15kV AL 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 Aluminum ASTM B231 1350 ¾ hard H16/H26 (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 B231 Standard Specification for Concentric-Lay-Stranded Aluminum 1350 Conductors
- ASTM B609 Standard Specification for Aluminum 1350 Round Wire, Annealed and Intermediate Tempers, for Electrical Purposes
- 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] AL 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
613418**	2 (1)	0.258	0.735	220	0.815	10x14	0.263	50	1.043	505	12.5	398
610306	2 (7)	0.283	0.760	220	0.840	10x14	0.263	50	1.068	529	12.8	398
TBA	1 (1)	0.289	0.766	220	0.846	13x14	0.202	50	1.074	571	12.9	502
TBA	1 (19)	0.322	0.799	220	0.879	13x14	0.202	50	1.107	599	13.3	502
TBA	1/0 (1)	0.325	0.802	220	0.882	16x14	0.164	50	1.110	642	13.3	634
610307	1/0 (19)	0.352	0.829	220	0.909	16x14	0.164	50	1.137	666	13.6	634
606978**	2/0 (19)	0.395	0.872	220	0.952	20x14	0.128	50	1.212	772	14.5	799
TBA	2/0 (19)	0.395	0.872	220	0.952	13x12	0.128	50	1.212	794	14.5	799
TBA	3/0 (19)	0.443	0.920	220	1.000	16x12	0.104	50	1.260	908	15.1	1007
610406	4/0 (19)	0.498	0.975	220	1.055	20x12	0.080	50	1.320	1070	16.3	1270
TBA	250 (37)	0.558	1.044	220	1.144	16x10	0.065	50	1.448	1298	17.4	1500
TBA	350 (37)	0.661	1.147	220	1.247	16x9	0.052	50	1.576	1605	18.9	2100

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 (1)	0.266	0.334	0.062	0.051	0.139	0.362	0.568+j0.125	0.336+j0.051	3660.2	120	150
2 (7)	0.266	0.334	0.059	0.049	0.147	0.382	0.568+j0.124	0.336+j0.049	3660.2	120	150
1 (1)	0.211	0.265	0.058	0.049	0.149	0.387	0.456+j0.091	0.267+j0.049	4758.3	140	175
1 (19)	0.211	0.265	0.054	0.048	0.159	0.413	0.456+j0.090	0.267+j0.047	4758.3	140	175
1/0 (1)	0.168	0.211	0.054	0.047	0.160	0.416	0.371+j0.071	0.213+j0.047	5856.3	155	195
1/0 (19)	0.168	0.211	0.051	0.046	0.168	0.437	0.371+j0.070	0.213+j0.046	5856.3	155	195
2/0 (19)	0.133	0.167	0.048	0.045	0.181	0.471	0.296+j0.057	0.170+j0.045	7560.0	180	225
2/0 (19)	0.133	0.167	0.048	0.045	0.181	0.471	0.296+j0.057	0.170+j0.045	7560.0	180	225
3/0 (19)	0.105	0.132	0.044	0.044	0.196	0.508	0.238+j0.047	0.136+j0.043	9304.6	205	250
4/0 (19)	0.0836	0.105	0.041	0.043	0.212	0.551	0.186+j0.040	0.110+j0.041	12017.3	235	285
250 (37)	0.0707	0.089	0.037	0.042	0.233	0.604	0.156+j0.034	0.095+j0.039	14790.5		
350 (37)	0.0505	0.064	0.033	0.040	0.263	0.683	0.117+j0.031	0.070+j0.037	18652.0	305	370

* 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
613418**	2 (1)	6.55	18.67	5.59	20.70	10x14	0.86	1.27	26.49	752	317.50	1771
610306	2 (7)	7.19	19.30	5.59	21.34	10x14	0.86	1.27	27.13	787	325.12	1771
TBA	1 (1)	7.34	19.46	5.59	21.49	13x14	0.66	1.27	27.28	850	327.66	2234
TBA	1 (19)	8.18	20.29	5.59	22.33	13x14	0.66	1.27	28.12	891	337.82	2234
TBA	1/0 (1)	8.25	20.37	5.59	22.40	16x14	0.54	1.27	28.19	955	337.82	2821
610307	1/0 (19)	8.94	21.06	5.59	23.09	16x14	0.54	1.27	28.88	991	345.44	2821
606978**	2/0 (19)	10.03	22.15	5.59	24.18	20x14	0.42	1.27	30.78	1149	368.30	3556
TBA	2/0 (19)	10.03	22.15	5.59	24.18	13x12	0.42	1.27	30.78	1182	368.30	3556
TBA	3/0 (19)	11.25	23.37	5.59	25.40	16x12	0.34	1.27	32.00	1351	383.54	4481
610406	4/0 (19)	12.65	24.76	5.59	26.80	20x12	0.26	1.27	33.53	1592	414.02	5652
TBA	250 (37)	14.17	26.52	5.59	29.06	16x10	0.21	1.27	36.78	1932	441.96	6675
TBA	350 (37)	16.79	29.13	5.59	31.67	16x9	0.17	1.27	40.03	2389	480.06	9345

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 (1)	0.8727	1.10	0.0189	0.1673	0.456	1.1877	0.568+j0.125	0.336+j0.051	3660.2	120	150
2 (7)	0.8727	1.10	0.0180	0.1608	0.482	1.2533	0.568+j0.124	0.336+j0.049	3660.2	120	150
1 (1)	0.6923	0.87	0.0177	0.1608	0.489	1.2697	0.456+j0.091	0.267+j0.049	4758.3	140	175
1 (19)	0.6923	0.87	0.0165	0.1575	0.522	1.3550	0.456+j0.090	0.267+j0.047	4758.3	140	175
1/0 (1)	0.5512	0.69	0.0165	0.1542	0.525	1.3648	0.371+j0.071	0.213+j0.047	5856.3	155	195
1/0 (19)	0.5512	0.69	0.0155	0.1509	0.551	1.4337	0.371+j0.070	0.213+j0.046	5856.3	155	195
2/0 (19)	0.4364	0.55	0.0146	0.1476	0.594	1.5453	0.296+j0.057	0.170+j0.045	7560.0	180	225
2/0 (19)	0.4364	0.55	0.0146	0.1476	0.594	1.5453	0.296+j0.057	0.170+j0.045	7560.0	180	225
3/0 (19)	0.3445	0.43	0.0134	0.1444	0.643	1.6667	0.238+j0.047	0.136+j0.043	9304.6	205	250
4/0 (19)	0.2743	0.34	0.0125	0.1411	0.696	1.8077	0.186+j0.040	0.110+j0.041	12017.3	235	285
250 (37)	0.2320	0.29	0.0113	0.1378	0.764	1.9816	0.156+j0.034	0.095+j0.039	14790.5		
350 (37)	0.1657	0.21	0.0101	0.1312	0.863	2.2408	0.117+j0.031	0.070+j0.037	18652.0	305	370

* 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)