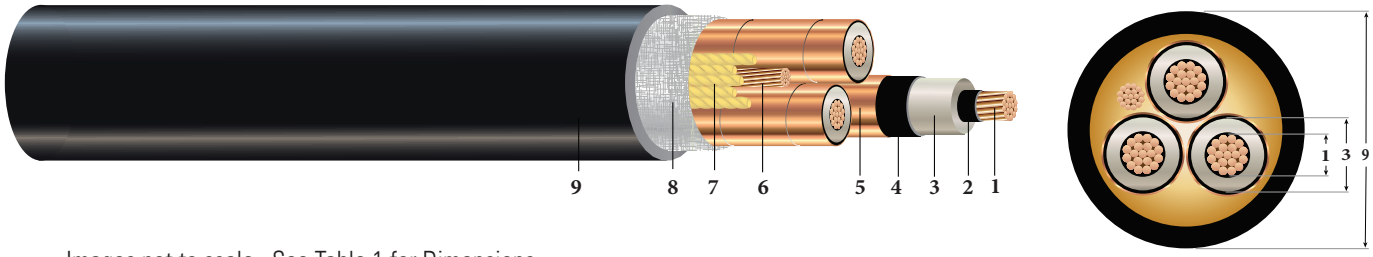
3/C CU 15KV 175 NL-EPR 100% TS PVC MV-105

Type MV-105 Three Conductor Copper, 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% 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**: 175 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 100% 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 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. 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 - LIGHTING BOLT] #P# (UL/CSA) 3/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) FOR DIRECT BURIAL FT4 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	Ground	Jacket Thickness[1]	Approx. OD (9)	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG	inches	inches	inches	No. x AWG	mils	inches	lbs./MFT	lbs.	inches
TBA	2	0.283	0.670	0.730	1 x 6	80	1.808	1873	1593	12.7
TBA	1	0.322	0.709	0.769	1 x 4	110	1.952	2264	2009	13.7
TBA	1/0	0.362	0.749	0.809	1 x 4	110	2.039	2560	2534	14.3
TBA	2/0	0.405	0.792	0.852	1 x 4	110	2.132	2917	3194	14.9
TBA	3/0	0.456	0.843	0.903	1 x 3	110	2.242	3397	4027	15.7
649373	4/0	0.512	0.899	0.959	1 x 3	110	2.363	3941	5078	16.5
TBA	250	0.558	0.954	1.014	1 x 3	110	2.481	4431	6000	17.4
649371	350	0.661	1.057	1.117	1 x 2	110	2.704	5665	8400	18.9
674399	500	0.789	1.185	1.245	1 x 1	135	3.030	7584	12000	21.2
TBA	750	0.968	1.373	1.433	1 x 0	135	3.436	10505	18000	24.1

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	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
TBA	2	0.162	0.203	0.047	0.044	0.203 + j0.044	0.578 + j0.457	2407	150 / 160	165 / 185
TBA	1	0.129	0.161	0.043	0.042	0.162 + j0.042	0.537 + j0.437	2534	170 / 185	185 / 210
TBA	1/0	0.102	0.128	0.039	0.041	0.128 + j0.041	0.503 + j0.418	2664	195 / 210	215 / 240
TBA	2/0	0.081	0.101	0.036	0.039	0.102 + j0.039	0.475 + j0.398	2804	220 / 235	245 / 275
TBA	3/0	0.064	0.081	0.033	0.038	0.081 + j0.038	0.452 + j0.377	2970	250 / 270	285 / 315
649373	4/0	0.051	0.064	0.030	0.037	0.065 + j0.037	0.432 + j0.355	3152	285 / 305	325 / 360
TBA	250	0.043	0.054	0.029	0.036	0.055 + j0.036	0.419 + j0.335	3331	310 / 335	360 / 400
649371	350	0.031	0.039	0.025	0.034	0.040 + j0.034	0.395 + j0.302	3666	375 / 400	435 / 490
679439	500	0.022	0.028	0.022	0.033	0.029 + j0.032	0.372 + j0.266	4083	450 / 485	535 / 600
TBA	750	0.014	0.020	0.019	0.031	0.020 + j0.031	0.344 + j0.224	4695	545 / 585	670 / 745

* 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)

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