25kV AL 100% EPR (EAM) One-Third Neutral LLDPE

Single Conductor, 260 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 100% Insulation Level, One-third 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 one-third 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	6x14	0.438	50	1.165	590	9.3	502
TBA	1 (19)	0.322	0.880	260	0.970	6x14	0.438	50	1.198	609	9.6	502
TBA	1/0 (Solid)	0.324	0.882	260	0.972	6x14	0.438	50	1.200	632	9.6	633
629764	1/0 (19)	0.351	0.902	260	0.992	6x14	0.438	50	1.220	687	9.8	633
626019^	1/0 (19)	0.351	0.902	260	0.992	6x14	0.438	50	1.220	687	9.8	633
TBA	2/0 (19)	0.395	0.953	260	1.043	7x14	0.375	50	1.271	714	10.2	798
TBA	3/0 (19)	0.443	1.001	260	1.111	9x14	0.292	50	1.339	824	10.7	1006
616138	4/0 (19)	0.498	1.048	260	1.158	11x14	0.239	50	1.386	971	11.1	1269
TBA	250 (37)	0.558	1.124	260	1.234	13x14	0.202	50	1.462	1035	11.7	1500
607538	350 (37)	0.661	1.221	260	1.331	18x14	0.146	50	1.559	1321	12.5	2100
621555	500 (37)	0.789	1.349	260	1.459	16x12	0.103	75	1.774	1746	14.2	3000
625465^	750 (61)	0.968	1.538	260	1.648	24x12	0.069	75	1.963	2302	15.7	4500
629769	750 (61)	0.968	1.538	260	1.648	24x12	0.069	75	1.964	2302	15.7	4500
606625	1000 (61)	1.117	1.687	260	1.827	20x10	0.052	75	2.184	2923	17.5	6000
604505^^	1000 (61)	1.117	1.687	260	1.827	16x9	0.051	75	2.209	2965	17.7	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
^ Solid Black Jacket
^^ HIDRI Plus Moisture Absorbing Powder Jacket

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	2092	140	175
1 (19)	0.211	0.266	0.052	0.052	0.159	8.72	0.320 + j0.758	0.266 + j0.052	2092	140	175
1/0 (Solid)	0.102	0.128	0.052	0.052	0.160	8.78	0.182 + j0.755	0.128 + j0.050	2092	155	195
1/0 (19)	0.167	0.211	0.049	0.050	0.168	9.21	0.265 + j0.754	0.211 + j0.050	2092	155	195
1/0 (19)	0.167	0.211	0.049	0.050	0.168	9.21	0.265 + j0.754	0.211 + j0.050	2092	155	195
2/0 (19)	0.133	0.167	0.045	0.049	0.181	9.93	0.221 + j0.750	0.167 + j0.048	2441	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	3138	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	3836	235	285
250 (37)	0.071	0.090	0.036	0.044	0.228	12.51	0.144 + j0.736	0.090 + j0.044	4533	256	309
350 (37)	0.050	0.065	0.032	0.042	0.258	14.15	0.119 + j0.729	0.065 + j0.042	6277	310	370
500 (37)	0.035	0.046	0.028	0.040	0.295	16.18	0.011 + j0.719	0.046 + j0.041	8865	370	445
750 (61)	0.024	0.033	0.024	0.038	0.342	18.76	0.087 + j0.709	0.033 + j0.038	13298	460	525
750 (61)	0.024	0.033	0.031	0.038	0.262	1.26	0.087 + j0.708	0.033 + j0.039	13298	460	525
1000 (61)	0.018	0.026	0.021	0.037	0.384	21.06	0.080 + j0.702	0.026 + j0.037	17615	520	575
1000 (61)	0.018	0.026	0.021	0.037	0.384	21.06	0.080 + j0.702	0.026 + j0.037	17771	520	575

*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.

