



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; Supersmooth conductor shield optional; 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: -40°C and MV 90°C optional marking available upon request





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)	0.257	0.735	220	0.825	6x14	0.438	50	1.053	490	8.4	398
TBA	2 (7)	0.282	0.760	220	0.850	6x14	0.438	50	1.078	504	8.6	398
TBA	1 (Solid)	0.289	0.767	220	0.857	6x14	0.438	50	1.085	525	8.7	502
TBA	1 (19)	0.322	0.800	220	0.890	6x14	0.438	50	1.118	543	8.9	502
TBA	1/0 (Solid)	0.324	0.802	220	0.892	6x14	0.438	50	1.120	565	9.0	633
TBA	1/0 (19)	0.351	0.829	220	0.919	6x14	0.438	50	1.147	579	9.2	633
TBA	2/0 (19)	0.395	0.873	220	0.963	7x14	0.375	50	1.191	643	9.5	798
TBA	3/0 (19)	0.443	0.921	220	1.011	9x14	0.292	50	1.239	729	9.9	1006
662264^	4/0 (19)	0.498	0.968	220	1.058	11x14	0.239	50	1.286	880	10.3	1269
TBA	250 (37)	0.558	1.044	220	1.154	13x14	0.202	50	1.382	952	11.1	1500
TBA	350 (37)	0.661	1.147	220	1.257	18x14	0.146	50	1.485	1171	11.9	2100
TBA	500 (37)	0.789	1.275	220	1.385	25x14	0.105	75	1.663	1560	13.3	3000
TBA	750 (61)	0.968	1.464	220	1.574	24x12	0.069	75	1.886	2100	15.1	4500
TBA	1000 (61)	1.117	1.613	220	1.753	20x10	0.052	75	2.107	2649	16.9	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.





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	0.204	0.047	0.054	0.182	13.6	0.257 + j0.763	0.204 + j0.055	2092	120	150
2 (7)	0.266	0.336	0.044	0.052	0.192	14.3	0.389 + j0.759	0.336 + j0.053	2092	120	150
1 (Solid)	0.129	0.162	0.044	0.052	0.194	14.4	0.215 + j0.759	0.162 + j0.053	2092	140	175
1 (19)	0.211	0.266	0.041	0.050	0.207	15.4	0.319 + j0.755	0.266 + j0.051	2092	140	175
1/0 (Solid)	0.102	0.128	0.041	0.050	0.209	15.6	0.181 + j0.754	0.128 + j0.051	2092	155	195
1/0 (19)	0.167	0.211	0.039	0.049	0.220	16.4	0.264 + j0.752	0.211 + j0.049	2092	155	195
2/0 (19)	0.133	0.167	0.036	0.047	0.236	17.6	0.221 + j0.749	0.167 + j0.048	2441	180	220
3/0 (19)	0.105	0.132	0.033	0.045	0.255	19.0	0.186 + j0.746	0.132 + j0.046	3138	200	250
4/0 (19)	0.084	0.105	0.030	0.044	0.280	20.9	0.159 + j0.742	0.105 + j0.044	3836	235	285
250 (37)	0.071	0.090	0.028	0.043	0.303	22.6	0.144 + j0.737	0.090 + j0.043	4533	256	309
350 (37)	0.050	0.065	0.025	0.040	0.343	25.5	0.119 + j0.731	0.065 + j0.041	6277	310	370
500 (37)	0.035	0.046	0.022	0.039	0.392	29.2	0.100 + j0.722	0.046 + j0.039	8718	370	445
750 (61)	0.024	0.033	0.018	0.037	0.464	34.6	0.087 + j0.711	0.033 + j0.038	13298	460	525
1000 (61)	0.018	0.026	0.016	0.036	0.521	38.8	0.080 + j0.703	0.026 + j0.037	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.





