15kV CU 133% TRXLPE Full Neutral LLDPE Primary UD

Single Conductor, 220 Mils Tree Retardant Cross Linked Polyethylene, 133% Insulation Level, Full Concentric Neutral, Linear Low Density Polyethylene (LLDPE) Jacket

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 (Non Moisture Blocked 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

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
- 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
- UL 1072 - Listed Listed as MV 90 When Specified

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 (1)	0.258	0.735	220	0.815	16x14	0.164	50	1.043	712	12.5	531
623040	2 (7)	0.283	0.760	220	0.840	16x14	0.164	50	1.068	739	12.8	531
TBA	1 (1)	0.289	0.766	220	0.846	13x12	0.128	50	1.106	855	13.3	670
TBA	1 (19)	0.322	0.799	220	0.879	13x12	0.128	50	1.139	889	13.7	670
TBA	1/0 (1)	0.325	0.802	220	0.882	16x12	0.104	50	1.142	994	13.7	845
628181	1/0 (19)	0.362	0.839	220	0.919	16x12	0.104	50	1.179	1034	14.1	845
628183	2/0 (19)	0.405	0.882	220	0.962	13x10	0.080	50	1.266	1261	15.2	1065
TBA	3/0 (19)	0.456	0.933	220	1.013	16x10	0.065	50	1.317	1486	15.8	1342
682294	4/0 (19)	0.512	0.989	220	1.069	20x10	0.052	50	1.398	1797	16.8	1693
TBA	250 (37)	0.558	1.044	220	1.144	25x10	0.042	50	1.448	2088	17.4	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

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	0.062	0.051	0.139	0.362	0.364+j0.074	0.206+j0.050	5856.3	155	195
2 (7)	0.162	0.203	0.059	0.049	0.147	0.382	0.363+j0.073	0.205+j0.049	5856.3	155	195
1 (1)	0.129	0.161	0.058	0.050	0.149	0.387	0.290+j0.060	0.164+j0.049	7560.0	175	220
1 (19)	0.129	0.161	0.054	0.048	0.159	0.413	0.290+j0.059	0.164+j0.048	7560.0	175	220
1/0 (1)	0.102	0.128	0.054	0.048	0.160	0.416	0.234+j0.050	0.132+j0.047	9304.6	200	250
1/0 (19)	0.102	0.128	0.051	0.047	0.171	0.445	0.234+j0.049	0.132+j0.046	9304.6	200	250
2/0 (19)	0.081	0.101	0.047	0.046	0.184	0.479	0.182+j0.042	0.106+j0.044	12017.3	225	285
3/0 (19)	0.0642	0.080	0.043	0.044	0.200	0.518	0.147+j0.036	0.086+j0.042	14790.5	260	320
4/0 (19)	0.051	0.064	0.040	0.043	0.216	0.562	0.117+j0.033	0.071+j0.040	18652.0	295	360
250 (37)	0.0431	0.054	0.037	0.042	0.233	0.604	0.097+j0.029	0.061+j0.037	23110.1		

* Calculations are based on three cables triplexed / concentric 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 T-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 T-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	18.67	5.59	20.70	16x14	0.54	1.27	26.49	1060	317.50	2363
623040	2 (7)	7.19	19.30	5.59	21.34	16x14	0.54	1.27	27.13	1100	325.12	2363
TBA	1 (1)	7.34	19.46	5.59	21.49	13x12	0.42	1.27	28.09	1272	337.82	2982
TBA	1 (19)	8.18	20.29	5.59	22.33	13x12	0.42	1.27	28.93	1323	347.98	2982
TBA	1/0 (1)	8.25	20.37	5.59	22.40	16x12	0.34	1.27	29.01	1479	347.98	3760
628181	1/0 (19)	9.19	21.31	5.59	23.34	16x12	0.34	1.27	29.95	1539	358.14	3760
628183	2/0 (19)	10.29	22.40	5.59	24.43	13x10	0.26	1.27	32.16	1877	386.08	4739
TBA	3/0 (19)	11.58	23.70	5.59	25.73	16x10	0.21	1.27	33.45	2211	401.32	5972
682294	4/0 (19)	13.00	25.12	5.59	27.15	20x10	0.17	1.27	35.51	2674	426.72	7534
TBA	250 (37)	14.17	26.52	5.59	29.06	25x10	0.14	1.27	36.78	3107	441.96	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

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	0.0189	0.1673	0.456	1.1877	0.364+j0.074	0.206+j0.050	5856.3	155	195
2 (7)	0.5315	0.67	0.0180	0.1608	0.482	1.2533	0.363+j0.073	0.205+j0.049	5856.3	155	195
1 (1)	0.4232	0.53	0.0177	0.1640	0.489	1.2697	0.290+j0.060	0.164+j0.049	7560.0	175	220
1 (19)	0.4232	0.53	0.0165	0.1575	0.522	1.3550	0.290+j0.059	0.164+j0.048	7560.0	175	220
1/0 (1)	0.3346	0.42	0.0165	0.1575	0.525	1.3648	0.234+j0.050	0.132+j0.047	9304.6	200	250
1/0 (19)	0.3346	0.42	0.0155	0.1542	0.561	1.4600	0.234+j0.049	0.132+j0.046	9304.6	200	250
2/0 (19)	0.2657	0.33	0.0143	0.1509	0.604	1.5715	0.182+j0.042	0.106+j0.044	12017.3	225	285
3/0 (19)	0.2106	0.26	0.0131	0.1444	0.656	1.6995	0.147+j0.036	0.086+j0.042	14790.5	260	320
4/0 (19)	0.1673	0.21	0.0122	0.1411	0.709	1.8438	0.117+j0.033	0.071+j0.040	18652.0	295	360
250 (37)	0.1414	0.18	0.0113	0.1378	0.764	1.9816	0.097+j0.029	0.061+j0.037	23110.1		

* Calculations are based on three cables triplexed / concentric 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 T-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 T-117-734 (Single circuit trefoil, 100% load factor, 90°C conductor temperature, earth RHO 90, 36" burial depth)