CU Compressed 15kV NLEPR Insulation 133% IL Black SIM-PVC Jacket. MV 105 - 2x5 mils Tape Shield -Tray Rated - Sunlight Resistant - For Direct Burial

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, 2x5 Mils Tape Shield, SIM*pull* Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

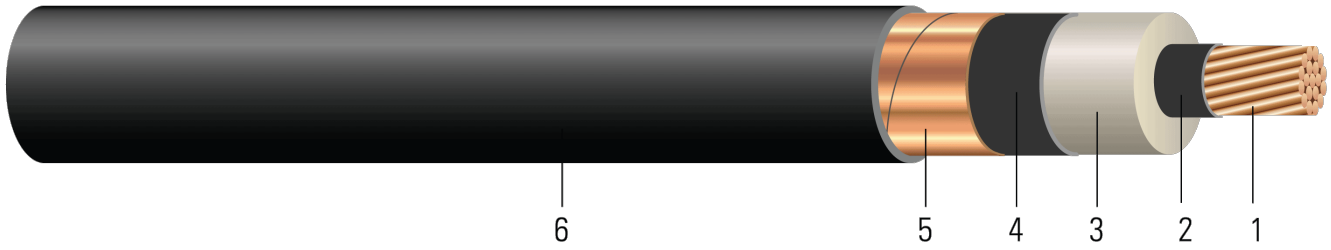


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level,
4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
5. **Copper Tape Shield:** Helically wrapped 2x5 mil copper tape with 25% overlap
6. **Overall Jacket:** 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), 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.

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
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 and Larger)

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- 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} XXX KCMIL CU 220 MILS NL-EPR 15KV 133% INS LEVEL 2X25%TS MV-105 FOR CT USE SUN. RES. {NESC} PAT www.patentSW.com

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	0.761	0.821	80	1.001	273	667	530	12	2.5
TBA	1	19	0.322	0.8	0.86	80	1.04	329	747	669	12.5	2.5
TBA	1/0	19	0.362	0.84	0.9	80	1.08	400	843	844	13	2.5
TBA	2/0	19	0.405	0.883	0.943	80	1.123	489	958	1064	13.5	3
TBA	3/0	19	0.456	0.934	0.994	80	1.174	600	1101	1342	14.1	3
TBA	4/0	19	0.512	0.99	1.05	80	1.23	739	1274	1692	14.8	3
TBA	250	37	0.558	1.044	1.104	80	1.284	863	1436	2000	15.4	3.5
596600	350	37	0.661	1.127	1.187	80	1.387	1284	1872	2800	16.6	3.5
582378	500	37	0.789	1.275	1.335	80	1.755	1544	2557	4000	21.1	4.5
TBA	600	61	0.866	1.362	1.422	80	1.602	1970	2749	4800	19.2	4
582377	750	61	0.968	1.464	1.524	110	1.784	2572	3462	6000	21.4	4.5
566145	1000	61	1.117	1.613	1.673	110	1.933	3367	4354	8000	23.2	5

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.

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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	0.221	0.045	0.051	0.581+j0.462	0.222+j0.057	2575	150/160	165/185
1	0.128	0.175	0.042	0.049	0.536+j0.444	0.176+j0.054	2696	170/185	185/210
1/0	0.102	0.139	0.039	0.047	0.500+j0.427	0.140+j0.052	2820	195/210	215/240
2/0	0.082	0.112	0.036	0.045	0.473+j0.410	0.113+j0.051	2953	220/235	245/275
3/0	0.064	0.087	0.033	0.043	0.447+j0.391	0.088+j0.049	3111	250/270	285/315
4/0	0.051	0.07	0.031	0.042	0.428+j0.371	0.071+j0.047	3284	285/305	325/360
250	0.043	0.059	0.029	0.041	0.415+j0.353	0.060+j0.046	3452	310/335	360/400
350	0.031	0.043	0.024	0.039	0.394+j0.327	0.044+j0.044	3709	375/400	435/490
500	0.021	0.03	0.022	0.04	0.369+j0.289	0.031+j0.045	4167	450/485	535/600
600	0.018	0.026	0.02	0.036	0.361+j0.269	0.027+j0.041	4437	488/525	589/658
750	0.014	0.021	0.019	0.036	0.347+j0.248	0.022+j0.041	4753	545/585	670/745
1000	0.011	0.018	0.017	0.034	0.332+j0.221	0.019+j0.040	5215	615/660	770/860

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