

15kV CU 100% EPR One-Third Neutral LLDPE Primary UD

Single Conductor, 175 Mils Ethylene Propylene Rubber (EPR), 100% Insulation Level, One-third Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

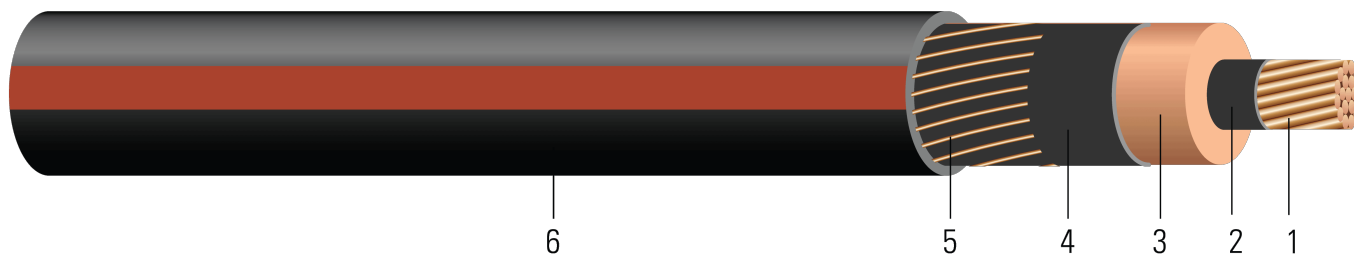


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** 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) 100% insulation level
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- Concentric Neutral:** Helically applied soft drawn bare copper one-third concentric neutral
- Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, Black (red extruded stripes optional); PowerGlide® LLDPE jacket optional

APPLICATIONS AND FEATURES:

Southwire's 15kV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, 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 Standard Specification for 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
- 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-DR(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

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	2 (1)	0.258	0.645	175	0.725	6x14	0.438	50	0.953	575	11.4	531
628070	2 (7)	0.283	0.670	175	0.750	6x14	0.438	50	0.978	602	11.7	531
TBA	2 (7)	0.283	0.670	175	0.750	6x14	0.438	50	0.978	602	11.7	531
TBA	1 (1)	0.289	0.676	175	0.756	7x14	0.376	50	0.984	655	11.8	670
TBA	1 (19)	0.322	0.709	175	0.789	7x14	0.376	50	1.017	688	12.2	670
TBA	1/0 (1)	0.325	0.712	175	0.792	9x14	0.292	50	1.020	762	12.2	845
628074	1/0 (19)	0.362	0.749	175	0.829	9x14	0.292	50	1.057	802	12.7	845
TBA	1/0 (19)	0.362	0.749	175	0.829	9x14	0.292	50	1.057	802	12.7	845
628077	2/0 (19)	0.405	0.792	175	0.872	11x14	0.239	50	1.100	934	13.2	1065
TBA	2/0 (19)	0.405	0.792	175	0.872	11x14	0.239	50	1.100	934	13.2	1065
TBA	3/0 (19)	0.456	0.843	175	0.923	14x14	0.188	50	1.151	1107	13.8	1342
623352	4/0 (19)	0.512	0.899	175	0.979	18x14	0.146	50	1.207	1321	14.5	1693
TBA	4/0 (19)	0.512	0.899	175	0.979	18x14	0.146	50	1.207	1321	14.5	1693
TBA	250 (37)	0.558	0.954	175	1.034	21x14	0.125	50	1.262	1507	15.1	2000
628080	350 (37)	0.661	1.057	175	1.157	18x12	0.092	50	1.417	2018	17.0	2800
619989	500 (37)	0.789	1.185	175	1.285	26x12	0.061	50	1.551	2721	19.1	4000
621464^	500 (37)	0.789	1.185	175	1.285	17x10	0.061	50	1.589	2772	19.1	4000
628083	500 (37)	0.789	1.185	175	1.285	17x10	0.061	50	1.589	2772	19.1	4000
628084	750 (61)	0.968	1.373	175	1.473	25x10	0.041	80	1.862	4014	22.3	6000
623507	1000 (61)	1.117	1.522	175	1.622	26x9	0.031	80	2.039	5175	24.5	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

