

## 25kV CU 100% TRXLPE LCT LLDPE Primary UD

Single Conductor, 260 Mils Tree Retardant Cross Linked Polyethylene, 100% Insulation Level, Longitudinally Corrugated Tape Shield, Linear Low Density Polyethylene (LLDPE) Jacket. Silicone Free

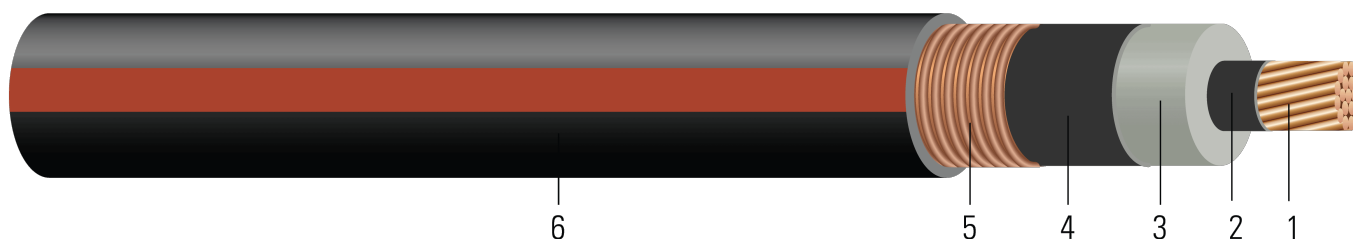


Image not to scale. See Table 1 for dimensions.

### CONSTRUCTION:

- 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)
- 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
- Insulation:** 260 Mils Tree Retardant Cross Linked Polyethylene 100% insulation level
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- Tape Shield:** 10 mils Longitudinally Corrugated Tape Shield
- 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, 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
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV
- 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: -40°C and MV 90°C 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	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension*
	AWG/ Kcmil	inch	inch	mil	inch	mil	inch	lb /1000ft	inch	lb
TBA	1 (1)	0.289	0.846	260	0.906	80	1.166	805	9.3	670
TBA	1 (19)	0.322	0.879	260	0.939	80	1.199	838	9.5	670
TBA	1/0 (1)	0.325	0.882	260	0.942	80	1.202	889	9.6	845
TBA	1/0 (19)	0.362	0.919	260	0.979	80	1.239	928	9.9	845
TBA	2/0 (19)	0.405	0.962	260	1.022	80	1.282	1038	10.2	1065
TBA	3/0 (19)	0.456	1.013	260	1.073	80	1.333	1176	10.6	1342
TBA	4/0 (19)	0.512	1.069	260	1.129	80	1.389	1344	11.1	1693
TBA	250 (37)	0.558	1.124	260	1.184	80	1.444	1496	11.5	2000
TBA	350 (37)	0.661	1.227	260	1.287	80	1.547	1869	12.3	2800
TBA	500 (37)	0.789	1.355	260	1.415	80	1.641	2454	13.1	4000
614491 <sup>^</sup>	750 (61)	0.968	1.543	260	1.603	110	1.938	3464	15.5	6000
613981 <sup>^</sup>	1000 (61)	1.117	1.692	260	1.752	110	2.087	4366	16.6	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

<sup>^</sup> Supersmooth conductor Shield



**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 (1)	0.129	0.161	0.065	0.051	0.222	0.963	0.452+j0.176	0.162+j0.051	3819.3	175	220
1 (19)	0.129	0.161	0.061	0.049	0.237	1.026	0.446+j0.167	0.162+j0.049	3936.5	175	220
1/0 (1)	0.102	0.128	0.061	0.049	0.238	1.031	0.412+j0.166	0.129+j0.049	3947.1	200	250
1/0 (19)	0.102	0.128	0.057	0.048	0.254	1.101	0.405+j0.157	0.129+j0.048	4078.5	200	250
2/0 (19)	0.081	0.101	0.053	0.046	0.273	1.181	0.371+j0.147	0.102+j0.046	4231.2	230	285
3/0 (19)	0.0642	0.080	0.049	0.045	0.295	1.275	0.341+j0.137	0.081+j0.044	4412.3	260	325
4/0 (19)	0.051	0.064	0.045	0.043	0.318	1.378	0.316+j0.127	0.065+j0.043	4611.2	300	365
250 (37)	0.0431	0.054	0.042	0.042	0.342	1.479	0.297+j0.118	0.055+j0.042	4806.5		
350 (37)	0.0308	0.039	0.038	0.040	0.385	1.666	0.268+j0.104	0.040+j0.040	5172.3	390	480
500 (37)	0.0216	0.028	0.033	0.037	0.438	1.897	0.241+j0.091	0.029+j0.037	5626.9	470	575
750 (61)	0.0144	0.019	0.028	0.036	0.516	2.235	0.211+j0.075	0.021+j0.036	6294.6	585	695
1000 (61)	0.0108	0.015	0.025	0.034	0.578	2.501	0.194+j0.066	0.017+j0.034	6823.7	670	785

