15kV CU 100% TRXLPE One-Third Neutral LLDPE

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 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:

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; Supersmooth conductor shield optional; A conductor tape is used for cable size larger than or equal to 1500 Kcmil
3. **Insulation:** 175 Mils Tree Retardant Cross Linked Polyethylene 100% insulation level
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Concentric Neutral:** Helically applied soft drawn bare copper one-third concentric neutral
6. **Overall Jacket:** Linear Low Density Polyethylene (LLDPE) Jacket, black with red extruded stripes; PowerGlide® LLDPE jacket optional

For information about our Cable-Rejuvenation Services please visit us at: Cable-Rejuvenation Services
You can email us at: Cable-Rejuvenation Services

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 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 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

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SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] CU 15000 VOLTS TRXLPE INSULATION 175 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	2 (Solid)	0.257	0.645	175	0.735	6x14	0.438	50	0.963	566	7.7	530
689828#	2 (7)	0.282	0.663	175	0.753	6x14	0.438	50	0.981	569	7.8	530
628184	2 (7)	0.282	0.663	175	0.753	6x14	0.438	50	0.981	571	7.8	530
TBA	1 (Solid)	0.289	0.677	175	0.767	7x14	0.375	50	0.995	649	8.0	669
TBA	1 (19)	0.322	0.710	175	0.800	7x14	0.375	50	1.028	665	8.2	669
TBA	1/0 (Solid)	0.324	0.712	175	0.802	9x14	0.292	50	1.030	759	8.2	844
616154	1/0 (19)	0.361	0.742	175	0.832	9x14	0.292	50	1.060	767	8.5	844
628187	2/0 (19)	0.405	0.786	175	0.876	11x14	0.239	50	1.104	898	8.8	1064
TBA	3/0 (19)	0.456	0.844	175	0.934	14x14	0.187	50	1.162	1085	9.3	1342
628189	4/0 (19)	0.512	0.892	175	0.982	18x14	0.146	50	1.210	1278	9.7	1692
614035	4/0 (19)	0.512	0.892	175	0.982	11x12	0.150	50	1.243	1288	9.9	1692
600829	250 (37)	0.558	0.948	175	1.038	13x12	0.127	50	1.299	1490	10.4	2000
614878#	350 (37)	0.661	1.051	175	1.161	18x12	0.092	50	1.422	1953	11.4	2800
628192	350 (37)	0.661	1.051	175	1.161	18x12	0.092	50	1.422	1972	11.4	2800
622071	500 (37)	0.789	1.179	175	1.289	26x12	0.063	50	1.550	2663	12.4	4000
611445#	500 (37)	0.789	1.179	175	1.289	26x12	0.063	50	1.550	2663	12.4	4000
628194	500 (37)	0.789	1.179	175	1.289	17x10	0.061	50	1.592	2724	12.7	4000
628195	750 (61)	0.968	1.368	175	1.478	25x10	0.041	75	1.835	3928	14.7	6000
628576^	1000 (61)	1.117	1.517	175	1.627	26x9	0.031	75	2.009	5071	16.1	8000
628197	1000 (61)	1.117	1.517	175	1.627	26x9	0.031	75	2.009	5070	16.1	8000
628199	1000 (61)	1.117	1.517	175	1.627	21x8	0.031	75	2.038	5393	16.3	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
^ HiDri Plus - Water Blocking Powder. Black Jacket

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All black jacket
§ HiDri Plus - Water Blocking Powder. Black Jacket. CSA Listed

