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, SIMpull Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA

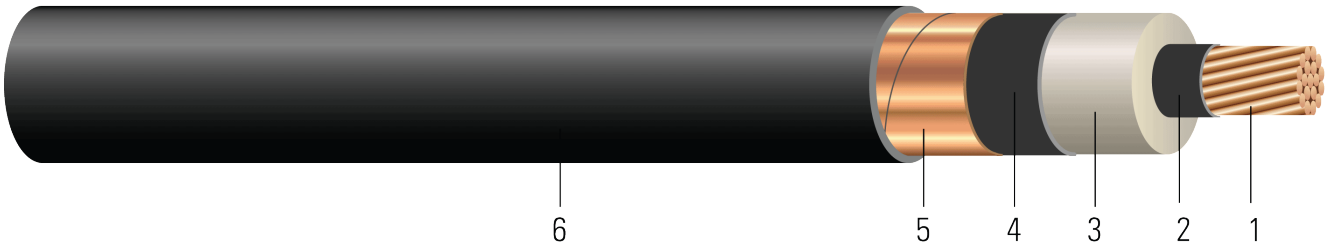

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper 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)

- 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	0.282	0.760	0.820	80	1.000	220	606	530	12.0	3.0
TBA	1	19	0.322	0.800	0.860	80	1.040	275	684	669	12.4	3.0
TBA	1/0	19	0.361	0.839	0.899	80	1.079	343	775	844	12.9	3.0
TBA	2/0	19	0.405	0.883	0.943	80	1.123	428	888	1064	13.4	3.5
TBA	3/0	19	0.456	0.934	0.994	80	1.174	537	1027	1342	14.0	3.5
TBA	4/0	19	0.512	0.990	1.050	80	1.230	674	1196	1692	14.7	3.5
TBA	250	37	0.558	1.044	1.104	80	1.284	793	1350	2000	15.4	4.0
596600	350	37	0.661	1.127	1.187	80	1.387	1272	1861	2800	16.6	4.0
582378	500	37	0.789	1.275	1.335	80	1.755	1740	2741	4000	21.0	5.0
TBA	600	61	0.865	1.361	1.421	80	1.601	1881	2636	4800	19.2	4.5
582377	750	61	0.968	1.464	1.524	110	1.784	2556	3448	6000	21.4	5.0
566145	1000	61	1.117	1.613	1.673	110	1.933	3350	4339	8000	23.1	5.5

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

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

* 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.