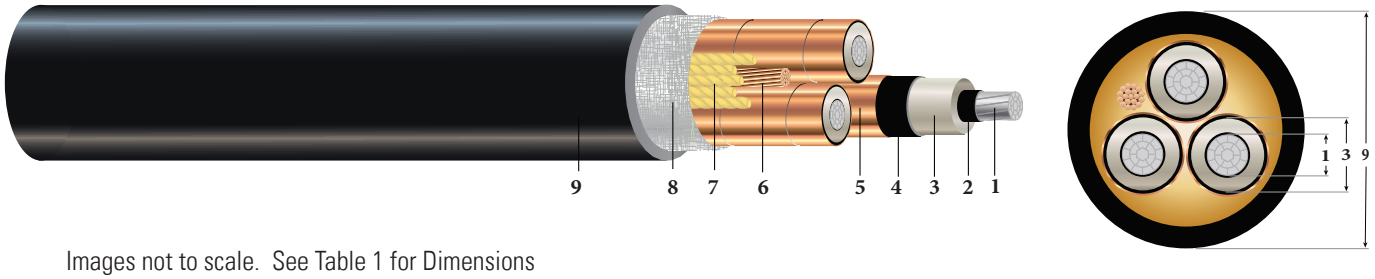
3/C AL 15KV 220 NL-EPR 133% TS PVC MV-105

Type MV-105 Three Conductor Aluminum, 220 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 compact stranded 8000 Series aluminum per ASTM B800 and ASTM B836
2. **Conductor Shield**: Semi-conducting cross-linked copolymer; A conductor separator is used for cable size larger than or equal to 500 Kcmil
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 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 B800 8000 Series Aluminum Alloy Wire
- ASTM B836 Compact Rounded Stranded Aluminum Conductors
- 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] AL 220 MILS NL-EPR 15KV 133% INS LEVEL

We've got it MADE IN AMERICA

Southwire Company, LLC | One Southwire Drive, Carrollton, GA 30119 | www.southwire.com

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	0.268	0.745	0.805	1 x 6	110	2.030	1761	1194	14.2
TBA	1	0.299	0.776	0.836	1 x 6	110	2.097	1887	1506	14.7
TBA	1/0	0.336	0.813	0.873	1 x 6	110	2.177	2042	1901	15.2
TBA	2/0	0.376	0.853	0.913	1 x 4	110	2.263	2268	2396	15.8
599305	3/0	0.423	0.900	0.960	1 x 4	110	2.365	2488	3020	16.6
TBA	4/0	0.475	0.952	1.012	1 x 4	110	2.477	2746	3809	17.3
TBA	250	0.520	1.006	1.066	1 x 4	110	2.594	3007	4500	18.2
578227	350	0.616	1.102	1.162	1 x 3	110	2.801	3582	6300	19.6
TBA	500	0.736	1.222	1.282	1 x 2	135	3.110	4526	9000	21.8
TBA	750	0.908	1.425	1.485	1 x 1	135	3.549	5930	13500	24.8

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	0.266	0.334	0.055	0.048	0.335 + j0.047	0.710 + j0.426	2651	115 / 125	125 / 145
TBA	1	0.211	0.265	0.051	0.046	0.266 + j0.046	0.640 + j0.411	2752	135 / 145	145 / 165
TBA	1/0	0.168	0.211	0.048	0.044	0.212 + j0.044	0.584 + j0.394	2873	150 / 165	170 / 185
TBA	2/0	0.133	0.167	0.044	0.043	0.168 + j0.043	0.538 + j0.377	3003	170 / 185	190 / 215
599305	3/0	0.105	0.132	0.041	0.041	0.132 + j0.041	0.500 + j0.359	3156	195 / 210	220 / 245
TBA	4/0	0.084	0.105	0.038	0.040	0.106 + j0.039	0.470 + j0.339	3325	220 / 240	255 / 285
TBA	250	0.071	0.089	0.036	0.039	0.089 + j0.039	0.449 + j0.321	3501	245 / 265	280 / 315
578227	350	0.051	0.064	0.031	0.037	0.064 + j0.037	0.415 + j0.292	3813	295 / 315	345 / 385
TBA	500	0.035	0.045	0.027	0.035	0.045 + j0.035	0.385 + j0.260	4203	355 / 385	425 / 475
TBA	750	0.024	0.030	0.024	0.033	0.031 + j0.033	0.350 + j0.217	4864	440 / 475	540 / 600

* 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)(80) 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)(72) of the 2014 National Electrical Code (40°C Ambient Air Temperature)