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 Copper 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

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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	50	1.127	1107	13.5	502
1 (19)	0.322	0.88	260	0.96	50	1.16	1149	13.9	502
1/0 (SOLID)	0.325	0.883	260	0.963	50	1.163	1173	14	633
1/0 (19)	0.352	0.91	260	0.99	50	1.19	1206	14.3	633
2/0 (19)	0.395	0.953	260	1.033	50	1.233	1285	14.8	798
3/0 (19)	0.443	1.001	260	1.081	50	1.281	1378	15.4	1006
4/0 (19)	0.498	1.056	260	1.136	50	1.336	1488	16	1269
250 (37)	0.558	1.124	260	1.204	50	1.404	1613	16.8	1500
350 (37)	0.661	1.227	260	1.307	50	1.507	1835	18.1	2100
500 (37)	0.789	1.355	260	1.435	75	1.685	2207	20.2	3000
750 (61)	0.968	1.544	260	1.624	75	1.874	2711	22.5	4500
1000 (61)	1.117	1.693	260	1.773	75	2.023	3143	24.3	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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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	0.177	0.05	0.053	0.29	4.2	0.458+j0.164	0.179+j0.056	3710	140	170
1 (19)	0.211	0.289	0.047	0.051	0.31	4.5	0.564+j0.159	0.291+j0.057	3822	140	170
1/0 (SOLID)	0.102	0.14	0.046	0.051	0.31	4.5	0.415+j0.156	0.142+j0.054	3832	155	195
1/0 (19)	0.167	0.229	0.044	0.05	0.33	4.7	0.500+j0.152	0.231+j0.054	3923	155	195
2/0 (19)	0.133	0.182	0.041	0.048	0.35	5.1	0.446+j0.144	0.184+j0.053	4069	180	220
3/0 (19)	0.105	0.144	0.038	0.046	0.38	5.5	0.401+j0.135	0.146+j0.051	4231	200	250
4/0 (19)	0.084	0.115	0.035	0.044	0.41	5.9	0.364+j0.126	0.117+j0.049	4417	235	285
250 (37)	0.07	0.096	0.032	0.043	0.45	6.4	0.336+j0.118	0.098+j0.048	4647	256	335
350 (37)	0.051	0.07	0.029	0.041	0.5	7.2	0.297+j0.105	0.072+j0.046	4996	310	375
500 (37)	0.036	0.05	0.025	0.039	0.57	8.3	0.263+j0.093	0.052+j0.044	5429	375	450
750 (61)	0.023	0.033	0.021	0.037	0.67	9.7	0.227+j0.078	0.036+j0.042	6069	470	550
1000 (61)	0.017	0.025	0.019	0.035	0.75	10.9	0.207+j0.069	0.028+j0.040	6573		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.

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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	1.27	28.63	1647	342.90	2234
1 (19)	8.18	22.35	6.60	24.38	1.27	29.46	1710	353.06	2234
1/0 (SOLID)	8.25	22.43	6.60	24.46	1.27	29.54	1746	355.60	2817
1/0 (19)	8.94	23.11	6.60	25.15	1.27	30.23	1795	363.22	2817
2/0 (19)	10.03	24.21	6.60	26.24	1.27	31.32	1912	375.92	3551
3/0 (19)	11.25	25.43	6.60	27.46	1.27	32.54	2051	391.16	4477
4/0 (19)	12.65	26.82	6.60	28.85	1.27	33.93	2214	406.40	5647
250 (37)	14.17	28.55	6.60	30.58	1.27	35.66	2400	426.72	6675
350 (37)	16.79	31.17	6.60	33.20	1.27	38.28	2731	459.74	9345
500 (37)	20.04	34.42	6.60	36.45	1.91	42.80	3284	513.08	13350
750 (61)	24.59	39.22	6.60	41.25	1.91	47.60	4034	571.50	20025
1000 (61)	28.37	43.00	6.60	45.03	1.91	51.38	4677	617.22	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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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	0.58	0.0152	0.1739	0.951	13.7795	0.458+j0.164	0.179+j0.056	3710	140	170
1 (19)	0.6923	0.95	0.0143	0.1673	1.017	14.7638	0.564+j0.159	0.291+j0.057	3822	140	170
1/0 (SOLID)	0.3346	0.46	0.0140	0.1673	1.017	14.7638	0.415+j0.156	0.142+j0.054	3832	155	195
1/0 (19)	0.5479	0.75	0.0134	0.1640	1.083	15.4199	0.500+j0.152	0.231+j0.054	3923	155	195
2/0 (19)	0.4364	0.60	0.0125	0.1575	1.148	16.7323	0.446+j0.144	0.184+j0.053	4069	180	220
3/0 (19)	0.3445	0.47	0.0116	0.1509	1.247	18.0446	0.401+j0.135	0.146+j0.051	4231	200	250
4/0 (19)	0.2756	0.38	0.0107	0.1444	1.345	19.3570	0.364+j0.126	0.117+j0.049	4417	235	285
250 (37)	0.2297	0.31	0.0098	0.1411	1.476	20.9974	0.336+j0.118	0.098+j0.048	4647	256	335
350 (37)	0.1673	0.23	0.0088	0.1345	1.640	23.6220	0.297+j0.105	0.072+j0.046	4996	310	375
500 (37)	0.1181	0.16	0.0076	0.1280	1.870	27.2310	0.263+j0.093	0.052+j0.044	5429	375	450
750 (61)	0.0755	0.11	0.0064	0.1214	2.198	31.8241	0.227+j0.078	0.036+j0.042	6069	470	550
1000 (61)	0.0558	0.08	0.0058	0.1148	2.461	35.7612	0.207+j0.069	0.028+j0.040	6573		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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