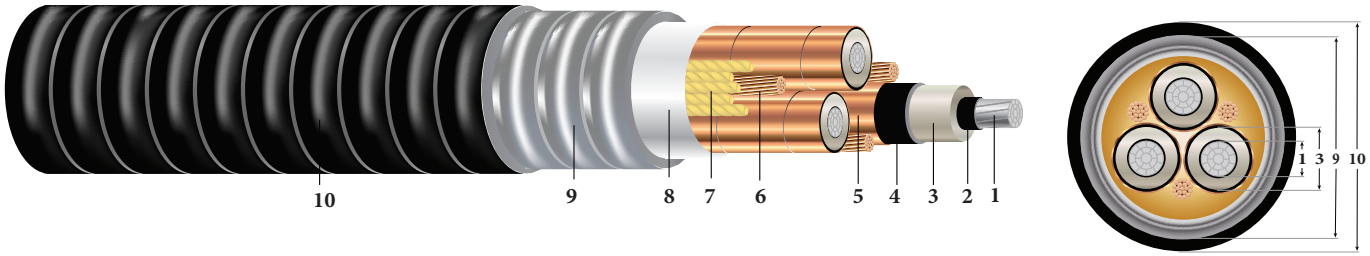
3/C AL 15KV 220 NL-EPR 133% TS AIA PVC MV-105

Type MV-105 Three Conductor Aluminum, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, 50% Ground Aluminum Interlocked Armor (AIA), Polyvinyl Chloride (PVC) Jacket. Silicone Free.



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**: Three separate ground wires with a combined circular mil of 50% of the equivalent copper-phase condutor ampacity. Class B compressed stranded bare copper per ASTM B3 and ASTM B8.
7. **Filler**: Wax paper filler
8. **Binder**: Polypropylene tape
9. **Armor**: Aluminum Interlocked Armor (AIA)
10. **Overall Jacket**: Polyvinyl Chloride (PVC) black jacket

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. The ground is sized to equal 50% of the equivalent copper phase condutor ampacity. Silicone free cable.

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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTING BOLT] #P# (UL) 3/C [#AWG or #kcmil] AL 220 MILS NL-EPR AIA 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 YEAR (NESC) [SEQUENTIAL FEET MARKS]

Table 1 – Weights & Measurements

Stock Code	Cond. Size	Diameter over Cond. (1)	Diameter over Insul. (3)	Diameter over Insul. Shield	Ground	Dia. Over Armor (9)	Jacket Thickness	Approx. OD (10)	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG	inches	inches	inches	No. x AWG	inches	mils	inches	lbs./MFT	lbs.	inches
TBA	1/0	0.336	0.813	0.873	3 x 8	2.251	75	2.401	2361	1901	16.8
TBA	2/0	0.376	0.853	0.913	3 x 6	2.337	75	2.487	2639	2396	17.4
TBA	3/0	0.423	0.900	0.960	3 x 6	2.439	75	2.589	2868	3020	18.1
TBA	4/0	0.475	0.952	1.012	3 x 5	2.551	75	2.701	3200	3809	18.9
TBA	250	0.520	1.006	1.066	3 x 5	2.668	75	2.818	3472	4500	19.7
TBA	350	0.616	1.102	1.162	3 x 4	2.875	75	3.025	4113	6300	21.2
TBA	500	0.736	1.222	1.282	3 x 2	3.134	85	3.304	5187	9000	23.1
575988	750	0.908	1.425	1.485	3 x 1	3.573	85	3.743	6727	13500	26.2

All dimensions are nominal and subject to normal manufacturing tolerances

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 Directly Buried †	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	1/0	0.168	0.211	0.048	0.044	0.212 + j0.044	0.584 + j0.394	2873	185 / 200	170 / 185
TBA	2/0	0.133	0.167	0.044	0.043	0.168 + j0.043	0.538 + j0.377	3003	210 / 225	190 / 215
TBA	3/0	0.105	0.132	0.041	0.041	0.132 + j0.041	0.500 + j0.359	3156	240 / 260	220 / 245
TBA	4/0	0.084	0.105	0.038	0.040	0.106 + j0.039	0.470 + j0.339	3325	270 / 295	255 / 285
TBA	250	0.071	0.089	0.036	0.039	0.089 + j0.039	0.449 + j0.321	3501	300 / 320	280 / 315
TBA	350	0.051	0.064	0.031	0.037	0.064 + j0.037	0.415 + j0.292	3813	360 / 390	345 / 385
TBA	500	0.035	0.045	0.027	0.035	0.045 + j0.035	0.385 + j0.260	4203	435 / 470	425 / 475
575988	750	0.024	0.030	0.024	0.033	0.031 + j0.033	0.350 + j0.217	4864	540 / 580	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)(84) 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)