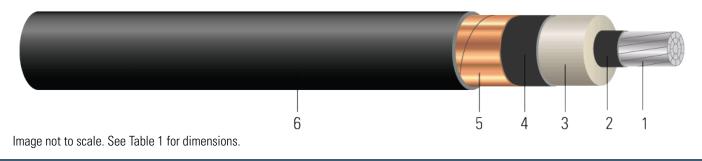
# AL Compact 15kV NLEPR Insulation 133% IL Black SIM-PVC Jacket. 2x5 mils Tape Shield - MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Aluminum, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, 2x5 Mils Tape Shield, SIMpull<sup>®</sup> Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



## **CONSTRUCTION:**

- 1. **Conductor:** Class B compact stranded TRIPLE E Aluminum Alloy (AA-8176) per ASTM B801 and 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 2x5 mil copper tape with 25% overlap
- 6. 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 when installed with a grounding conductor in close proximity that conforms to NEC section 311.36 and 250.4(A)(5), and where su-perior 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. ST1 (low smoke) Rated for sizes 1/0 and larger. 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. 2x5 mils tape shield for higher short circuit withstand.

#### **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-ST1 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)



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- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- 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:**

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] AL 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]

#### **Table 1 – Weights and Measurements**

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
1	19	0.298	0.776	0.836	80	1.016	16	489	502	12.1	3.0

All dimensions are nominal and subject to normal manufacturing tolerances

 $\Diamond$  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	0.211	0.266	0.049	0.050	0.636 + j0.41	0.266 + j0.048	2621	135/145	175/195

\* 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.



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