^ Solid Black Jacket



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 (1)	0.162	0.203	0.044	0.049	0.198	34.304	0.523+j0.230	0.204+j0.049	2025.6	160	195
2 (7)	0.162	0.203	0.041	0.047	0.210	36.315	0.522+j0.229	0.204+j0.047	2025.6	160	195
2 (7)	0.162	0.203	0.041	0.047	0.210	36.315	0.522+j0.229	0.204+j0.047	2025.6	160	195
1 (1)	0.129	0.161	0.041	0.047	0.212	36.796	0.456+j0.189	0.162+j0.047	2363.3	180	220
1 (19)	0.129	0.161	0.038	0.046	0.228	39.432	0.456+j0.188	0.162+j0.046	2363.3	180	220
1/0 (1)	0.102	0.128	0.038	0.046	0.229	39.671	0.381+j0.137	0.129+j0.045	3038.5	200	250
1/0 (19)	0.102	0.128	0.035	0.044	0.246	42.610	0.380+j0.136	0.129+j0.044	3038.5	200	250
1/0 (19)	0.102	0.128	0.035	0.044	0.246	42.610	0.380+j0.136	0.129+j0.044	3038.5	200	250
2/0 (19)	0.081	0.101	0.033	0.043	0.266	46.009	0.319+j0.104	0.103+j0.042	3713.7	230	285
2/0 (19)	0.081	0.101	0.033	0.043	0.266	46.009	0.319+j0.104	0.103+j0.042	3713.7	230	285
3/0 (19)	0.0642	0.081	0.030	0.041	0.289	50.022	0.260+j0.077	0.083+j0.041	4726.5	260	325
4/0 (19)	0.051	0.064	0.028	0.040	0.314	54.411	0.208+j0.056	0.067+j0.039	6076.9	300	365
4/0 (19)	0.051	0.064	0.028	0.040	0.314	54.411	0.208+j0.056	0.067+j0.039	6076.9	300	365
250 (37)	0.0431	0.054	0.026	0.039	0.339	58.708	0.180+j0.047	0.057+j0.038	7089.8		
350 (37)	0.0308	0.039	0.022	0.038	0.385	66.727	0.134+j0.037	0.043+j0.037	9655.1	390	475
500 (37)	0.0216	0.028	0.020	0.036	0.443	76.657	0.091+j0.029	0.034+j0.034	14494.9	455	555
500 (37)	0.0216	0.028	0.020	0.036	0.443	76.657	0.091+j0.029	0.034+j0.034	14494.9	455	555
500 (37)	0.0216	0.028	0.020	0.036	0.443	76.657	0.091+j0.029	0.034+j0.034	14494.9	455	555
750 (61)	0.0144	0.019	0.016	0.035	0.526	91.195	0.062+j0.023	0.026+j0.031	21505.0	545	650
1000 (61)	0.0108	0.015	0.015	0.034	0.593	102.692	0.047+j0.021	0.023+j0.028	28479.8		

* Calculations are based on three cables triplexed / concentric shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohm-meter

† Ampacities are based on Figure 7 of ICEA P-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

‡ Ampacities are based on Figure 1 of ICEA P-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)



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	2 (1)	6.55	16.38	4.44	18.42	6x14	1.44	1.27	24.21	856	289.56	2363
628070	2 (7)	7.19	17.02	4.44	19.05	6x14	1.44	1.27	24.84	896	297.18	2363
TBA	2 (7)	7.19	17.02	4.44	19.05	6x14	1.44	1.27	24.84	896	297.18	2363
TBA	1 (1)	7.34	17.17	4.44	19.20	7x14	1.23	1.27	24.99	975	299.72	2982
TBA	1 (19)	8.18	18.01	4.44	20.04	7x14	1.23	1.27	25.83	1024	309.88	2982
TBA	1/0 (1)	8.25	18.08	4.44	20.12	9x14	0.96	1.27	25.91	1134	309.88	3760
628074	1/0 (19)	9.19	19.02	4.44	21.06	9x14	0.96	1.27	26.85	1194	322.58	3760
TBA	1/0 (19)	9.19	19.02	4.44	21.06	9x14	0.96	1.27	26.85	1194	322.58	3760
628077	2/0 (19)	10.29	20.12	4.44	22.15	11x14	0.78	1.27	27.94	1390	335.28	4739
TBA	2/0 (19)	10.29	20.12	4.44	22.15	11x14	0.78	1.27	27.94	1390	335.28	4739
TBA	3/0 (19)	11.58	21.41	4.44	23.44	14x14	0.62	1.27	29.24	1647	350.52	5972
623352	4/0 (19)	13.00	22.83	4.44	24.87	18x14	0.48	1.27	30.66	1966	368.30	7534
TBA	4/0 (19)	13.00	22.83	4.44	24.87	18x14	0.48	1.27	30.66	1966	368.30	7534
TBA	250 (37)	14.17	24.23	4.44	26.26	21x14	0.41	1.27	32.05	2243	383.54	8900
628080	350 (37)	16.79	26.85	4.44	29.39	18x12	0.30	1.27	35.99	3003	431.80	12460
619989	500 (37)	20.04	30.10	4.44	32.64	26x12	0.20	1.27	39.40	4049	485.14	17800
621464^	500 (37)	20.04	30.10	4.44	32.64	17x10	0.20	1.27	40.36	4125	485.14	17800
628083	500 (37)	20.04	30.10	4.44	32.64	17x10	0.20	1.27	40.36	4125	485.14	17800
628084	750 (61)	24.59	34.87	4.44	37.41	25x10	0.13	2.03	47.29	5973	566.42	26700
623507	1000 (61)	28.37	38.66	4.44	41.20	26x9	0.10	2.03	51.79	7701	622.30	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

