

15kV CU 100% TRXLPE LCT LLDPE Primary UD

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Longitudinally Corrugated Tape Shield, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

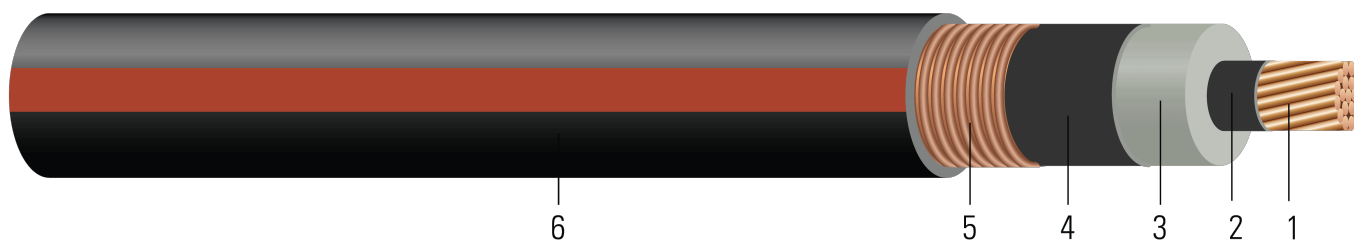


Image not to scale. See Table 1 for dimensions.

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; Supersmooth conductor shield optional; A conductor tape is used for cable size larger than or equal to 1500 Kcmil
- Insulation:** 175 Mils Tree Retardant Cross Linked Polyethylene 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, 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 90°C for normal operation, 130°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-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
- 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 TRXLPE 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	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension*
	AWG/ Kcmil	inch	inch	mil	inch	mil	inch	lb /1000ft	inch	lb
TBA	2 (1)	0.258	0.645	175	0.705	80	0.965	589	11.6	531
TBA	2 (7)	0.283	0.663	175	0.743	80	0.963	693	11.9	531
TBA	1 (1)	0.289	0.676	175	0.736	80	0.996	654	12.0	670
TBA	1 (19)	0.322	0.709	175	0.769	80	1.029	683	12.3	670
TBA	1/0 (1)	0.325	0.712	175	0.772	80	1.032	735	12.4	845
TBA	1/0 (19)	0.362	0.749	175	0.809	80	1.069	769	12.8	845
TBA	2/0 (19)	0.405	0.792	175	0.852	80	1.112	919	13.3	1065
TBA	3/0 (19)	0.456	0.843	175	0.903	80	1.163	1051	14.0	1342
TBA	4/0 (19)	0.512	0.899	175	0.959	80	1.219	1214	14.6	1693
TBA	250 (37)	0.558	0.954	175	1.014	80	1.274	1359	15.3	2000
TBA	350 (37)	0.661	1.057	175	1.117	80	1.377	1722	16.5	2800
TBA	500 (37)	0.789	1.185	175	1.245	80	1.505	2253	18.1	4000
TBA	750 (61)	0.968	1.373	175	1.433	80	1.659	3170	19.9	6000
662309	1000 (61)	1.117	1.522	175	1.582	110	1.917	4160	22.4	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 (1)	0.162	0.203	0.053	0.049	0.163	0.423	0.536+j0.234	0.204+j0.049	3105.4	155	195
2 (7)	0.162	0.203	0.050	0.048	0.172	0.447	0.530+j0.223	0.204+j0.048	3194.2	155	195
1 (1)	0.129	0.161	0.050	0.047	0.174	0.453	0.487+j0.221	0.162+j0.047	3215.5	175	220
1 (19)	0.129	0.161	0.046	0.046	0.187	0.486	0.480+j0.208	0.162+j0.046	3332.7	175	220
1/0 (1)	0.102	0.128	0.046	0.046	0.188	0.489	0.446+j0.207	0.129+j0.046	3343.4	200	250
1/0 (19)	0.102	0.128	0.043	0.044	0.202	0.525	0.439+j0.194	0.129+j0.044	3474.8	200	250
2/0 (19)	0.081	0.101	0.040	0.043	0.218	0.567	0.403+j0.181	0.102+j0.043	3627.5	230	285
3/0 (19)	0.0642	0.081	0.037	0.041	0.237	0.616	0.373+j0.167	0.082+j0.041	3808.6	260	325
4/0 (19)	0.051	0.064	0.034	0.040	0.258	0.670	0.345+j0.153	0.065+j0.040	4007.5	300	365
250 (37)	0.0431	0.054	0.031	0.039	0.278	0.723	0.325+j0.141	0.055+j0.039	4202.8		
350 (37)	0.0308	0.039	0.027	0.037	0.316	0.822	0.293+j0.123	0.040+j0.037	4568.6	390	480
500 (37)	0.0216	0.028	0.024	0.035	0.364	0.945	0.263+j0.105	0.029+j0.035	5023.2	470	575
750 (61)	0.0144	0.020	0.020	0.033	0.432	1.124	0.231+j0.085	0.021+j0.033	5690.8	585	695
1000 (61)	0.0108	0.015	0.018	0.032	0.487	1.265	0.209+j0.073	0.017+j0.032	6220.0	670	785

