15kV CU 100% EPR (EAM) One-Third Neutral LLDPE Patented POWERGLIDE® MV CABLE (PATENT: www.patentsw.com)

Single Conductor, 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 100% 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:** 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:** 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 100% 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-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

SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] CU 15000 VOLTS EPR INSULATION 175 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	0.645	175	0.735	6x14	0.438	50	0.963	568	7.7	530
TBA	2 (7)	0.282	0.670	175	0.760	6x14	0.438	50	0.988	581	7.9	530
TBA	1 (Solid)	0.289	0.677	175	0.767	7x14	0.375	50	0.995	651	8.0	669
TBA	1 (19)	0.322	0.710	175	0.800	7x14	0.375	50	1.028	668	8.2	669
TBA	1/0 (Solid)	0.324	0.712	175	0.802	9x14	0.292	50	1.030	763	8.2	844
TBA	1/0 (19)	0.361	0.749	175	0.839	9x14	0.292	50	1.067	781	8.5	844
TBA	2/0 (19)	0.405	0.793	175	0.883	11x14	0.239	50	1.111	914	8.9	1064
TBA	2/0 (19)	0.405	0.793	175	0.883	11x14	0.239	50	1.111	914	8.9	1064
TBA	3/0 (19)	0.456	0.844	175	0.934	14x14	0.187	50	1.162	1087	9.3	1342
TBA	4/0 (19)	0.512	0.900	175	0.990	18x14	0.146	50	1.218	1304	9.7	1692
TBA	4/0 (19)	0.512	0.900	175	0.990	18x14	0.146	50	1.218	1304	9.7	1692
TBA	250 (37)	0.558	0.954	175	1.044	21x14	0.125	50	1.272	1492	10.2	2000
TBA	350 (37)	0.661	1.057	175	1.167	29x14	0.090	50	1.395	1982	11.2	2800
TBA	500 (37)	0.789	1.185	175	1.295	26x12	0.063	50	1.557	2662	12.5	4000
628688	500 (37)	0.789	1.179	175	1.289	17x10	0.061	50	1.592	2800	12.7	4000
TBA	750 (61)	0.968	1.374	175	1.484	25x10	0.041	75	1.838	3923	14.7	6000
TBA	1000 (61)	1.117	1.523	175	1.663	33x10	0.031	75	2.017	5089	16.1	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

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	0.040	0.052	0.212	15.8	0.257 + j1.281	0.204 + j0.571	2092	160	195
2 (7)	0.162	0.204	0.038	0.050	0.225	16.8	0.257 + j1.224	0.204 + j0.514	2092	160	195
1 (Solid)	0.128	0.162	0.037	0.050	0.228	17.0	0.216 + j1.212	0.162 + j0.502	2441	180	220
1 (19)	0.128	0.162	0.035	0.048	0.244	18.2	0.216 + j1.153	0.162 + j0.445	2441	180	220
1/0 (Solid)	0.102	0.128	0.035	0.048	0.246	18.3	0.182 + j1.150	0.128 + j0.441	3138	200	250
1/0 (19)	0.102	0.128	0.032	0.047	0.264	19.7	0.182 + j1.098	0.128 + j0.390	3138	200	250
2/0 (19)	0.081	0.102	0.030	0.045	0.285	21.2	0.156 + j1.049	0.102 + j0.343	3836	230	285
2/0 (19)	0.081	0.102	0.030	0.045	0.285	21.2	0.156 + j1.049	0.102 + j0.343	3836	230	285
3/0 (19)	0.064	0.081	0.027	0.043	0.309	23.0	0.135 + j1.002	0.081 + j0.299	4882	260	320
4/0 (19)	0.051	0.065	0.025	0.042	0.337	25.1	0.119 + j0.962	0.065 + j0.261	6277	300	360
4/0 (19)	0.051	0.065	0.025	0.042	0.337	25.1	0.119 + j0.962	0.065 + j0.261	6277	300	360
250 (37)	0.043	0.056	0.023	0.041	0.363	27.0	0.110 + j0.934	0.056 + j0.236	7323	325	
350 (37)	0.031	0.041	0.020	0.039	0.412	30.7	0.095 + j0.884	0.041 + j0.193	10113	390	460
500 (37)	0.022	0.030	0.018	0.037	0.474	35.3	0.084 + j0.839	0.030 + j0.155	14406	455	525
500 (37)	0.022	0.030	0.017	0.038	0.481	35.8	0.084 + j0.837	0.030 + j0.156	14973	455	525
750 (61)	0.014	0.023	0.015	0.036	0.564	42.0	0.077 + j0.793	0.023 + j0.121	22019	545	580
1000 (61)	0.011	0.019	0.013	0.035	0.635	47.3	0.073 + j0.766	0.019 + j0.100	29065		

