CU Compressed 5/8kV NLEPR Insulation 133/100% IL PVC Jacket. MV 105 - UL Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Three Conductor Copper, 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 5kV 133% / 8kV 100% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA. 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:** 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 5kV 133% / 8kV 100% 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. **Grounding Conductor:** Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
7. **Filler:** Wax paper filler
8. **Binder:** Poly glass tape
9. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 5kV / 8kV 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 -25°C for cold bend and cold impact and marked with "LTGG" when 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
- ASTM B496 Compact Round Concentric-lay-standard copper
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- UL 2225 Cables and Cable-Fittings For Use In Hazardous (Classified) Locations
- 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-58-679 Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

- 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
- 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:

{SQFTG_DUAL} SOUTHWIRE{R} POWER CABLE {UL} 3/C XXX KCMIL CU 115 MILS NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS GW 1 X X AWG CU MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL -- {CSA} XXX KCMIL CU 2.92mm (115 mils) NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS MV68.10 SR 90{D}C FT4 -25{D}C LTGG {NESC}

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Diameter Over Insulation Shield	Ground	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size
	AWG/ Kcmil	No. of Strands	inch	inch	inch	No. x AWG	mil	inch	lb/ 1000ft	lb/ 1000ft	lb	inch	inch
956292◊	2	7	0.283	0.551	0.611	1x6	80	1.519	855	1499	1592	10.6	2
956300◊	1/0	19	0.362	0.63	0.69	1x4	110	1.762	1289	2149	2534	12.3	2
958371◊	2/0	19	0.405	0.674	0.734	1x4	110	1.857	1555	2485	3194	13	2.5
558171	3/0	19	0.456	0.724	0.784	1x3	110	1.965	1941	2901	4027	13.8	2.5
957456◊	4/0	19	0.512	0.78	0.84	1x3	110	2.086	2364	3449	5078	14.6	2.5
958386	250	37	0.558	0.834	0.894	1x2	110	2.21	2779	3934	6000	15.5	3
955179◊	350	37	0.661	0.917	0.977	1x2	110	2.389	3734	5065	8400	16.7	3
958397◊	500	37	0.789	1.042	1.102	1x1	110	2.659	5225	6726	12000	18.6	3.5
557496	750	61	0.968	1.254	1.314	1x1/0	135	3.167	7681	9743	18000	22.2	4

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

Copyright © 2026 Southwire Company, LLC. All Rights Reserved

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
2	0.162	0.221	0.028	0.024	0.577+j0.556	0.221+j0.041	1924	135/145	140/154
1/0	0.102	0.139	0.024	0.021	0.503+j0.513	0.139+j0.037	2169	175/190	185/205
2/0	0.082	0.112	0.022	0.02	0.479+j0.492	0.112+j0.036	2305	200/220	215/240
3/0	0.064	0.087	0.02	0.019	0.457+j0.468	0.087+j0.035	2460	230/250	250/280
4/0	0.051	0.07	0.018	0.017	0.441+j0.443	0.070+j0.034	2634	265/280	285/320
250	0.043	0.059	0.017	0.017	0.430+j0.421	0.059+j0.033	2801	290/315	320/355
350	0.031	0.043	0.014	0.015	0.412+j0.389	0.043+j0.031	3058	355/380	395/440
500	0.021	0.03	0.012	0.014	0.394+j0.347	0.030+j0.030	3445	430/460	485/545
750	0.014	0.021	0.011	0.013	0.370+j0.288	0.021+j0.029	4102	530/570	615/685

* NEC ampacities are based on:
* For Duct: Table 310.60(C)(13) Detail 1.
* For Free Air: Table 310.60(C)(5).
* 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.
* Capacitive Reactance is between Phase-to-Shield.

Copyright © 2026 Southwire Company, LLC. All Rights Reserved