^ Solid Black Jacket



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 (1)	0.5315	0.67	0.0134	0.1608	0.650	112.5459	0.523+j0.230	0.204+j0.049	2025.6	160	195
2 (7)	0.5315	0.67	0.0125	0.1542	0.689	119.1437	0.522+j0.229	0.204+j0.047	2025.6	160	195
2 (7)	0.5315	0.67	0.0125	0.1542	0.689	119.1437	0.522+j0.229	0.204+j0.047	2025.6	160	195
1 (1)	0.4232	0.53	0.0125	0.1542	0.696	120.7218	0.456+j0.189	0.162+j0.047	2363.3	180	220
1 (19)	0.4232	0.53	0.0116	0.1509	0.748	129.3701	0.456+j0.188	0.162+j0.046	2363.3	180	220
1/0 (1)	0.3346	0.42	0.0116	0.1509	0.751	130.1542	0.381+j0.137	0.129+j0.045	3038.5	200	250
1/0 (19)	0.3346	0.42	0.0107	0.1444	0.807	139.7966	0.380+j0.136	0.129+j0.044	3038.5	200	250
1/0 (19)	0.3346	0.42	0.0107	0.1444	0.807	139.7966	0.380+j0.136	0.129+j0.044	3038.5	200	250
2/0 (19)	0.2657	0.33	0.0101	0.1411	0.873	150.9482	0.319+j0.104	0.103+j0.042	3713.7	230	285
2/0 (19)	0.2657	0.33	0.0101	0.1411	0.873	150.9482	0.319+j0.104	0.103+j0.042	3713.7	230	285
3/0 (19)	0.2106	0.27	0.0091	0.1345	0.948	164.1142	0.260+j0.077	0.083+j0.041	4726.5	260	325
4/0 (19)	0.1673	0.21	0.0085	0.1312	1.030	178.5138	0.208+j0.056	0.067+j0.039	6076.9	300	365
4/0 (19)	0.1673	0.21	0.0085	0.1312	1.030	178.5138	0.208+j0.056	0.067+j0.039	6076.9	300	365
250 (37)	0.1414	0.18	0.0079	0.1280	1.112	192.6115	0.180+j0.047	0.057+j0.038	7089.8		
350 (37)	0.1010	0.13	0.0067	0.1247	1.263	218.9206	0.134+j0.037	0.043+j0.037	9655.1	390	475
500 (37)	0.0709	0.09	0.0061	0.1181	1.453	251.4993	0.091+j0.029	0.034+j0.034	14494.9	455	555
500 (37)	0.0709	0.09	0.0061	0.1181	1.453	251.4993	0.091+j0.029	0.034+j0.034	14494.9	455	555
500 (37)	0.0709	0.09	0.0061	0.1181	1.453	251.4993	0.091+j0.029	0.034+j0.034	14494.9	455	555
750 (61)	0.0472	0.06	0.0049	0.1148	1.726	299.1962	0.062+j0.023	0.026+j0.031	21505.0	545	650
1000 (61)	0.0354	0.05	0.0046	0.1115	1.946	336.9160	0.047+j0.021	0.023+j0.028	28479.8		

* Calculations are based on three cables triplexed / concentric shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohm-meter

† Ampacities are based on Figure 7 of ICEA P-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

‡ Ampacities are based on Figure 1 of ICEA P-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)

