AL Compact 25kV NLEPR Insulation 100% IL Black SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Aluminum, 260 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% Insulation Level, Tape Shield, SIM*pull* Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

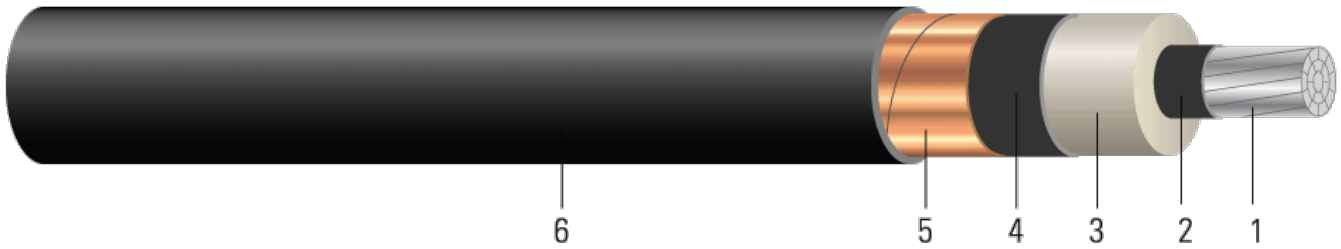


Image not to scale. See Table 1 for dimensions.

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:** 260 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% 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. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 25KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial when installed with a grounding conductor in close proximity that conforms to NEC section 311.36 and 250.4(A)(5), 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 -25°C for cold bend and cold impact and marked with "LTDD" when CSA listed or dual UL/CSA listed. PVC jacket is made with SIM technology and has a coefficient of friction COF of 0.2. Cable can be installed in conduit without the aid of lubrication. Rated for 1000 lbs./FT maximum sidewall pressure.

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 FT4 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- CSA C22.2 No.230 Tray Cables - Rated TC-ER (1/0 AWG and Larger)
- CSA C22.2 No. 2556 / UL 2556 Cable Test Methods
- CSA C68.10 Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 and Larger)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

- 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 SIMpull® POWER CABLE {UL} XXX KCMIL COMPACT AL.--- {ALUMAFLEX}® AA8176 260 MILS NL-EPR 25KV 100% INS LEVEL 25%TS MV-105 FOR CT USE SUN. RES. {NESC} PAT www.patentSW.com

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	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	mil	inch	lb/ 1000ft	lb/1000ft	lb/ 1000ft	lb	inch	inch
TBA	1/0	19	0.336	0.894	0.954	80	1.134	79	99	681	633	13.6	3
TBA	2/0	19	0.376	0.934	0.994	80	1.174	82	126	738	798	14.1	3
TBA	3/0	19	0.423	0.981	1.041	80	1.221	86	159	808	1006	14.7	3
TBA	4/0	19	0.475	1.033	1.093	80	1.273	90	200	889	1269	15.3	3
TBA	250	35	0.52	1.086	1.146	80	1.326	94	237	970	1500	15.9	3.5
TBA	350	35	0.616	1.182	1.242	80	1.422	102	332	1140	2100	17.1	3.5
585651	500	35	0.736	1.326	1.386	80	1.566	116	471	1342	3000	18.8	4
TBA	750	58	0.908	1.484	1.544	110	1.784	127	713	1858	4500	21.4	4.5
TBA	1000	58	1.117	1.693	1.753	110	1.993	144	950	2270	6000	23.9	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
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	0.045	0.05	0.590+j0.409	0.230+j0.054	2987	150/165	170/185
2/0	0.133	0.182	0.042	0.048	0.542+j0.393	0.183+j0.052	3111	170/185	190/215
3/0	0.105	0.144	0.039	0.046	0.503+j0.376	0.145+j0.050	3256	195/210	220/245
4/0	0.084	0.115	0.037	0.044	0.471+j0.359	0.116+j0.048	3418	220/240	255/285
250	0.07	0.096	0.034	0.043	0.450+j0.342	0.097+j0.047	3582	245/265	280/315
350	0.051	0.07	0.03	0.041	0.418+j0.314	0.071+j0.045	3879	295/315	345/385
500	0.036	0.05	0.028	0.039	0.388+j0.278	0.051+j0.043	4325	355/385	425/475
750	0.023	0.033	0.023	0.037	0.358+j0.245	0.034+j0.041	4815	440/475	540/600
1000	0.017	0.025	0.019	0.035	0.333+j0.210	0.026+j0.040	5462	510/545	635/705

* NEC ampacities are based on:
* For Duct: Table 310.60(C)(12) Detail 1.
* For Free Air: Table 310.60(C)(4).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft, Spacing: one diameter spacing center-to-center.
* Capacitive Reactance is between Phase-to-Shield.

Copyright © 2026 Southwire Company, LLC. All Rights Reserved