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

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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)	0.257	0.735	220	0.825	6x14	0.438	50	1.053	633	8.4	530
TBA	2 (7)	0.282	0.760	220	0.850	6x14	0.438	50	1.078	646	8.6	530
TBA	1 (Solid)	0.289	0.767	220	0.857	7x14	0.375	50	1.085	717	8.7	669
TBA	1 (19)	0.322	0.800	220	0.890	7x14	0.375	50	1.118	736	8.9	669
TBA	1/0 (Solid)	0.324	0.802	220	0.892	9x14	0.292	50	1.120	831	9.0	844
TBA	1/0 (19)	0.361	0.839	220	0.929	9x14	0.292	50	1.157	852	9.3	844
TBA	2/0 (19)	0.405	0.883	220	0.973	11x14	0.239	50	1.201	989	9.6	1064
TBA	3/0 (19)	0.456	0.934	220	1.024	14x14	0.187	50	1.252	1166	10.0	1342
TBA	4/0 (19)	0.512	0.990	220	1.080	18x14	0.146	50	1.308	1387	10.5	1692
TBA	250 (37)	0.558	1.044	220	1.154	21x14	0.125	50	1.382	1599	11.1	2000
TBA	350 (37)	0.661	1.147	220	1.257	29x14	0.090	50	1.485	2077	11.9	2800
TBA	500 (37)	0.789	1.275	220	1.385	26x12	0.063	75	1.697	2849	13.6	4000
661913	750 (61)	0.968	1.458	220	1.568	25x10	0.041	75	1.925	4167	15.4	6000
TBA	1000 (61)	1.117	1.613	220	1.753	32x10	0.032	75	2.107	5193	16.9	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

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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	160	195
2 (7)	0.162	0.204	0.051	0.052	0.097	3.19	0.258 + j0.767	0.204 + j0.054	2092	160	195
1 (Solid)	0.128	0.162	0.050	0.052	0.098	3.23	0.216 + j0.763	0.162 + j0.050	2441	180	220
1 (19)	0.128	0.162	0.047	0.050	0.105	3.46	0.216 + j0.761	0.162 + j0.051	2441	180	220
1/0 (Solid)	0.102	0.128	0.047	0.050	0.106	3.49	0.182 + j0.759	0.128 + j0.048	3138	200	250
1/0 (19)	0.102	0.128	0.043	0.048	0.114	3.75	0.182 + j0.757	0.128 + j0.049	3138	200	250
2/0 (19)	0.081	0.102	0.040	0.047	0.123	4.05	0.156 + j0.753	0.102 + j0.047	3836	230	285
3/0 (19)	0.064	0.081	0.037	0.045	0.133	4.38	0.135 + j0.748	0.081 + j0.045	4882	260	320
4/0 (19)	0.051	0.065	0.034	0.043	0.145	4.77	0.119 + j0.743	0.065 + j0.044	6277	300	360
250 (37)	0.043	0.056	0.032	0.043	0.153	5.04	0.111 + j0.739	0.056 + j0.043	7323	325	
350 (37)	0.031	0.041	0.028	0.040	0.174	5.73	0.095 + j0.732	0.041 + j0.040	10113	390	460
500 (37)	0.022	0.030	0.025	0.039	0.199	6.55	0.084 + j0.721	0.030 + j0.039	14406	455	525
750 (61)	0.014	0.023	0.021	0.038	0.231	7.60	0.077 + j0.711	0.023 + j0.038	22019	545	580
1000 (61)	0.011	0.019	0.019	0.036	0.261	8.59	0.073 + j0.703	0.019 + j0.036	28184		

*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	942	213.36	2359
TBA	2 (7)	7.16	19.30	5.59	21.59	6x14	1.44	1.27	27.38	961	218.44	2359
TBA	1 (Solid)	7.34	19.48	5.59	21.77	7x14	1.23	1.27	27.56	1067	220.98	2977
TBA	1 (19)	8.18	20.32	5.59	22.61	7x14	1.23	1.27	28.40	1095	226.06	2977
TBA	1/0 (Solid)	8.23	20.37	5.59	22.66	9x14	0.96	1.27	28.45	1237	228.60	3756
TBA	1/0 (19)	9.17	21.31	5.59	23.60	9x14	0.96	1.27	29.39	1268	236.22	3756
TBA	2/0 (19)	10.29	22.43	5.59	24.71	11x14	0.78	1.27	30.51	1472	243.84	4735
TBA	3/0 (19)	11.58	23.72	5.59	26.01	14x14	0.61	1.27	31.80	1735	254.00	5972
TBA	4/0 (19)	13.00	25.15	5.59	27.43	18x14	0.48	1.27	33.22	2064	266.70	7529
TBA	250 (37)	14.17	26.52	5.59	29.31	21x14	0.41	1.27	35.10	2380	281.94	8900
TBA	350 (37)	16.79	29.13	5.59	31.93	29x14	0.30	1.27	37.72	3091	302.26	12460
TBA	500 (37)	20.04	32.39	5.59	35.18	26x12	0.21	1.91	43.10	4240	345.44	17800
661913	750 (61)	24.59	37.03	5.59	39.83	25x10	0.13	1.91	48.89	6201	391.16	26700
TBA	1000 (61)	28.37	40.97	5.59	44.53	32x10	0.10	1.91	53.52	7728	429.26	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

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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	160	195
2 (7)	0.5315	0.67	0.0155	0.1706	0.318	10.4659	0.258 + j0.767	0.204 + j0.054	2092	160	195
1 (Solid)	0.4199	0.53	0.0152	0.1706	0.322	10.5971	0.216 + j0.763	0.162 + j0.050	2441	180	220
1 (19)	0.4199	0.53	0.0143	0.1640	0.344	11.3517	0.216 + j0.761	0.162 + j0.051	2441	180	220
1/0 (Solid)	0.3346	0.42	0.0143	0.1640	0.348	11.4501	0.182 + j0.759	0.128 + j0.048	3138	200	250
1/0 (19)	0.3346	0.42	0.0131	0.1575	0.374	12.3031	0.182 + j0.757	0.128 + j0.049	3138	200	250
2/0 (19)	0.2657	0.33	0.0122	0.1542	0.404	13.2874	0.156 + j0.753	0.102 + j0.047	3836	230	285
3/0 (19)	0.2100	0.27	0.0113	0.1476	0.436	14.3701	0.135 + j0.748	0.081 + j0.045	4882	260	320
4/0 (19)	0.1673	0.21	0.0104	0.1411	0.476	15.6496	0.119 + j0.743	0.065 + j0.044	6277	300	360
250 (37)	0.1411	0.18	0.0098	0.1411	0.502	16.5354	0.111 + j0.739	0.056 + j0.043	7323	325	
350 (37)	0.1017	0.13	0.0085	0.1312	0.571	18.7992	0.095 + j0.732	0.041 + j0.040	10113	390	460
500 (37)	0.0722	0.10	0.0076	0.1280	0.653	21.4895	0.084 + j0.721	0.030 + j0.039	14406	455	525
750 (61)	0.0459	0.08	0.0064	0.1247	0.758	24.9344	0.077 + j0.711	0.023 + j0.038	22019	545	580
1000 (61)	0.0361	0.06	0.0058	0.1181	0.856	28.1824	0.073 + j0.703	0.019 + j0.036	28184		

*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