



15kV CU 100% EPR (EAM) LCT LLDPE

Single Conductor, 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 100% 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:** 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Tape Shield:** 10 mils Longitudinally Corrugated 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 175 MILS -- (NESC) --
SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET





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)	0.257	0.645	175	0.725	80	0.985	589	11.8	530
2 (7)	0.282	0.670	175	0.750	80	1.010	605	12.1	530
1 (Solid)	0.289	0.677	175	0.757	80	1.017	663	12.2	669
1 (19)	0.322	0.710	175	0.790	80	1.050	682	12.6	669
1/0 (Solid)	0.324	0.712	175	0.792	80	1.052	751	12.6	844
1/0 (19)	0.361	0.749	175	0.829	80	1.089	774	13.1	844
2/0 (19)	0.405	0.793	175	0.873	80	1.133	887	13.6	1064
3/0 (19)	0.456	0.844	175	0.924	80	1.184	1026	14.2	1342
4/0 (19)	0.512	0.900	175	0.980	80	1.240	1196	14.9	1692
250 (37)	0.558	0.954	175	1.034	80	1.294	1350	15.5	2000
350 (37)	0.661	1.057	175	1.137	80	1.397	1724	16.8	2800
500 (37)	0.789	1.185	175	1.265	80	1.525	2266	18.3	4000
750 (61)	0.968	1.374	175	1.454	110	1.774	3266	21.3	6000
1000 (61)	1.117	1.523	175	1.603	110	1.923	4141	23.1	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	0.053	0.212	15.8	0.551 + j0.267	0.205 + j0.053	3027	155	195
2 (7)	0.162	0.204	0.038	0.051	0.225	16.8	0.546 + j0.256	0.205 + j0.051	3112	155	195
1 (Solid)	0.128	0.162	0.037	0.051	0.228	17.0	0.503 + j0.253	0.163 + j0.051	3136	175	220
1 (19)	0.128	0.162	0.035	0.049	0.244	18.2	0.497 + j0.239	0.163 + j0.049	3247	175	220
1/0 (Solid)	0.102	0.128	0.035	0.049	0.246	18.3	0.462 + j0.238	0.129 + j0.049	3254	200	250
1/0 (19)	0.102	0.128	0.032	0.047	0.264	19.7	0.455 + j0.224	0.129 + j0.048	3379	200	250
2/0 (19)	0.081	0.102	0.030	0.045	0.285	21.2	0.421 + j0.210	0.103 + j0.046	3528	230	285
3/0 (19)	0.064	0.081	0.027	0.044	0.309	23.0	0.391 + j0.194	0.082 + j0.044	3701	260	320
4/0 (19)	0.051	0.065	0.025	0.042	0.337	25.1	0.365 + j0.179	0.066 + j0.043	3891	300	365
250 (37)	0.043	0.056	0.023	0.041	0.363	27.0	0.347 + j0.166	0.057 + j0.042	4073	315	396
350 (37)	0.031	0.041	0.020	0.039	0.412	30.7	0.315 + j0.145	0.042 + j0.039	4422	390	475
500 (37)	0.022	0.030	0.018	0.037	0.474	35.3	0.285 + j0.125	0.031 + j0.037	4856	470	565
750 (61)	0.014	0.023	0.015	0.036	0.564	42.0	0.253 + j0.102	0.025 + j0.036	5495	585	680
1000 (61)	0.011	0.019	0.013	0.034	0.635	47.3	0.233 + j0.088	0.021 + j0.035	6000	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.





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)	6.53	16.38	4.44	18.42	2.03	25.02	877	299.72	2359
2 (7)	7.16	17.02	4.44	19.05	2.03	25.65	900	307.34	2359
1 (Solid)	7.34	17.20	4.44	19.23	2.03	25.83	987	309.88	2977
1 (19)	8.18	18.03	4.44	20.07	2.03	26.67	1015	320.04	2977
1/0 (Solid)	8.23	18.08	4.44	20.12	2.03	26.72	1118	320.04	3756
1/0 (19)	9.17	19.02	4.44	21.06	2.03	27.66	1152	332.74	3756
2/0 (19)	10.29	20.14	4.44	22.17	2.03	28.78	1320	345.44	4735
3/0 (19)	11.58	21.44	4.44	23.47	2.03	30.07	1527	360.68	5972
4/0 (19)	13.00	22.86	4.44	24.89	2.03	31.50	1780	378.46	7529
250 (37)	14.17	24.23	4.44	26.26	2.03	32.87	2009	393.70	8900
350 (37)	16.79	26.85	4.44	28.88	2.03	35.48	2566	426.72	12460
500 (37)	20.04	30.10	4.44	32.13	2.03	38.73	3372	464.82	17800
750 (61)	24.59	34.90	4.44	36.93	2.79	45.06	4860	541.02	26700
1000 (61)	28.37	38.68	4.44	40.72	2.79	48.84	6162	586.74	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	0.1739	0.696	51.8373	0.551 + j0.267	0.205 + j0.053	3027	155	195
2 (7)	0.5315	0.67	0.0116	0.1673	0.738	55.1181	0.546 + j0.256	0.205 + j0.051	3112	155	195
1 (Solid)	0.4199	0.53	0.0113	0.1673	0.748	55.7743	0.503 + j0.253	0.163 + j0.051	3136	175	220
1 (19)	0.4199	0.53	0.0107	0.1608	0.801	59.7113	0.497 + j0.239	0.163 + j0.049	3247	175	220
1/0 (Solid)	0.3346	0.42	0.0107	0.1608	0.807	60.0394	0.462 + j0.238	0.129 + j0.049	3254	200	250
1/0 (19)	0.3346	0.42	0.0098	0.1542	0.866	64.6325	0.455 + j0.224	0.129 + j0.048	3379	200	250
2/0 (19)	0.2657	0.33	0.0091	0.1476	0.935	69.5538	0.421 + j0.210	0.103 + j0.046	3528	230	285
3/0 (19)	0.2100	0.27	0.0082	0.1444	1.014	75.4593	0.391 + j0.194	0.082 + j0.044	3701	260	320
4/0 (19)	0.1673	0.21	0.0076	0.1378	1.106	82.3491	0.365 + j0.179	0.066 + j0.043	3891	300	365
250 (37)	0.1411	0.18	0.0070	0.1345	1.191	88.5827	0.347 + j0.166	0.057 + j0.042	4073	315	396
350 (37)	0.1017	0.13	0.0061	0.1280	1.352	100.7218	0.315 + j0.145	0.042 + j0.039	4422	390	475
500 (37)	0.0722	0.10	0.0055	0.1214	1.555	115.8136	0.285 + j0.125	0.031 + j0.037	4856	470	565
750 (61)	0.0459	0.08	0.0046	0.1181	1.850	137.7953	0.253 + j0.102	0.025 + j0.036	5495	585	680
1000 (61)	0.0361	0.06	0.0040	0.1115	2.083	155.1837	0.233 + j0.088	0.021 + j0.035	6000	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.

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