\* Calculations are based on three cables triplexed / tape 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 P-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 P-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	Jacket Thickness	Approx. OD	Approx. Weight	Min Bending Radius	Max Pull Tension*
	AWG/ Kcmil	mm	mm	mm	mm	mm	mm	kg/km	mm	newton
TBA	1 (1)	7.34	21.49	6.60	23.01	2.03	29.62	1198	236.22	2982
TBA	1 (19)	8.18	22.33	6.60	23.85	2.03	30.45	1247	241.30	2982
TBA	1/0 (1)	8.25	22.40	6.60	23.93	2.03	30.53	1323	243.84	3760
TBA	1/0 (19)	9.19	23.34	6.60	24.87	2.03	31.47	1381	251.46	3760
TBA	2/0 (19)	10.29	24.43	6.60	25.96	2.03	32.56	1545	259.08	4739
TBA	3/0 (19)	11.58	25.73	6.60	27.25	2.03	33.86	1750	269.24	5972
TBA	4/0 (19)	13.00	27.15	6.60	28.68	2.03	35.28	2000	281.94	7534
TBA	250 (37)	14.17	28.55	6.60	30.07	2.03	36.68	2226	292.10	8900
TBA	350 (37)	16.79	31.17	6.60	32.69	2.03	39.29	2781	312.42	12460
TBA	500 (37)	20.04	34.42	6.60	35.94	2.03	41.68	3652	332.74	17800
614491 <sup>^</sup>	750 (61)	24.59	39.19	6.60	40.72	2.79	49.23	5155	393.70	26700
613981 <sup>^</sup>	1000 (61)	28.37	42.98	6.60	44.50	2.79	53.01	6497	421.64	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

<sup>^</sup> Supersmooth conductor Shield



**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 (1)	0.4232	0.53	0.0198	0.1673	0.728	3.1594	0.452+j0.176	0.162+j0.051	3819.3	175	220
1 (19)	0.4232	0.53	0.0186	0.1608	0.778	3.3661	0.446+j0.167	0.162+j0.049	3936.5	175	220
1/0 (1)	0.3346	0.42	0.0186	0.1608	0.781	3.3825	0.412+j0.166	0.129+j0.049	3947.1	200	250
1/0 (19)	0.3346	0.42	0.0174	0.1575	0.833	3.6122	0.405+j0.157	0.129+j0.048	4078.5	200	250
2/0 (19)	0.2657	0.33	0.0162	0.1509	0.896	3.8747	0.371+j0.147	0.102+j0.046	4231.2	230	285
3/0 (19)	0.2106	0.26	0.0149	0.1476	0.968	4.1831	0.341+j0.137	0.081+j0.044	4412.3	260	325
4/0 (19)	0.1673	0.21	0.0137	0.1411	1.043	4.5210	0.316+j0.127	0.065+j0.043	4611.2	300	365
250 (37)	0.1414	0.18	0.0128	0.1378	1.122	4.8524	0.297+j0.118	0.055+j0.042	4806.5		
350 (37)	0.1010	0.13	0.0116	0.1312	1.263	5.4659	0.268+j0.104	0.040+j0.040	5172.3	390	480
500 (37)	0.0709	0.09	0.0101	0.1214	1.437	6.2238	0.241+j0.091	0.029+j0.037	5626.9	470	575
750 (61)	0.0472	0.06	0.0085	0.1181	1.693	7.3327	0.211+j0.075	0.021+j0.036	6294.6	585	695
1000 (61)	0.0354	0.05	0.0076	0.1115	1.896	8.2054	0.194+j0.066	0.017+j0.034	6823.7	670	785

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

