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	0.947	13x14	0.249	50	1.175	711	8.2	502
TBA	1 (19)	0.322	0.88	260	0.98	13x14	0.249	50	1.208	733	8.5	502
616133	1/0 (1)	0.325	0.875	260	0.965	16x14	0.203	50	1.193	780	8.4	633
618503#	1/0 (19)	0.352	0.902	260	0.992	16x14	0.203	50	1.22	807	8.5	633
616134	1/0 (19)	0.352	0.902	260	0.992	16x14	0.203	50	1.22	807	8.5	633
TBA	2/0 (19)	0.395	0.953	260	1.053	20x14	0.162	50	1.281	921	9	798
TBA	3/0 (19)	0.443	1.001	260	1.121	25x14	0.13	50	1.349	1074	9.4	1006
629570	4/0 (19)	0.498	1.048	260	1.158	13x10	0.099	50	1.462	1301	10.2	1269
TBA	250 (37)	0.558	1.124	260	1.244	24x12	0.085	50	1.506	1401	10.5	1500
TBA	350 (37)	0.661	1.227	260	1.347	21x10	0.061	75	1.701	1840	11.9	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
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	0.054	0.29	4.2	0.395+j0.106	0.179+j0.057	4538	140	170
1 (19)	0.211	0.289	0.047	0.052	0.31	4.5	0.507+j0.107	0.291+j0.057	4538	140	170
1/0 (1)	0.102	0.14	0.046	0.052	0.31	4.5	0.324+j0.081	0.143+j0.054	5585	155	195
1/0 (19)	0.167	0.229	0.044	0.05	0.33	4.8	0.413+j0.082	0.232+j0.055	5585	155	195
1/0 (19)	0.167	0.229	0.044	0.05	0.33	4.8	0.413+j0.082	0.232+j0.055	5585	155	195
2/0 (19)	0.133	0.182	0.041	0.049	0.35	5.1	0.334+j0.063	0.185+j0.053	6982	180	220
3/0 (19)	0.105	0.144	0.038	0.047	0.38	5.5	0.268+j0.050	0.148+j0.052	8727	205	250
4/0 (19)	0.084	0.115	0.035	0.046	0.41	6	0.211+j0.040	0.121+j0.050	11450	235	285
250 (37)	0.07	0.096	0.032	0.045	0.45	6.4	0.179+j0.036	0.102+j0.048	13298	254	307
350 (37)	0.051	0.07	0.029	0.043	0.5	7.2	0.130+j0.030	0.079+j0.045	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.

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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	24.05	13x14	0.82	1.27	29.85	1058	208.28	2234
TBA	1 (19)	8.18	22.35	6.60	24.89	13x14	0.82	1.27	30.68	1091	215.90	2234
616133	1/0 (1)	8.25	22.22	6.60	24.51	16x14	0.67	1.27	30.30	1161	213.36	2817
618503#	1/0 (19)	8.94	22.91	6.60	25.20	16x14	0.67	1.27	30.99	1201	215.90	2817
616134	1/0 (19)	8.94	22.91	6.60	25.20	16x14	0.67	1.27	30.99	1201	215.90	2817
TBA	2/0 (19)	10.03	24.21	6.60	26.75	20x14	0.53	1.27	32.54	1371	228.60	3551
TBA	3/0 (19)	11.25	25.43	6.60	28.47	25x14	0.43	1.27	34.26	1598	238.76	4477
629570	4/0 (19)	12.65	26.62	6.60	29.41	13x10	0.32	1.27	37.13	1936	259.08	5647
TBA	250 (37)	14.17	28.55	6.60	31.60	24x12	0.28	1.27	38.25	2085	266.70	6675
TBA	350 (37)	16.79	31.17	6.60	34.21	21x10	0.20	1.91	43.21	2738	302.26	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
# Hi-Dri-Plus® - Water Blocking Powder
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	0.1772	0.951	13.7795	0.395+j0.106	0.179+j0.057	4538	140	170
1 (19)	0.6923	0.95	0.0143	0.1706	1.017	14.7638	0.507+j0.107	0.291+j0.057	4538	140	170
1/0 (1)	0.3346	0.46	0.0140	0.1706	1.017	14.7638	0.324+j0.081	0.143+j0.054	5585	155	195
1/0 (19)	0.5479	0.75	0.0134	0.1640	1.083	15.7480	0.413+j0.082	0.232+j0.055	5585	155	195
1/0 (19)	0.5479	0.75	0.0134	0.1640	1.083	15.7480	0.413+j0.082	0.232+j0.055	5585	155	195
2/0 (19)	0.4364	0.60	0.0125	0.1608	1.148	16.7323	0.334+j0.063	0.185+j0.053	6982	180	220
3/0 (19)	0.3445	0.47	0.0116	0.1542	1.247	18.0446	0.268+j0.050	0.148+j0.052	8727	205	250
4/0 (19)	0.2756	0.38	0.0107	0.1509	1.345	19.6850	0.211+j0.040	0.121+j0.050	11450	235	285
250 (37)	0.2297	0.31	0.0098	0.1476	1.476	20.9974	0.179+j0.036	0.102+j0.048	13298	254	307
350 (37)	0.1673	0.23	0.0088	0.1411	1.640	23.6220	0.130+j0.030	0.079+j0.045	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.

Concentric Neutral Calculator

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