AL Compact 35kV NLEPR Insulation 100% IL Black SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Aluminum, 345 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% Insulation Level, Tape Shield, SIM*pull* Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

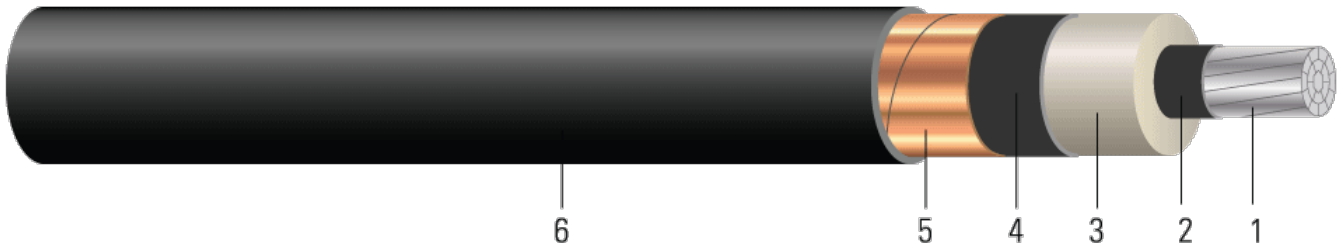


Image not to scale. See Table 1 for dimensions.

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:** 345 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 35KV 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
- ICEA S-97-682 Standard for Shielded Utility Cable Rated for 5 - 46kV
- 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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- 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} XXXX KCMIL COMPACT AL.--- {ALUMAFLEX}® AA8176 345 MILS NL-EPR 35KV 100% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES (NESC) -- {CSA} 1000 KCMIL COMPACT AL.--- {ALUMAFLEX}® AA8176 8.76mm (345 mils) NL-EPR 35KV 100% INS LEVEL 25%TS SR TC-ER 105°C FT4 -25°C LTDD -- PAT www.patentSW.com -- RoHS

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
649559	1/0	10	0.336	1.064	1.124	80	1.304	96	99	830	633	15.6	4
TBA	2/0	15	0.376	1.104	1.164	80	1.344	96	126	939	798	16.1	4
649569	3/0	15	0.423	1.151	1.211	80	1.391	97	158	957	1006	16.7	4
583741	4/0	19	0.475	1.203	1.263	80	1.443	107	199	1049	1269	17.3	4
580896	250	22	0.52	1.256	1.316	80	1.496	111	236	1132	1500	18	4
649572	350	35	0.616	1.352	1.412	80	1.592	118	330	1310	2100	19.1	4
580895	500	35	0.736	1.496	1.556	110	1.796	130	471	1675	3000	21.6	5
597511	750	58	0.908	1.666	1.726	110	1.966	143	707	2071	4500	23.6	5
597784	1000	58	1.117	1.818	1.878	110	2.118	155	942	2446	6000	25.4	6

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	0.055	0.053	0.584+j0.358	0.230+j0.057	3514	150/165	170/185
2/0	0.133	0.182	0.051	0.051	0.535+j0.345	0.183+j0.055	3638	170/185	190/215
3/0	0.105	0.144	0.048	0.049	0.494+j0.330	0.145+j0.053	3783	195/210	220/245
4/0	0.084	0.115	0.044	0.047	0.462+j0.315	0.116+j0.051	3944	220/240	255/285
250	0.07	0.096	0.042	0.046	0.439+j0.301	0.097+j0.050	4108	245/265	280/315
350	0.051	0.07	0.037	0.044	0.406+j0.277	0.071+j0.047	4406	295/315	345/385
500	0.036	0.05	0.034	0.042	0.374+j0.247	0.051+j0.046	4852	355/385	425/475
750	0.023	0.033	0.029	0.039	0.343+j0.217	0.034+j0.043	5379	440/475	540/600
1000	0.017	0.025	0.023	0.036	0.323+j0.194	0.026+j0.042	5850	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).

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* 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, Spacing: one diameter spacing center-to-center.
* Capacitive Reactance is between Phase-to-Shield.

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