AL Compact 15kV NLEPR Insulation 133% IL AIA Black PVC Jacket. MV 105 - 50% Ground - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Three Conductor Aluminum, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, With 3 x Grounds Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket. Silicone Free

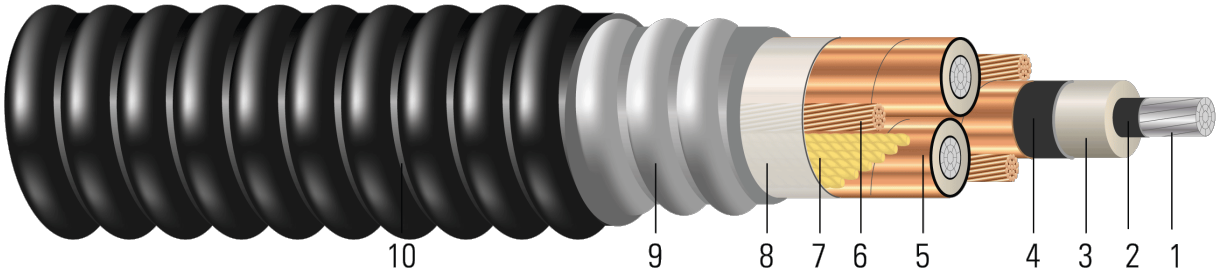


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
2. **Conductor Shield:** Semi-conducting cross-linked copolymer; A conductor separator is used for cable size larger than or equal to 500 Kcmil
3. **Insulation:** 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
6. **Grounding Conductor:** Three separate ground wires with a combined circular mil of 50% of the phase conductor. Class B compressed stranded bare copper per ASTM B3 and ASTM B8
7. **Filler:** Fillers as needed to make rounder
8. **Binder:** Polypropylene tape
9. **Armor:** Aluminum Interlocked Armor (AIA)
10. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 15KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 105°C for normal operation, 140°C for emergency overload, and 250°C for short circuit conditions. Rated at -35°C for cold bend when UL listed. Rated at -40°C for cold bend and cold impact and marked with "LTGG" when CSA listed or dual UL/CSA listed. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502. Rated for 1000 lbs./FT maximum sidewall pressure. Silicone Free

SPECIFICATIONS:

- ASTM B801 Concentric-Lay-Stranded Conductors of 8000 Series Aluminum Alloy
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-58-679 Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV

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- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

SAMPLE PRINT LEGEND:

{SQFTG_DUAL} SOUTHWIRE® POWER CABLE {UL} 3/C XXX KCMIL COMPACT AL.--- {ALUMAFLEX}® AA8176 220 MILS NL-EPR 15KV 133% INS LEVEL 25%TS GW 3 X X AWG CU MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL {NESC}

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Ground	Diameter Over armor	Jacket Thickness	Approx. OD	Copper Weight	Aluminum Weight	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size
	AWG/ Kcmil	No. of Strands	inch	inch	inch	No. x AWG	inch	mil	inch	lb/ 1000ft	lb/1000ft	lb/ 1000ft	lb	inch	inch
TBA	1/0	19	0.336	0.814	0.874	3x9	2.221	60	2.341	300	647	2169	1900	16.4	3
TBA	2/0	19	0.376	0.854	0.914	3x8	2.307	75	2.457	358	739	2484	2395	17.2	3
TBA	3/0	19	0.423	0.901	0.961	3x7	2.409	75	2.559	370	856	2700	3020	17.9	3.5
671545	4/0	18	0.475	0.953	1.013	3x5	2.56	75	2.726	575	1001	3096	3808	19.1	3.5
TBA	250	35	0.52	1.006	1.066	3x6	2.636	75	2.786	430	1125	3235	4500	19.5	3.5
TBA	350	35	0.616	1.102	1.162	3x4	2.843	75	2.993	454	1442	3757	6300	21	4
TBA	500	35	0.736	1.222	1.282	3x3	3.102	90	3.282	526	1912	4649	9000	23	4.5
575988	750	53	0.908	1.416	1.476	3x1	3.56	90	3.748	1157	2703	6487	13500	26.2	5
587887^	750	53	0.908	1.416	1.476	3x1	3.56	90	3.748	1157	2703	6494	13500	26.2	5

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Strand count meets minimum number per ASTM
^ Red Overall Jacket Color
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.

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Capacitive Reactance @ 60Hz	Inductive Reactance @ 60Hz	Zero Sequence Impedance	Positive Sequence Impedance	Shield Short Circuit Current 6 Cycles	Allowable Ampacity In Duct 90/105°C	Allowable Ampacity In Air 90/105°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	MΩ*1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
1/0	0.167	0.229	0.041	0.028	0.600+j0.439	0.229+j0.043	2739	150/165	170/185
2/0	0.133	0.182	0.038	0.026	0.553+j0.422	0.182+j0.041	2863	170/185	190/215
3/0	0.105	0.144	0.035	0.025	0.514+j0.403	0.144+j0.040	3009	195/210	220/245
4/0	0.084	0.115	0.032	0.023	0.483+j0.383	0.115+j0.038	3170	220/240	255/285
250	0.07	0.096	0.03	0.022	0.462+j0.365	0.096+j0.037	3334	245/265	280/315
350	0.051	0.07	0.027	0.021	0.430+j0.334	0.070+j0.035	3631	295/315	345/385
500	0.036	0.05	0.023	0.019	0.402+j0.300	0.050+j0.033	4003	355/385	425/475
750	0.023	0.033	0.02	0.017	0.369+j0.255	0.033+j0.032	4604	440/475	540/600
750	0.023	0.033	0.02	0.017	0.369+j0.255	0.033+j0.032	4604	440/475	540/600

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* NEC ampacities are based on:
* For Duct: Table 310.60(C)(14) Detail 1.
* For Free Air: Table 310.60(C)(6).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.
* Capacitive Reactance is between Phase-to-Shield.

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