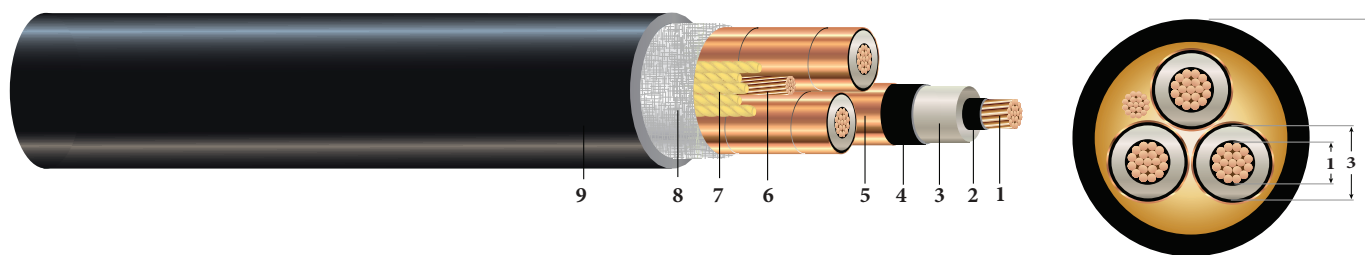


3/C CU 35KV 420 NL-EPR 133% TS PVC MV-105

Type MV-105 Three Conductor Copper, 420 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, 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:** 420 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 5 mil copper tape with 25% overlap
6. **Grounding Conductor:** 1 Class B compressed stranded bare copper ground per ASTM B3 and ASTM B8
7. **Filler:** Wax paper filler
8. **Binder:** Poly glass tape
9. **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. For uses in Class I and II, Division 2 hazardous locations per NEC Article 501 and 502. 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-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable & ICEA S-97-682 5-46 KV Utility
- UL 1685/FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 -Flame Test (70,000) BTU/hr Vertical Tray Test
- 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
- CSA C22.2 No. 2556 / UL 2556 - Cable Test Methods

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# (UL/CSA) 3/C [#AWG or #kcmil] CU 420 MILS NL-EPR 35KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. TC-ER(CSA) FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]



Southwire[®]

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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Jacket Thickness ¹ mils	Approx. OD (9) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches						
582147	1/0	0.362	1.239	1.299	1 x 1/0	135	3.147	4582	2534	22.0
578337	2/0	0.405	1.282	1.342	1 x 4	135	3.240	5005	3194	22.7
TBA	3/0	0.456	1.333	1.393	1 x 3	135	3.350	5564	4027	23.5
597853	4/0	0.512	1.389	1.449	3 x 3	135	3.471	6194	5078	24.3
TBA	250	0.558	1.444	1.504	1 x 3	135	3.590	6770	6000	25.1
TBA	350	0.661	1.547	1.607	1 x 2	135	3.812	8163	8400	26.7

All dimensions are nominal and subject to normal manufacturing tolerances

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

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 Ω/MFT	AC @ 90°C Ω/MFT	X _C @ 60Hz MΩ*MFT	X _L @ 60Hz Ω/MFT				In Duct † Amps	In Air ‡ Amps
582147	1/0	0.102	0.128	0.066	0.051	0.128 + j0.051	0.466 + j0.272	4259	195 / 210	215 / 240
578337	2/0	0.081	0.101	0.062	0.050	0.102 + j0.050	0.435 + j0.261	4398	220 / 235	245 / 275
TBA	3/0	0.064	0.080	0.058	0.048	0.081 + j0.048	0.409 + j0.249	4564	250 / 270	285 / 315
597853	4/0	0.051	0.064	0.054	0.046	0.065 + j0.046	0.387 + j0.236	4747	285 / 305	325 / 360
TBA	250	0.043	0.054	0.051	0.045	0.055 + j0.045	0.372 + j0.225	4926	310 / 335	360 / 400
TBA	350	0.031	0.039	0.046	0.042	0.040 + j0.042	0.346 + j0.206	5261	375 / 400	435 / 490

* Calculations are based on 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)(79) 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)(71) of the 2014 National Electrical Code (40°C Ambient Air Temperature)

