33.22	1135	398.78	4481
682286	4/0 (19)	12.65	26.80	6.60	29.34	11x14	0.78	1.27	35.13	1313	421.64	5652
TBA	250 (37)	14.17	28.55	6.60	31.09	13x14	0.66	1.27	36.88	1482	441.96	6675
627872	350 (37)	16.79	31.17	6.60	33.71	18x14	0.48	1.27	39.50	1813	474.98	9345
613891	500 (37)	20.04	34.42	6.60	36.96	16x12	0.34	2.03	45.08	2433	541.02	13350
613716	750 (61)	24.59	39.19	6.60	41.73	24x12	0.23	2.03	49.86	3217	599.44	20025
347302	1000 (61)	28.37	42.98	6.60	46.28	20x10	0.17	2.03	55.52	4115	665.48	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

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	0.580+j0.234	0.266+j0.051	2196.1	140	175
1 (19)	0.6923	0.87	0.0186	0.1608	0.778	3.3661	0.580+j0.233	0.266+j0.049	2196.1	140	175
1/0 (1)	0.5512	0.69	0.0186	0.1608	0.781	3.3825	0.526+j0.233	0.212+j0.049	2196.1	155	195
1/0 (19)	0.5512	0.69	0.0177	0.1575	0.820	3.5499	0.525+j0.232	0.212+j0.048	2196.1	155	195
2/0 (19)	0.4364	0.55	0.0165	0.1509	0.879	3.8123	0.458+j0.192	0.168+j0.046	2562.1	180	225
3/0 (19)	0.3445	0.43	0.0152	0.1476	0.948	4.1043	0.382+j0.140	0.133+j0.045	3294.2	200	255
4/0 (19)	0.2743	0.34	0.0140	0.1444	1.024	4.4390	0.321+j0.108	0.107+j0.043	4026.2	235	285
250 (37)	0.2320	0.29	0.0128	0.1378	1.122	4.8524	0.279+j0.087	0.091+j0.042	4758.3		
350 (37)	0.1657	0.21	0.0116	0.1312	1.263	5.4659	0.208+j0.059	0.066+j0.039	6588.4	310	375
500 (37)	0.1161	0.15	0.0101	0.1280	1.437	6.2238	0.151+j0.043	0.048+j0.038	9304.6	370	450
750 (61)	0.0774	0.10	0.0085	0.1214	1.693	7.3327	0.102+j0.030	0.035+j0.035	13956.9	460	545
1000 (61)	0.0581	0.08	0.0076	0.1181	1.896	8.2054	0.077+j0.027	0.029+j0.033	18488.1	520	620

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