25kV AL 100% EPR LCT LLDPE Primary UD

Single Conductor, 260 Mils Ethylene Propylene Rubber (EPR), 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 Ethylene Propylene Rubber (EPR) 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 105°C for normal operation. 140°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 EPR 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	688	14.0	502
TBA	1 (19)	0.322	0.879	260	0.939	80	1.199	719	14.4	502
TBA	1/0 (1)	0.325	0.882	260	0.942	80	1.202	729	14.4	634
TBA	1/0 (19)	0.352	0.909	260	0.969	80	1.229	756	14.7	634
TBA	2/0 (19)	0.395	0.952	260	1.012	80	1.272	810	15.3	799
TBA	3/0 (19)	0.443	1.000	260	1.060	80	1.320	874	15.8	1007
TBA	4/0 (19)	0.498	1.055	260	1.115	80	1.375	952	16.5	1270
TBA	250 (37)	0.558	1.124	260	1.184	80	1.444	1045	17.3	1500
TBA	350 (37)	0.661	1.227	260	1.287	80	1.547	1214	18.6	2100
TBA	500 (37)	0.789	1.355	260	1.415	80	1.641	1491	19.7	3000
TBA	750 (61)	0.968	1.543	260	1.603	110	1.889	1940	22.7	4500
TBA	1000 (61)	1.117	1.692	260	1.752	110	2.038	2298	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

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	0.053	0.051	0.271	78.166	0.556+j0.176	0.266+j0.051	3622.8	140	170
1 (19)	0.211	0.265	0.050	0.049	0.288	83.243	0.550+j0.167	0.266+j0.049	3733.9	140	170
1/0 (1)	0.168	0.211	0.050	0.049	0.290	83.703	0.495+j0.166	0.212+j0.049	3744.0	155	195
1/0 (19)	0.168	0.211	0.047	0.048	0.304	87.823	0.490+j0.159	0.212+j0.048	3835.0	155	195
2/0 (19)	0.133	0.167	0.044	0.047	0.327	94.339	0.438+j0.149	0.168+j0.046	3979.9	180	220
3/0 (19)	0.105	0.132	0.041	0.045	0.352	101.559	0.395+j0.140	0.133+j0.045	4141.5	200	250
4/0 (19)	0.0836	0.105	0.038	0.043	0.380	109.776	0.359+j0.129	0.106+j0.043	4326.8	235	285
250 (37)	0.0707	0.089	0.035	0.042	0.416	120.020	0.332+j0.118	0.090+j0.042	4559.3		
350 (37)	0.0505	0.064	0.031	0.040	0.468	135.211	0.293+j0.104	0.065+j0.040	4906.2	310	375
500 (37)	0.0354	0.045	0.027	0.037	0.533	153.971	0.258+j0.091	0.046+j0.037	5337.4	375	455
750 (61)	0.0236	0.030	0.023	0.036	0.628	181.370	0.222+j0.075	0.032+j0.036	5970.7	470	560
1000 (61)	0.0177	0.023	0.021	0.034	0.703	202.999	0.202+j0.066	0.025+j0.034	6472.7	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	1024	355.60	2234
TBA	1 (19)	8.18	22.33	6.60	23.85	2.03	30.45	1070	365.76	2234
TBA	1/0 (1)	8.25	22.40	6.60	23.93	2.03	30.53	1085	365.76	2821
TBA	1/0 (19)	8.94	23.09	6.60	24.61	2.03	31.22	1125	373.38	2821
TBA	2/0 (19)	10.03	24.18	6.60	25.70	2.03	32.31	1205	388.62	3556
TBA	3/0 (19)	11.25	25.40	6.60	26.92	2.03	33.53	1301	401.32	4481
TBA	4/0 (19)	12.65	26.80	6.60	28.32	2.03	34.93	1417	419.10	5652
TBA	250 (37)	14.17	28.55	6.60	30.07	2.03	36.68	1555	439.42	6675
TBA	350 (37)	16.79	31.17	6.60	32.69	2.03	39.29	1807	472.44	9345
TBA	500 (37)	20.04	34.42	6.60	35.94	2.03	41.68	2219	500.38	13350
TBA	750 (61)	24.59	39.19	6.60	40.72	2.79	47.98	2887	576.58	20025
TBA	1000 (61)	28.37	42.98	6.60	44.50	2.79	51.77	3420	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

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	0.0162	0.1673	0.889	256.4501	0.556+j0.176	0.266+j0.051	3622.8	140	170
1 (19)	0.6923	0.87	0.0152	0.1608	0.945	273.1070	0.550+j0.167	0.266+j0.049	3733.9	140	170
1/0 (1)	0.5512	0.69	0.0152	0.1608	0.951	274.6161	0.495+j0.166	0.212+j0.049	3744.0	155	195
1/0 (19)	0.5512	0.69	0.0143	0.1575	0.997	288.1332	0.490+j0.159	0.212+j0.048	3835.0	155	195
2/0 (19)	0.4364	0.55	0.0134	0.1542	1.073	309.5112	0.438+j0.149	0.168+j0.046	3979.9	180	220
3/0 (19)	0.3445	0.43	0.0125	0.1476	1.155	333.1988	0.395+j0.140	0.133+j0.045	4141.5	200	250
4/0 (19)	0.2743	0.34	0.0116	0.1411	1.247	360.1575	0.359+j0.129	0.106+j0.043	4326.8	235	285
250 (37)	0.2320	0.29	0.0107	0.1378	1.365	393.7664	0.332+j0.118	0.090+j0.042	4559.3		
350 (37)	0.1657	0.21	0.0094	0.1312	1.535	443.6056	0.293+j0.104	0.065+j0.040	4906.2	310	375
500 (37)	0.1161	0.15	0.0082	0.1214	1.749	505.1542	0.258+j0.091	0.046+j0.037	5337.4	375	455
750 (61)	0.0774	0.10	0.0070	0.1181	2.060	595.0459	0.222+j0.075	0.032+j0.036	5970.7	470	560
1000 (61)	0.0581	0.08	0.0064	0.1115	2.306	666.0072	0.202+j0.066	0.025+j0.034	6472.7	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)