CU Compressed 2.4kV EPR Insulation 100% IL ARMOR-X® PVC Jacket. MV 105 - Tray Rated - Sunlight Resistant - For Direct Burial - VFD Cable

Type MV-105 Three Conductor Copper, 90 Mils Ethylene Propylene Rubber (EPR) Continuous Corrugated Welded Armor - ARMOR-X®, Polyvinyl Chloride (PVC) Jacket. Suitable for VFD Applications. Type MC-HL. Silicone Free

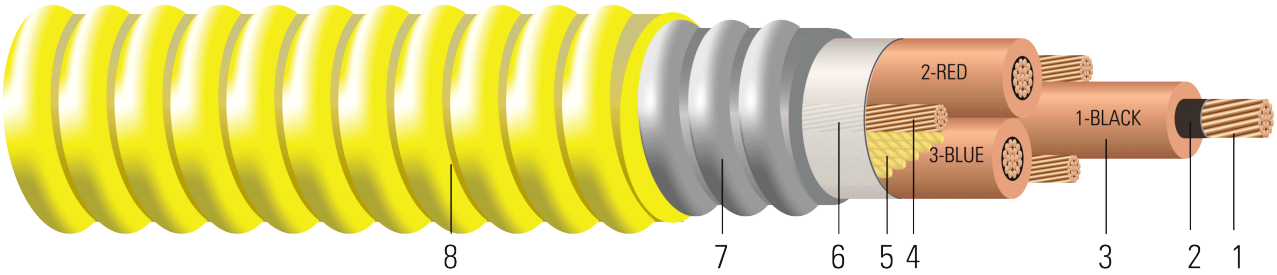

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** 90 Mils Ethylene Propylene Rubber (EPR)
4. **Grounding Conductor:** 3 Class B compressed stranded bare copper ground per ASTM B3 and B8 (Tinned Copper per ASTM B33 optional)
5. **Filler:** Wax paper filler
6. **Binder:** Polypropylene tape
7. **Armor:** ARMOR-X® Continuous Corrugated Welded Armor
8. **Overall Jacket:** Polyvinyl Chloride (PVC)

APPLICATIONS AND FEATURES:

Southwire's 2.4KV ARMOR-X® Type MC-HL are armored cables for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial or concrete encasement 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, 130°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. Suitable for VFD application.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- UL 1072 Medium-Voltage Power Cables
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- ICEA S-96-659 (NEMA WC 71) 2001-5000 V Nonshielded Cables
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- Made in America: Compliant with both Buy American and Buy America Act (BAA) requirements per 49 U.S.C. § 5323(j) and the Federal Transit Administration Buy America requirements per 49 C.F.R. part 661

UPDATED: May 8, 2024, 2:02 p.m.UTC REVISION: 1.000.006

SAMPLE PRINT LEGEND:

{SQFTG_DUAL} SOUTHWIRE® ARMOR-X® {UL} MV-105 3/C NON-SHIELDED 4/0 AWG CU 90 MILS NL-EPR GW 3 X X AWG CU 90°C JKT FOR CT USE SUN. RES. 2400V IEEE 1202/FT4 {NESC} MAXIMUM 2400 VOLTS

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Strand Count	Diameter Over Conductor	Diameter Over Insulation	Ground	Diameter Over armor	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight	Max Pull Tension	Min Bending Radius
	AWG/ Kcmil	No. of Strands	inch	inch	No. x AWG	inch	mil	inch	lb/1000ft	lb/1000ft	lb	inch
890615	2	7	0.282	0.495	3 x 10	1.430	70	1.570	717	1432	1592	10.9
890616	1/0	19	0.361	0.580	3 x 8	1.540	60	1.660	1142	1960	2534	11.6
890617	2/0	19	0.405	0.625	3 x 8	1.670	70	1.810	1399	2338	3194	12.6
890618	4/0	19	0.512	0.715	3 x 6	1.870	60	1.990	2225	3199	5078	13.9
890619	250	37	0.558	0.770	3 x 6	2.040	60	2.166	2584	3750	6000	15.1
890620	350	37	0.661	0.865	3 x 6	2.290	85	2.460	3520	5276	8400	17.2
890621	500	37	0.789	0.990	3 x 4	2.670	75	2.820	5068	6809	12000	19.7
890622	750	61	0.968	1.205	3 x 4	3.000	85	3.170	7406	9734	18000	22.1

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Cond. Size	DC Resistance @ 25°C	AC Resistance @ 90°C	Inductive Reactance @ 60Hz	Zero Sequence Impedance	Positive Sequence Impedance	Allowable Ampacity In Duct 90/105°C	Allowable Ampacity In Air 90/105°C
AWG/ Kcmil	Ω/1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp
2	0.162	0.204	0.035	0.186 + j0.02	0.196 + j0.029	135/145	140/154
1/0	0.102	0.128	0.032	0.11 + j0.017	0.12 + j0.026	175/190	185/205
2/0	0.081	0.102	0.032	0.084 + j0.016	0.094 + j0.025	200/220	215/240
4/0	0.051	0.065	0.030	0.047 + j0.015	0.057 + j0.023	265/280	285/320
250	0.043	0.056	0.029	0.038 + j0.014	0.048 + j0.023	290/315	320/355
350	0.031	0.041	0.028	0.023 + j0.013	0.033 + j0.022	355/380	395/440
500	0.022	0.030	0.027	0.012 + j0.012	0.022 + j0.021	430/460	485/545
750	0.014	0.023	0.027	0.005 + j0.011	0.015 + j0.02	530/570	615/685

* Ampacities are based on:
* For Duct: Table 310.60(C)(79) Detail 1.
* For Free Air: Table 310.60(C)(71).
* Inductive impedance is based on non-ferrous conduit with one diameter spacing.
* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.
* Capacitive Reactance is between Phase-to-Shield.