

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

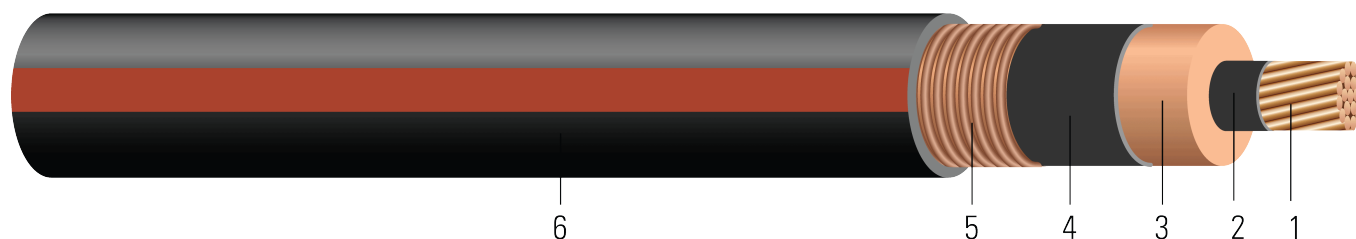


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- 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)
- Conductor Shield:** Conventional Semi-conducting cross-linked copolymer. A conductor tape is used for cable size larger than or equal to 1500 Kcmil
- Insulation:** 175 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 100% insulation level
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- Tape Shield:** 10 mils Longitudinally Corrugated Tape Shield
- 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
- Optional CSA 68.5: -40°C and MV 90°C 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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Southwire

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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)	0.257	0.645	175	0.725	80	0.985	547	11.8	530
2 (7)	0.282	0.670	175	0.750	80	1.010	560	12.1	530
1 (Solid)	0.289	0.677	175	0.757	80	1.017	619	12.2	669
1 (19)	0.322	0.710	175	0.790	80	1.050	637	12.6	669
1/0 (Solid)	0.324	0.712	175	0.792	80	1.052	704	12.6	844
1/0 (19)	0.361	0.749	175	0.829	80	1.089	725	13.1	844
2/0 (19)	0.405	0.793	175	0.873	80	1.133	836	13.6	1064
3/0 (19)	0.456	0.844	175	0.924	80	1.184	971	14.2	1342
4/0 (19)	0.512	0.900	175	0.980	80	1.240	1138	14.9	1692
250 (37)	0.558	0.954	175	1.034	80	1.294	1290	15.5	2000
350 (37)	0.661	1.057	175	1.137	80	1.397	1658	16.8	2800
500 (37)	0.789	1.185	175	1.265	80	1.525	2193	18.3	4000
750 (61)	0.968	1.374	175	1.454	110	1.774	3184	21.3	6000
1000 (61)	1.117	1.523	175	1.603	110	1.923	4049	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	0.047	0.053	0.104	3.42	0.258 + j0.771	0.204 + j0.051	2064	155	195
2 (7)	0.162	0.204	0.044	0.051	0.111	3.65	0.258 + j0.770	0.204 + j0.052	2133	155	195
1 (Solid)	0.128	0.162	0.044	0.051	0.112	3.69	0.216 + j0.766	0.162 + j0.048	2153	175	220
1 (19)	0.128	0.162	0.041	0.049	0.121	3.98	0.216 + j0.764	0.162 + j0.049	2244	175	220
1/0 (Solid)	0.102	0.128	0.040	0.049	0.122	4.02	0.182 + j0.761	0.128 + j0.047	2250	200	250
1/0 (19)	0.102	0.128	0.037	0.047	0.131	4.31	0.182 + j0.760	0.128 + j0.047	2352	200	250
2/0 (19)	0.081	0.102	0.035	0.045	0.142	4.67	0.156 + j0.755	0.102 + j0.046	2474	230	285
3/0 (19)	0.064	0.081	0.032	0.044	0.155	5.10	0.135 + j0.751	0.081 + j0.044	2616	260	320
4/0 (19)	0.051	0.065	0.029	0.042	0.170	5.59	0.119 + j0.746	0.065 + j0.042	2771	300	365
250 (37)	0.043	0.056	0.027	0.041	0.178	5.86	0.111 + j0.742	0.056 + j0.041	2920	315	396
350 (37)	0.031	0.041	0.024	0.039	0.204	6.71	0.095 + j0.734	0.041 + j0.039	3206	390	475
500 (37)	0.022	0.030	0.021	0.037	0.235	7.73	0.084 + j0.726	0.030 + j0.037	3561	470	565
750 (61)	0.014	0.023	0.018	0.036	0.273	8.98	0.077 + j0.714	0.023 + j0.036	4084	585	680
1000 (61)	0.011	0.019	0.016	0.034	0.309	10.17	0.073 + j0.707	0.019 + j0.034	4497	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.



