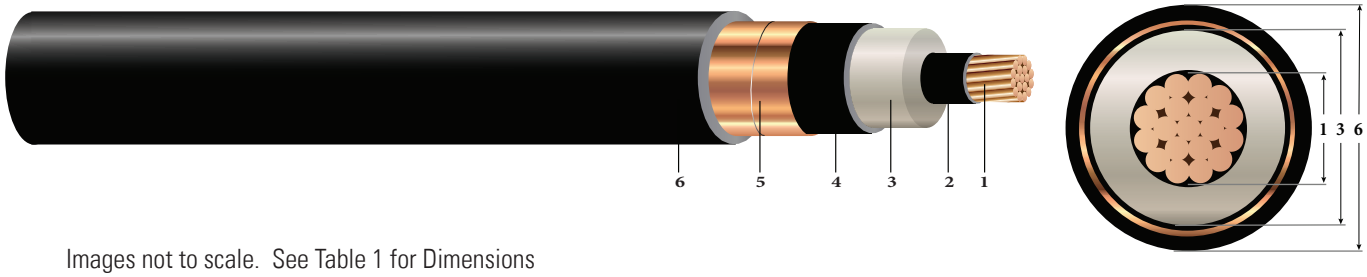
1/C CU 15KV 175 NL-EPR 100% TS SIM*pull*® PVC MV-105

Type MV-105 Single Conductor Copper, 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% Insulation Level, Tape Shield, SIM*pull*® 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**: 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% 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**: 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.

SPECIFICATIONS:

- ASTM B3 Soft or annealed copper
- ASTM B8 Concentric-lay-standard copper
- UL 1072 - Medium Voltage Power Cables
- ICEA S-97-682 5-46 KV Utility & ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- 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 - LIGHTING BOLT] #P# (UL/CSA) 1/C [#AWG or #kcmil] CU 175 MILS NL-EPR 15KV 100% INS LEVEL 25% TS MV-105 For CT USE SUN. RES. TC-ER(CSA 1/0 LARGER) FOR DIRECT BURIAL FT4 -ST1 YEAR (NESC) [SEQUENTIAL FEET MARKS]

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Diameter over			Jacket Thickness[1]	Approx. OD (6)	Approx. Weight	Max Pull Tension	Min Bend-ing Radius	Conduit Size*
		Cond. (1)	Insul. (3)	Insul. Shield						
	AWG	inches	inches	inches	mils	inches	lbs./MFT	lbs.	inches	inches
TBA	2	0.283	0.670	0.730	65	0.880	540	531	10.6	2.5
TBA	1	0.322	0.709	0.769	80	0.949	638	670	11.4	3
TBA	1/0	0.362	0.749	0.809	80	0.989	729	845	11.9	3
552078	2/0	0.405	0.792	0.852	80	1.032	839	1065	12.4	3
TBA	3/0	0.456	0.843	0.903	80	1.083	977	1342	13.0	3
552079 ◊	4/0	0.512	0.899	0.959	80	1.139	1145	1693	13.7	3.5
TBA	250	0.558	0.954	1.014	80	1.194	1295	2000	14.3	3.5
552080 ◊	350	0.661	1.057	1.117	80	1.297	1666	2800	15.6	4
552081 ◊	500	0.789	1.185	1.245	80	1.425	2204	4000	17.1	4
TBA	600	0.866	1.271	1.331	80	1.511	2564	4800	18.1	5
552082	750	0.968	1.373	1.433	80	1.613	3087	6000	19.4	5
605279 ◊	1000	1.117	1.522	1.582	110	1.822	4044	8000	21.9	5

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	Resistance		Reactance		Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles	Allowable Ampacities 90°C/105°C	
		DC @ 25°C	AC @ 90°C	X_C @ 60Hz	X_L @ 60Hz				In Duct †	In Air ‡
	AWG	Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT	Ω/MFT	Ω/MFT	Amps	Amps	Amps
TBA	2	0.162	0.203	0.047	0.048	0.203 + j0.048	0.574 + j0.456	2407	155 / 165	195 / 215
TBA	1	0.129	0.161	0.043	0.047	0.162 + j0.046	0.533 + j0.436	2534	175 / 185	225 / 250
TBA	1/0	0.102	0.128	0.039	0.045	0.128 + j0.045	0.499 + j0.417	2664	200 / 215	260 / 290
552078	2/0	0.081	0.101	0.036	0.043	0.102 + j0.043	0.471 + j0.397	2804	230 / 245	300 / 335
TBA	3/0	0.064	0.081	0.033	0.042	0.081 + j0.042	0.448 + j0.376	2970	260 / 275	345 / 385
552079 ◊	4/0	0.051	0.064	0.030	0.040	0.065 + j0.040	0.429 + j0.354	3152	295 / 315	400 / 445
TBA	250	0.043	0.054	0.029	0.039	0.055 + j0.039	0.416 + j0.335	3331	325 / 345	445 / 495
552080 ◊	350	0.031	0.039	0.025	0.037	0.040 + j0.037	0.392 + j0.302	3666	390 / 415	550 / 610
552081 ◊	500	0.022	0.028	0.022	0.035	0.029 + j0.035	0.370 + j0.267	4083	465 / 500	685 / 765
TBA	600	0.018	0.024	0.021	0.034	0.024 + j0.034	0.357 + j0.246	4363	/	/
552082	750	0.014	0.019	0.019	0.033	0.020 + j0.033	0.343 + j0.225	4695	565 / 610	885 / 990
605279 ◊	1000	0.011	0.015	0.017	0.033	0.016 + j0.033	0.323 + j0.198	5179	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)