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	6x14	1.44	1.27	29.59	878	236.22	2234
TBA	1 (19)	8.18	22.35	6.60	24.64	6x14	1.44	1.27	30.43	906	243.84	2234
TBA	1/0 (Solid)	8.23	22.40	6.60	24.69	6x14	1.44	1.27	30.48	941	243.84	2817
629764	1/0 (19)	8.92	22.91	6.60	25.20	6x14	1.44	1.27	30.99	1022	248.92	2817
626019^	1/0 (19)	8.92	22.91	6.60	25.20	6x14	1.44	1.27	30.99	1022	248.92	2817
TBA	2/0 (19)	10.03	24.21	6.60	26.49	7x14	1.23	1.27	32.28	1063	259.08	3551
TBA	3/0 (19)	11.25	25.43	6.60	28.22	9x14	0.96	1.27	34.01	1226	271.78	4477
616138	4/0 (19)	12.65	26.62	6.60	29.41	11x14	0.78	1.27	35.20	1445	281.94	5647
TBA	250 (37)	14.17	28.55	6.60	31.34	13x14	0.66	1.27	37.13	1540	297.18	6675
607538	350 (37)	16.79	31.01	6.60	33.81	18x14	0.48	1.27	39.60	1966	317.50	9345
621555	500 (37)	20.04	34.26	6.60	37.06	16x12	0.34	1.91	45.06	2598	360.68	13350
625465^	750 (61)	24.59	39.07	6.60	41.86	24x12	0.23	1.91	49.86	3426	398.78	20025
629769	750 (61)	24.59	39.07	6.60	41.86	24x12	0.23	1.91	49.89	3426	398.78	20025
606625	1000 (61)	28.37	42.85	6.60	46.41	20x10	0.17	1.91	55.47	4350	444.50	26700
604505^^	1000 (61)	28.37	42.85	6.60	46.41	16x9	0.17	1.91	56.11	4412	449.58	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
^ Solid Black Jacket
^^ HIDRI Plus Moisture Absorbing Powder Jacket

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	2092	140	175
1 (19)	0.6923	0.87	0.0158	0.1706	0.522	28.6089	0.320 + j0.758	0.266 + j0.052	2092	140	175
1/0 (Solid)	0.3346	0.42	0.0158	0.1706	0.525	28.8058	0.182 + j0.755	0.128 + j0.050	2092	155	195
1/0 (19)	0.5479	0.69	0.0149	0.1640	0.551	30.2165	0.265 + j0.754	0.211 + j0.050	2092	155	195
1/0 (19)	0.5479	0.69	0.0149	0.1640	0.551	30.2165	0.265 + j0.754	0.211 + j0.050	2092	155	195
2/0 (19)	0.4364	0.55	0.0137	0.1608	0.594	32.5787	0.221 + j0.750	0.167 + j0.048	2441	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	3138	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	3836	235	285
250 (37)	0.2329	0.30	0.0110	0.1444	0.748	41.0433	0.144 + j0.736	0.090 + j0.044	4533	256	309
350 (37)	0.1640	0.21	0.0098	0.1378	0.846	46.4239	0.119 + j0.729	0.065 + j0.042	6277	310	370
500 (37)	0.1148	0.15	0.0085	0.1312	0.968	53.0840	0.011 + j0.719	0.046 + j0.041	8865	370	445
750 (61)	0.0787	0.11	0.0073	0.1247	1.122	61.5486	0.087 + j0.709	0.033 + j0.038	13298	460	525
750 (61)	0.0787	0.11	0.0094	0.1247	0.860	4.1339	0.087 + j0.708	0.033 + j0.039	13298	460	525
1000 (61)	0.0591	0.09	0.0064	0.1214	1.260	69.0945	0.080 + j0.702	0.026 + j0.037	17615	520	575
1000 (61)	0.0591	0.09	0.0064	0.1214	1.260	69.0945	0.080 + j0.702	0.026 + j0.037	17771	520	575

*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.

CN Calculator

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