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, SIMpull Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

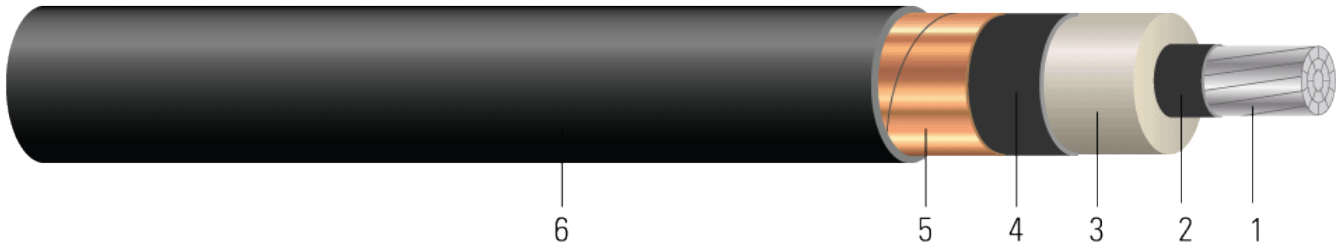


Image not to scale. See Table 1 for dimensions.

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)

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UPDATED: Dec. 11, 2023, 9:29 p.m.UTC REVISION: 1.000.001

- 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	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	inch	inch
TBA	1/0	19	0.336	0.894	0.954	80	1.134	19	607	633	13.6	3.5
TBA	2/0	19	0.376	0.934	0.994	80	1.174	19	661	798	14.0	3.5
TBA	3/0	19	0.422	0.980	1.040	80	1.220	20	725	1006	14.6	3.5
TBA	4/0	19	0.474	1.032	1.092	80	1.272	21	802	1269	15.2	3.5
TBA	250	35	0.520	1.086	1.146	80	1.326	22	878	1500	15.9	4.0
TBA	350	35	0.615	1.181	1.241	80	1.421	24	1037	2100	17.0	4.0
585651	500	35	0.735	1.324	1.384	80	1.564	109	1342	3000	18.7	4.5
TBA	750	58	0.908	1.484	1.544	110	1.784	30	1734	4500	21.4	5.0
TBA	1000	58	1.060	1.636	1.696	110	1.936	33	2084	6000	23.2	5.5

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

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	0.168	0.211	0.051	0.050	0.576 + j0.366	0.212 + j0.048	2986	155/165	200/225
2/0	0.133	0.167	0.047	0.048	0.53 + j0.35	0.168 + j0.046	3110	175/190	230/260
3/0	0.105	0.133	0.043	0.046	0.492 + j0.333	0.134 + j0.045	3253	200/215	270/300
4/0	0.084	0.105	0.040	0.044	0.46 + j0.316	0.106 + j0.043	3414	230/245	310/345
250	0.071	0.090	0.038	0.043	0.441 + j0.299	0.091 + j0.042	3581	250/270	345/380
350	0.050	0.065	0.033	0.041	0.407 + j0.273	0.066 + j0.039	3875	305/330	430/475
500	0.035	0.046	0.029	0.039	0.377 + j0.244	0.047 + j0.037	4247	370/400	530/590
750	0.024	0.033	0.025	0.037	0.345 + j0.207	0.034 + j0.036	4814	455/490	685/765
1000	0.018	0.026	0.022	0.036	0.323 + j0.183	0.027 + j0.034	5285	525/565	825/920

* Ampacities are based on:
* For Duct: Table 310.60(C)(78) Detail 1.
* For Free Air: Table 310.60(C)(70).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.
* Capacitive Reactance is between Phase-to-Shield.