15kV CU 133% EPR (EAM) One-Third Neutral LLDPE

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

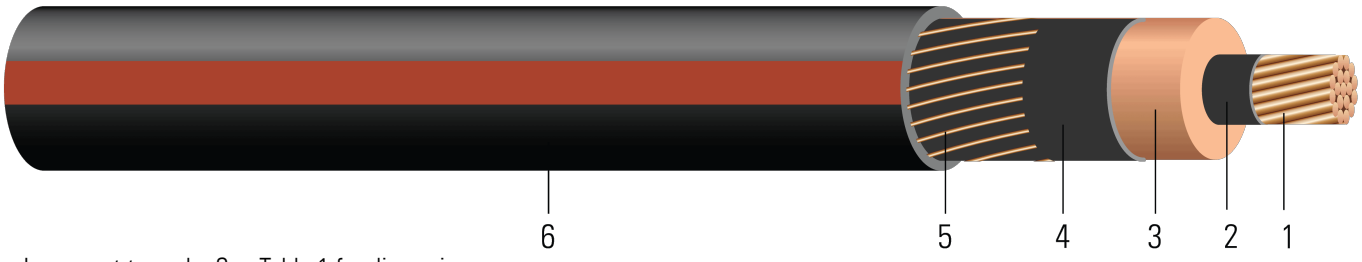


Image not to scale. See Table 1 for dimensions.

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, 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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UPDATED: Aug. 10, 2025, 11:33 p.m.UTC REVISION: 1.000.004

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
627966	2 (7)	0.283	0.753	220	0.843	6x14	0.54	50	1.071	676	7.5	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
627970	1/0 (19)	0.362	0.832	220	0.922	9x14	0.36	50	1.15	883	8	844
627973	2/0 (19)	0.405	0.876	220	0.966	11x14	0.295	50	1.194	1020	8.4	1064
TBA	3/0 (19)	0.456	0.934	220	1.034	14x14	0.231	50	1.262	1189	8.8	1342
627975	4/0 (19)	0.512	0.982	220	1.072	18x14	0.18	50	1.3	1415	9.1	1692
139298	4/0 (19)	0.512	0.982	220	1.072	18x14	0.18	50	1.3	1416	9.1	1692
621494	4/0 (19)	0.512	0.982	220	1.072	11x12	0.186	50	1.334	1437	9.3	1692
139148	250 (37)	0.558	1.038	220	1.148	21x14	0.154	50	1.376	1633	9.6	2000
627967	350 (37)	0.661	1.141	220	1.251	18x12	0.114	50	1.513	2136	10.6	2800
139181^	350 (37)	0.661	1.141	220	1.251	18x12	0.114	50	1.513	2136	10.6	2800
621934**	500 (37)	0.789	1.269	220	1.379	26x12	0.079	75	1.641	2845	11.5	4000
627983	500 (37)	0.789	1.269	220	1.379	17x10	0.075	75	1.737	2967	12.2	4000
606626**	750 (61)	0.968	1.458	220	1.568	25x10	0.051	75	1.926	4142	13.5	6000
627977	750 (61)	0.968	1.458	220	1.568	25x10	0.051	75	1.926	4142	13.5	6000
618572	1000 (61)	1.117	1.607	220	1.747	26x9	0.039	75	2.13	5356	14.9	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
¥ Water Block: Hi-DRI-PLUS® Water Swellable Powder under jacket
^ UL listed MV 90
** All Black PE 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	0.561+j0.275	0.222+j0.059	2095	160	195
2 (7)	0.162	0.221	0.044	0.052	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	0.038	0.048	0.23	2	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+j0.126	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	0.03	0.043	0.29	2.5	0.236+j0.066	0.073+j0.048	6284	300	360
4/0 (19)	0.051	0.07	0.03	0.043	0.29	2.5	0.236+j0.066	0.073+j0.048	6284	300	360
4/0 (19)	0.051	0.07	0.03	0.044	0.29	2.5	0.241+j0.069	0.073+j0.049	6095	300	360
250 (37)	0.043	0.059	0.028	0.042	0.31	2.7	0.204+j0.055	0.063+j0.047	7331	325	
350 (37)	0.031	0.043	0.025	0.041	0.35	3	0.152+j0.040	0.048+j0.045	9974	390	460
350 (37)	0.031	0.043	0.025	0.041	0.35	3	0.152+j0.040	0.048+j0.045	9974	390	460
500 (37)	0.021	0.03	0.022	0.039	0.4	3.4	0.107+j0.029	0.037+j0.042	14406	455	525
500 (37)	0.021	0.03	0.022	0.04	0.4	3.4	0.104+j0.028	0.038+j0.043	14973	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
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	0.016	0.037	0.53	4.6	0.057+j0.019	0.029+j0.035	28879		

