



25kV CU 100% EPR (EAM) LCT LLDPE

Single Conductor, 260 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:** 260 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 25kV 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 25000 VOLTS EPR INSULATION 260 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
1 (Solid)	0.289	0.847	260	0.927	80	1.187	820	14.2	669
1 (19)	0.322	0.880	260	0.960	80	1.220	844	14.6	669
1/0 (Solid)	0.324	0.882	260	0.962	80	1.222	913	14.7	844
1/0 (19)	0.361	0.919	260	0.999	80	1.259	941	15.1	844
2/0 (19)	0.405	0.963	260	1.043	80	1.303	1060	15.6	1064
3/0 (19)	0.456	1.014	260	1.094	80	1.354	1206	16.2	1342
4/0 (19)	0.512	1.070	260	1.150	80	1.410	1382	16.9	1692
250 (37)	0.558	1.124	260	1.204	80	1.464	1545	17.6	2000
350 (37)	0.661	1.227	260	1.307	80	1.567	1934	18.8	2800
500 (37)	0.789	1.355	260	1.435	110	1.755	2596	21.1	4000
750 (61)	0.968	1.544	260	1.624	110	1.944	3530	23.3	6000
1000 (61)	1.117	1.693	260	1.773	110	2.093	4426	25.1	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
1 (Solid)	0.128	0.162	0.049	0.054	0.290	36.0	0.471 + j0.204	0.163 + j0.055	3711	175	220
1 (19)	0.128	0.162	0.046	0.052	0.309	38.4	0.465 + j0.194	0.163 + j0.053	3823	175	220
1/0 (Solid)	0.102	0.128	0.046	0.052	0.311	38.6	0.431 + j0.193	0.129 + j0.053	3830	200	250
1/0 (19)	0.102	0.128	0.043	0.050	0.332	41.2	0.425 + j0.183	0.129 + j0.051	3955	200	250
2/0 (19)	0.081	0.102	0.040	0.049	0.356	44.2	0.391 + j0.172	0.103 + j0.049	4104	230	285
3/0 (19)	0.064	0.081	0.037	0.047	0.384	47.7	0.362 + j0.161	0.082 + j0.047	4277	260	320
4/0 (19)	0.051	0.065	0.034	0.045	0.415	51.5	0.337 + j0.149	0.066 + j0.045	4466	300	365
250 (37)	0.043	0.056	0.032	0.044	0.445	55.2	0.320 + j0.140	0.057 + j0.044	4649	315	396
350 (37)	0.031	0.041	0.028	0.042	0.501	62.2	0.290 + j0.124	0.042 + j0.042	4998	390	475
500 (37)	0.022	0.030	0.025	0.040	0.571	70.9	0.263 + j0.108	0.032 + j0.041	5431	470	565
750 (61)	0.014	0.023	0.021	0.038	0.673	83.5	0.235 + j0.090	0.025 + j0.038	6071	585	680
1000 (61)	0.011	0.019	0.019	0.036	0.753	93.5	0.216 + j0.079	0.021 + j0.037	6575	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
1 (Solid)	7.34	21.51	6.60	23.55	2.03	30.15	1220	360.68	2977
1 (19)	8.18	22.35	6.60	24.38	2.03	30.99	1256	370.84	2977
1/0 (Solid)	8.23	22.40	6.60	24.43	2.03	31.04	1359	373.38	3756
1/0 (19)	9.17	23.34	6.60	25.37	2.03	31.98	1400	383.54	3756
2/0 (19)	10.29	24.46	6.60	26.49	2.03	33.10	1577	396.24	4735
3/0 (19)	11.58	25.76	6.60	27.79	2.03	34.39	1795	411.48	5972
4/0 (19)	13.00	27.18	6.60	29.21	2.03	35.81	2057	429.26	7529
250 (37)	14.17	28.55	6.60	30.58	2.03	37.19	2299	447.04	8900
350 (37)	16.79	31.17	6.60	33.20	2.03	39.80	2878	477.52	12460
500 (37)	20.04	34.42	6.60	36.45	2.79	44.58	3863	535.94	17800
750 (61)	24.59	39.22	6.60	41.25	2.79	49.38	5253	591.82	26700
1000 (61)	28.37	43.00	6.60	45.03	2.79	53.16	6587	637.54	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
1 (Solid)	0.4199	0.53	0.0149	0.1772	0.951	118.1102	0.471 + j0.204	0.163 + j0.055	3711	175	220
1 (19)	0.4199	0.53	0.0140	0.1706	1.014	125.9843	0.465 + j0.194	0.163 + j0.053	3823	175	220
1/0 (Solid)	0.3346	0.42	0.0140	0.1706	1.020	126.6404	0.431 + j0.193	0.129 + j0.053	3830	200	250
1/0 (19)	0.3346	0.42	0.0131	0.1640	1.089	135.1706	0.425 + j0.183	0.129 + j0.051	3955	200	250
2/0 (19)	0.2657	0.33	0.0122	0.1608	1.168	145.0131	0.391 + j0.172	0.103 + j0.049	4104	230	285
3/0 (19)	0.2100	0.27	0.0113	0.1542	1.260	156.4961	0.362 + j0.161	0.082 + j0.047	4277	260	320
4/0 (19)	0.1673	0.21	0.0104	0.1476	1.362	168.9633	0.337 + j0.149	0.066 + j0.045	4466	300	365
250 (37)	0.1411	0.18	0.0098	0.1444	1.460	181.1024	0.320 + j0.140	0.057 + j0.044	4649	315	396
350 (37)	0.1017	0.13	0.0085	0.1378	1.644	204.0682	0.290 + j0.124	0.042 + j0.042	4998	390	475
500 (37)	0.0722	0.10	0.0076	0.1312	1.873	232.6115	0.263 + j0.108	0.032 + j0.041	5431	470	565
750 (61)	0.0459	0.08	0.0064	0.1247	2.208	273.9501	0.235 + j0.090	0.025 + j0.038	6071	585	680
1000 (61)	0.0361	0.06	0.0058	0.1181	2.470	306.7585	0.216 + j0.079	0.021 + j0.037	6575	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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