



## 15kV AL 100% EPR (EAM) Full Neutral LLDPE

Single Conductor, 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 100% Insulation Level, Full Concentric Neutral, 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:** 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Concentric Neutral:** Helically applied soft drawn bare copper full concentric neutral
6. **Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes; PowerGlide® LLDPE jacket optional

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### APPLICATIONS AND FEATURES:

Southwire's 15kV 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-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 (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: -40°C and MV 90°C optional marking available upon request



**SAMPLE PRINT LEGEND:**

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] AL 15000 VOLTS EPR INSULATION 175 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	2 (Solid)	0.257	0.645	175	0.735	10x14	0.263	50	0.963	479	7.7	398
TBA	2 (7)	0.282	0.670	175	0.760	10x14	0.263	50	0.988	491	7.9	398
TBA	1 (Solid)	0.289	0.677	175	0.767	13x14	0.202	50	0.995	551	8.0	502
TBA	1 (19)	0.322	0.710	175	0.800	13x14	0.202	50	1.028	567	8.2	502
TBA	1/0 (Solid)	0.324	0.712	175	0.802	16x14	0.164	50	1.030	629	8.2	633
TBA	1/0 (19)	0.351	0.739	175	0.829	16x14	0.164	50	1.057	643	8.5	633
TBA	2/0 (19)	0.395	0.783	175	0.873	20x14	0.131	50	1.101	743	8.8	798
TBA	3/0 (19)	0.443	0.831	175	0.921	25x14	0.105	50	1.149	866	9.2	1006
629457	4/0 (19)	0.498	0.878	175	0.968	13x10	0.080	50	1.271	1099	10.2	1269
TBA	250 (37)	0.558	0.954	175	1.044	24x12	0.069	50	1.306	1168	10.4	1500
TBA	350 (37)	0.661	1.057	175	1.167	21x10	0.049	50	1.471	1536	11.8	2100

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
2 (Solid)	0.162	0.204	0.040	0.052	0.212	15.8	0.258 + j1.285	0.204 + j0.571	3487	120	150
2 (7)	0.266	0.336	0.038	0.050	0.225	16.8	0.390 + j1.228	0.336 + j0.514	3487	120	150
1 (Solid)	0.129	0.162	0.037	0.050	0.228	17.0	0.216 + j1.215	0.162 + j0.502	4533	140	170
1 (19)	0.211	0.266	0.035	0.048	0.244	18.2	0.320 + j1.157	0.266 + j0.445	4533	140	170
1/0 (Solid)	0.102	0.128	0.035	0.048	0.246	18.3	0.182 + j1.153	0.128 + j0.441	5579	155	195
1/0 (19)	0.167	0.211	0.033	0.047	0.259	19.3	0.265 + j1.113	0.211 + j0.403	5579	155	195
2/0 (19)	0.133	0.167	0.030	0.045	0.280	20.9	0.221 + j1.061	0.167 + j0.353	6974	180	220
3/0 (19)	0.105	0.132	0.028	0.044	0.303	22.6	0.186 + j1.014	0.132 + j0.310	8718	205	250
4/0 (19)	0.084	0.105	0.025	0.043	0.336	25.0	0.159 + j0.968	0.105 + j0.271	11450	235	285
250 (37)	0.071	0.090	0.023	0.041	0.363	27.0	0.144 + j0.932	0.090 + j0.237	13298	254	307
350 (37)	0.050	0.065	0.020	0.040	0.412	30.7	0.119 + j0.881	0.065 + j0.194	18496	305	365

\*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)**

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	2 (Solid)	6.53	16.38	4.44	18.67	10x14	0.86	1.27	24.46	713	195.58	1771
TBA	2 (7)	7.16	17.02	4.44	19.30	10x14	0.86	1.27	25.10	731	200.66	1771
TBA	1 (Solid)	7.34	17.20	4.44	19.48	13x14	0.66	1.27	25.27	820	203.20	2234
TBA	1 (19)	8.18	18.03	4.44	20.32	13x14	0.66	1.27	26.11	844	208.28	2234
TBA	1/0 (Solid)	8.23	18.08	4.44	20.37	16x14	0.54	1.27	26.16	936	208.28	2817
TBA	1/0 (19)	8.92	18.77	4.44	21.06	16x14	0.54	1.27	26.85	957	215.90	2817
TBA	2/0 (19)	10.03	19.89	4.44	22.17	20x14	0.43	1.27	27.97	1106	223.52	3551
TBA	3/0 (19)	11.25	21.11	4.44	23.39	25x14	0.34	1.27	29.18	1289	233.68	4477
629457	4/0 (19)	12.65	22.30	4.44	24.59	13x10	0.26	1.27	32.28	1635	259.08	5647
TBA	250 (37)	14.17	24.23	4.44	26.52	24x12	0.23	1.27	33.17	1738	264.16	6675
TBA	350 (37)	16.79	26.85	4.44	29.64	21x10	0.16	1.27	37.36	2286	299.72	9345

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
2 (Solid)	0.5315	0.67	0.0122	0.1706	0.696	51.8373	0.258 + j1.285	0.204 + j0.571	3487	120	150
2 (7)	0.8727	1.10	0.0116	0.1640	0.738	55.1181	0.390 + j1.228	0.336 + j0.514	3487	120	150
1 (Solid)	0.4232	0.53	0.0113	0.1640	0.748	55.7743	0.216 + j1.215	0.162 + j0.502	4533	140	170
1 (19)	0.6923	0.87	0.0107	0.1575	0.801	59.7113	0.320 + j1.157	0.266 + j0.445	4533	140	170
1/0 (Solid)	0.3346	0.42	0.0107	0.1575	0.807	60.0394	0.182 + j1.153	0.128 + j0.441	5579	155	195
1/0 (19)	0.5479	0.69	0.0101	0.1542	0.850	63.3202	0.265 + j1.113	0.211 + j0.403	5579	155	195
2/0 (19)	0.4364	0.55	0.0091	0.1476	0.919	68.5696	0.221 + j1.061	0.167 + j0.353	6974	180	220
3/0 (19)	0.3445	0.43	0.0085	0.1444	0.994	74.1470	0.186 + j1.014	0.132 + j0.310	8718	205	250
4/0 (19)	0.2756	0.34	0.0076	0.1411	1.102	82.0210	0.159 + j0.968	0.105 + j0.271	11450	235	285
250 (37)	0.2329	0.30	0.0070	0.1345	1.191	88.5827	0.144 + j0.932	0.090 + j0.237	13298	254	307
350 (37)	0.1640	0.21	0.0061	0.1312	1.352	100.7218	0.119 + j0.881	0.065 + j0.194	18496	305	365

\*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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Calculator

