15kV CU 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 stranded soft drawn bare copper per ASTM B3 and ASTM B8 (Conductor moisture block optional and tinned copper per ASTM B33 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

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 types available that can be installed in conduit without the aid of lubrication. Rated for 1000 lbs./FT maximum sidewall pressure.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 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] CU 15000 VOLTS EPR INSULATION 220 MILS -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

We've got it MADE IN AMERICA

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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	2 (SOLID)	0.258	0.736	220	0.836	6x14	0.54	50	1.064	653	7.4	530
TBA	2 (7)	0.283	0.761	220	0.861	6x14	0.54	50	1.089	668	7.6	530
TBA	1 (SOLID)	0.289	0.767	220	0.867	7x14	0.463	50	1.095	738	7.7	669
TBA	1 (19)	0.322	0.8	220	0.9	7x14	0.463	50	1.128	757	7.9	669
TBA	1/0 (SOLID)	0.325	0.803	220	0.903	9x14	0.36	50	1.131	853	7.9	844
TBA	1/0 (19)	0.362	0.84	220	0.94	9x14	0.36	50	1.168	875	8.2	844
TBA	2/0 (19)	0.405	0.883	220	0.983	11x14	0.295	50	1.211	1012	8.5	1064
TBA	3/0 (19)	0.456	0.934	220	1.034	14x14	0.231	50	1.262	1189	8.8	1342
TBA	4/0 (19)	0.512	0.99	220	1.09	18x14	0.18	50	1.318	1410	9.2	1692
TBA	250 (37)	0.558	1.044	220	1.164	21x14	0.154	50	1.392	1626	9.7	2000
TBA	350 (37)	0.661	1.147	220	1.267	29x14	0.112	50	1.495	2104	10.5	2800
TBA	500 (37)	0.789	1.275	220	1.395	26x12	0.079	75	1.707	2867	11.9	4000
661913!	750 (61)	0.968	1.458	220	1.568	25x10	0.051	75	1.926	4168	13.5	6000
TBA	1000 (61)	1.117	1.613	220	1.763	21x8	0.038	75	2.171	5262	15.2	8000

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
! Black jacket (no red extruded stripes)
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	0.221	0.048	0.054	0.18	1.6	0.561+j0.275	0.222+j0.059	2095	160	195
2 (7)	0.162	0.221	0.045	0.053	0.19	1.7	0.561+j0.276	0.222+j0.059	2095	160	195
1 (SOLID)	0.128	0.175	0.044	0.052	0.19	1.7	0.496+j0.228	0.176+j0.055	2444	180	220
1 (19)	0.128	0.175	0.042	0.051	0.21	1.8	0.495+j0.229	0.176+j0.056	2444	180	220
1/0 (SOLID)	0.102	0.139	0.041	0.05	0.21	1.8	0.420+j0.165	0.141+j0.053	3142	200	250
1/0 (19)	0.102	0.139	0.039	0.049	0.22	1.9	0.420+j0.166	0.141+j0.054	3142	200	250
2/0 (19)	0.082	0.112	0.036	0.047	0.24	2.1	0.358+j0.127	0.114+j0.052	3840	230	285
3/0 (19)	0.064	0.087	0.033	0.045	0.26	2.3	0.292+j0.092	0.089+j0.050	4887	260	320
4/0 (19)	0.051	0.07	0.031	0.043	0.28	2.5	0.236+j0.066	0.073+j0.049	6284	300	360
250 (37)	0.043	0.059	0.029	0.043	0.3	2.6	0.204+j0.055	0.063+j0.048	7331	325	
350 (37)	0.031	0.043	0.025	0.04	0.34	3	0.151+j0.039	0.048+j0.045	10123	390	460
500 (37)	0.021	0.03	0.022	0.039	0.39	3.4	0.107+j0.029	0.037+j0.042	14406	455	525
750 (61)	0.014	0.021	0.018	0.038	0.47	4.1	0.072+j0.022	0.031+j0.038	22019	545	580
1000 (61)	0.011	0.018	0.017	0.037	0.52	4.5	0.056+j0.020	0.029+j0.035	29419		

