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: -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)	0.257	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	502	8.6	398
TBA	1 (Solid)	0.289	0.767	220	0.857	6x14	0.438	50	1.085	523	8.7	502
TBA	1 (19)	0.322	0.800	220	0.890	6x14	0.438	50	1.118	541	8.9	502
TBA	1/0 (Solid)	0.324	0.802	220	0.892	6x14	0.438	50	1.120	563	9.0	633
TBA	1/0 (19)	0.351	0.829	220	0.919	6x14	0.438	50	1.147	578	9.2	633
TBA	2/0 (19)	0.395	0.873	220	0.963	7x14	0.375	50	1.191	641	9.5	798
TBA	3/0 (19)	0.443	0.921	220	1.011	9x14	0.292	50	1.239	727	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	949	11.1	1500
TBA	350 (37)	0.661	1.147	220	1.257	18x14	0.146	50	1.485	1168	11.9	2100
TBA	500 (37)	0.789	1.275	220	1.385	16x12	0.103	75	1.697	1556	13.6	3000
TBA	750 (61)	0.968	1.464	220	1.574	24x12	0.069	75	1.886	2097	15.1	4500
TBA	1000 (61)	1.117	1.613	220	1.753	20x10	0.052	75	2.107	2647	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.

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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	0.204	0.054	0.054	0.091	2.99	0.258 + j0.768	0.204 + j0.053	2092	120	150
2 (7)	0.266	0.336	0.051	0.052	0.097	3.19	0.390 + j0.767	0.336 + j0.054	2092	120	150
1 (Solid)	0.129	0.162	0.050	0.052	0.098	3.23	0.216 + j0.763	0.162 + j0.050	2092	140	175
1 (19)	0.211	0.266	0.047	0.050	0.105	3.46	0.320 + j0.761	0.266 + j0.051	2092	140	175
1/0 (Solid)	0.102	0.128	0.047	0.050	0.106	3.49	0.182 + j0.759	0.128 + j0.048	2092	155	195
1/0 (19)	0.167	0.211	0.044	0.049	0.111	3.65	0.265 + j0.757	0.211 + j0.049	2092	155	195
2/0 (19)	0.133	0.167	0.041	0.047	0.120	3.95	0.221 + j0.753	0.167 + j0.047	2441	180	220
3/0 (19)	0.105	0.132	0.038	0.045	0.131	4.31	0.186 + j0.749	0.132 + j0.045	3138	200	250
4/0 (19)	0.084	0.105	0.035	0.044	0.142	4.67	0.159 + j0.744	0.105 + j0.043	3836	235	285
250 (37)	0.071	0.090	0.032	0.043	0.153	5.04	0.144 + j0.739	0.090 + j0.043	4533	256	309
350 (37)	0.050	0.065	0.028	0.040	0.174	5.73	0.119 + j0.732	0.065 + j0.040	6277	310	370
500 (37)	0.035	0.046	0.025	0.039	0.199	6.55	0.100 + j0.721	0.046 + j0.039	8865	370	445
750 (61)	0.024	0.033	0.021	0.037	0.231	7.60	0.087 + j0.712	0.033 + j0.037	13298	460	525
1000 (61)	0.018	0.026	0.019	0.036	0.261	8.59	0.080 + j0.703	0.026 + j0.036	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.

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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)	6.53	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	747	218.44	1771
TBA	1 (Solid)	7.34	19.48	5.59	21.77	6x14	1.44	1.27	27.56	778	220.98	2234
TBA	1 (19)	8.18	20.32	5.59	22.61	6x14	1.44	1.27	28.40	805	226.06	2234
TBA	1/0 (Solid)	8.23	20.37	5.59	22.66	6x14	1.44	1.27	28.45	838	228.60	2817
TBA	1/0 (19)	8.92	21.06	5.59	23.34	6x14	1.44	1.27	29.13	860	233.68	2817
TBA	2/0 (19)	10.03	22.17	5.59	24.46	7x14	1.23	1.27	30.25	954	241.30	3551
TBA	3/0 (19)	11.25	23.39	5.59	25.68	9x14	0.96	1.27	31.47	1082	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	1412	281.94	6675
TBA	350 (37)	16.79	29.13	5.59	31.93	18x14	0.48	1.27	37.72	1738	302.26	9345
TBA	500 (37)	20.04	32.39	5.59	35.18	16x12	0.34	1.91	43.10	2316	345.44	13350
TBA	750 (61)	24.59	37.19	5.59	39.98	24x12	0.23	1.91	47.90	3121	383.54	20025
TBA	1000 (61)	28.37	40.97	5.59	44.53	20x10	0.17	1.91	53.52	3939	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.

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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	0.67	0.0165	0.1772	0.299	9.8097	0.258 + j0.768	0.204 + j0.053	2092	120	150
2 (7)	0.8727	1.10	0.0155	0.1706	0.318	10.4659	0.390 + j0.767	0.336 + j0.054	2092	120	150
1 (Solid)	0.4232	0.53	0.0152	0.1706	0.322	10.5971	0.216 + j0.763	0.162 + j0.050	2092	140	175
1 (19)	0.6923	0.87	0.0143	0.1640	0.344	11.3517	0.320 + j0.761	0.266 + j0.051	2092	140	175
1/0 (Solid)	0.3346	0.42	0.0143	0.1640	0.348	11.4501	0.182 + j0.759	0.128 + j0.048	2092	155	195
1/0 (19)	0.5479	0.69	0.0134	0.1608	0.364	11.9751	0.265 + j0.757	0.211 + j0.049	2092	155	195
2/0 (19)	0.4364	0.55	0.0125	0.1542	0.394	12.9593	0.221 + j0.753	0.167 + j0.047	2441	180	220
3/0 (19)	0.3445	0.43	0.0116	0.1476	0.430	14.1404	0.186 + j0.749	0.132 + j0.045	3138	200	250
4/0 (19)	0.2756	0.34	0.0107	0.1444	0.466	15.3215	0.159 + j0.744	0.105 + j0.043	3836	235	285
250 (37)	0.2329	0.30	0.0098	0.1411	0.502	16.5354	0.144 + j0.739	0.090 + j0.043	4533	256	309
350 (37)	0.1640	0.21	0.0085	0.1312	0.571	18.7992	0.119 + j0.732	0.065 + j0.040	6277	310	370
500 (37)	0.1148	0.15	0.0076	0.1280	0.653	21.4895	0.100 + j0.721	0.046 + j0.039	8865	370	445
750 (61)	0.0787	0.11	0.0064	0.1214	0.758	24.9344	0.087 + j0.712	0.033 + j0.037	13298	460	525
1000 (61)	0.0591	0.09	0.0058	0.1181	0.856	28.1824	0.080 + j0.703	0.026 + j0.036	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.

CN Calculator