15kV CU 133% TRXLPE One-Third Neutral LLDPE Primary UD

Single Conductor, 220 Mils Tree Retardant Cross Linked Polyethylene, 133% Insulation Level, One-third 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 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 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	6x14	0.438	50	1.043	601	12.5	531
430074	2 (7)	0.283	0.760	220	0.840	6x14	0.438	50	1.068	628	12.8	531
TBA	1 (1)	0.289	0.766	220	0.846	7x14	0.376	50	1.074	680	12.9	670
TBA	1 (19)	0.322	0.799	220	0.879	7x14	0.376	50	1.107	713	13.3	670
TBA	1/0 (1)	0.325	0.802	220	0.882	9x14	0.292	50	1.110	787	13.3	845
628160	1/0 (19)	0.362	0.839	220	0.919	9x14	0.292	50	1.147	826	13.8	845
628161	2/0 (19)	0.405	0.882	220	0.962	11x14	0.239	50	1.190	958	14.3	1065
619059^	2/0 (19)	0.405	0.882	220	0.962	11x14	0.239	50	1.190	958	14.3	1065
TBA	3/0 (19)	0.456	0.933	220	1.013	14x14	0.188	50	1.241	1130	14.9	1342
628165	4/0 (19)	0.512	0.989	220	1.069	18x14	0.146	50	1.297	1344	15.6	1693
TBA	250 (37)	0.558	1.044	220	1.144	21x14	0.125	50	1.372	1549	16.5	2000
628167	350 (37)	0.661	1.147	220	1.247	18x12	0.092	50	1.507	2042	18.1	2800
611445	500 (37)	0.789	1.275	220	1.375	26x12	0.061	50	1.550	2625	19	4000
612883	500 (37)	0.789	1.275	220	1.375	17x10	0.061	80	1.739	2862	20.9	4000
628171	750 (61)	0.968	1.463	220	1.563	25x10	0.041	80	1.952	4041	23.4	6000
628175	1000 (61)	1.117	1.612	220	1.742	26x9	0.031	80	2.159	5251	25.9	8000
628177	1000 (61)	1.117	1.612	220	1.742	21x8	0.031	80	2.159	5251	25.9	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
^ No Red Stripes

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	0.521+j0.233	0.204+j0.051	2196.1	160	195
2 (7)	0.162	0.203	0.059	0.049	0.147	0.382	0.520+j0.232	0.204+j0.049	2196.1	160	195
1 (1)	0.129	0.161	0.058	0.049	0.149	0.387	0.455+j0.193	0.162+j0.049	2562.1	180	220
1 (19)	0.129	0.161	0.054	0.048	0.159	0.413	0.454+j0.192	0.162+j0.047	2562.1	180	220
1/0 (1)	0.102	0.128	0.054	0.047	0.160	0.416	0.380+j0.140	0.129+j0.047	3294.2	200	250
1/0 (19)	0.102	0.128	0.051	0.046	0.171	0.445	0.379+j0.139	0.129+j0.046	3294.2	200	250
2/0 (19)	0.081	0.101	0.047	0.044	0.184	0.479	0.318+j0.107	0.103+j0.044	4026.2	230	285
2/0 (19)	0.081	0.101	0.047	0.044	0.184	0.479	0.318+j0.107	0.103+j0.044	4026.2	230	285
3/0 (19)	0.0642	0.080	0.043	0.043	0.200	0.518	0.259+j0.079	0.082+j0.043	5124.3	260	325
4/0 (19)	0.051	0.064	0.040	0.041	0.216	0.562	0.208+j0.059	0.067+j0.041	6588.4	300	365
250 (37)	0.0431	0.054	0.037	0.041	0.233	0.604	0.179+j0.050	0.057+j0.040	7686.4		
350 (37)	0.0308	0.039	0.033	0.039	0.263	0.683	0.134+j0.039	0.043+j0.038	10467.7	390	475
500 (37)	0.0216	0.028	0.029	0.039	0.301	0.781	0.091+j0.030	0.034+j0.036	15714.9	455	555
500 (37)	0.0216	0.028	0.029	0.039	0.301	0.781	0.091+j0.030	0.034+j0.036	15714.9	455	555
750 (61)	0.0144	0.019	0.024	0.037	0.356	0.924	0.062+j0.025	0.026+j0.032	23314.9	545	650
1000 (61)	0.0108	0.015	0.022	0.036	0.399	1.037	0.047+j0.023	0.023+j0.029	30876.7		
1000 (61)	0.0108	0.015	0.022	0.036	0.399	1.037	0.047+j0.023	0.023+j0.029	30876.7		