*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	972	187.96	2359
TBA	2 (7)	7.19	19.33	5.59	21.87	6x14	1.77	1.27	27.66	994	193.04	2359
TBA	1 (SOLID)	7.34	19.48	5.59	22.02	7x14	1.52	1.27	27.81	1098	195.58	2977
TBA	1 (19)	8.18	20.32	5.59	22.86	7x14	1.52	1.27	28.65	1127	200.66	2977
TBA	1/0 (SOLID)	8.25	20.40	5.59	22.94	9x14	1.18	1.27	28.73	1269	200.66	3756
TBA	1/0 (19)	9.19	21.34	5.59	23.88	9x14	1.18	1.27	29.67	1302	208.28	3756
TBA	2/0 (19)	10.29	22.43	5.59	24.97	11x14	0.97	1.27	30.76	1506	215.90	4735
TBA	3/0 (19)	11.58	23.72	5.59	26.26	14x14	0.76	1.27	32.05	1769	223.52	5972
TBA	4/0 (19)	13.00	25.15	5.59	27.69	18x14	0.59	1.27	33.48	2098	233.68	7529
TBA	250 (37)	14.17	26.52	5.59	29.57	21x14	0.51	1.27	35.36	2420	246.38	8900
TBA	350 (37)	16.79	29.13	5.59	32.18	29x14	0.37	1.27	37.97	3131	266.70	12460
TBA	500 (37)	20.04	32.39	5.59	35.43	26x12	0.26	1.91	43.36	4267	302.26	17800
661913!	750 (61)	24.59	37.03	5.59	39.83	25x10	0.17	1.91	48.92	6203	342.90	26700
TBA	1000 (61)	28.37	40.97	5.59	44.78	21x8	0.12	1.91	55.14	7831	386.08	35600

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
! Black jacket (no red extruded stripes)
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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	0.561+j0.275	0.222+j0.059	2095	160	195
2 (7)	0.5315	0.73	0.0137	0.1739	0.623	5.5774	0.561+j0.276	0.222+j0.059	2095	160	195
1 (SOLID)	0.4199	0.57	0.0134	0.1706	0.623	5.5774	0.496+j0.228	0.176+j0.055	2444	180	220
1 (19)	0.4199	0.57	0.0128	0.1673	0.689	5.9055	0.495+j0.229	0.176+j0.056	2444	180	220
1/0 (SOLID)	0.3346	0.46	0.0125	0.1640	0.689	5.9055	0.420+j0.165	0.141+j0.053	3142	200	250
1/0 (19)	0.3346	0.46	0.0119	0.1608	0.722	6.2336	0.420+j0.166	0.141+j0.054	3142	200	250
2/0 (19)	0.2690	0.37	0.0110	0.1542	0.787	6.8898	0.358+j0.127	0.114+j0.052	3840	230	285
3/0 (19)	0.2100	0.29	0.0101	0.1476	0.853	7.5459	0.292+j0.092	0.089+j0.050	4887	260	320
4/0 (19)	0.1673	0.23	0.0094	0.1411	0.919	8.2021	0.236+j0.066	0.073+j0.049	6284	300	360
250 (37)	0.1411	0.19	0.0088	0.1411	0.984	8.5302	0.204+j0.055	0.063+j0.048	7331	325	
350 (37)	0.1017	0.14	0.0076	0.1312	1.115	9.8425	0.151+j0.039	0.048+j0.045	10123	390	460
500 (37)	0.0689	0.10	0.0067	0.1280	1.280	11.1549	0.107+j0.029	0.037+j0.042	14406	455	525
750 (61)	0.0459	0.07	0.0055	0.1247	1.542	13.4514	0.072+j0.022	0.031+j0.038	22019	545	580
1000 (61)	0.0361	0.06	0.0052	0.1214	1.706	14.7638	0.056+j0.020	0.029+j0.035	29419		

*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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