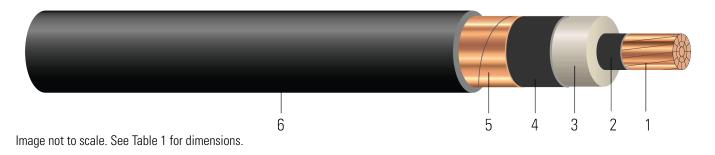
**SPEC 46120** Stock #: TBA

# CU Compact 5/8kV NLEPR Insulation 133/100% IL SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial Type MV-105 Single Conductor Compact Copper, 5kV/8kV 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133%/100%

Insulation Level, Tape Shield, SIMpull® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



## **CONSTRUCTION:**

- 1. Conductor: Class B compact stranded per ASTM B496
- 2. **Conductor Shield:** Semi-conducting cross-linked copolymer
- 3. **Insulation:** 115 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 5 mil copper tape with 25% overlap
- 6. **Overall Jacket:** Polyvinyl Chloride (PVC)

# **APPLICATIONS AND FEATURES:**

Southwire's 5KV 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 supe- rior 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 B3 Soft or Annealed Copper Wire
- ASTM B496 Compact Round Concentric-lay-standard copper
- 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)











**SPEC 46120** Stock #: TBA

• 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 CPT CU 115 MILS NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES (NESC) -- {CSA} XXX KCMIL CPT CU 2.92mm (115 mils) NL-EPR 5KV 133%/ 8KV 100% INS LEVEL 25%TS SR TC-ER 105°C FT4 -25°C LTDD -- PAT www.patentSW.com -- RoHS

**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
350	37	0.615	0.891	0.951	80	1.131	1099	1477	2800	13.5	3.5

All dimensions are nominal and subject to normal manufacturing tolerances

# **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
350	0.031	0.041	0.019	0.036	0.406 + j0.352	0.042 + j0.034	2977	385/415	550/615

<sup>\*</sup> Ampacities are based on:











<sup>♦</sup> Cable marked with this symbol is a standard stock item

<sup>\*</sup> Strand count meets minimum number per ASTM

<sup>\*</sup> For Duct: Table 310.60(C)(77) Detail 1.

<sup>\*</sup> For Free Air: Table 310.60(C)(69).

<sup>\*</sup> Inductive impedance is based on non-ferrous conduit with one diameter spacing.

<sup>\*</sup> Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

<sup>\*</sup> Capacitive Reactance is between Phase-to-Shield.