CU Compressed 15kV NLEPR Insulation 133% IL Black SIM-PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) Lead-Free EAM 133% Insulation Level, Tape Shield, SIMpull Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

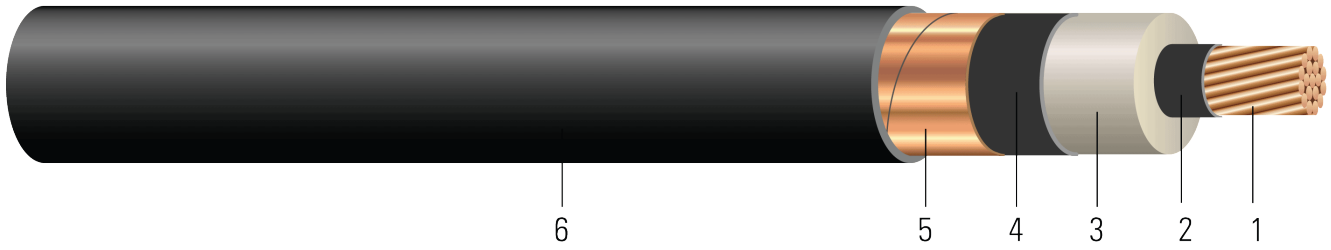


Image not to scale. See Table 1 for dimensions.

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:** 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) / No-Lead Ethylene Alkene Copolymer (EAM) 133% 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:** SIMpull® Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 15KV 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
- 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:

{SQFTG_DUAL} SOUTHWIRE SIMpull® POWER CABLE {UL} XX KCMIL CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25%TS MV-105 FOR CT USE SUN RES (NESC) -- {CSA} XX KCMIL CU 5.59mm (220 mils) NL-EPR 15KV 133% INS LEVEL 25%TS SR TC-ER 105°C FT4 -25°C LTDD -- 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
953638◊	2	7	0.282	0.755	0.815	80	0.995	271	640	530	11.9	3.0
955104	1	19	0.322	0.800	0.860	80	1.040	328	722	669	12.4	3.0
955989◊	1/0	19	0.361	0.840	0.900	80	1.080	398	816	844	12.9	3.0
955997◊	2/0	19	0.405	0.884	0.944	80	1.124	487	929	1064	13.4	3.5
956003	3/0	19	0.456	0.934	0.994	80	1.174	597	1069	1342	14.0	3.5
956011◊	4/0	19	0.512	0.990	1.050	80	1.230	738	1242	1692	14.7	3.5
956029◊	250	37	0.558	1.044	1.104	80	1.284	860	1398	2000	15.4	4.0
956037◊	350	37	0.661	1.147	1.207	80	1.387	1177	1775	2800	16.6	4.0
956045◊	500	37	0.789	1.252	1.312	80	1.492	1648	2307	4000	17.9	4.5
643755◊	600	61	0.865	1.362	1.422	80	1.602	1964	2694	4800	19.2	4.5
956052◊	750	61	0.968	1.464	1.524	110	1.764	2435	3323	6000	21.1	5.0
956060◊	1000	61	1.117	1.613	1.673	110	1.913	3218	4202	8000	22.9	5.5
581886	1250	91	1.250	1.780	1.840	110	2.080	4002	5118	10000	24.9	6.0
567443	1500	91	1.370	1.930	1.990	110	2.230	4785	6006	12000	26.7	
550811	2000	127	1.583	2.143	2.203	110	2.443	6345	7716	16000	29.3	

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	0.051	0.051	0.575 + j0.42	0.204 + j0.052	2571	155/165	195/215
1	0.128	0.162	0.047	0.049	0.532 + j0.401	0.162 + j0.049	2695	175/185	225/250
1/0	0.102	0.128	0.043	0.047	0.496 + j0.384	0.128 + j0.047	2816	200/215	260/290
2/0	0.081	0.102	0.040	0.045	0.468 + j0.367	0.103 + j0.045	2952	230/245	300/335
3/0	0.064	0.081	0.037	0.043	0.444 + j0.347	0.082 + j0.044	3110	260/275	345/385
4/0	0.051	0.065	0.034	0.042	0.424 + j0.328	0.066 + j0.042	3284	295/315	400/445
250	0.043	0.056	0.032	0.041	0.41 + j0.31	0.057 + j0.041	3451	325/345	445/495
350	0.031	0.041	0.028	0.039	0.386 + j0.281	0.042 + j0.039	3770	390/415	550/610
500	0.022	0.030	0.025	0.037	0.363 + j0.249	0.031 + j0.037	4167	465/500	685/765
600	0.018	0.026	0.023	0.036	0.351 + j0.23	0.027 + j0.035	4433	505/544	765/855
750	0.014	0.023	0.021	0.035	0.337 + j0.211	0.024 + j0.035	4752	565/610	885/990
1000	0.011	0.019	0.019	0.034	0.319 + j0.186	0.02 + j0.034	5214	640/690	1060/1185
1250	0.009	0.018	0.017	0.033	0.305 - j0.089	0.019 - j0.223	5638	715/770	1210/1350
1500	0.007	0.017	0.016	0.032	0.293 + j0.152	0.018 + j0.031	6010	815/880	1345/1500
2000	0.005	0.017	0.014	0.031	0.275 + j0.13	0.018 + j0.029	6670	940/1010	1575/1755

* 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.