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

Type MV-105 Single Conductor Copper, 5kV 133% /8KV 100% 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR) Insulation Level, Tape Shield, SIMpull Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

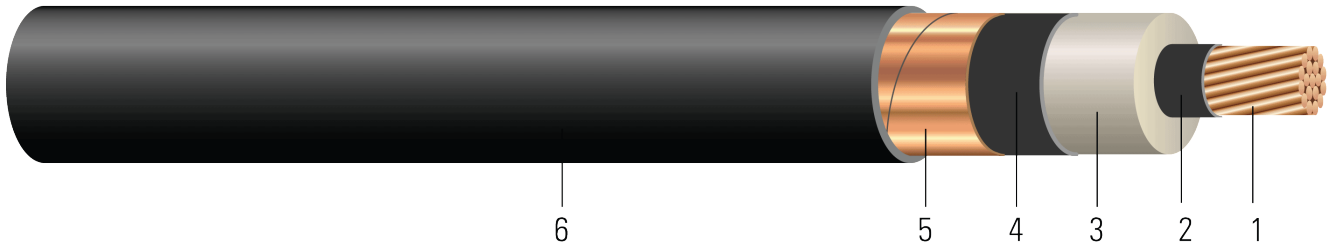


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8. Tinned copper optional per ASTM B33
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 5kV 133% /8KV 100% Insulation Level 115 Mils No Lead Ethylene Propylene Rubber (NL-EPR)
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 133% /8KV 100% 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), aerially supported by a messenger 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 -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. These cables feature sunlight and moisture resistance, exceptional corona resistance, resistance to most chemicals, oils and acids and are flame retardant.

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 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

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- 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)
- 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:

SOUTHWIRE SIMpull® POWER CABLE {UL} XXX AWG CU 115 MILS NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES {NESC} -- {CSA} XXX AWG CU X.XXmm (115 mils) NL-EPR 5KV 133%/8KV 100% INS LEVEL 25%TS SR TC-ER 105°C FT4 -25°C LTDD {YYYY} -- PAT www.patentSW.com -- RoHS

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
954636◊	2	7	0.282	0.545	0.605	55	0.755	255	454	530	9.0	2.5
954644	1	19	0.322	0.590	0.650	55	0.800	311	527	669	9.6	2.5
955005◊	1/0	19	0.361	0.630	0.690	80	0.870	383	639	844	10.4	2.5
955013◊	2/0	19	0.405	0.674	0.734	80	0.914	471	745	1064	10.9	3.0
955021	3/0	19	0.456	0.724	0.784	80	0.964	582	877	1342	11.5	3.0
955088◊	4/0	19	0.512	0.780	0.840	80	1.020	721	1039	1692	12.2	3.0
955039◊	250	37	0.558	0.818	0.878	80	1.058	843	1179	2000	12.6	3.0
955047◊	350	37	0.661	0.937	0.997	80	1.177	1162	1548	2800	14.1	3.5
955054◊	500	37	0.789	1.042	1.102	80	1.282	1632	2063	4000	15.3	4.0
679638	600	61	0.865	1.152	1.212	80	1.392	1949	2431	4800	16.7	4.0
955096◊	750	61	0.968	1.254	1.314	80	1.494	2419	2946	6000	17.9	4.5
955070	1000	61	1.117	1.403	1.463	80	1.643	3202	3793	8000	19.7	5.0
596374	1500	91	1.370	1.770	1.830	110	2.070	4773	5746	12000	24.8	6.0
552012	2000	127	1.583	1.953	2.013	110	2.153	6323	7207	16000	25.8	6.0

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

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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	0.204	0.034	0.044	0.57 + j0.514	0.204 + j0.045	1920	145/155	190/215
1	0.128	0.162	0.031	0.042	0.531 + j0.491	0.162 + j0.042	2044	170/180	225/250
1/0	0.102	0.128	0.028	0.042	0.497 + j0.469	0.128 + j0.042	2165	195/210	260/290
2/0	0.081	0.102	0.026	0.040	0.473 + j0.447	0.102 + j0.041	2302	220/235	300/330
3/0	0.064	0.081	0.024	0.039	0.452 + j0.423	0.081 + j0.039	2459	250/270	345/385
4/0	0.051	0.065	0.021	0.038	0.435 + j0.398	0.065 + j0.038	2633	290/310	400/445
250	0.043	0.056	0.020	0.037	0.424 + j0.376	0.056 + j0.037	2800	320/345	445/495
350	0.031	0.041	0.018	0.035	0.404 + j0.338	0.042 + j0.035	3120	385/415	550/615
500	0.022	0.030	0.015	0.033	0.383 + j0.297	0.031 + j0.033	3516	470/505	695/775
600	0.018	0.026	0.014	0.033	0.371 + j0.273	0.027 + j0.032	3782	505/544	777/865
750	0.014	0.023	0.013	0.032	0.358 + j0.248	0.024 + j0.032	4102	585/630	900/1000
1000	0.011	0.019	0.011	0.031	0.339 + j0.217	0.02 + j0.031	4563	670/720	1075/1200
1500	0.007	0.017	0.011	0.031	0.307 + j0.169	0.018 + j0.03	5515	870/935	1365/1525
2000	0.005	0.017	0.010	0.030	0.289 + j0.143	0.018 + j0.028	6174	1070/1150	1605/1790

* Ampacities are based on:
* For Duct: Table 310.60(C)(77) Detail 1.
* For Free Air: Table 310.60(C)(69).
* 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.