15kV CU 133% EPR (EAM) LCT LLDPE

Single Conductor, 220 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 133% Insulation Level, Longitudinally Corrugated Tape Shield, 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. **Tape Shield:** 10 mils Longitudinally Corrugated Copper Tape Shield
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-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

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

Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
AWG/ Kcmil	inch	inch	mil	inch	mil	inch	lb /1000ft	inch	lb
2 (SOLID)	0.258	0.736	220	0.816	50	1.016	1080	12.2	530
2 (7)	0.283	0.761	220	0.841	50	1.041	1110	12.5	530
1 (SOLID)	0.289	0.767	220	0.847	50	1.047	1170	12.6	669
1 (19)	0.322	0.8	220	0.88	50	1.08	1209	13	669
1/0 (SOLID)	0.325	0.803	220	0.883	50	1.083	1280	13	844
1/0 (19)	0.362	0.84	220	0.92	50	1.12	1325	13.4	844
2/0 (19)	0.405	0.883	220	0.963	50	1.163	1461	14	1064
3/0 (19)	0.456	0.934	220	1.014	50	1.214	1629	14.6	1342
4/0 (19)	0.512	0.99	220	1.07	50	1.27	1830	15.2	1692
250 (37)	0.558	1.044	220	1.124	50	1.324	2017	15.9	2000
350 (37)	0.661	1.147	220	1.227	50	1.427	2449	17.1	2800
500 (37)	0.789	1.275	220	1.355	50	1.555	3065	18.7	4000
750 (61)	0.968	1.464	220	1.544	75	1.794	4149	21.5	6000
1000 (61)	1.117	1.613	220	1.693	75	1.943	5108	23.3	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
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	0.053	0.18	1.6	0.521+j0.188	0.223+j0.057	3334	155	195
2 (7)	0.162	0.221	0.045	0.052	0.19	1.7	0.517+j0.183	0.223+j0.058	3419	155	195
1 (SOLID)	0.128	0.175	0.044	0.051	0.19	1.7	0.470+j0.178	0.177+j0.054	3439	175	220
1 (19)	0.128	0.175	0.042	0.05	0.21	1.8	0.464+j0.172	0.177+j0.055	3551	175	220
1/0 (SOLID)	0.102	0.139	0.041	0.049	0.21	1.8	0.427+j0.169	0.141+j0.052	3561	200	250
1/0 (19)	0.102	0.139	0.039	0.048	0.22	1.9	0.421+j0.163	0.141+j0.053	3686	200	250
2/0 (19)	0.082	0.112	0.036	0.046	0.24	2.1	0.387+j0.153	0.114+j0.051	3832	230	285
3/0 (19)	0.064	0.087	0.033	0.044	0.26	2.3	0.354+j0.144	00.089+j0.050	4004	260	320
4/0 (19)	0.051	0.07	0.031	0.043	0.28	2.5	0.329+j0.134	0.072+j0.048	4194	300	365
250 (37)	0.043	0.059	0.029	0.042	0.3	2.6	0.310+j0.126	0.061+j0.047	4377	315	396
350 (37)	0.031	0.043	0.025	0.039	0.34	3	0.280+j0.112	0.045+j0.045	4725	390	475
500 (37)	0.021	0.03	0.022	0.037	0.39	3.4	0.252+j0.098	0.032+j0.043	5158	470	565
750 (61)	0.014	0.021	0.019	0.036	0.46	4	0.223+j0.082	0.024+j0.040	5798	585	680
1000 (61)	0.011	0.018	0.017	0.034	0.52	4.5	0.206+j0.072	0.021+j0.039	6302	670	750

*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)

Cond. Size	Diameter Over Conductor	Diameter Over Insulation	Insul. Thickness	Diameter Over Insulation Shield	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension
AWG/ Kcmil	mm	mm	mm	mm	mm	mm	kg/km	mm	newton
2 (SOLID)	6.55	18.69	5.59	20.73	1.27	25.81	1607	309.88	2359
2 (7)	7.19	19.33	5.59	21.36	1.27	26.44	1652	317.50	2359
1 (SOLID)	7.34	19.48	5.59	21.51	1.27	26.59	1741	320.04	2977
1 (19)	8.18	20.32	5.59	22.35	1.27	27.43	1799	330.20	2977
1/0 (SOLID)	8.25	20.40	5.59	22.43	1.27	27.51	1905	330.20	3756
1/0 (19)	9.19	21.34	5.59	23.37	1.27	28.45	1972	340.36	3756
2/0 (19)	10.29	22.43	5.59	24.46	1.27	29.54	2174	355.60	4735
3/0 (19)	11.58	23.72	5.59	25.76	1.27	30.84	2424	370.84	5972
4/0 (19)	13.00	25.15	5.59	27.18	1.27	32.26	2723	386.08	7529
250 (37)	14.17	26.52	5.59	28.55	1.27	33.63	3002	403.86	8900
350 (37)	16.79	29.13	5.59	31.17	1.27	36.25	3645	434.34	12460
500 (37)	20.04	32.39	5.59	34.42	1.27	39.50	4561	474.98	17800
750 (61)	24.59	37.19	5.59	39.22	1.91	45.57	6174	546.10	26700
1000 (61)	28.37	40.97	5.59	43.00	1.91	49.35	7602	591.82	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	0.73	0.0146	0.1739	0.591	5.2493	0.521+j0.188	0.223+j0.057	3334	155	195
2 (7)	0.5315	0.73	0.0137	0.1706	0.623	5.5774	0.517+j0.183	0.223+j0.058	3419	155	195
1 (SOLID)	0.4199	0.57	0.0134	0.1673	0.623	5.5774	0.470+j0.178	0.177+j0.054	3439	175	220
1 (19)	0.4199	0.57	0.0128	0.1640	0.689	5.9055	0.464+j0.172	0.177+j0.055	3551	175	220
1/0 (SOLID)	0.3346	0.46	0.0125	0.1608	0.689	5.9055	0.427+j0.169	0.141+j0.052	3561	200	250
1/0 (19)	0.3346	0.46	0.0119	0.1575	0.722	6.2336	0.421+j0.163	0.141+j0.053	3686	200	250
2/0 (19)	0.2690	0.37	0.0110	0.1509	0.787	6.8898	0.387+j0.153	0.114+j0.051	3832	230	285
3/0 (19)	0.2100	0.29	0.0101	0.1444	0.853	7.5459	0.354+j0.144	00.089+j0.050	4004	260	320
4/0 (19)	0.1673	0.23	0.0094	0.1411	0.919	8.2021	0.329+j0.134	0.072+j0.048	4194	300	365
250 (37)	0.1411	0.19	0.0088	0.1378	0.984	8.5302	0.310+j0.126	0.061+j0.047	4377	315	396
350 (37)	0.1017	0.14	0.0076	0.1280	1.115	9.8425	0.280+j0.112	0.045+j0.045	4725	390	475
500 (37)	0.0689	0.10	0.0067	0.1214	1.280	11.1549	0.252+j0.098	0.032+j0.043	5158	470	565
750 (61)	0.0459	0.07	0.0058	0.1181	1.509	13.1234	0.223+j0.082	0.024+j0.040	5798	585	680
1000 (61)	0.0361	0.06	0.0052	0.1115	1.706	14.7638	0.206+j0.072	0.021+j0.039	6302	670	750

*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
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