15kV CU 133% TRXLPE Full Neutral LLDPE

Single Conductor, 220 Mils Tree Retardant Cross Linked Polyethylene, 133% 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; Supersmooth conductor shield optional; A conductor tape is used for cable size larger than or equal to 1500 Kcmil
3. **Insulation:** 220 Mils Tree Retardant Cross Linked Polyethylene 133% 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

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 220 MILS -- (NESC) -- SOUTHWIRE {MMM} {YYYY} NON-CONDUCTING JACKET

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	0.735	220	0.825	16x14	0.164	50	1.053	768	8.4	530
623040	2 (7)	0.282	0.753	220	0.843	16x14	0.164	50	1.071	749	8.6	530
TBA	1 (Solid)	0.289	0.767	220	0.857	20x14	0.131	50	1.085	893	8.7	669
TBA	1 (19)	0.322	0.800	220	0.890	20x14	0.131	50	1.118	912	8.9	669
TBA	1/0 (Solid)	0.324	0.802	220	0.892	25x14	0.105	50	1.120	1047	9.0	844
628181	1/0 (19)	0.361	0.832	220	0.922	16x12	0.103	50	1.183	1052	9.5	844
628183	2/0 (19)	0.405	0.876	220	0.966	13x10	0.080	50	1.269	1284	10.2	1064
TBA	3/0 (19)	0.456	0.934	220	1.024	25x12	0.066	50	1.286	1501	10.3	1342
682294	4/0 (19)	0.512	0.982	220	1.072	20x10	0.052	50	1.375	1802	11.0	1692
TBA	250 (37)	0.558	1.044	220	1.154	25x10	0.041	50	1.458	2155	11.7	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

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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
2 (Solid)	0.162	0.204	0.071	0.054	0.070	0.61	0.258 + j0.768	0.204 + j0.053	5579	155	195
2 (7)	0.162	0.204	0.067	0.052	0.074	0.64	0.258 + j0.767	0.204 + j0.054	5579	155	195
1 (Solid)	0.128	0.162	0.066	0.052	0.075	0.65	0.216 + j0.763	0.162 + j0.050	6974	175	220
1 (19)	0.128	0.162	0.061	0.050	0.080	0.69	0.216 + j0.761	0.162 + j0.051	6974	175	220
1/0 (Solid)	0.102	0.128	0.061	0.050	0.081	0.70	0.182 + j0.759	0.128 + j0.048	8718	200	250
1/0 (19)	0.102	0.128	0.057	0.049	0.087	0.75	0.182 + j0.756	0.128 + j0.049	8865	200	250
2/0 (19)	0.081	0.102	0.053	0.048	0.094	0.81	0.156 + j0.750	0.102 + j0.048	11450	225	280
3/0 (19)	0.064	0.081	0.048	0.046	0.102	0.88	0.135 + j0.747	0.081 + j0.046	13852	260	315
4/0 (19)	0.051	0.065	0.044	0.045	0.111	0.96	0.119 + j0.741	0.065 + j0.045	17615	295	355
250 (37)	0.043	0.056	0.042	0.044	0.117	1.01	0.111 + j0.736	0.056 + j0.044	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.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

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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	2 (Solid)	6.53	18.67	5.59	20.96	16x14	0.54	1.27	26.75	1143	213.36	2359
623040	2 (7)	7.16	19.13	5.59	21.41	16x14	0.54	1.27	27.20	1115	218.44	2359
TBA	1 (Solid)	7.34	19.48	5.59	21.77	20x14	0.43	1.27	27.56	1329	220.98	2977
TBA	1 (19)	8.18	20.32	5.59	22.61	20x14	0.43	1.27	28.40	1357	226.06	2977
TBA	1/0 (Solid)	8.23	20.37	5.59	22.66	25x14	0.34	1.27	28.45	1558	228.60	3756
628181	1/0 (19)	9.17	21.13	5.59	23.42	16x12	0.34	1.27	30.05	1566	241.30	3756
628183	2/0 (19)	10.29	22.25	5.59	24.54	13x10	0.26	1.27	32.23	1911	259.08	4735
TBA	3/0 (19)	11.58	23.72	5.59	26.01	25x12	0.22	1.27	32.66	2234	261.62	5972
682294	4/0 (19)	13.00	24.94	5.59	27.23	20x10	0.17	1.27	34.93	2682	279.40	7529
TBA	250 (37)	14.17	26.52	5.59	29.31	25x10	0.13	1.27	37.03	3207	297.18	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

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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	0.0216	0.1772	0.230	2.0013	0.258 + j0.768	0.204 + j0.053	5579	155	195
2 (7)	0.5315	0.67	0.0204	0.1706	0.243	2.0997	0.258 + j0.767	0.204 + j0.054	5579	155	195
1 (Solid)	0.4199	0.53	0.0201	0.1706	0.246	2.1325	0.216 + j0.763	0.162 + j0.050	6974	175	220
1 (19)	0.4199	0.53	0.0186	0.1640	0.262	2.2638	0.216 + j0.761	0.162 + j0.051	6974	175	220
1/0 (Solid)	0.3346	0.42	0.0186	0.1640	0.266	2.2966	0.182 + j0.759	0.128 + j0.048	8718	200	250
1/0 (19)	0.3346	0.42	0.0174	0.1608	0.285	2.4606	0.182 + j0.756	0.128 + j0.049	8865	200	250
2/0 (19)	0.2657	0.33	0.0162	0.1575	0.308	2.6575	0.156 + j0.750	0.102 + j0.048	11450	225	280
3/0 (19)	0.2100	0.27	0.0146	0.1509	0.335	2.8871	0.135 + j0.747	0.081 + j0.046	13852	260	315
4/0 (19)	0.1673	0.21	0.0134	0.1476	0.364	3.1496	0.119 + j0.741	0.065 + j0.045	17615	295	355
250 (37)	0.1411	0.18	0.0128	0.1444	0.384	3.3136	0.111 + j0.736	0.056 + j0.044	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.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

CN Calculator