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	0.062	0.052	0.080	0.69	0.258 + j0.772	0.204 + j0.051	2092	160	195
2 (7)	0.162	0.204	0.058	0.050	0.085	0.74	0.258 + j0.771	0.204 + j0.052	2092	160	195
2 (7)	0.162	0.204	0.058	0.050	0.085	0.74	0.258 + j0.771	0.204 + j0.052	2092	160	195
1 (Solid)	0.128	0.162	0.057	0.050	0.086	0.74	0.216 + j0.767	0.162 + j0.048	2441	180	220
1 (19)	0.128	0.162	0.053	0.048	0.093	0.81	0.216 + j0.765	0.162 + j0.049	2441	180	220
1/0 (Solid)	0.102	0.128	0.053	0.048	0.093	0.81	0.182 + j0.762	0.128 + j0.046	3138	200	250
1/0 (19)	0.102	0.128	0.049	0.047	0.101	0.87	0.182 + j0.761	0.128 + j0.047	3138	200	250
2/0 (19)	0.081	0.102	0.045	0.045	0.109	0.94	0.156 + j0.756	0.102 + j0.045	3836	230	285
3/0 (19)	0.064	0.081	0.041	0.043	0.119	1.03	0.135 + j0.752	0.081 + j0.044	4882	260	320
4/0 (19)	0.051	0.065	0.038	0.042	0.130	1.13	0.119 + j0.747	0.065 + j0.042	6277	300	360
4/0 (19)	0.051	0.065	0.038	0.042	0.130	1.13	0.119 + j0.745	0.065 + j0.043	6094	300	360
250 (37)	0.043	0.056	0.036	0.041	0.137	1.19	0.111 + j0.741	0.056 + j0.041	7203	325	
350 (37)	0.031	0.041	0.031	0.039	0.156	1.35	0.095 + j0.733	0.041 + j0.040	9973	390	460
350 (37)	0.031	0.041	0.031	0.039	0.156	1.35	0.095 + j0.733	0.041 + j0.040	9973	390	460
500 (37)	0.022	0.030	0.027	0.037	0.180	1.56	0.084 + j0.725	0.030 + j0.037	14406	455	525
500 (37)	0.022	0.030	0.027	0.037	0.180	1.56	0.084 + j0.725	0.030 + j0.037	14406	455	525
500 (37)	0.022	0.030	0.027	0.038	0.180	1.56	0.084 + j0.724	0.030 + j0.038	14973	455	525
750 (61)	0.014	0.023	0.023	0.036	0.210	1.82	0.077 + j0.713	0.023 + j0.036	22019	545	580
1000 (61)	0.011	0.019	0.021	0.035	0.237	2.05	0.073 + j0.705	0.019 + j0.035	28878		
1000 (61)	0.011	0.019	0.021	0.035	0.237	2.05	0.073 + j0.705	0.019 + j0.035	28878		
1000 (61)	0.011	0.019	0.021	0.036	0.237	2.05	0.073 + j0.704	0.019 + j0.036	29419		

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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.

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 (Solid)	6.53	16.38	4.44	18.67	6x14	1.44	1.27	24.46	842	195.58	2359
689828#	2 (7)	7.16	16.84	4.44	19.13	6x14	1.44	1.27	24.92	847	198.12	2359
628184	2 (7)	7.16	16.84	4.44	19.13	6x14	1.44	1.27	24.92	850	198.12	2359
TBA	1 (Solid)	7.34	17.20	4.44	19.48	7x14	1.23	1.27	25.27	966	203.20	2977
TBA	1 (19)	8.18	18.03	4.44	20.32	7x14	1.23	1.27	26.11	990	208.28	2977
TBA	1/0 (Solid)	8.23	18.08	4.44	20.37	9x14	0.96	1.27	26.16	1130	208.28	3756
616154	1/0 (19)	9.17	18.85	4.44	21.13	9x14	0.96	1.27	26.92	1141	215.90	3756
628187	2/0 (19)	10.29	19.96	4.44	22.25	11x14	0.78	1.27	28.04	1336	223.52	4735
TBA	3/0 (19)	11.58	21.44	4.44	23.72	14x14	0.61	1.27	29.51	1615	236.22	5972
628189	4/0 (19)	13.00	22.66	4.44	24.94	18x14	0.48	1.27	30.73	1902	246.38	7529
614035	4/0 (19)	13.00	22.66	4.44	24.94	11x12	0.49	1.27	31.57	1917	251.46	7529
600829	250 (37)	14.17	24.08	4.44	26.37	13x12	0.42	1.27	32.99	2217	264.16	8900
614878#	350 (37)	16.79	26.70	4.44	29.49	18x12	0.30	1.27	36.12	2906	289.56	12460
628192	350 (37)	16.79	26.70	4.44	29.49	18x12	0.30	1.27	36.12	2935	289.56	12460
622071	500 (37)	20.04	29.95	4.44	32.74	26x12	0.21	1.27	39.37	3963	314.96	17800
611445#	500 (37)	20.04	29.95	4.44	32.74	26x12	0.21	1.27	39.37	3963	314.96	17800
628194	500 (37)	20.04	29.95	4.44	32.74	17x10	0.20	1.27	40.44	4054	322.58	17800
628195	750 (61)	24.59	34.75	4.44	37.54	25x10	0.13	1.91	46.61	5846	373.38	26700
628576^	1000 (61)	28.37	38.53	4.44	41.33	26x9	0.10	1.91	51.03	7546	408.94	35600
628197	1000 (61)	28.37	38.53	4.44	41.33	26x9	0.10	1.91	51.03	7545	408.94	35600
628199	1000 (61)	28.37	38.53	4.44	41.33	21x8	0.10	1.91	51.77	8026	414.02	35600

