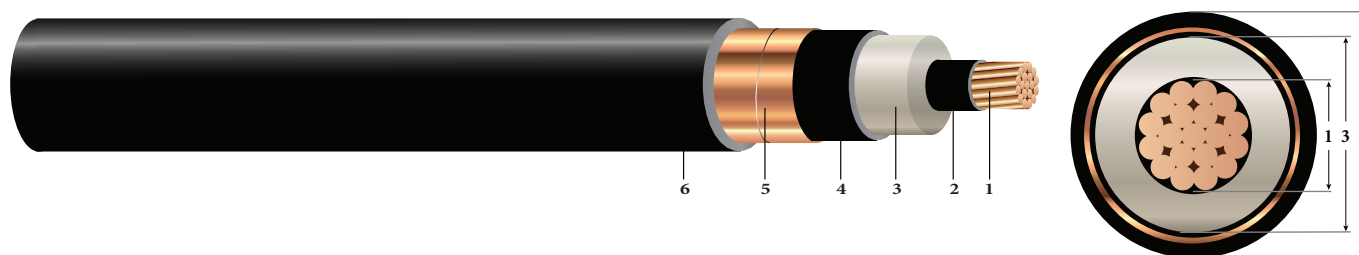


1/C CU 15KV 220 NL-EPR 133% 2x5 Mils TS SIMpull® PVC MV-105

Type MV-105 Single Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, 2 x 5 Mils Tape Shield, SIMpull® Polyvinyl Chloride (PVC) Jacket, Dual Rated UL/CSA



Images not to scale. See Table 1 for Dimensions

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
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:** Stripable 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, 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. ST1 (low smoke) Rated for sizes 1/0 and larger. 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. 2x5 mils tape shield for higher short circuit withstand.

SPECIFICATIONS:

- ASTM B3 Soft or annealed copper
- ASTM B8 Concentric-lay-standard copper
- UL 1072 - Medium Voltage Power Cables
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable & ICEA S-97-682 5-46 KV Utility
- UL 1685/FT4-ST1 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 AWG and Larger)
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test (1/0 AWG and Larger)
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV
- CSA C68.10 - Shielded Power Cables for Commercial and Industrial Applications - 5 to 46 KV
- 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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% 2x5 Mils TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire®

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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Jacket Thickness ¹ mils	Approx. OD (6) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches	Conduit Size* inches
		Cond. (1)	Insul. (3)	Insul. Shield						
		inches	inches	inches						
TBA	2	0.283	0.760	0.820	80	1.020	639	531	12.2	3
TBA	1	0.322	0.799	0.859	80	1.059	715	670	12.7	3
TBA	1/0	0.362	0.839	0.899	80	1.099	809	845	13.2	3
TBA	2/0	0.405	0.882	0.942	80	1.142	922	1065	13.7	3.5
TBA	3/0	0.456	0.933	0.993	80	1.193	1063	1342	14.3	3.5
TBA	4/0	0.512	0.989	1.049	80	1.249	1235	1693	15.0	3.5
TBA	250	0.558	1.044	1.104	80	1.304	1390	2000	15.6	4
596600	350	0.661	1.147	1.207	80	1.414	1868	2800	16.9	4
582378	500	0.789	1.275	1.335	80	1.552	2440	4000	18.4	5
TBA	600	0.866	1.361	1.421	80	1.621	2680	4800	19.5	5
582377	750	0.968	1.463	1.523	110	1.802	3452	6000	20.7	5
566145	1000	1.117	1.612	1.672	110	1.947	4336	8000	23.2	6

All dimensions are nominal and subject to normal manufacturing tolerances

* Conduit size based on 3 phase 40% fill-factor without ground

¹ Comply with ICEA S-93-639 Appendix C for jacket thickness determination

◇ Standard stock item

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size AWG	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles Amps	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X _c @ 60Hz	X _L @ 60Hz				In Duct †	In Air ‡
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
TBA	2	0.162	0.203	0.053	0.051	0.203 + j0.051	0.573 + j0.418	5400	155 / 165	195 / 215
TBA	1	0.129	0.161	0.049	0.049	0.162 + j0.049	0.531 + j0.400	5654	175 / 185	225 / 250
TBA	1/0	0.102	0.128	0.045	0.047	0.128 + j0.047	0.496 + j0.383	5914	200 / 215	260 / 290
TBA	2/0	0.081	0.101	0.042	0.045	0.102 + j0.045	0.467 + j0.366	6194	230 / 245	300 / 335
TBA	3/0	0.064	0.080	0.039	0.043	0.081 + j0.043	0.443 + j0.346	6526	260 / 275	345 / 385
TBA	4/0	0.051	0.064	0.036	0.042	0.065 + j0.042	0.423 + j0.327	6890	295 / 315	400 / 445
TBA	250	0.043	0.054	0.034	0.041	0.055 + j0.041	0.409 + j0.309	7248	325 / 345	445 / 495
596600	350	0.031	0.039	0.030	0.039	0.040 + j0.039	0.384 + j0.279	7918	390 / 415	550 / 610
582378	500	0.022	0.028	0.026	0.037	0.029 + j0.037	0.361 + j0.248	8752	465 / 500	685 / 765
TBA	600	0.018	0.024	0.024	0.036	0.348 + j0.229	0.024 + j0.036	9310	505 / 544	765 / 855
582377	750	0.014	0.019	0.022	0.035	0.020 + j0.035	0.334 + j0.210	9974	565 / 610	885 / 990
566145	1000	0.011	0.015	0.020	0.034	0.016 + j0.034	0.315 + j0.185	10944	640 / 690	1060 / 1185

* Calculations are based on three cables triplexed / 5 mil 25 % over lapping copper tape shield / Conductor temperature of 90°C / Shield temperature of 45°C / Earth resistivity of 100 ohms-meter

† Ampacities are based on TABLE 310.60(C)(77) Detail 1. of the 2014 National Electrical Code (20°C Ambient Earth Temperature, Thermal Resistance ROH of 90)

‡ Ampacities are based on TABLE 310.60(C)(69) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

◇ Standard stock item

