15kV CU 100% TRXLPE One-Third Neutral LLDPE Primary UD

Single Conductor, 175 Mils Tree Retardant Cross Linked Polyethylene, 100% 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:** 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

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 175 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	0.645	175	0.725	6x14	0.438	50	0.953	543	11.4	531
689828#	2 (7)	0.283	0.670	175	0.750	6x14	0.438	50	0.978	568	11.7	531
628184	2 (7)	0.283	0.670	175	0.750	6x14	0.438	50	0.978	568	11.7	531
TBA	1 (1)	0.289	0.676	175	0.756	7x14	0.376	50	0.984	621	11.8	670
TBA	1 (19)	0.322	0.709	175	0.789	7x14	0.376	50	1.017	652	12.2	670
TBA	1/0 (1)	0.325	0.712	175	0.792	9x14	0.292	50	1.020	726	12.2	845
616154	1/0 (19)	0.362	0.749	175	0.829	9x14	0.292	50	1.057	763	12.7	845
628187	2/0 (19)	0.405	0.792	175	0.872	11x14	0.239	50	1.100	892	13.2	1065
TBA	3/0 (19)	0.456	0.843	175	0.923	14x14	0.188	50	1.151	1061	13.8	1342
628189	4/0 (19)	0.512	0.899	175	0.979	18x14	0.146	50	1.207	1272	14.5	1693
614035	4/0 (19)	0.512	0.899	175	0.979	11x12	0.146	50	1.243	1281	14.5	1693
TBA	250 (37)	0.558	0.954	175	1.034	21x14	0.125	50	1.262	1454	15.1	2000
628192	350 (37)	0.661	1.057	175	1.157	18x12	0.092	50	1.417	1958	17.0	2800
614878#	350 (37)	0.661	1.057	175	1.157	18x12	0.092	50	1.42	1943	17.0	2800
628194	500 (37)	0.789	1.185	175	1.285	17x10	0.061	50	1.589	2703	19.1	4000
628195	750 (61)	0.968	1.373	175	1.473	25x10	0.041	80	1.862	3932	22.3	6000
628576^	1000 (61)	1.117	1.522	175	1.622	26x9	0.031	80	2.039	5083	24.5	8000
628197	1000 (61)	1.117	1.522	175	1.622	26x9	0.031	80	2.039	5083	24.5	8000
628199	1000 (61)	1.117	1.522	175	1.622	21x8	0.031	80	2.039	5083	24.5	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 - Moisture absorbing powder under jacket
# All black jacket

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	0.053	0.049	0.163	0.423	0.523+j0.230	0.204+j0.049	2196.1	160	195
2 (7)	0.162	0.203	0.050	0.047	0.172	0.447	0.522+j0.229	0.204+j0.047	2196.1	160	195
2 (7)	0.162	0.203	0.050	0.047	0.172	0.447	0.522+j0.229	0.204+j0.047	2196.1	160	195
1 (1)	0.129	0.161	0.050	0.047	0.174	0.453	0.456+j0.189	0.162+j0.047	2562.1	180	220
1 (19)	0.129	0.161	0.046	0.046	0.187	0.486	0.456+j0.188	0.162+j0.046	2562.1	180	220
1/0 (1)	0.102	0.128	0.046	0.046	0.188	0.489	0.381+j0.137	0.129+j0.045	3294.2	200	250
1/0 (19)	0.102	0.128	0.043	0.044	0.202	0.525	0.380+j0.136	0.129+j0.044	3294.2	200	250
2/0 (19)	0.081	0.101	0.040	0.043	0.218	0.567	0.319+j0.104	0.103+j0.042	4026.2	230	285
3/0 (19)	0.0642	0.081	0.037	0.041	0.237	0.616	0.260+j0.077	0.083+j0.041	5124.3	260	325
4/0 (19)	0.051	0.064	0.034	0.040	0.258	0.670	0.208+j0.056	0.067+j0.039	6588.4	300	365
4/0 (19)	0.051	0.064	0.034	0.040	0.258	0.670	0.208+j0.056	0.067+j0.039	6588.4	300	365
250 (37)	0.0431	0.054	0.031	0.039	0.278	0.723	0.180+j0.047	0.057+j0.038	7686.4		
350 (37)	0.0308	0.039	0.027	0.038	0.316	0.822	0.134+j0.037	0.043+j0.037	10467.7	390	475
350 (37)	0.0308	0.039	0.027	0.038	0.316	0.822	0.134+j0.037	0.043+j0.037	10467.7	390	475
500 (37)	0.0216	0.028	0.024	0.036	0.364	0.945	0.091+j0.029	0.034+j0.034	15714.9	455	555
750 (61)	0.0144	0.019	0.020	0.035	0.432	1.124	0.062+j0.023	0.026+j0.031	23314.9	545	650
1000 (61)	0.0108	0.015	0.018	0.034	0.487	1.265	0.047+j0.021	0.023+j0.028	30876.7		
1000 (61)	0.0108	0.015	0.018	0.034	0.487	1.265	0.047+j0.021	0.023+j0.028	30876.7		
1000 (61)	0.0108	0.015	0.018	0.034	0.487	1.265	0.047+j0.021	0.023+j0.028	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	16.38	4.44	18.42	6x14	1.44	1.27	24.21	808	289.56	2363
689828#	2 (7)	7.19	17.02	4.44	19.05	6x14	1.44	1.27	24.84	845	297.18	2363
628184	2 (7)	7.19	17.02	4.44	19.05	6x14	1.44	1.27	24.84	845	297.18	2363
TBA	1 (1)	7.34	17.17	4.44	19.20	7x14	1.23	1.27	24.99	924	299.72	2982
TBA	1 (19)	8.18	18.01	4.44	20.04	7x14	1.23	1.27	25.83	970	309.88	2982
TBA	1/0 (1)	8.25	18.08	4.44	20.12	9x14	0.96	1.27	25.91	1080	309.88	3760
616154	1/0 (19)	9.19	19.02	4.44	21.06	9x14	0.96	1.27	26.85	1135	322.58	3760
628187	2/0 (19)	10.29	20.12	4.44	22.15	11x14	0.78	1.27	27.94	1327	335.28	4739
TBA	3/0 (19)	11.58	21.41	4.44	23.44	14x14	0.62	1.27	29.24	1579	350.52	5972
628189	4/0 (19)	13.00	22.83	4.44	24.87	18x14	0.48	1.27	30.66	1893	368.30	7534
614035	4/0 (19)	13.00	22.83	4.44	24.87	11x12	0.48	1.27	31.57	1906	368.30	7534
TBA	250 (37)	14.17	24.23	4.44	26.26	21x14	0.41	1.27	32.05	2164	383.54	8900
628192	350 (37)	16.79	26.85	4.44	29.39	18x12	0.30	1.27	35.99	2914	431.80	12460
614878#	350 (37)	16.79	26.85	4.44	29.39	18x12	0.30	1.27	36.07	2892	431.80	12460
628194	500 (37)	20.04	30.10	4.44	32.64	17x10	0.20	1.27	40.36	4023	485.14	17800
628195	750 (61)	24.59	34.87	4.44	37.41	25x10	0.13	2.03	47.29	5851	566.42	26700
628576^	1000 (61)	28.37	38.66	4.44	41.20	26x9	0.10	2.03	51.79	7564	622.30	35600
628197	1000 (61)	28.37	38.66	4.44	41.20	26x9	0.10	2.03	51.79	7564	622.30	35600
628199	1000 (61)	28.37	38.66	4.44	41.20	21x8	0.10	2.03	51.79	7564	622.30	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
^ HIDRI PLUS - Moisture absorbing powder under jacket
# All black jacket