All dimensions are nominal and subject to normal manufacturing tolerances

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◊ Cable marked with this symbol is a standard stock item
* Pulling tension based on pulling eye directly connected to conductor
^ HiDri Plus - Water Blocking Powder. Black Jacket
# All black jacket
§ HiDri Plus - Water Blocking Powder. Black Jacket. CSA Listed

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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
2 (Solid)	0.5315	0.67	0.0189	0.1706	0.262	2.2638	0.258 + j0.772	0.204 + j0.051	2092	160	195
2 (7)	0.5315	0.67	0.0177	0.1640	0.279	2.4278	0.258 + j0.771	0.204 + j0.052	2092	160	195
2 (7)	0.5315	0.67	0.0177	0.1640	0.279	2.4278	0.258 + j0.771	0.204 + j0.052	2092	160	195
1 (Solid)	0.4199	0.53	0.0174	0.1640	0.282	2.4278	0.216 + j0.767	0.162 + j0.048	2441	180	220
1 (19)	0.4199	0.53	0.0162	0.1575	0.305	2.6575	0.216 + j0.765	0.162 + j0.049	2441	180	220
1/0 (Solid)	0.3346	0.42	0.0162	0.1575	0.305	2.6575	0.182 + j0.762	0.128 + j0.046	3138	200	250
1/0 (19)	0.3346	0.42	0.0149	0.1542	0.331	2.8543	0.182 + j0.761	0.128 + j0.047	3138	200	250
2/0 (19)	0.2657	0.33	0.0137	0.1476	0.358	3.0840	0.156 + j0.756	0.102 + j0.045	3836	230	285
3/0 (19)	0.2100	0.27	0.0125	0.1411	0.390	3.3793	0.135 + j0.752	0.081 + j0.044	4882	260	320
4/0 (19)	0.1673	0.21	0.0116	0.1378	0.427	3.7073	0.119 + j0.747	0.065 + j0.042	6277	300	360
4/0 (19)	0.1673	0.21	0.0116	0.1378	0.427	3.7073	0.119 + j0.745	0.065 + j0.043	6094	300	360
250 (37)	0.1411	0.18	0.0110	0.1345	0.449	3.9042	0.111 + j0.741	0.056 + j0.041	7203	325	
350 (37)	0.1017	0.13	0.0094	0.1280	0.512	4.4291	0.095 + j0.733	0.041 + j0.040	9973	390	460
350 (37)	0.1017	0.13	0.0094	0.1280	0.512	4.4291	0.095 + j0.733	0.041 + j0.040	9973	390	460
500 (37)	0.0722	0.10	0.0082	0.1214	0.591	5.1181	0.084 + j0.725	0.030 + j0.037	14406	455	525
500 (37)	0.0722	0.10	0.0082	0.1214	0.591	5.1181	0.084 + j0.725	0.030 + j0.037	14406	455	525
500 (37)	0.0722	0.10	0.0082	0.1247	0.591	5.1181	0.084 + j0.724	0.030 + j0.038	14973	455	525
750 (61)	0.0459	0.08	0.0070	0.1181	0.689	5.9711	0.077 + j0.713	0.023 + j0.036	22019	545	580
1000 (61)	0.0361	0.06	0.0064	0.1148	0.778	6.7257	0.073 + j0.705	0.019 + j0.035	28878		
1000 (61)	0.0361	0.06	0.0064	0.1148	0.778	6.7257	0.073 + j0.705	0.019 + j0.035	28878		
1000 (61)	0.0361	0.06	0.0064	0.1181	0.778	6.7257	0.073 + j0.704	0.019 + j0.036	29419		

*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.

CN Calculator