* Calculations are based on three cables triplexed / tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-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	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension*
	AWG/ Kcmil	mm	mm	mm	mm	mm	mm	kg/km	mm	newton
TBA	2 (1)	6.55	16.38	4.44	17.91	2.03	24.51	877	294.64	2363
TBA	2 (7)	7.19	16.84	4.44	18.87	2.03	24.46	1031	302.26	2363
TBA	1 (1)	7.34	17.17	4.44	18.69	2.03	25.30	973	304.80	2982
TBA	1 (19)	8.18	18.01	4.44	19.53	2.03	26.14	1016	312.42	2982
TBA	1/0 (1)	8.25	18.08	4.44	19.61	2.03	26.21	1094	314.96	3760
TBA	1/0 (19)	9.19	19.02	4.44	20.55	2.03	27.15	1144	325.12	3760
TBA	2/0 (19)	10.29	20.12	4.44	21.64	2.03	28.24	1368	337.82	4739
TBA	3/0 (19)	11.58	21.41	4.44	22.94	2.03	29.54	1564	355.60	5972
TBA	4/0 (19)	13.00	22.83	4.44	24.36	2.03	30.96	1807	370.84	7534
TBA	250 (37)	14.17	24.23	4.44	25.76	2.03	32.36	2022	388.62	8900
TBA	350 (37)	16.79	26.85	4.44	28.37	2.03	34.98	2563	419.10	12460
TBA	500 (37)	20.04	30.10	4.44	31.62	2.03	38.23	3353	459.74	17800
TBA	750 (61)	24.59	34.87	4.44	36.40	2.03	42.14	4717	505.46	26700
662309	1000 (61)	28.37	38.66	4.44	40.18	2.79	48.69	6191	568.96	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 (1)	0.5315	0.67	0.0162	0.1608	0.535	1.3878	0.536+j0.234	0.204+j0.049	3105.4	155	195
2 (7)	0.5315	0.67	0.0152	0.1575	0.564	1.4665	0.530+j0.223	0.204+j0.048	3194.2	155	195
1 (1)	0.4232	0.53	0.0152	0.1542	0.571	1.4862	0.487+j0.221	0.162+j0.047	3215.5	175	220
1 (19)	0.4232	0.53	0.0140	0.1509	0.614	1.5945	0.480+j0.208	0.162+j0.046	3332.7	175	220
1/0 (1)	0.3346	0.42	0.0140	0.1509	0.617	1.6043	0.446+j0.207	0.129+j0.046	3343.4	200	250
1/0 (19)	0.3346	0.42	0.0131	0.1444	0.663	1.7224	0.439+j0.194	0.129+j0.044	3474.8	200	250
2/0 (19)	0.2657	0.33	0.0122	0.1411	0.715	1.8602	0.403+j0.181	0.102+j0.043	3627.5	230	285
3/0 (19)	0.2106	0.27	0.0113	0.1345	0.778	2.0210	0.373+j0.167	0.082+j0.041	3808.6	260	325
4/0 (19)	0.1673	0.21	0.0104	0.1312	0.846	2.1982	0.345+j0.153	0.065+j0.040	4007.5	300	365
250 (37)	0.1414	0.18	0.0094	0.1280	0.912	2.3720	0.325+j0.141	0.055+j0.039	4202.8		
350 (37)	0.1010	0.13	0.0082	0.1214	1.037	2.6969	0.293+j0.123	0.040+j0.037	4568.6	390	480
500 (37)	0.0709	0.09	0.0073	0.1148	1.194	3.1004	0.263+j0.105	0.029+j0.035	5023.2	470	575
750 (61)	0.0472	0.07	0.0061	0.1083	1.417	3.6877	0.231+j0.085	0.021+j0.033	5690.8	585	695
1000 (61)	0.0354	0.05	0.0055	0.1050	1.598	4.1503	0.209+j0.073	0.017+j0.032	6220.0	670	785

* Calculations are based on three cables triplexed / tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-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)

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