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)	6.53	18.67	5.59	20.96	6x14	1.44	1.27	26.75	729	213.36	1771
TBA	2 (7)	7.16	19.30	5.59	21.59	6x14	1.44	1.27	27.38	750	218.44	1771
TBA	1 (Solid)	7.34	19.48	5.59	21.77	6x14	1.44	1.27	27.56	781	220.98	2234
TBA	1 (19)	8.18	20.32	5.59	22.61	6x14	1.44	1.27	28.40	808	226.06	2234
TBA	1/0 (Solid)	8.23	20.37	5.59	22.66	6x14	1.44	1.27	28.45	841	228.60	2817
TBA	1/0 (19)	8.92	21.06	5.59	23.34	6x14	1.44	1.27	29.13	862	233.68	2817
TBA	2/0 (19)	10.03	22.17	5.59	24.46	7x14	1.23	1.27	30.25	957	241.30	3551
TBA	3/0 (19)	11.25	23.39	5.59	25.68	9x14	0.96	1.27	31.47	1085	251.46	4477
662264 [^]	4/0 (19)	12.65	24.59	5.59	26.87	11x14	0.78	1.27	32.66	1310	261.62	5647
TBA	250 (37)	14.17	26.52	5.59	29.31	13x14	0.66	1.27	35.10	1417	281.94	6675
TBA	350 (37)	16.79	29.13	5.59	31.93	18x14	0.48	1.27	37.72	1743	302.26	9345
TBA	500 (37)	20.04	32.39	5.59	35.18	25x14	0.34	1.91	42.24	2322	337.82	13350
TBA	750 (61)	24.59	37.19	5.59	39.98	24x12	0.23	1.91	47.90	3125	383.54	20025
TBA	1000 (61)	28.37	40.97	5.59	44.53	20x10	0.17	1.91	53.52	3942	429.26	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.





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	0.67	0.0143	0.1772	0.597	44.6194	0.257 + j0.763	0.204 + j0.055	2092	120	150
2 (7)	0.8727	1.10	0.0134	0.1706	0.630	46.9160	0.389 + j0.759	0.336 + j0.053	2092	120	150
1 (Solid)	0.4232	0.53	0.0134	0.1706	0.636	47.2441	0.215 + j0.759	0.162 + j0.053	2092	140	175
1 (19)	0.6923	0.87	0.0125	0.1640	0.679	50.5249	0.319 + j0.755	0.266 + j0.051	2092	140	175
1/0 (Solid)	0.3346	0.42	0.0125	0.1640	0.686	51.1811	0.181 + j0.754	0.128 + j0.051	2092	155	195
1/0 (19)	0.5479	0.69	0.0119	0.1608	0.722	53.8058	0.264 + j0.752	0.211 + j0.049	2092	155	195
2/0 (19)	0.4364	0.55	0.0110	0.1542	0.774	57.7428	0.221 + j0.749	0.167 + j0.048	2441	180	220
3/0 (19)	0.3445	0.43	0.0101	0.1476	0.837	62.3360	0.186 + j0.746	0.132 + j0.046	3138	200	250
4/0 (19)	0.2756	0.34	0.0091	0.1444	0.919	68.5696	0.159 + j0.742	0.105 + j0.044	3836	235	285
250 (37)	0.2329	0.30	0.0085	0.1411	0.994	74.1470	0.144 + j0.737	0.090 + j0.043	4533	256	309
350 (37)	0.1640	0.21	0.0076	0.1312	1.125	83.6614	0.119 + j0.731	0.065 + j0.041	6277	310	370
500 (37)	0.1148	0.15	0.0067	0.1280	1.286	95.8005	0.100 + j0.722	0.046 + j0.039	8718	370	445
750 (61)	0.0787	0.11	0.0055	0.1214	1.522	113.5171	0.087 + j0.711	0.033 + j0.038	13298	460	525
1000 (61)	0.0591	0.09	0.0049	0.1181	1.709	127.2966	0.080 + j0.703	0.026 + j0.037	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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Calculator

