CU Compressed 2.4kV NLEPR Insulation 100% IL PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Three Conductor Copper, 90 Mils No Lead Ethylene Propylene Rubber (NL-EPR) Polyvinyl Chloride (PVC) Jacket. Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 90 Mils No Lead Ethylene Propylene Rubber (NL-EPR)
4. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
5. **Filler:** Wax paper filler
6. **Binder:** Poly glass tape
7. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 2.4KV 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 when UL listed. Rated at -40°C for cold bend and cold impact and marked with "LTGG" when CSA listed or dual UL/CSA listed. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502.Rated for 1000 lbs./FT maximum sidewall pressure.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- 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

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SAMPLE PRINT LEGEND:

SOUTHWIRE® POWER CABLE {UL} 3/C XXX AWG CU 90 MILS NL-EPR 2400V NONSHIELDED GW 1 X X AWG MV-105 FOR CT USE SUN. RES. {NESC} MAXIMUM 2400 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	No. of Strands	inch	inch	No. x AWG	mil	inch	lb/1000ft	lb/1000ft	lb	inch
600429	2	7	0.282	0.495	1 x 6	80	1.239	702	1143	1592	8.6
600411	1/0	19	0.361	0.580	1 x 4	80	1.422	1118	1688	2534	9.9
600395	4/0	19	0.512	0.715	1 x 3	110	1.774	2143	2997	5078	12.4
679271	350	37	0.661	0.885	1 x 1	110	2.141	3535	4578	8400	14.9
600445	350	37	0.661	0.885	1 x 2	110	2.156	3481	4629	8400	15.1
600387	500	37	0.789	1.015	1 x 1	110	2.437	4938	6310	12000	17.1

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Zero Sequence Impedance	Positive Sequence Impedance	Allowable Ampacity In Duct 90/105°C	Allowable Ampacity In Air 90/105°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
2	0.162	0.204	0.035	0.186 + j0.02	0.196 + j0.029	135/145	140/154
1/0	0.102	0.128	0.032	0.11 + j0.017	0.12 + j0.026	175/190	185/205
4/0	0.051	0.065	0.030	0.047 + j0.015	0.057 + j0.023	265/280	285/320
350	0.031	0.041	0.028	0.023 + j0.013	0.033 + j0.022	355/380	395/440
350	0.031	0.041	0.028	0.023 + j0.013	0.033 + j0.022	355/380	395/440
500	0.022	0.030	0.027	0.012 + j0.012	0.022 + j0.021	430/460	485/545

* Ampacities are based on:
* For Duct: Table 310.60(C)(79) Detail 1.
* For Free Air: Table 310.60(C)(71).
* 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.