15kV AL 133% TRXLPE Full Neutral LLDPE Patented POWERGLIDE® MV CABLE (PATENT: www.patentsw.com)

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



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 with PowerGlide® Technology. Black with red extruded stripes

For information about our Cable-Rejuvenation Services please visit us at: Cable-Rejuvenation Services
You can email us at: Cable-Rejuvenation Services

APPLICATIONS AND FEATURES:

Southwire's 15kV cables are suited for use in wet and dry areas, conduits, ducts, 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 (Qualification Test Requirements)
- 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: -40ºC and MV 90ºC optional marking available upon request

We've got it MADE IN AMERICA

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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

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
2 (SOLID)	0.258	0.736	220	0.836	10x14	0.324	50	1.064	565	7.4	398
2 (7)	0.283	0.761	220	0.861	10x14	0.324	50	1.089	580	7.6	398
1 (SOLID)	0.289	0.767	220	0.867	13x14	0.249	50	1.095	640	7.7	502
1 (19)	0.322	0.8	220	0.9	13x14	0.249	50	1.128	659	7.9	502
1/0 (SOLID)	0.325	0.803	220	0.903	16x14	0.203	50	1.131	721	7.9	633
1/0 (19)	0.352	0.83	220	0.93	16x14	0.203	50	1.158	737	8.1	633
2/0 (19)	0.395	0.873	220	0.973	20x14	0.162	50	1.201	842	8.4	798
3/0 (19)	0.443	0.921	220	1.021	25x14	0.13	50	1.249	970	8.7	1006
4/0 (19)	0.498	0.976	220	1.076	20x12	0.102	50	1.338	1123	9.4	1269
250 (37)	0.558	1.044	220	1.164	24x12	0.085	50	1.426	1308	10	1500
350 (37)	0.661	1.147	220	1.267	21x10	0.061	50	1.571	1666	11	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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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 (SOLID)	0.162	0.222	0.062	0.054	0.14	1.2	0.486+j0.148	0.224+j0.058	3491	120	150
2 (7)	0.266	0.365	0.059	0.053	0.15	1.3	0.629+j0.149	0.367+j0.059	3491	120	150
1 (SOLID)	0.129	0.177	0.058	0.052	0.15	1.3	0.395+j0.104	0.179+j0.055	4538	140	170
1 (19)	0.211	0.289	0.054	0.051	0.16	1.4	0.507+j0.105	0.291+j0.056	4538	140	170
1/0 (SOLID)	0.102	0.14	0.054	0.05	0.16	1.4	0.324+j0.080	0.143+j0.053	5585	155	195
1/0 (19)	0.167	0.229	0.051	0.049	0.17	1.5	0.413+j0.080	0.232+j0.054	5585	155	195
2/0 (19)	0.133	0.182	0.048	0.047	0.18	1.6	0.334+j0.061	0.186+j0.052	6982	180	220
3/0 (19)	0.105	0.144	0.044	0.046	0.2	1.7	0.268+j0.048	0.148+j0.050	8727	205	250
4/0 (19)	0.084	0.115	0.041	0.044	0.21	1.8	0.214+j0.039	0.121+j0.048	11082	235	285
250 (37)	0.07	0.096	0.037	0.043	0.23	2	0.179+j0.034	0.103+j0.047	13298	254	307
350 (37)	0.051	0.07	0.033	0.042	0.26	2.3	0.130+j0.027	0.079+j0.044	18496	305	365

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center.

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Table 3 – Weights and Measurements (Metric)

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
2 (SOLID)	6.55	18.69	5.59	21.23	10x14	1.06	1.27	27.03	841	187.96	1771
2 (7)	7.19	19.33	5.59	21.87	10x14	1.06	1.27	27.66	863	193.04	1771
1 (SOLID)	7.34	19.48	5.59	22.02	13x14	0.82	1.27	27.81	952	195.58	2234
1 (19)	8.18	20.32	5.59	22.86	13x14	0.82	1.27	28.65	981	200.66	2234
1/0 (SOLID)	8.25	20.40	5.59	22.94	16x14	0.67	1.27	28.73	1073	200.66	2817
1/0 (19)	8.94	21.08	5.59	23.62	16x14	0.67	1.27	29.41	1097	205.74	2817
2/0 (19)	10.03	22.17	5.59	24.71	20x14	0.53	1.27	30.51	1253	213.36	3551
3/0 (19)	11.25	23.39	5.59	25.93	25x14	0.43	1.27	31.72	1444	220.98	4477
4/0 (19)	12.65	24.79	5.59	27.33	20x12	0.33	1.27	33.99	1671	238.76	5647
250 (37)	14.17	26.52	5.59	29.57	24x12	0.28	1.27	36.22	1947	254.00	6675
350 (37)	16.79	29.13	5.59	32.18	21x10	0.20	1.27	39.90	2479	279.40	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
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.

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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 (SOLID)	0.5315	0.73	0.0189	0.1772	0.459	3.9370	0.486+j0.148	0.224+j0.058	3491	120	150
2 (7)	0.8727	1.20	0.0180	0.1739	0.492	4.2651	0.629+j0.149	0.367+j0.059	3491	120	150
1 (SOLID)	0.4232	0.58	0.0177	0.1706	0.492	4.2651	0.395+j0.104	0.179+j0.055	4538	140	170
1 (19)	0.6923	0.95	0.0165	0.1673	0.525	4.5932	0.507+j0.105	0.291+j0.056	4538	140	170
1/0 (SOLID)	0.3346	0.46	0.0165	0.1640	0.525	4.5932	0.324+j0.080	0.143+j0.053	5585	155	195
1/0 (19)	0.5479	0.75	0.0155	0.1608	0.558	4.9213	0.413+j0.080	0.232+j0.054	5585	155	195
2/0 (19)	0.4364	0.60	0.0146	0.1542	0.591	5.2493	0.334+j0.061	0.186+j0.052	6982	180	220
3/0 (19)	0.3445	0.47	0.0134	0.1509	0.656	5.5774	0.268+j0.048	0.148+j0.050	8727	205	250
4/0 (19)	0.2756	0.38	0.0125	0.1444	0.689	5.9055	0.214+j0.039	0.121+j0.048	11082	235	285
250 (37)	0.2297	0.31	0.0113	0.1411	0.755	6.5617	0.179+j0.034	0.103+j0.047	13298	254	307
350 (37)	0.1673	0.23	0.0101	0.1378	0.853	7.5459	0.130+j0.027	0.079+j0.044	18496	305	365

*Ampacities for Direct Buried are based on ICEA P-117-734-2016 Single-Conductor Solid Dielectric 15-35kV. Single Circuit Flat Direct Buried Figure 3
*Ampacities for Duct are based on ICEA P-117-734-2016 for Single-Conductor Solid Dielectric 15-35kV. Single Circuit Trefoil Conduit Figure 7.
*Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center.

Concentric Neutral Calculator

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