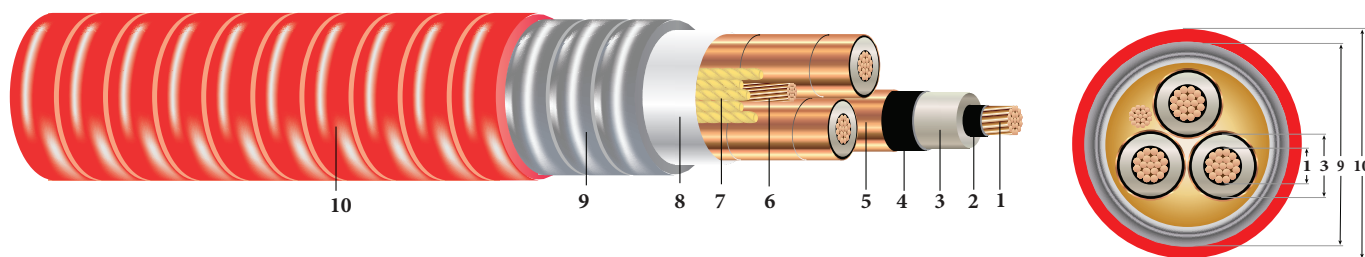


3/C CU 15KV 220 NL-EPR 133% TS ARMOR-X PVC MV-105

Type MV-105 Three Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape Shield, Continuous Corrugated Welded Armor (Armor-X), Polyvinyl Chloride (PVC) Jacket



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:** 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:** Polypropylene tape
9. **Armor:** Continuous Corrugated Welded Armor (Armor-X)
10. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 15KV ARMOR-X are armored cables 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, 250°C for short circuit conditions, and -50°C for cold bend. For uses in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503.

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

SAMPLE PRINT LEGEND:

SOUTHWIRE [SYMBOL - LIGHTNING BOLT] #P# ARMOR-X (UL) 3/C [#AWG or #kcmil] CU 220 MILS NL-EPR 15KV 133% INS LEVEL 25% TS MV-105 FOR CT USE SUN. RES. FOR DIRECT BURIAL FT4 [-50°C] YEAR (NESC) [SEQUENTIAL FEET MARKS]



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Table 1 – Weights & Measurements

Stock Code	Cond. Size AWG	Diameter over			Ground No. x AWG	Dia. Over Armor (9) inches	Jacket Thickness mils	Approx. OD (10) inches	Approx. Weight lbs./MFT	Max Pull Tension lbs.	Min Bending Radius inches
		Cond. (1) inches	Insul. (3) inches	Insul. Shield inches							
890663	2	0.283	0.760	0.820	1 x 6	2.290	75	2.440	2529	1593	17.1
TBA	1	0.322	0.799	0.859	1 x 4	2.290	75	2.440	2811	2009	17.1
890664	1/0	0.362	0.839	0.899	1 x 4	2.430	75	2.580	3142	2534	18.1
890665	2/0	0.405	0.882	0.942	1 x 4	2.550	75	2.700	3527	3194	18.9
TBA	3/0	0.456	0.933	0.993	1 x 3	2.670	75	2.820	4033	4027	19.7
890666	4/0	0.512	0.989	1.049	1 x 3	2.880	75	3.030	4630	5078	21.2
890667	250	0.558	1.044	1.104	1 x 3	2.880	75	3.030	5109	6000	21.2
890668 ◊	350	0.661	1.147	1.207	1 x 2	3.220	85	3.390	6839	8400	23.7
890669 ◊	500	0.789	1.275	1.335	1 x 1	3.540	85	3.710	8731	12000	26.0
550439	750	0.968	1.463	1.523	1 x 0	3.850	85	4.020	11729	18000	28.1

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Standard stock item

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				Directly Buried † Amps	In Air ‡ Amps
		Ω/MFT	Ω/MFT	MΩ*MFT	Ω/MFT				Amps	Amps
890663	2	0.162	0.203	0.053	0.047	0.203 + j0.047	0.577 + j0.419	2700	185 / 200	165 / 185
TBA	1	0.129	0.161	0.049	0.045	0.162 + j0.045	0.535 + j0.401	2827	210 / 225	185 / 210
890664	1/0	0.102	0.128	0.045	0.043	0.128 + j0.043	0.499 + j0.383	2957	240 / 255	215 / 240
890665	2/0	0.081	0.101	0.042	0.042	0.102 + j0.042	0.471 + j0.366	3097	270 / 290	245 / 275
TBA	3/0	0.064	0.081	0.039	0.040	0.081 + j0.040	0.446 + j0.346	3263	305 / 330	285 / 315
890666	4/0	0.051	0.064	0.036	0.039	0.065 + j0.039	0.426 + j0.327	3445	350 / 375	325 / 360
890667	250	0.043	0.054	0.034	0.038	0.055 + j0.038	0.411 + j0.309	3624	380 / 410	360 / 400
890668 ◊	350	0.031	0.039	0.030	0.036	0.040 + j0.036	0.386 + j0.279	3959	460 / 495	435 / 490
890669 ◊	500	0.022	0.028	0.026	0.034	0.028 + j0.034	0.362 + j0.247	4376	550 / 590	535 / 600
550439	750	0.014	0.020	0.022	0.032	0.020 + j0.032	0.335 + j0.209	4987	665 / 720	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)(83) 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)