*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	16.38	4.44	18.67	6x14	1.44	1.27	24.46	845	195.58	2359
TBA	2 (7)	7.16	17.02	4.44	19.30	6x14	1.44	1.27	25.10	865	200.66	2359
TBA	1 (Solid)	7.34	17.20	4.44	19.48	7x14	1.23	1.27	25.27	969	203.20	2977
TBA	1 (19)	8.18	18.03	4.44	20.32	7x14	1.23	1.27	26.11	994	208.28	2977
TBA	1/0 (Solid)	8.23	18.08	4.44	20.37	9x14	0.96	1.27	26.16	1135	208.28	3756
TBA	1/0 (19)	9.17	19.02	4.44	21.31	9x14	0.96	1.27	27.10	1162	215.90	3756
TBA	2/0 (19)	10.29	20.14	4.44	22.43	11x14	0.78	1.27	28.22	1360	226.06	4735
TBA	2/0 (19)	10.29	20.14	4.44	22.43	11x14	0.78	1.27	28.22	1360	226.06	4735
TBA	3/0 (19)	11.58	21.44	4.44	23.72	14x14	0.61	1.27	29.51	1618	236.22	5972
TBA	4/0 (19)	13.00	22.86	4.44	25.15	18x14	0.48	1.27	30.94	1941	246.38	7529
TBA	4/0 (19)	13.00	22.86	4.44	25.15	18x14	0.48	1.27	30.94	1941	246.38	7529
TBA	250 (37)	14.17	24.23	4.44	26.52	21x14	0.41	1.27	32.31	2220	259.08	8900
TBA	350 (37)	16.79	26.85	4.44	29.64	29x14	0.30	1.27	35.43	2950	284.48	12460
TBA	500 (37)	20.04	30.10	4.44	32.89	26x12	0.21	1.27	39.55	3961	317.50	17800
628688	500 (37)	20.04	29.95	4.44	32.74	17x10	0.20	1.27	40.44	4167	322.58	17800
TBA	750 (61)	24.59	34.90	4.44	37.69	25x10	0.13	1.91	46.69	5838	373.38	26700
TBA	1000 (61)	28.37	38.68	4.44	42.24	33x10	0.10	1.91	51.23	7573	408.94	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

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	0.0122	0.1706	0.696	51.8373	0.257 + j1.281	0.204 + j0.571	2092	160	195
2 (7)	0.5315	0.67	0.0116	0.1640	0.738	55.1181	0.257 + j1.224	0.204 + j0.514	2092	160	195
1 (Solid)	0.4199	0.53	0.0113	0.1640	0.748	55.7743	0.216 + j1.212	0.162 + j0.502	2441	180	220
1 (19)	0.4199	0.53	0.0107	0.1575	0.801	59.7113	0.216 + j1.153	0.162 + j0.445	2441	180	220
1/0 (Solid)	0.3346	0.42	0.0107	0.1575	0.807	60.0394	0.182 + j1.150	0.128 + j0.441	3138	200	250
1/0 (19)	0.3346	0.42	0.0098	0.1542	0.866	64.6325	0.182 + j1.098	0.128 + j0.390	3138	200	250
2/0 (19)	0.2657	0.33	0.0091	0.1476	0.935	69.5538	0.156 + j1.049	0.102 + j0.343	3836	230	285
2/0 (19)	0.2657	0.33	0.0091	0.1476	0.935	69.5538	0.156 + j1.049	0.102 + j0.343	3836	230	285
3/0 (19)	0.2100	0.27	0.0082	0.1411	1.014	75.4593	0.135 + j1.002	0.081 + j0.299	4882	260	320
4/0 (19)	0.1673	0.21	0.0076	0.1378	1.106	82.3491	0.119 + j0.962	0.065 + j0.261	6277	300	360
4/0 (19)	0.1673	0.21	0.0076	0.1378	1.106	82.3491	0.119 + j0.962	0.065 + j0.261	6277	300	360
250 (37)	0.1411	0.18	0.0070	0.1345	1.191	88.5827	0.110 + j0.934	0.056 + j0.236	7323	325	
350 (37)	0.1017	0.13	0.0061	0.1280	1.352	100.7218	0.095 + j0.884	0.041 + j0.193	10113	390	460
500 (37)	0.0722	0.10	0.0055	0.1214	1.555	115.8136	0.084 + j0.839	0.030 + j0.155	14406	455	525
500 (37)	0.0722	0.10	0.0052	0.1247	1.578	117.4541	0.084 + j0.837	0.030 + j0.156	14973	455	525
750 (61)	0.0459	0.08	0.0046	0.1181	1.850	137.7953	0.077 + j0.793	0.023 + j0.121	22019	545	580
1000 (61)	0.0361	0.06	0.0040	0.1148	2.083	155.1837	0.073 + j0.766	0.019 + j0.100	29065		

*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.

CN Calculator

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