* 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	6x14	1.44	1.27	26.49	894	317.50	2363
430074	2 (7)	7.19	19.30	5.59	21.34	6x14	1.44	1.27	27.13	935	325.12	2363
TBA	1 (1)	7.34	19.46	5.59	21.49	7x14	1.23	1.27	27.28	1012	327.66	2982
TBA	1 (19)	8.18	20.29	5.59	22.33	7x14	1.23	1.27	28.12	1061	337.82	2982
TBA	1/0 (1)	8.25	20.37	5.59	22.40	9x14	0.96	1.27	28.19	1171	337.82	3760
628160	1/0 (19)	9.19	21.31	5.59	23.34	9x14	0.96	1.27	29.13	1229	350.52	3760
628161	2/0 (19)	10.29	22.40	5.59	24.43	11x14	0.78	1.27	30.23	1426	363.22	4739
619059^	2/0 (19)	10.29	22.40	5.59	24.43	11x14	0.78	1.27	30.23	1426	363.22	4739
TBA	3/0 (19)	11.58	23.70	5.59	25.73	14x14	0.62	1.27	31.52	1682	378.46	5972
628165	4/0 (19)	13.00	25.12	5.59	27.15	18x14	0.48	1.27	32.94	2000	396.24	7534
TBA	250 (37)	14.17	26.52	5.59	29.06	21x14	0.41	1.27	34.85	2305	419.10	8900
628167	350 (37)	16.79	29.13	5.59	31.67	18x12	0.30	1.27	38.28	3039	459.74	12460
611445	500 (37)	20.04	32.39	5.59	34.93	26x12	0.20	1.27	39.37	3906	482.60	17800
612883	500 (37)	20.04	32.39	5.59	34.93	17x10	0.20	2.03	44.17	4259	530.86	17800
628171	750 (61)	24.59	37.16	5.59	39.70	25x10	0.13	2.03	49.58	6014	594.36	26700
628175	1000 (61)	28.37	40.94	5.59	44.25	26x9	0.10	2.03	54.84	7814	657.86	35600
628177	1000 (61)	28.37	40.94	5.59	44.25	21x8	0.10	2.03	54.84	7814	657.86	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
^ No Red Stripes

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	0.521+j0.233	0.204+j0.051	2196.1	160	195
2 (7)	0.5315	0.67	0.0180	0.1608	0.482	1.2533	0.520+j0.232	0.204+j0.049	2196.1	160	195
1 (1)	0.4232	0.53	0.0177	0.1608	0.489	1.2697	0.455+j0.193	0.162+j0.049	2562.1	180	220
1 (19)	0.4232	0.53	0.0165	0.1575	0.522	1.3550	0.454+j0.192	0.162+j0.047	2562.1	180	220
1/0 (1)	0.3346	0.42	0.0165	0.1542	0.525	1.3648	0.380+j0.140	0.129+j0.047	3294.2	200	250
1/0 (19)	0.3346	0.42	0.0155	0.1509	0.561	1.4600	0.379+j0.139	0.129+j0.046	3294.2	200	250
2/0 (19)	0.2657	0.33	0.0143	0.1444	0.604	1.5715	0.318+j0.107	0.103+j0.044	4026.2	230	285
2/0 (19)	0.2657	0.33	0.0143	0.1444	0.604	1.5715	0.318+j0.107	0.103+j0.044	4026.2	230	285
3/0 (19)	0.2106	0.26	0.0131	0.1411	0.656	1.6995	0.259+j0.079	0.082+j0.043	5124.3	260	325
4/0 (19)	0.1673	0.21	0.0122	0.1345	0.709	1.8438	0.208+j0.059	0.067+j0.041	6588.4	300	365
250 (37)	0.1414	0.18	0.0113	0.1345	0.764	1.9816	0.179+j0.050	0.057+j0.040	7686.4		
350 (37)	0.1010	0.13	0.0101	0.1280	0.863	2.2408	0.134+j0.039	0.043+j0.038	10467.7	390	475
500 (37)	0.0709	0.09	0.0088	0.1280	0.988	2.5623	0.091+j0.030	0.034+j0.036	15714.9	455	555
500 (37)	0.0709	0.09	0.0088	0.1280	0.988	2.5623	0.091+j0.030	0.034+j0.036	15714.9	455	555
750 (61)	0.0472	0.06	0.0073	0.1214	1.168	3.0315	0.062+j0.025	0.026+j0.032	23314.9	545	650
1000 (61)	0.0354	0.05	0.0067	0.1181	1.309	3.4022	0.047+j0.023	0.023+j0.029	30876.7		
1000 (61)	0.0354	0.05	0.0067	0.1181	1.309	3.4022	0.047+j0.023	0.023+j0.029	30876.7		

* 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

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‡ 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)