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	814	299.72	2359
2 (7)	7.16	17.02	4.44	19.05	2.03	25.65	833	307.34	2359
1 (Solid)	7.34	17.20	4.44	19.23	2.03	25.83	921	309.88	2977
1 (19)	8.18	18.03	4.44	20.07	2.03	26.67	948	320.04	2977
1/0 (Solid)	8.23	18.08	4.44	20.12	2.03	26.72	1048	320.04	3756
1/0 (19)	9.17	19.02	4.44	21.06	2.03	27.66	1079	332.74	3756
2/0 (19)	10.29	20.14	4.44	22.17	2.03	28.78	1244	345.44	4735
3/0 (19)	11.58	21.44	4.44	23.47	2.03	30.07	1445	360.68	5972
4/0 (19)	13.00	22.86	4.44	24.89	2.03	31.50	1694	378.46	7529
250 (37)	14.17	24.23	4.44	26.26	2.03	32.87	1920	393.70	8900
350 (37)	16.79	26.85	4.44	28.88	2.03	35.48	2467	426.72	12460
500 (37)	20.04	30.10	4.44	32.13	2.03	38.73	3264	464.82	17800
750 (61)	24.59	34.90	4.44	36.93	2.79	45.06	4738	541.02	26700
1000 (61)	28.37	38.68	4.44	40.72	2.79	48.84	6026	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	0.0143	0.1739	0.341	11.2205	0.258 + j0.771	0.204 + j0.051	2064	155	195
2 (7)	0.5315	0.67	0.0134	0.1673	0.364	11.9751	0.258 + j0.770	0.204 + j0.052	2133	155	195
1 (Solid)	0.4199	0.53	0.0134	0.1673	0.367	12.1063	0.216 + j0.766	0.162 + j0.048	2153	175	220
1 (19)	0.4199	0.53	0.0125	0.1608	0.397	13.0577	0.216 + j0.764	0.162 + j0.049	2244	175	220
1/0 (Solid)	0.3346	0.42	0.0122	0.1608	0.400	13.1890	0.182 + j0.761	0.128 + j0.047	2250	200	250
1/0 (19)	0.3346	0.42	0.0113	0.1542	0.430	14.1404	0.182 + j0.760	0.128 + j0.047	2352	200	250
2/0 (19)	0.2657	0.33	0.0107	0.1476	0.466	15.3215	0.156 + j0.755	0.102 + j0.046	2474	230	285
3/0 (19)	0.2100	0.27	0.0098	0.1444	0.509	16.7323	0.135 + j0.751	0.081 + j0.044	2616	260	320
4/0 (19)	0.1673	0.21	0.0088	0.1378	0.558	18.3399	0.119 + j0.746	0.065 + j0.042	2771	300	365
250 (37)	0.1411	0.18	0.0082	0.1345	0.584	19.2257	0.111 + j0.742	0.056 + j0.041	2920	315	396
350 (37)	0.1017	0.13	0.0073	0.1280	0.669	22.0144	0.095 + j0.734	0.041 + j0.039	3206	390	475
500 (37)	0.0722	0.10	0.0064	0.1214	0.771	25.3609	0.084 + j0.726	0.030 + j0.037	3561	470	565
750 (61)	0.0459	0.08	0.0055	0.1181	0.896	29.4619	0.077 + j0.714	0.023 + j0.036	4084	585	680
1000 (61)	0.0361	0.06	0.0049	0.1115	1.014	33.3661	0.073 + j0.707	0.019 + j0.034	4497	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.

