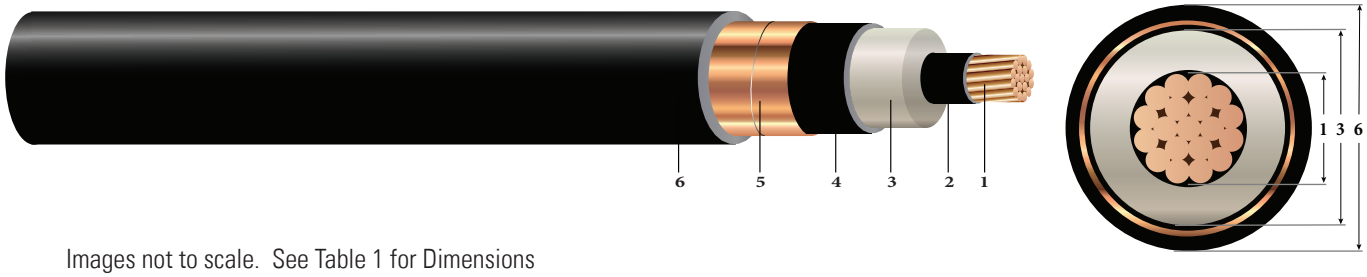
1/C CU 35KV 345 NL-EPR 100% TS SIM*pull*® PVC MV-105

Type MV-105 Single Conductor Copper, 345 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**: 345 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 35KV 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 345 MILS NL-EPR 35KV 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]

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Table 1 – Weights & Measurements

Stock Code	Cond. Size	Diameter over Cond. (1)	Diameter over Insul. (3)	Diameter over Insul. Shield	Jacket Thickness[1]	Approx. OD (6)	Approx. Weight	Max Pull Tension	Min Bending Radius	Conduit Size*
	AWG	inches	inches	inches	mils	inches	lbs./MFT	lbs.	inches	inches
555839	1/0	0.362	1.089	1.149	80	1.329	1064	845	15.9	4
555847	2/0	0.405	1.132	1.192	80	1.372	1185	1065	16.5	4
555854	3/0	0.456	1.183	1.243	80	1.423	1336	1342	17.1	4
555862	4/0	0.512	1.239	1.299	80	1.479	1520	1693	17.7	5
555870	250	0.558	1.294	1.354	80	1.534	1684	2000	18.4	5
551986	350	0.661	1.397	1.457	80	1.637	2082	2800	19.6	5
555888	500	0.789	1.525	1.585	110	1.825	2753	4000	21.9	5
957316	750	0.968	1.713	1.773	110	2.013	3696	6000	24.2	6
608992	1000	1.117	1.862	1.922	110	2.162	4602	8000	25.9	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

Table 2 – Electrical and Engineering Data

Stock Code	Cond. Size	Resistance DC @ 25°C	Resistance AC @ 90°C	Reactance X_C @ 60Hz	Reactance X_L @ 60Hz	Positive Sequence Impedance*	Zero Sequence Impedance*	Shield Short Circuit Current 6 Cycles	Allowable Ampacities 90°C/105°C In Duct †	Allowable Ampacities 90°C/105°C In Air ‡
	AWG	Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT	Ω/MFT	Ω/MFT	Amps	Amps	Amps
555839	1/0	0.102	0.128	0.059	0.052	0.128 + j0.052	0.478 + j0.307	3771	200 / 215	260 / 290
555847	2/0	0.081	0.101	0.055	0.050	0.102 + j0.050	0.448 + j0.294	3910	230 / 245	300 / 330
555854	3/0	0.064	0.080	0.051	0.048	0.081 + j0.048	0.422 + j0.280	4076	260 / 275	345 / 380
555862	4/0	0.051	0.064	0.048	0.046	0.065 + j0.046	0.400 + j0.265	4259	295 / 315	395 / 445
555870	250	0.043	0.054	0.045	0.045	0.055 + j0.045	0.385 + j0.252	4438	325 / 345	440 / 490
551986	350	0.031	0.039	0.040	0.043	0.040 + j0.042	0.360 + j0.229	4773	390 / 415	545 / 605
555888	500	0.022	0.028	0.036	0.041	0.029 + j0.041	0.335 + j0.205	5189	465 / 500	680 / 755
957316	750	0.014	0.019	0.031	0.039	0.020 + j0.038	0.309 + j0.176	5801	565 / 610	870 / 970
608992	1000	0.011	0.015	0.028	0.037	0.016 + j0.037	0.291 + j0.158	6285	640 / 690	1040 / 1160

* 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)