

3/C AL 15kV 220 NLEPR 133% AIA PVC MV-105. 50% Ground. Silicone Free

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

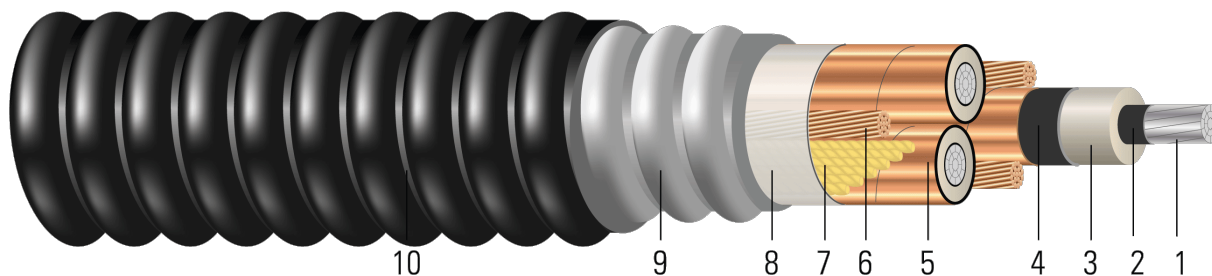


Image not to scale. See Table 1 for dimensions.

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. 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-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- 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
- 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



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Southwire

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SAMPLE PRINT LEGEND:

{SQFTG_DUAL} SOUTHWIRE{R} POWER CABLE MASTER-DESIGN {UL} 3/C XXX KCMIL COMPACT AL.--- {ALUMAFLEX}{R} 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	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Ground	Jacket Thickness ¹	Approx. OD	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/Kcmil	inch	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb	inch
TBA	1/0	0.336	0.813	0.873	3 x 8	75	2.401	2361	1901	16.8
TBA	2/0	0.376	0.853	0.913	3 x 6	75	2.487	2639	2396	17.4
TBA	3/0	0.423	0.900	0.960	3 x 6	75	2.589	2868	3020	18.1
671545	4/0	0.475	0.953	1.013	3 x 5	80	2.712	3262	3809	19.0
TBA	250	0.520	1.006	1.066	3 x 5	75	2.818	3472	4500	19.7
TBA	350	0.616	1.102	1.162	3 x 4	75	3.025	4113	6300	21.2
TBA	500	0.736	1.222	1.282	3 x 2	85	3.304	5187	9000	23.1
587887 [^]	750	0.908	1.425	1.485	3 x 1	85	3.743	6727	13500	26.2
575988	750	0.908	1.425	1.485	3 x 1	85	3.743	6727	13500	26.2

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

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 Directly Buried 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	0.168	0.211	0.048	0.044	0.584 + j0.394	0.212 + j0.044	2873	185/200	170/185
2/0	0.133	0.167	0.044	0.043	0.538 + j0.377	0.168 + j0.043	3003	210/225	190/215
3/0	0.105	0.132	0.041	0.041	0.500 + j0.359	0.132 + j0.041	3156	240/260	220/245
4/0	0.084	0.105	0.038	0.040	0.470 + j0.339	0.106 + j0.039	3325	270/295	255/285
250	0.071	0.089	0.036	0.039	0.449 + j0.321	0.089 + j0.039	3501	300/320	280/315
350	0.051	0.064	0.031	0.037	0.415 + j0.292	0.064 + j0.037	3813	360/390	345/385
500	0.035	0.045	0.027	0.035	0.385 + j0.260	0.045 + j0.035	4203	435/470	425/475
750	0.024	0.030	0.024	0.033	0.350 + j0.217	0.031 + j0.033	4864	540/580	540/600
750	0.024	0.030	0.024	0.033	0.350 + j0.217	0.031 + j0.033	4864	540/580	540/600

* Calculations are based on 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on TABLE 310.60(C)(84) of the 2020 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(72) of the 2020 National Electrical Code (40°C Ambient Air Temperature)

[^] Red Overall PVC Jacket

