25kV AL 100% EPR (EAM) Full Neutral LLDPE

Single Conductor, 260 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:** 260 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 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-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: -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

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	1 (Solid)	0.289	0.847	260	0.937	13x14	0.202	50	1.165	687	9.3	502
TBA	1 (19)	0.322	0.880	260	0.970	13x14	0.202	50	1.198	707	9.6	502
616133	1/0 (Solid)	0.324	0.875	260	0.965	16x14	0.164	50	1.193	780	9.5	633
616134	1/0 (19)	0.351	0.902	260	0.992	16x14	0.164	50	1.220	807	9.8	633
618503#	1/0 (19)	0.351	0.902	260	0.992	16x14	0.164	50	1.220	807	9.8	633
TBA	2/0 (19)	0.395	0.953	260	1.043	20x14	0.131	50	1.271	893	10.2	798
TBA	3/0 (19)	0.443	1.001	260	1.111	25x14	0.105	50	1.339	1041	10.7	1006
629570	4/0 (19)	0.498	1.048	260	1.158	13x10	0.080	50	1.461	1301	11.7	1269
TBA	250 (37)	0.558	1.124	260	1.234	24x12	0.069	50	1.496	1364	12.0	1500
TBA	350 (37)	0.661	1.227	260	1.337	21x10	0.049	75	1.691	1809	13.5	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
# Hi-Dri-Plus® - Water Blocking Powder

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	0.216 + j1.208	0.162 + j0.506	4533	140	170
1 (19)	0.211	0.266	0.046	0.052	0.309	38.4	0.320 + j1.150	0.266 + j0.449	4533	140	170
1/0 (Solid)	0.102	0.128	0.045	0.052	0.314	39.0	0.182 + j1.146	0.128 + j0.444	5579	155	195
1/0 (19)	0.167	0.211	0.043	0.050	0.329	40.8	0.265 + j1.106	0.211 + j0.406	5579	155	195
1/0 (19)	0.167	0.211	0.043	0.050	0.329	40.8	0.265 + j1.106	0.211 + j0.406	5579	155	195
2/0 (19)	0.133	0.167	0.041	0.049	0.350	43.4	0.221 + j1.054	0.167 + j0.357	6974	180	220
3/0 (19)	0.105	0.132	0.038	0.047	0.377	46.8	0.186 + j1.007	0.132 + j0.313	8718	205	250
4/0 (19)	0.084	0.105	0.034	0.046	0.412	51.1	0.159 + j0.961	0.105 + j0.274	11450	235	285
250 (37)	0.071	0.090	0.032	0.044	0.445	55.2	0.144 + j0.926	0.090 + j0.240	13298	254	307
350 (37)	0.050	0.065	0.028	0.043	0.501	62.2	0.119 + j0.875	0.065 + j0.197	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	1 (Solid)	7.34	21.51	6.60	23.80	13x14	0.66	1.27	29.59	1022	236.22	2234
TBA	1 (19)	8.18	22.35	6.60	24.64	13x14	0.66	1.27	30.43	1052	243.84	2234
616133	1/0 (Solid)	8.23	22.22	6.60	24.51	16x14	0.54	1.27	30.30	1161	241.30	2817
616134	1/0 (19)	8.92	22.91	6.60	25.20	16x14	0.54	1.27	30.99	1201	248.92	2817
618503#	1/0 (19)	8.92	22.91	6.60	25.20	16x14	0.54	1.27	30.99	1201	248.92	2817
TBA	2/0 (19)	10.03	24.21	6.60	26.49	20x14	0.43	1.27	32.28	1329	259.08	3551
TBA	3/0 (19)	11.25	25.43	6.60	28.22	25x14	0.34	1.27	34.01	1549	271.78	4477
629570	4/0 (19)	12.65	26.62	6.60	29.41	13x10	0.26	1.27	37.11	1936	297.18	5647
TBA	250 (37)	14.17	28.55	6.60	31.34	24x12	0.23	1.27	38.00	2030	304.80	6675
TBA	350 (37)	16.79	31.17	6.60	33.96	21x10	0.16	1.91	42.95	2692	342.90	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
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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	0.0149	0.1772	0.951	118.1102	0.216 + j1.208	0.162 + j0.506	4533	140	170
1 (19)	0.6923	0.87	0.0140	0.1706	1.014	125.9843	0.320 + j1.150	0.266 + j0.449	4533	140	170
1/0 (Solid)	0.3346	0.42	0.0137	0.1706	1.030	127.9528	0.182 + j1.146	0.128 + j0.444	5579	155	195
1/0 (19)	0.5479	0.69	0.0131	0.1640	1.079	133.8583	0.265 + j1.106	0.211 + j0.406	5579	155	195
1/0 (19)	0.5479	0.69	0.0131	0.1640	1.079	133.8583	0.265 + j1.106	0.211 + j0.406	5579	155	195
2/0 (19)	0.4364	0.55	0.0125	0.1608	1.148	142.3885	0.221 + j1.054	0.167 + j0.357	6974	180	220
3/0 (19)	0.3445	0.43	0.0116	0.1542	1.237	153.5433	0.186 + j1.007	0.132 + j0.313	8718	205	250
4/0 (19)	0.2756	0.34	0.0104	0.1509	1.352	167.6509	0.159 + j0.961	0.105 + j0.274	11450	235	285
250 (37)	0.2329	0.30	0.0098	0.1444	1.460	181.1024	0.144 + j0.926	0.090 + j0.240	13298	254	307
350 (37)	0.1640	0.21	0.0085	0.1411	1.644	204.0682	0.119 + j0.875	0.065 + j0.197	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.

CN Calculator

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