15kV CU 133% EPR (EAM) Full Neutral LLDPE

Single Conductor, 220 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 133% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

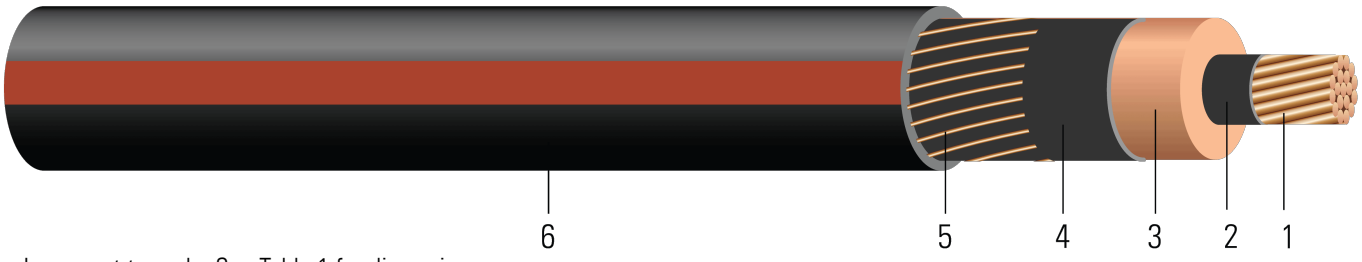


Image not to scale. See Table 1 for dimensions.

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 full concentric neutral
6. **Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes; PowerGlide® LLDPE jacket optional

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
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- 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 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)	0.258	0.736	220	0.836	17x14	0.191	50	1.064	796	7.4	530
617699	2 (7)	0.283	0.753	220	0.843	17x14	0.191	50	1.071	808	7.5	530
661908**	2 (7)	0.283	0.753	220	0.843	16x14	0.203	50	1.081	803	7.6	530
TBA	1 (SOLID)	0.289	0.767	220	0.867	21x14	0.154	50	1.095	920	7.7	669
TBA	1 (19)	0.322	0.8	220	0.9	21x14	0.154	50	1.128	939	7.9	669
TBA	1/0 (SOLID)	0.325	0.803	220	0.903	26x14	0.125	50	1.131	1074	7.9	844
628027	1/0 (19)	0.362	0.832	220	0.922	16x12	0.128	50	1.184	1104	8.3	844
628029	2/0 (19)	0.405	0.876	220	0.966	13x10	0.099	50	1.27	1340	8.9	1064
TBA	3/0 (19)	0.456	0.934	220	1.034	26x12	0.079	50	1.296	1530	9.1	1342
628023	4/0 (19)	0.512	0.982	220	1.072	20x10	0.064	50	1.376	1868	9.6	1692
TBA	250 (37)	0.558	1.044	220	1.164	25x10	0.051	50	1.468	2160	10.3	2000

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
** Solid Black color jacket
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	0.396+j0.079	0.224+j0.058	5934	155	195
2 (7)	0.162	0.221	0.044	0.052	0.19	1.7	0.396+j0.079	0.224+j0.058	5934	155	195
2 (7)	0.162	0.221	0.044	0.053	0.19	1.7	0.406+j0.084	0.224+j0.059	5585	155	195
1 (SOLID)	0.128	0.175	0.044	0.052	0.19	1.7	0.321+j0.061	0.179+j0.055	7331	175	220
1 (19)	0.128	0.175	0.042	0.051	0.21	1.8	0.321+j0.062	0.179+j0.055	7331	175	220
1/0 (SOLID)	0.102	0.139	0.041	0.05	0.21	1.8	0.259+j0.049	0.144+j0.053	9076	200	250
1/0 (19)	0.102	0.139	0.038	0.049	0.23	2	0.262+j0.051	0.144+j0.054	8865	200	250
2/0 (19)	0.082	0.112	0.036	0.048	0.24	2.1	0.208+j0.041	0.118+j0.052	11450	225	280
3/0 (19)	0.064	0.087	0.033	0.046	0.26	2.3	0.164+j0.035	0.094+j0.049	14406	260	315
4/0 (19)	0.051	0.07	0.03	0.044	0.29	2.5	0.133+j0.030	0.079+j0.047	17615	295	355
250 (37)	0.043	0.059	0.029	0.044	0.3	2.6	0.110+j0.028	0.069+j0.045	22019	318	360

*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	17x14	0.63	1.27	27.03	1185	187.96	2359
617699	2 (7)	7.19	19.13	5.59	21.41	17x14	0.63	1.27	27.20	1202	190.50	2359
661908**	2 (7)	7.19	19.13	5.59	21.41	16x14	0.67	1.27	27.46	1195	193.04	2359
TBA	1 (SOLID)	7.34	19.48	5.59	22.02	21x14	0.51	1.27	27.81	1369	195.58	2977
TBA	1 (19)	8.18	20.32	5.59	22.86	21x14	0.51	1.27	28.65	1397	200.66	2977
TBA	1/0 (SOLID)	8.25	20.40	5.59	22.94	26x14	0.41	1.27	28.73	1598	200.66	3756
628027	1/0 (19)	9.19	21.13	5.59	23.42	16x12	0.42	1.27	30.07	1643	210.82	3756
628029	2/0 (19)	10.29	22.25	5.59	24.54	13x10	0.32	1.27	32.26	1994	226.06	4735
TBA	3/0 (19)	11.58	23.72	5.59	26.26	26x12	0.26	1.27	32.92	2277	231.14	5972
628023	4/0 (19)	13.00	24.94	5.59	27.23	20x10	0.21	1.27	34.95	2780	243.84	7529
TBA	250 (37)	14.17	26.52	5.59	29.57	25x10	0.17	1.27	37.29	3214	261.62	8900

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
** Solid Black color jacket
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 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	0.396+j0.079	0.224+j0.058	5934	155	195
2 (7)	0.5315	0.73	0.0134	0.1706	0.623	5.5774	0.396+j0.079	0.224+j0.058	5934	155	195
2 (7)	0.5315	0.73	0.0134	0.1739	0.623	5.5774	0.406+j0.084	0.224+j0.059	5585	155	195
1 (SOLID)	0.4199	0.57	0.0134	0.1706	0.623	5.5774	0.321+j0.061	0.179+j0.055	7331	175	220
1 (19)	0.4199	0.57	0.0128	0.1673	0.689	5.9055	0.321+j0.062	0.179+j0.055	7331	175	220
1/0 (SOLID)	0.3346	0.46	0.0125	0.1640	0.689	5.9055	0.259+j0.049	0.144+j0.053	9076	200	250
1/0 (19)	0.3346	0.46	0.0116	0.1608	0.755	6.5617	0.262+j0.051	0.144+j0.054	8865	200	250
2/0 (19)	0.2690	0.37	0.0110	0.1575	0.787	6.8898	0.208+j0.041	0.118+j0.052	11450	225	280
3/0 (19)	0.2100	0.29	0.0101	0.1509	0.853	7.5459	0.164+j0.035	0.094+j0.049	14406	260	315
4/0 (19)	0.1673	0.23	0.0091	0.1444	0.951	8.2021	0.133+j0.030	0.079+j0.047	17615	295	355
250 (37)	0.1411	0.19	0.0088	0.1444	0.984	8.5302	0.110+j0.028	0.069+j0.045	22019	318	360

*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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