



# 15kV AL 133% TRXLPE Full Neutral LLDPE Patented POWERGLIDE® MV CABLE (PATENT: [www.patentsw.com](http://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: -40°C and MV 90°C optional marking available upon request





**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)	0.257	0.735	220	0.825	10x14	0.263	50	1.053	544	8.4	398
2 (7)	0.282	0.760	220	0.850	10x14	0.263	50	1.078	558	8.6	398
1 (Solid)	0.289	0.767	220	0.857	13x14	0.202	50	1.085	620	8.7	502
1 (19)	0.322	0.800	220	0.890	13x14	0.202	50	1.118	638	8.9	502
1/0 (Solid)	0.324	0.802	220	0.892	16x14	0.164	50	1.120	700	9.0	633
1/0 (19)	0.351	0.829	220	0.919	16x14	0.164	50	1.147	714	9.2	633
2/0 (19)	0.395	0.873	220	0.963	20x14	0.131	50	1.191	819	9.5	798
3/0 (19)	0.443	0.921	220	1.011	25x14	0.105	50	1.239	946	9.9	1006
4/0 (19)	0.498	0.976	220	1.066	20x12	0.083	50	1.328	1097	10.6	1269
250 (37)	0.558	1.044	220	1.154	24x12	0.069	50	1.416	1278	11.3	1500
350 (37)	0.661	1.147	220	1.257	21x10	0.049	50	1.561	1633	12.5	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



**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	0.204	0.061	0.054	0.139	0.4	0.258 + j1.281	0.204 + j0.573	3487	120	150
2 (7)	0.266	0.336	0.058	0.052	0.147	0.4	0.390 + j1.223	0.336 + j0.516	3487	120	150
1 (Solid)	0.129	0.162	0.057	0.052	0.149	0.4	0.216 + j1.211	0.162 + j0.504	4533	140	170
1 (19)	0.211	0.266	0.054	0.050	0.159	0.4	0.320 + j1.153	0.266 + j0.447	4533	140	170
1/0 (Solid)	0.102	0.128	0.053	0.050	0.160	0.4	0.182 + j1.149	0.128 + j0.443	5579	155	195
1/0 (19)	0.167	0.211	0.051	0.049	0.168	0.4	0.265 + j1.109	0.211 + j0.405	5579	155	195
2/0 (19)	0.133	0.167	0.047	0.047	0.181	0.5	0.221 + j1.057	0.167 + j0.355	6974	180	220
3/0 (19)	0.105	0.132	0.044	0.045	0.195	0.5	0.186 + j1.011	0.132 + j0.311	8718	205	250
4/0 (19)	0.084	0.105	0.040	0.044	0.212	0.6	0.159 + j0.967	0.105 + j0.272	11081	235	285
250 (37)	0.071	0.090	0.037	0.043	0.232	0.6	0.144 + j0.929	0.090 + j0.238	13298	254	307
350 (37)	0.050	0.065	0.032	0.041	0.262	0.7	0.119 + j0.879	0.065 + j0.195	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.





**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)	6.53	18.67	5.59	20.96	10x14	0.86	1.27	26.75	810	213.36	1771
2 (7)	7.16	19.30	5.59	21.59	10x14	0.86	1.27	27.38	830	218.44	1771
1 (Solid)	7.34	19.48	5.59	21.77	13x14	0.66	1.27	27.56	923	220.98	2234
1 (19)	8.18	20.32	5.59	22.61	13x14	0.66	1.27	28.40	949	226.06	2234
1/0 (Solid)	8.23	20.37	5.59	22.66	16x14	0.54	1.27	28.45	1042	228.60	2817
1/0 (19)	8.92	21.06	5.59	23.34	16x14	0.54	1.27	29.13	1063	233.68	2817
2/0 (19)	10.03	22.17	5.59	24.46	20x14	0.43	1.27	30.25	1219	241.30	3551
3/0 (19)	11.25	23.39	5.59	25.68	25x14	0.34	1.27	31.47	1408	251.46	4477
4/0 (19)	12.65	24.79	5.59	27.08	20x12	0.27	1.27	33.73	1633	269.24	5647
250 (37)	14.17	26.52	5.59	29.31	24x12	0.23	1.27	35.97	1902	287.02	6675
350 (37)	16.79	29.13	5.59	31.93	21x10	0.16	1.27	39.65	2430	317.50	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



**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	0.67	0.0186	0.1772	0.456	1.3123	0.258 + j1.281	0.204 + j0.573	3487	120	150
2 (7)	0.8727	1.10	0.0177	0.1706	0.482	1.3123	0.390 + j1.223	0.336 + j0.516	3487	120	150
1 (Solid)	0.4232	0.53	0.0174	0.1706	0.489	1.3123	0.216 + j1.211	0.162 + j0.504	4533	140	170
1 (19)	0.6923	0.87	0.0165	0.1640	0.522	1.3123	0.320 + j1.153	0.266 + j0.447	4533	140	170
1/0 (Solid)	0.3346	0.42	0.0162	0.1640	0.525	1.3123	0.182 + j1.149	0.128 + j0.443	5579	155	195
1/0 (19)	0.5479	0.69	0.0155	0.1608	0.551	1.3123	0.265 + j1.109	0.211 + j0.405	5579	155	195
2/0 (19)	0.4364	0.55	0.0143	0.1542	0.594	1.6404	0.221 + j1.057	0.167 + j0.355	6974	180	220
3/0 (19)	0.3445	0.43	0.0134	0.1476	0.640	1.6404	0.186 + j1.011	0.132 + j0.311	8718	205	250
4/0 (19)	0.2756	0.34	0.0122	0.1444	0.696	1.9685	0.159 + j0.967	0.105 + j0.272	11081	235	285
250 (37)	0.2329	0.30	0.0113	0.1411	0.761	1.9685	0.144 + j0.929	0.090 + j0.238	13298	254	307
350 (37)	0.1640	0.21	0.0098	0.1345	0.860	2.2966	0.119 + j0.879	0.065 + j0.195	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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Calculator

