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

Type MV-105 Single Conductor Copper, 90 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% Insulation Level, Tape Shield, Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA. Silicone Free

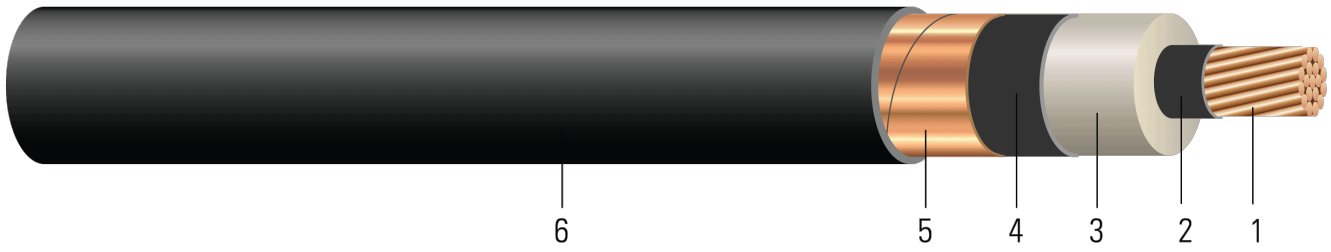


Image not to scale. See Table 1 for dimensions.

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:** 90 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 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. **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 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 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 (1/0 and Larger)
- 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
- 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

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SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 90 MILS NL-EPR 5KV 100% 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

Stock Number	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
TBA	2	7	0.283	0.501	0.561	55	0.691	251	417	530	8.3	1.5
TBA	1	19	0.322	0.54	0.6	55	0.73	308	487	669	8.8	1.5
555656	1/0	19	0.362	0.58	0.64	55	0.79	379	578	844	9.5	2
TBA	2/0	19	0.405	0.623	0.683	80	0.863	467	712	1064	10.4	2
TBA	3/0	19	0.456	0.674	0.734	80	0.914	579	844	1342	11	2.5
TBA	4/0	19	0.512	0.73	0.79	80	0.97	718	1005	1692	11.6	2.5
TBA	250	37	0.558	0.784	0.844	80	1.024	842	1153	2000	12.3	2.5
TBA	350	37	0.661	0.887	0.947	80	1.127	1159	1511	2800	13.5	3
TBA	500	37	0.789	1.015	1.075	80	1.255	1632	2035	4000	15.1	3
TBA	750	61	0.968	1.204	1.264	80	1.444	2420	2906	6000	17.3	3.5
TBA	1000	61	1.117	1.353	1.413	80	1.593	3204	3750	8000	19.1	4

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
* Conduit size based on 3 phase 40% fill-factor without ground
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.

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	0.023	0.042	0.559+j0.573	0.221+j0.049	1769	135/145	140/154
1	0.128	0.175	0.021	0.041	0.519+j0.551	0.175+j0.046	1890	155/165	160/180
1/0	0.102	0.139	0.019	0.04	0.487+j0.530	0.140+j0.045	2014	175/190	185/205
2/0	0.082	0.112	0.018	0.039	0.464+j0.508	0.113+j0.045	2147	200/220	215/240
3/0	0.064	0.087	0.016	0.038	0.443+j0.484	0.088+j0.043	2305	230/250	250/280
4/0	0.051	0.07	0.015	0.036	0.429+j0.459	0.071+j0.042	2479	265/280	285/320
250	0.043	0.059	0.014	0.036	0.420+j0.437	0.060+j0.041	2646	290/315	320/355
350	0.031	0.043	0.012	0.034	0.404+j0.397	0.044+j0.039	2965	355/380	395/440
500	0.021	0.03	0.01	0.032	0.387+j0.354	0.031+j0.038	3362	430/460	485/545
750	0.014	0.021	0.008	0.031	0.368+j0.300	0.022+j0.036	3947	530/570	615/685
1000	0.011	0.018	0.007	0.03	0.354+j0.265	0.019+j0.035	4409	600/645	705/790

***** NEC ampacities are based on:
***** For Duct: Table 310.60(C)(11) Detail 1.
***** For Free Air: Table 310.60(C)(3).

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* 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, Spacing: one diameter spacing center-to-center..
* Capacitive Reactance is between Phase-to-Shield.

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