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

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; Supersmooth conductor shield optional; 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

APPLICATIONS AND FEATURES:

Southwire's 15kV 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-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
- 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 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 (1)	0.258	0.645	175	0.725	10x14	0.263	50	0.953	480	7.6	398
623517	2 (7)	0.283	0.670	175	0.750	10x14	0.263	50	0.978	504	7.8	398
TBA	1 (1)	0.289	0.676	175	0.756	13x14	0.202	50	0.984	545	7.8	502
TBA	1 (19)	0.322	0.709	175	0.789	13x14	0.202	50	1.017	575	8.1	502
TBA	1/0 (1)	0.325	0.712	175	0.792	16x14	0.164	50	1.020	617	8.0	634
TBA	1/0 (19)	0.352	0.739	175	0.819	16x14	0.164	50	1.047	642	8.3	634
TBA	2/0 (19)	0.395	0.782	175	0.862	13x12	0.128	50	1.122	768	8.9	799
TBA	3/0 (19)	0.443	0.830	175	0.910	16x12	0.104	50	1.170	882	9.0	1007
629457	4/0 (19)	0.498	0.885	175	0.965	13x10	0.080	50	1.269	1074	10.1	1270
TBA	250 (37)	0.558	0.954	175	1.034	16x10	0.065	50	1.338	1249	10.7	1500
TBA	350 (37)	0.661	1.057	175	1.157	16x9	0.052	50	1.486	1578	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 (1)	0.266	0.334	0.044	0.049	0.198	34.304	0.569+j0.122	0.336+j0.048	3376.1	120	150
2 (7)	0.266	0.334	0.041	0.047	0.210	36.315	0.569+j0.121	0.336+j0.047	3376.1	120	150
1 (1)	0.211	0.265	0.041	0.047	0.212	36.796	0.457+j0.088	0.267+j0.047	4388.9	140	175
1 (19)	0.211	0.265	0.038	0.046	0.228	39.432	0.456+j0.087	0.267+j0.045	4388.9	140	175
1/0 (1)	0.168	0.211	0.038	0.046	0.229	39.671	0.372+j0.069	0.214+j0.045	5401.7	155	195
1/0 (19)	0.168	0.211	0.036	0.044	0.241	41.817	0.372+j0.068	0.214+j0.044	5401.7	155	195
2/0 (19)	0.133	0.167	0.033	0.044	0.261	45.220	0.296+j0.054	0.170+j0.043	6973.1	180	225
3/0 (19)	0.105	0.132	0.031	0.042	0.283	49.001	0.238+j0.044	0.136+j0.041	8582.3	205	250
4/0 (19)	0.0836	0.105	0.028	0.042	0.308	53.316	0.186+j0.038	0.110+j0.040	11084.4	235	285
250 (37)	0.0707	0.089	0.026	0.040	0.339	58.708	0.156+j0.032	0.095+j0.038	13642.3		
350 (37)	0.0505	0.064	0.022	0.039	0.385	66.727	0.117+j0.029	0.071+j0.035	17204.0	305	370

* Calculations are based on three cables triplexed / concentric 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	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 (1)	6.55	16.38	4.44	18.42	10x14	0.86	1.27	24.21	714	193.04	1771
623517	2 (7)	7.19	17.02	4.44	19.05	10x14	0.86	1.27	24.84	750	198.12	1771
TBA	1 (1)	7.34	17.17	4.44	19.20	13x14	0.66	1.27	24.99	811	198.12	2234
TBA	1 (19)	8.18	18.01	4.44	20.04	13x14	0.66	1.27	25.83	856	205.74	2234
TBA	1/0 (1)	8.25	18.08	4.44	20.12	16x14	0.54	1.27	25.91	918	203.20	2821
TBA	1/0 (19)	8.94	18.77	4.44	20.80	16x14	0.54	1.27	26.59	955	210.82	2821
TBA	2/0 (19)	10.03	19.86	4.44	21.89	13x12	0.42	1.27	28.50	1143	226.06	3556
TBA	3/0 (19)	11.25	21.08	4.44	23.11	16x12	0.34	1.27	29.72	1313	228.60	4481
629457	4/0 (19)	12.65	22.48	4.44	24.51	13x10	0.26	1.27	32.23	1598	256.54	5652
TBA	250 (37)	14.17	24.23	4.44	26.26	16x10	0.21	1.27	33.99	1859	271.78	6675
TBA	350 (37)	16.79	26.85	4.44	29.39	16x9	0.17	1.27	37.74	2348	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 (1)	0.8727	1.10	0.0134	0.1608	0.650	112.5459	0.569+j0.122	0.336+j0.048	3376.1	120	150
2 (7)	0.8727	1.10	0.0125	0.1542	0.689	119.1437	0.569+j0.121	0.336+j0.047	3376.1	120	150
1 (1)	0.6923	0.87	0.0125	0.1542	0.696	120.7218	0.457+j0.088	0.267+j0.047	4388.9	140	175
1 (19)	0.6923	0.87	0.0116	0.1509	0.748	129.3701	0.456+j0.087	0.267+j0.045	4388.9	140	175
1/0 (1)	0.5512	0.69	0.0116	0.1509	0.751	130.1542	0.372+j0.069	0.214+j0.045	5401.7	155	195
1/0 (19)	0.5512	0.69	0.0110	0.1444	0.791	137.1949	0.372+j0.068	0.214+j0.044	5401.7	155	195
2/0 (19)	0.4364	0.55	0.0101	0.1444	0.856	148.3596	0.296+j0.054	0.170+j0.043	6973.1	180	225
3/0 (19)	0.3445	0.43	0.0094	0.1378	0.928	160.7644	0.238+j0.044	0.136+j0.041	8582.3	205	250
4/0 (19)	0.2743	0.34	0.0085	0.1378	1.010	174.9213	0.186+j0.038	0.110+j0.040	11084.4	235	285
250 (37)	0.2320	0.29	0.0079	0.1312	1.112	192.6115	0.156+j0.032	0.095+j0.038	13642.3		
350 (37)	0.1657	0.21	0.0067	0.1280	1.263	218.9206	0.117+j0.029	0.071+j0.035	17204.0	305	370

* Calculations are based on three cables triplexed / concentric 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)