15kV AL 133% EPR (EAM) One-Third Neutral LLDPE Patented POWERGLIDE® MV CABLE (PATENT: www.patentsw.com)

Single Conductor, 220 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 133% 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:** 220 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 133% 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 with PowerGlide® Technology. Black with red extruded stripes

For information about our Cable-Rejuvenation Services please visit us at: Cable-Rejuvenation Services
You can email us at: Cable-Rejuvenation Services

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 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

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SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI-PLUS(R) XXX AWG AL 15000 VOLTS EPR INSULATION 220 MILS (NESC) POWERGLIDE(R) MV PAT www.patentSW.com -- 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)	0.258	0.736	220	0.836	6x14	0.54	50	1.064	511	7.4	398
TBA	2 (7)	0.283	0.761	220	0.861	6x14	0.54	50	1.089	526	7.6	398
TBA	1 (SOLID)	0.289	0.767	220	0.867	6x14	0.54	50	1.095	546	7.7	502
TBA	1 (19)	0.322	0.8	220	0.9	6x14	0.54	50	1.128	565	7.9	502
TBA	1/0 (SOLID)	0.325	0.803	220	0.903	6x14	0.54	50	1.131	587	7.9	633
TBA	1/0 (19)	0.352	0.83	220	0.93	6x14	0.54	50	1.158	603	8.1	633
TBA	2/0 (19)	0.395	0.873	220	0.973	7x14	0.463	50	1.201	668	8.4	798
TBA	3/0 (19)	0.443	0.921	220	1.021	9x14	0.36	50	1.249	756	8.7	1006
662264^	4/0 (19)	0.498	0.968	220	1.058	11x14	0.295	50	1.286	880	9	1269
TBA	250 (37)	0.558	1.044	220	1.164	13x14	0.249	50	1.392	985	9.7	1500
TBA	350 (37)	0.661	1.147	220	1.267	18x14	0.18	50	1.495	1209	10.5	2100
TBA	500 (37)	0.789	1.275	220	1.395	25x14	0.13	75	1.673	1593	11.7	3000
660202	750 (61)	0.968	1.458	220	1.568	24x12	0.085	75	1.884	2203	13.2	4500
TBA	1000 (61)	1.117	1.613	220	1.763	20x10	0.064	75	2.117	2696	14.8	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
^ HI-DRI-PLUS.
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
2 (SOLID)	0.162	0.222	0.048	0.054	0.18	1.6	0.562+j0.275	0.223+j0.059	2095	120	150
2 (7)	0.266	0.365	0.045	0.053	0.19	1.7	0.705+j0.276	0.366+j0.059	2095	120	150
1 (SOLID)	0.129	0.177	0.044	0.052	0.19	1.7	0.517+j0.272	0.178+j0.055	2095	140	175
1 (19)	0.211	0.289	0.042	0.051	0.21	1.8	0.628+j0.273	0.290+j0.056	2095	140	175
1/0 (SOLID)	0.102	0.14	0.041	0.05	0.21	1.8	0.479+j0.271	0.141+j0.053	2095	155	195
1/0 (19)	0.167	0.229	0.039	0.049	0.22	1.9	0.567+j0.272	0.230+j0.054	2095	155	195
2/0 (19)	0.133	0.182	0.037	0.047	0.24	2.1	0.501+j0.226	0.183+j0.052	2444	180	220
3/0 (19)	0.105	0.144	0.034	0.046	0.26	2.2	0.424+j0.163	0.146+j0.050	3142	200	250
4/0 (19)	0.084	0.115	0.031	0.044	0.28	2.4	0.361+j0.123	0.117+j0.048	3840	235	285
250 (37)	0.07	0.096	0.029	0.043	0.3	2.6	0.313+j0.099	0.098+j0.048	4538	256	309
350 (37)	0.051	0.07	0.025	0.04	0.34	3	0.236+j0.064	0.073+j0.046	6284	310	370
