AL Compact 25kV NLEPR Insulation 133% IL Black SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Aluminum, 320 Mils No Lead Ethylene Propylene Rubber (NLEPR) 133% Insulation Level, Tape Shield, SIM*pull* Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

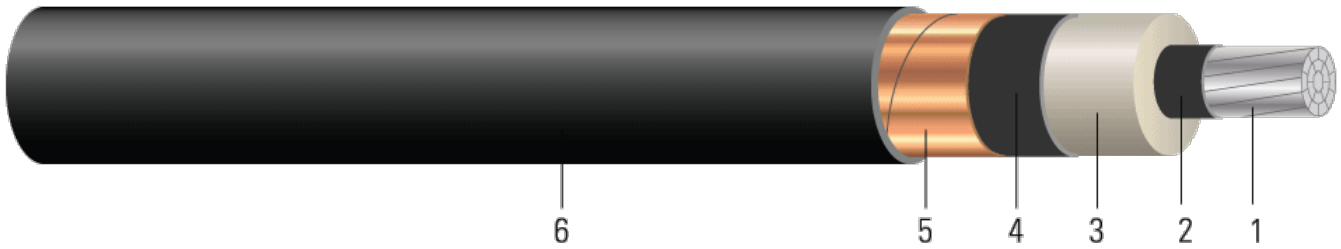

Image not to scale. See Table 1 for dimensions.

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:** 320 Mils No Lead Ethylene Propylene Rubber (NLEPR) 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. **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
- 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} XXX KCMIL COMPACT AL.--- {ALUMAFLEX}® AA8176 320 MILS NL-EPR 25KV 133% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES (NESC) -- {CSA} 750 KCMIL COMPACT AL.--- {ALUMAFLEX}® AA8176 8.13mm (320 mils) NL-EPR 25KV 133% 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
671508	1/0	19	0.336	1.014	1.074	80	1.254	86	99	771	633	15.0	3.5
672018	2/0	12	0.376	1.054	1.114	80	1.294	22	125	829	798	15.5	4.0
TBA	3/0	19	0.422	1.100	1.160	80	1.340	23	158	854	1006	16.0	4.0
672158	4/0	19	0.474	1.153	1.213	80	1.393	96	199	984	1269	16.7	4.0
TBA	250	35	0.520	1.206	1.266	80	1.446	25	235	1018	1500	17.3	4.0
TBA	350	35	0.615	1.301	1.361	80	1.541	27	329	1186	2100	18.4	4.5
665046	500	34	0.735	1.444	1.504	110	1.744	118	471	1593	3000	20.9	5.0
672021	750	53	0.908	1.616	1.676	110	1.926	131	706	2005	4500	23.1	5.5
TBA	1000	58	1.060	1.756	1.816	110	2.056	146	941	2285	6000	24.6	6.0
TBA	1250	91	1.250	1.954	2.014	110	2.254	161	1173	2814	7500	27.0	8.0

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	0.168	0.211	0.057	0.052	0.492 + j0.513	0.128 + j0.038	3358	155/165	200/225
2/0	0.133	0.167	0.053	0.050	0.492 + j0.513	0.128 + j0.038	3482	175/190	230/260
3/0	0.105	0.133	0.049	0.048	0.492 + j0.513	0.128 + j0.038	3625	200/215	270/300
4/0	0.084	0.105	0.046	0.046	0.492 + j0.513	0.128 + j0.038	3786	230/245	310/345
250	0.071	0.090	0.043	0.045	0.493 + j0.473	0.128 + j0.046	3953	250/270	345/380
350	0.050	0.065	0.039	0.043	0.494 + j0.461	0.128 + j0.045	4247	305/330	430/475
500	0.035	0.046	0.034	0.041	0.532 + j0.506	0.167 + j0.037	4619	370/400	530/590
750	0.024	0.033	0.029	0.039	0.494 + j0.401	0.128 + j0.049	5186	455/490	685/765
1000	0.018	0.026	0.026	0.037	0.494 + j0.461	0.128 + j0.045	5657	525/565	825/920
1250	0.013	0.023	0.024	0.035	0.624 + j0.546	0.266 + j0.040	6270	595/640	950/1055

* 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.
* 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.