

1/C CU 25kV 320 TRXLPE 133% SIMpull® PVC MV-105

Type MV-105 Single Conductor Copper, 320 Mils Tree Retardant Cross-Linked Polyethylene (TRXLPE) 133% Insulation Level, Tape Shield, SIMpull Polyvinyl Chloride (PVC) Jacket, Rated UL



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Conductor Shield:** Semi-conducting cross-linked copolymer
- Insulation:** 320 Mils Tree Retardant Cross-Linked Polyethylene (TRXLPE) 133% Insulation Level,
- Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
- 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, 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. 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.

SPECIFICATIONS:

- ASTM B2 Medium-Hard Drawn Copper Wire
- ASTM B3 Standard Specification for Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull{R} (UL) 1/C [#AWG or #kcmil] CU 320 TR-XLPE 25KV 133% INS LEVEL 25%TS MV-105 SUN RES -40{D} C [SEQUENTIAL FEET MARKS]

Table 1 – Weights and Measurements

TBA	350	0.661	1.347	1.407	80	1.587	2015	2800	19.0	5
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All dimensions are nominal and subject to normal manufacturing tolerances



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◇ Cable marked with this symbol is a standard stock item

* Conduit size based on 3 phase 40% fill-factor without ground

1 Comply with ICEA S-93-639 Appendix C for jacket thickness determination

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	0.039	0.038	0.042	0.365 + j0.238	0.040 + j0.042	4610	390/415	545/605

* Calculations are based on three cables triplexed / 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

[†] Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

[‡] Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