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	0.0162	0.1608	0.535	1.3878	0.523+j0.230	0.204+j0.049	2196.1	160	195
2 (7)	0.5315	0.67	0.0152	0.1542	0.564	1.4665	0.522+j0.229	0.204+j0.047	2196.1	160	195
2 (7)	0.5315	0.67	0.0152	0.1542	0.564	1.4665	0.522+j0.229	0.204+j0.047	2196.1	160	195
1 (1)	0.4232	0.53	0.0152	0.1542	0.571	1.4862	0.456+j0.189	0.162+j0.047	2562.1	180	220
1 (19)	0.4232	0.53	0.0140	0.1509	0.614	1.5945	0.456+j0.188	0.162+j0.046	2562.1	180	220
1/0 (1)	0.3346	0.42	0.0140	0.1509	0.617	1.6043	0.381+j0.137	0.129+j0.045	3294.2	200	250
1/0 (19)	0.3346	0.42	0.0131	0.1444	0.663	1.7224	0.380+j0.136	0.129+j0.044	3294.2	200	250
2/0 (19)	0.2657	0.33	0.0122	0.1411	0.715	1.8602	0.319+j0.104	0.103+j0.042	4026.2	230	285
3/0 (19)	0.2106	0.27	0.0113	0.1345	0.778	2.0210	0.260+j0.077	0.083+j0.041	5124.3	260	325
4/0 (19)	0.1673	0.21	0.0104	0.1312	0.846	2.1982	0.208+j0.056	0.067+j0.039	6588.4	300	365
4/0 (19)	0.1673	0.21	0.0104	0.1312	0.846	2.1982	0.208+j0.056	0.067+j0.039	6588.4	300	365
250 (37)	0.1414	0.18	0.0094	0.1280	0.912	2.3720	0.180+j0.047	0.057+j0.038	7686.4		
350 (37)	0.1010	0.13	0.0082	0.1247	1.037	2.6969	0.134+j0.037	0.043+j0.037	10467.7	390	475
350 (37)	0.1010	0.13	0.0082	0.1247	1.037	2.6969	0.134+j0.037	0.043+j0.037	10467.7	390	475
500 (37)	0.0709	0.09	0.0073	0.1181	1.194	3.1004	0.091+j0.029	0.034+j0.034	15714.9	455	555
750 (61)	0.0472	0.06	0.0061	0.1148	1.417	3.6877	0.062+j0.023	0.026+j0.031	23314.9	545	650
1000 (61)	0.0354	0.05	0.0055	0.1115	1.598	4.1503	0.047+j0.021	0.023+j0.028	30876.7		
1000 (61)	0.0354	0.05	0.0055	0.1115	1.598	4.1503	0.047+j0.021	0.023+j0.028	30876.7		
1000 (61)	0.0354	0.05	0.0055	0.1115	1.598	4.1503	0.047+j0.021	0.023+j0.028	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)