25kV CU 100% TRXLPE One-Third Neutral LLDPE

Single Conductor, 260 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:** 260 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

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 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

SAMPLE PRINT LEGEND:

SOUTHWIRE HI-DRI(R) [CONDUCTOR SIZE] [AWG or KCMIL] CU 25000 VOLTS TRXLPE 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	7x14	0.463	50	1.175	809	8.2	669
TBA	1 (19)	0.322	0.88	260	0.98	7x14	0.463	50	1.208	831	8.5	669
TBA	1/0 (SOLID)	0.325	0.883	260	0.983	9x14	0.36	50	1.211	927	8.5	844
628208	1/0 (19)	0.362	0.912	260	1.002	9x14	0.36	50	1.23	892	8.6	844
628211	2/0 (19)	0.405	0.956	260	1.046	11x14	0.295	50	1.274	1028	8.9	1064
TBA	3/0 (19)	0.456	1.014	260	1.134	14x14	0.231	50	1.362	1294	9.5	1342
628215	4/0 (19)	0.512	1.062	260	1.172	18x14	0.18	50	1.4	1440	9.8	1692
TBA	250 (37)	0.558	1.124	260	1.244	21x14	0.154	50	1.472	1719	10.3	2000
628218	350 (37)	0.661	1.221	260	1.331	18x12	0.114	50	1.593	2137	11.2	2800
628221	500 (37)	0.789	1.349	260	1.459	17x10	0.075	75	1.817	2969	12.7	4000
628225	750 (61)	0.968	1.538	260	1.648	25x10	0.051	75	2.006	4137	14	6000
628233	1000 (61)	1.117	1.687	260	1.827	26x9	0.039	75	2.21	5348	15.5	8000
628235	1000 (61)	1.117	1.687	260	1.827	21x8	0.038	75	2.238	5407	15.7	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
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 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	0.065	0.054	0.22	3.2	0.494+j0.230	0.176+j0.057	2444	180	220
1 (19)	0.128	0.175	0.061	0.052	0.24	3.4	0.494+j0.231	0.176+j0.058	2444	180	220
1/0 (SOLID)	0.102	0.139	0.06	0.052	0.24	3.4	0.419+j0.167	0.141+j0.055	3142	200	250
1/0 (19)	0.102	0.139	0.056	0.05	0.26	3.7	0.419+j0.168	0.141+j0.055	3142	200	250
2/0 (19)	0.082	0.112	0.052	0.048	0.28	4	0.358+j0.129	0.114+j0.053	3840	230	285
3/0 (19)	0.064	0.087	0.049	0.047	0.29	4.3	0.292+j0.094	0.09+j0.0530	4887	260	320
4/0 (19)	0.051	0.07	0.045	0.045	0.32	4.7	0.236+j0.068	0.073+j0.050	6284	300	360
250 (37)	0.043	0.059	0.042	0.044	0.34	4.9	0.204+j0.057	0.063+j0.049	7331	325	
350 (37)	0.031	0.043	0.037	0.042	0.39	5.6	0.152+j0.041	0.048+j0.046	9974	390	460
500 (37)	0.021	0.03	0.033	0.041	0.44	6.4	0.104+j0.030	0.037+j0.044	14973	455	525
750 (61)	0.014	0.021	0.028	0.038	0.52	7.5	0.072+j0.023	0.031+j0.039	22019	545	580
1000 (61)	0.011	0.018	0.025	0.037	0.58	8.4	0.057+j0.020	0.029+j0.036	28879		
1000 (61)	0.011	0.018	0.025	0.038	0.58	8.4	0.056+j0.020	0.029+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, Spacing: one diameter spacing center-to-center.

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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	7x14	1.52	1.27	29.85	1204	208.28	2977
TBA	1 (19)	8.18	22.35	6.60	24.89	7x14	1.52	1.27	30.68	1237	215.90	2977
TBA	1/0 (SOLID)	8.25	22.43	6.60	24.97	9x14	1.18	1.27	30.76	1380	215.90	3756
628208	1/0 (19)	9.19	23.16	6.60	25.45	9x14	1.18	1.27	31.24	1327	218.44	3756
628211	2/0 (19)	10.29	24.28	6.60	26.57	11x14	0.97	1.27	32.36	1530	226.06	4735
TBA	3/0 (19)	11.58	25.76	6.60	28.80	14x14	0.76	1.27	34.59	1926	241.30	5972
628215	4/0 (19)	13.00	26.97	6.60	29.77	18x14	0.59	1.27	35.56	2143	248.92	7529
TBA	250 (37)	14.17	28.55	6.60	31.60	21x14	0.51	1.27	37.39	2558	261.62	8900
628218	350 (37)	16.79	31.01	6.60	33.81	18x12	0.37	1.27	40.46	3180	284.48	12460
628221	500 (37)	20.04	34.26	6.60	37.06	17x10	0.25	1.91	46.15	4418	322.58	17800
628225	750 (61)	24.59	39.07	6.60	41.86	25x10	0.17	1.91	50.95	6157	355.60	26700
628233	1000 (61)	28.37	42.85	6.60	46.41	26x9	0.13	1.91	56.13	7959	393.70	35600
628235	1000 (61)	28.37	42.85	6.60	46.41	21x8	0.12	1.91	56.85	8047	398.78	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
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	0.0198	0.1772	0.722	10.4987	0.494+j0.230	0.176+j0.057	2444	180	220
1 (19)	0.4199	0.57	0.0186	0.1706	0.787	11.1549	0.494+j0.231	0.176+j0.058	2444	180	220
1/0 (SOLID)	0.3346	0.46	0.0183	0.1706	0.787	11.1549	0.419+j0.167	0.141+j0.055	3142	200	250
1/0 (19)	0.3346	0.46	0.0171	0.1640	0.853	12.1391	0.419+j0.168	0.141+j0.055	3142	200	250
2/0 (19)	0.2690	0.37	0.0158	0.1575	0.919	13.1234	0.358+j0.129	0.114+j0.053	3840	230	285
3/0 (19)	0.2100	0.29	0.0149	0.1542	0.951	14.1076	0.292+j0.094	0.09+j0.0530	4887	260	320
4/0 (19)	0.1673	0.23	0.0137	0.1476	1.050	15.4199	0.236+j0.068	0.073+j0.050	6284	300	360
250 (37)	0.1411	0.19	0.0128	0.1444	1.115	16.0761	0.204+j0.057	0.063+j0.049	7331	325	
350 (37)	0.1017	0.14	0.0113	0.1378	1.280	18.3727	0.152+j0.041	0.048+j0.046	9974	390	460
500 (37)	0.0689	0.10	0.0101	0.1345	1.444	20.9974	0.104+j0.030	0.037+j0.044	14973	455	525
750 (61)	0.0459	0.07	0.0085	0.1247	1.706	24.6063	0.072+j0.023	0.031+j0.039	22019	545	580
1000 (61)	0.0361	0.06	0.0076	0.1214	1.903	27.5591	0.057+j0.020	0.029+j0.036	28879		
1000 (61)	0.0361	0.06	0.0076	0.1247	1.903	27.5591	0.056+j0.020	0.029+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.
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Concentric Neutral Calculator

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