*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
627966	2 (7)	7.19	19.13	5.59	21.41	6x14	1.77	1.27	27.20	1006	190.50	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
627970	1/0 (19)	9.19	21.13	5.59	23.42	9x14	1.18	1.27	29.21	1314	203.20	3756
627973	2/0 (19)	10.29	22.25	5.59	24.54	11x14	0.97	1.27	30.33	1518	213.36	4735
TBA	3/0 (19)	11.58	23.72	5.59	26.26	14x14	0.76	1.27	32.05	1769	223.52	5972
627975	4/0 (19)	13.00	24.94	5.59	27.23	18x14	0.59	1.27	33.02	2106	231.14	7529
139298	4/0 (19)	13.00	24.94	5.59	27.23	18x14	0.59	1.27	33.02	2107	231.14	7529
621494	4/0 (19)	13.00	24.94	5.59	27.23	11x12	0.61	1.27	33.88	2138	236.22	7529
139148	250 (37)	14.17	26.37	5.59	29.16	21x14	0.51	1.27	34.95	2430	243.84	8900
627967	350 (37)	16.79	28.98	5.59	31.78	18x12	0.37	1.27	38.43	3179	269.24	12460
139181^	350 (37)	16.79	28.98	5.59	31.78	18x12	0.37	1.27	38.43	3179	269.24	12460
621934**	500 (37)	20.04	32.23	5.59	35.03	26x12	0.26	1.91	41.68	4234	292.10	17800
627983	500 (37)	20.04	32.23	5.59	35.03	17x10	0.25	1.91	44.12	4415	309.88	17800
606626**	750 (61)	24.59	37.03	5.59	39.83	25x10	0.17	1.91	48.92	6164	342.90	26700
627977	750 (61)	24.59	37.03	5.59	39.83	25x10	0.17	1.91	48.92	6164	342.90	26700
618572	1000 (61)	28.37	40.82	5.59	44.37	26x9	0.13	1.91	54.10	7971	378.46	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
¥ Water Block: Hi-DRI-PLUS® Water Swellable Powder under jacket
^ UL listed MV 90
** All Black PE 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	0.561+j0.275	0.222+j0.059	2095	160	195
2 (7)	0.5315	0.73	0.0134	0.1706	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	0.0116	0.1575	0.755	6.5617	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+j0.126	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	0.0091	0.1411	0.951	8.2021	0.236+j0.066	0.073+j0.048	6284	300	360
4/0 (19)	0.1673	0.23	0.0091	0.1411	0.951	8.2021	0.236+j0.066	0.073+j0.048	6284	300	360
4/0 (19)	0.1673	0.23	0.0091	0.1444	0.951	8.2021	0.241+j0.069	0.073+j0.049	6095	300	360
250 (37)	0.1411	0.19	0.0085	0.1378	1.017	8.8583	0.204+j0.055	0.063+j0.047	7331	325	
350 (37)	0.1017	0.14	0.0076	0.1345	1.148	9.8425	0.152+j0.040	0.048+j0.045	9974	390	460
350 (37)	0.1017	0.14	0.0076	0.1345	1.148	9.8425	0.152+j0.040	0.048+j0.045	9974	390	460
500 (37)	0.0689	0.10	0.0067	0.1280	1.312	11.1549	0.107+j0.029	0.037+j0.042	14406	455	525
500 (37)	0.0689	0.10	0.0067	0.1312	1.312	11.1549	0.104+j0.028	0.038+j0.043	14973	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
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	0.0049	0.1214	1.739	15.0919	0.057+j0.019	0.029+j0.035	28879		

*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.
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Concentric Neutral Calculator

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