500 (37)	0.036	0.05	0.022	0.039	0.39	3.4	0.174+j0.043	0.054+j0.043	8727	370	445
750 (61)	0.023	0.033	0.018	0.037	0.47	4.1	0.116+j0.028	0.039+j0.040	13298	460	525
1000 (61)	0.017	0.025	0.017	0.036	0.52	4.5	0.088+j0.023	0.033+j0.039	17615	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, 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	2 (SOLID)	6.55	18.69	5.59	21.23	6x14	1.77	1.27	27.03	760	187.96	1771
TBA	2 (7)	7.19	19.33	5.59	21.87	6x14	1.77	1.27	27.66	783	193.04	1771
TBA	1 (SOLID)	7.34	19.48	5.59	22.02	6x14	1.77	1.27	27.81	813	195.58	2234
TBA	1 (19)	8.18	20.32	5.59	22.86	6x14	1.77	1.27	28.65	841	200.66	2234
TBA	1/0 (SOLID)	8.25	20.40	5.59	22.94	6x14	1.77	1.27	28.73	874	200.66	2817
TBA	1/0 (19)	8.94	21.08	5.59	23.62	6x14	1.77	1.27	29.41	897	205.74	2817
TBA	2/0 (19)	10.03	22.17	5.59	24.71	7x14	1.52	1.27	30.51	994	213.36	3551
TBA	3/0 (19)	11.25	23.39	5.59	25.93	9x14	1.18	1.27	31.72	1125	220.98	4477
662264^	4/0 (19)	12.65	24.59	5.59	26.87	11x14	0.97	1.27	32.66	1310	228.60	5647
TBA	250 (37)	14.17	26.52	5.59	29.57	13x14	0.82	1.27	35.36	1466	246.38	6675
TBA	350 (37)	16.79	29.13	5.59	32.18	18x14	0.59	1.27	37.97	1799	266.70	9345
TBA	500 (37)	20.04	32.39	5.59	35.43	25x14	0.43	1.91	42.49	2371	297.18	13350
660202	750 (61)	24.59	37.03	5.59	39.83	24x12	0.28	1.91	47.85	3278	335.28	20025
TBA	1000 (61)	28.37	40.97	5.59	44.78	20x10	0.21	1.91	53.77	4012	375.92	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
^ HI-DRI-PLUS.
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
2 (SOLID)	0.5315	0.73	0.0146	0.1772	0.591	5.2493	0.562+j0.275	0.223+j0.059	2095	120	150
2 (7)	0.8727	1.20	0.0137	0.1739	0.623	5.5774	0.705+j0.276	0.366+j0.059	2095	120	150
1 (SOLID)	0.4232	0.58	0.0134	0.1706	0.623	5.5774	0.517+j0.272	0.178+j0.055	2095	140	175
1 (19)	0.6923	0.95	0.0128	0.1673	0.689	5.9055	0.628+j0.273	0.290+j0.056	2095	140	175
1/0 (SOLID)	0.3346	0.46	0.0125	0.1640	0.689	5.9055	0.479+j0.271	0.141+j0.053	2095	155	195
1/0 (19)	0.5479	0.75	0.0119	0.1608	0.722	6.2336	0.567+j0.272	0.230+j0.054	2095	155	195
2/0 (19)	0.4364	0.60	0.0113	0.1542	0.787	6.8898	0.501+j0.226	0.183+j0.052	2444	180	220
3/0 (19)	0.3445	0.47	0.0104	0.1509	0.853	7.2178	0.424+j0.163	0.146+j0.050	3142	200	250
4/0 (19)	0.2756	0.38	0.0094	0.1444	0.919	7.8740	0.361+j0.123	0.117+j0.048	3840	235	285
250 (37)	0.2297	0.31	0.0088	0.1411	0.984	8.5302	0.313+j0.099	0.098+j0.048	4538	256	309
350 (37)	0.1673	0.23	0.0076	0.1312	1.115	9.8425	0.236+j0.064	0.073+j0.046	6284	310	370
500 (37)	0.1181	0.16	0.0067	0.1280	1.280	11.1549	0.174+j0.043	0.054+j0.043	8727	370	445
750 (61)	0.0755	0.11	0.0055	0.1214	1.542	13.4514	0.116+j0.028	0.039+j0.040	13298	460	525
1000 (61)	0.0558	0.08	0.0052	0.1181	1.706	14.7638	0.088+j0.023	0.033+j0.039	17615	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, Spacing: one diameter spacing center-to-center.

Concentric Neutral Calculator

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