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; 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) / 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
- 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

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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	80	1.187	585	14.2	502
1 (19)	0.322	0.880	260	0.960	80	1.220	607	14.6	502
1/0 (Solid)	0.324	0.882	260	0.962	80	1.222	629	14.7	633
1/0 (19)	0.351	0.909	260	0.989	80	1.249	648	15.0	633
2/0 (19)	0.395	0.953	260	1.033	80	1.293	702	15.5	798
3/0 (19)	0.443	1.001	260	1.081	80	1.341	770	16.1	1006
4/0 (19)	0.498	1.056	260	1.136	80	1.396	848	16.8	1269
250 (37)	0.558	1.124	260	1.204	80	1.464	932	17.6	1500
350 (37)	0.661	1.227	260	1.307	80	1.567	1098	18.8	2100
500 (37)	0.789	1.355	260	1.435	110	1.755	1427	21.1	3000
750 (61)	0.968	1.544	260	1.624	110	1.944	1827	23.3	4500
1000 (61)	1.117	1.693	260	1.773	110	2.093	2177	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

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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	0.162	0.056	0.054	0.148	8.12	0.216 + j0.759	0.162 + j0.052	2624	140	170
1 (19)	0.211	0.266	0.052	0.052	0.159	8.72	0.320 + j0.757	0.266 + j0.053	2715	140	170
1/0 (Solid)	0.102	0.128	0.052	0.052	0.160	8.78	0.182 + j0.755	0.128 + j0.050	2721	155	195
1/0 (19)	0.167	0.211	0.049	0.051	0.168	9.21	0.265 + j0.754	0.211 + j0.050	2796	155	195
2/0 (19)	0.133	0.167	0.045	0.049	0.181	9.93	0.221 + j0.749	0.167 + j0.049	2918	180	220
3/0 (19)	0.105	0.132	0.042	0.047	0.196	10.75	0.186 + j0.745	0.132 + j0.047	3051	200	250
4/0 (19)	0.084	0.105	0.039	0.045	0.212	11.63	0.159 + j0.740	0.105 + j0.045	3203	235	285
250 (37)	0.071	0.090	0.036	0.044	0.228	12.51	0.144 + j0.736	0.090 + j0.044	3391	256	335
350 (37)	0.050	0.065	0.032	0.042	0.258	14.15	0.119 + j0.729	0.065 + j0.042	3677	310	375
500 (37)	0.035	0.046	0.028	0.040	0.295	16.18	0.011 + j0.720	0.046 + j0.040	4032	375	450
750 (61)	0.024	0.033	0.024	0.038	0.342	18.76	0.087 + j0.710	0.033 + j0.038	4555	470	550
1000 (61)	0.018	0.026	0.021	0.036	0.384	21.06	0.080 + j0.704	0.026 + j0.036	4968		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.

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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	2.03	30.15	871	360.68	2234
1 (19)	8.18	22.35	6.60	24.38	2.03	30.99	903	370.84	2234
1/0 (Solid)	8.23	22.40	6.60	24.43	2.03	31.04	936	373.38	2817
1/0 (19)	8.92	23.09	6.60	25.12	2.03	31.72	964	381.00	2817
2/0 (19)	10.03	24.21	6.60	26.24	2.03	32.84	1045	393.70	3551
3/0 (19)	11.25	25.43	6.60	27.46	2.03	34.06	1146	408.94	4477
4/0 (19)	12.65	26.82	6.60	28.85	2.03	35.46	1262	426.72	5647
250 (37)	14.17	28.55	6.60	30.58	2.03	37.19	1387	447.04	6675
350 (37)	16.79	31.17	6.60	33.20	2.03	39.80	1634	477.52	9345
500 (37)	20.04	34.42	6.60	36.45	2.79	44.58	2124	535.94	13350
750 (61)	24.59	39.22	6.60	41.25	2.79	49.38	2719	591.82	20025
1000 (61)	28.37	43.00	6.60	45.03	2.79	53.16	3240	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

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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	0.53	0.0171	0.1772	0.486	26.6404	0.216 + j0.759	0.162 + j0.052	2624	140	170
1 (19)	0.6923	0.87	0.0158	0.1706	0.522	28.6089	0.320 + j0.757	0.266 + j0.053	2715	140	170
1/0 (Solid)	0.3346	0.42	0.0158	0.1706	0.525	28.8058	0.182 + j0.755	0.128 + j0.050	2721	155	195
1/0 (19)	0.5479	0.69	0.0149	0.1673	0.551	30.2165	0.265 + j0.754	0.211 + j0.050	2796	155	195
2/0 (19)	0.4364	0.55	0.0137	0.1608	0.594	32.5787	0.221 + j0.749	0.167 + j0.049	2918	180	220
3/0 (19)	0.3445	0.43	0.0128	0.1542	0.643	35.2690	0.186 + j0.745	0.132 + j0.047	3051	200	250
4/0 (19)	0.2756	0.34	0.0119	0.1476	0.696	38.1562	0.159 + j0.740	0.105 + j0.045	3203	235	285
250 (37)	0.2329	0.30	0.0110	0.1444	0.748	41.0433	0.144 + j0.736	0.090 + j0.044	3391	256	335
350 (37)	0.1640	0.21	0.0098	0.1378	0.846	46.4239	0.119 + j0.729	0.065 + j0.042	3677	310	375
500 (37)	0.1148	0.15	0.0085	0.1312	0.968	53.0840	0.011 + j0.720	0.046 + j0.040	4032	375	450
750 (61)	0.0787	0.11	0.0073	0.1247	1.122	61.5486	0.087 + j0.710	0.033 + j0.038	4555	470	550
1000 (61)	0.0591	0.09	0.0064	0.1181	1.260	69.0945	0.080 + j0.704	0.026 + j0.036	4968		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.