



25kV AL 100% EPR (EAM) LCT LLDPE

Single Conductor, 260 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 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; A conductor tape is used for cable size larger than or equal to 1500 Kcmil
3. **Insulation:** 260 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 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 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 (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

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

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
1 (Solid)	0.289	0.847	260	0.927	80	1.187	639	14.2	502
1 (19)	0.322	0.880	260	0.960	80	1.220	662	14.6	502
1/0 (Solid)	0.324	0.882	260	0.962	80	1.222	685	14.7	633
1/0 (19)	0.351	0.909	260	0.989	80	1.249	705	15.0	633
2/0 (19)	0.395	0.953	260	1.033	80	1.293	764	15.5	798
3/0 (19)	0.443	1.001	260	1.081	80	1.341	832	16.1	1006
4/0 (19)	0.498	1.056	260	1.136	80	1.396	914	16.8	1269
250 (37)	0.558	1.124	260	1.204	80	1.464	1003	17.6	1500
350 (37)	0.661	1.227	260	1.307	80	1.567	1174	18.8	2100
500 (37)	0.789	1.355	260	1.435	110	1.755	1511	21.1	3000
750 (61)	0.968	1.544	260	1.624	110	1.944	1920	23.3	4500
1000 (61)	1.117	1.693	260	1.773	110	2.093	2279	25.1	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 (Solid)	0.129	0.162	0.049	0.054	0.290	36.0	0.471 + j0.204	0.163 + j0.055	3711	140	170
1 (19)	0.211	0.266	0.046	0.052	0.309	38.4	0.569 + j0.194	0.267 + j0.053	3823	140	170
1/0 (Solid)	0.102	0.128	0.046	0.052	0.311	38.6	0.431 + j0.193	0.129 + j0.053	3830	155	195
1/0 (19)	0.167	0.211	0.044	0.051	0.326	40.5	0.509 + j0.186	0.212 + j0.051	3921	155	195
2/0 (19)	0.133	0.167	0.041	0.049	0.350	43.4	0.458 + j0.175	0.168 + j0.049	4070	180	220
3/0 (19)	0.105	0.132	0.038	0.047	0.377	46.8	0.415 + j0.163	0.133 + j0.048	4233	200	250
4/0 (19)	0.084	0.105	0.035	0.045	0.407	50.5	0.379 + j0.152	0.106 + j0.046	4419	235	285
250 (37)	0.071	0.090	0.032	0.044	0.445	55.2	0.354 + j0.140	0.091 + j0.044	4649	256	335
350 (37)	0.050	0.065	0.028	0.042	0.501	62.2	0.314 + j0.124	0.066 + j0.042	4998	310	375
500 (37)	0.035	0.046	0.025	0.040	0.571	70.9	0.279 + j0.108	0.048 + j0.041	5431	375	450
750 (61)	0.024	0.033	0.021	0.038	0.673	83.5	0.245 + j0.090	0.035 + j0.038	6071	470	550
1000 (61)	0.018	0.026	0.019	0.036	0.753	93.5	0.223 + j0.079	0.028 + j0.037	6575		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)

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
1 (Solid)	7.34	21.51	6.60	23.55	2.03	30.15	951	360.68	2234
1 (19)	8.18	22.35	6.60	24.38	2.03	30.99	985	370.84	2234
1/0 (Solid)	8.23	22.40	6.60	24.43	2.03	31.04	1019	373.38	2817
1/0 (19)	8.92	23.09	6.60	25.12	2.03	31.72	1049	381.00	2817
2/0 (19)	10.03	24.21	6.60	26.24	2.03	32.84	1137	393.70	3551
3/0 (19)	11.25	25.43	6.60	27.46	2.03	34.06	1238	408.94	4477
4/0 (19)	12.65	26.82	6.60	28.85	2.03	35.46	1360	426.72	5647
250 (37)	14.17	28.55	6.60	30.58	2.03	37.19	1493	447.04	6675
350 (37)	16.79	31.17	6.60	33.20	2.03	39.80	1747	477.52	9345
500 (37)	20.04	34.42	6.60	36.45	2.79	44.58	2249	535.94	13350
750 (61)	24.59	39.22	6.60	41.25	2.79	49.38	2857	591.82	20025
1000 (61)	28.37	43.00	6.60	45.03	2.79	53.16	3392	637.54	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 (Solid)	0.4232	0.53	0.0149	0.1772	0.951	118.1102	0.471 + j0.204	0.163 + j0.055	3711	140	170
1 (19)	0.6923	0.87	0.0140	0.1706	1.014	125.9843	0.569 + j0.194	0.267 + j0.053	3823	140	170
1/0 (Solid)	0.3346	0.42	0.0140	0.1706	1.020	126.6404	0.431 + j0.193	0.129 + j0.053	3830	155	195
1/0 (19)	0.5479	0.69	0.0134	0.1673	1.070	132.8740	0.509 + j0.186	0.212 + j0.051	3921	155	195
2/0 (19)	0.4364	0.55	0.0125	0.1608	1.148	142.3885	0.458 + j0.175	0.168 + j0.049	4070	180	220
3/0 (19)	0.3445	0.43	0.0116	0.1542	1.237	153.5433	0.415 + j0.163	0.133 + j0.048	4233	200	250
4/0 (19)	0.2756	0.34	0.0107	0.1476	1.335	165.6824	0.379 + j0.152	0.106 + j0.046	4419	235	285
250 (37)	0.2329	0.30	0.0098	0.1444	1.460	181.1024	0.354 + j0.140	0.091 + j0.044	4649	256	335
350 (37)	0.1640	0.21	0.0085	0.1378	1.644	204.0682	0.314 + j0.124	0.066 + j0.042	4998	310	375
500 (37)	0.1148	0.15	0.0076	0.1312	1.873	232.6115	0.279 + j0.108	0.048 + j0.041	5431	375	450
750 (61)	0.0787	0.11	0.0064	0.1247	2.208	273.9501	0.245 + j0.090	0.035 + j0.038	6071	470	550
1000 (61)	0.0591	0.09	0.0058	0.1181	2.470	306.7585	0.223 + j0.079	0.028 + j0.037	6575		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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