25kV CU 100% EPR (EAM) Full Neutral LLDPE

Single Conductor, 260 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM), 100% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

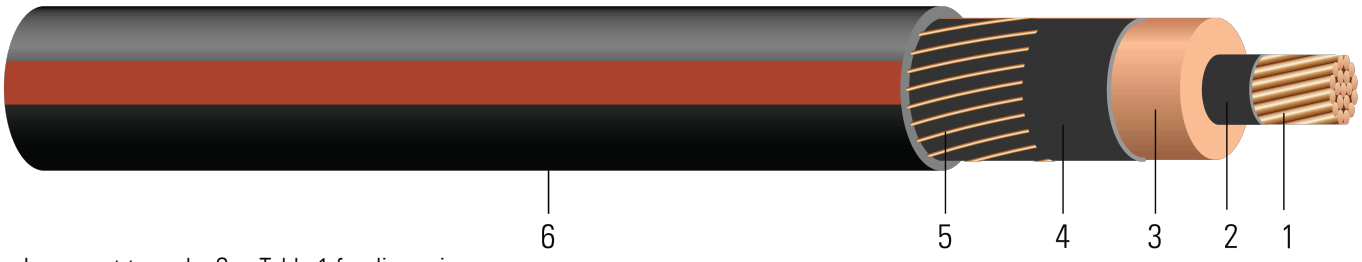


Image not to scale. See Table 1 for dimensions.

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:** 260 Mils Ethylene Propylene Rubber (EPR) / Ethylene Alkene Copolymer (EAM) 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Concentric Neutral:** Helically applied soft drawn bare copper full 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 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-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 25000 VOLTS EPR INSULATION 260 MILS -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

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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	1 (SOLID)	0.289	0.847	260	0.947	21x14	0.154	50	1.175	991	8.2	669
TBA	1 (19)	0.322	0.88	260	0.98	21x14	0.154	50	1.208	1013	8.5	669
TBA	1/0 (SOLID)	0.325	0.883	260	0.983	26x14	0.125	50	1.211	1148	8.5	844
628019	1/0 (19)	0.362	0.912	260	1.002	16x12	0.128	50	1.264	1180	8.8	844
627993	2/0 (19)	0.405	0.956	260	1.046	13x10	0.099	50	1.35	1422	9.5	1064
TBA	3/0 (19)	0.456	1.014	260	1.134	26x12	0.079	50	1.396	1635	9.8	1342
627995	4/0 (19)	0.512	1.062	260	1.172	20x10	0.064	50	1.476	1978	10.3	1692
TBA	250 (37)	0.558	1.124	260	1.244	25x10	0.051	50	1.548	2252	10.8	2000

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.

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	0.175	0.05	0.054	0.29	4.2	0.321+j0.063	0.179+j0.056	7331	175	220
1 (19)	0.128	0.175	0.047	0.052	0.31	4.5	0.32+j0.064	0.179+j0.057	7331	175	220
1/0 (SOLID)	0.102	0.139	0.046	0.052	0.31	4.5	0.259+j0.051	0.144+j0.054	9076	200	250
1/0 (19)	0.102	0.139	0.043	0.05	0.34	4.8	0.261+j0.053	0.144+j0.055	8865	200	250
2/0 (19)	0.082	0.112	0.04	0.049	0.36	5.2	0.208+j0.043	0.118+j0.053	11450	225	280
3/0 (19)	0.064	0.087	0.038	0.047	0.38	5.6	0.164+j0.037	0.094+j0.051	14406	260	315
4/0 (19)	0.051	0.07	0.034	0.046	0.42	6.1	0.133+j0.032	0.078+j0.048	17615	295	355
250 (37)	0.043	0.059	0.032	0.045	0.45	6.4	0.110+j0.029	0.069+j0.046	22019	318	360

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*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)

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	1 (SOLID)	7.34	21.51	6.60	24.05	21x14	0.51	1.27	29.85	1475	208.28	2977
TBA	1 (19)	8.18	22.35	6.60	24.89	21x14	0.51	1.27	30.68	1508	215.90	2977
TBA	1/0 (SOLID)	8.25	22.43	6.60	24.97	26x14	0.41	1.27	30.76	1708	215.90	3756
628019	1/0 (19)	9.19	23.16	6.60	25.45	16x12	0.42	1.27	32.11	1756	223.52	3756
627993	2/0 (19)	10.29	24.28	6.60	26.57	13x10	0.32	1.27	34.29	2116	241.30	4735
TBA	3/0 (19)	11.58	25.76	6.60	28.80	26x12	0.26	1.27	35.46	2433	248.92	5972
627995	4/0 (19)	13.00	26.97	6.60	29.77	20x10	0.21	1.27	37.49	2944	261.62	7529
TBA	250 (37)	14.17	28.55	6.60	31.60	25x10	0.17	1.27	39.32	3351	274.32	8900

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 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	0.57	0.0152	0.1772	0.951	13.7795	0.321+j0.063	0.179+j0.056	7331	175	220
1 (19)	0.4199	0.57	0.0143	0.1706	1.017	14.7638	0.32+j0.064	0.179+j0.057	7331	175	220
1/0 (SOLID)	0.3346	0.46	0.0140	0.1706	1.017	14.7638	0.259+j0.051	0.144+j0.054	9076	200	250
1/0 (19)	0.3346	0.46	0.0131	0.1640	1.115	15.7480	0.261+j0.053	0.144+j0.055	8865	200	250
2/0 (19)	0.2690	0.37	0.0122	0.1608	1.181	17.0604	0.208+j0.043	0.118+j0.053	11450	225	280
3/0 (19)	0.2100	0.29	0.0116	0.1542	1.247	18.3727	0.164+j0.037	0.094+j0.051	14406	260	315
4/0 (19)	0.1673	0.23	0.0104	0.1509	1.378	20.0131	0.133+j0.032	0.078+j0.048	17615	295	355
250 (37)	0.1411	0.19	0.0098	0.1476	1.476	20.9974	0.110+j0.029	0.069+j0.046	22019	318	360

*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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