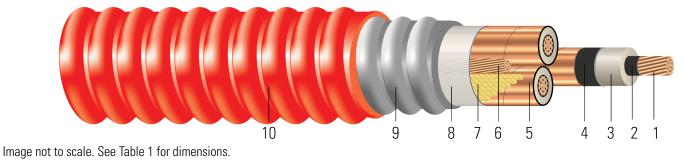


# CU Compressed 15kV NLEPR Insulation 133% IL ARMOR-X<sup>®</sup> Red PVC Jacket. MV 105 Tray Rated - Sunlight Resistant - For Direct Burial Type MV-105 Three Conductor Copper, 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level, Tape

Shield, Continuous Corrugated Welded Aluminum Armor - ARMOR-X<sup>®</sup>, Polyvinyl Chloride (PVC) Jacket. Silicone Free



## **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: 220 Mils No Lead Ethylene Propylene Rubber (NL-EPR) 133% Insulation Level
- 4. **Insulation Shield:** Strippable semi-conducting cross-linked copolymer
- 5. **Copper Tape Shield:** Helically wrapped 5 mil copper tape with 25% overlap
- 6. Grounding Conductor: Class B compressed stranded bare copper ground per ASTM B3 and B8 (Tinned Copper per ASTM B33 optional)
- 7. Filler: Wax paper filler
- 8. Binder: Polypropylene tape
- 9. Armor: ARMOR-X<sup>®</sup> Continuous Corrugated Welded Aluminum Armor
- 10. Overall Jacket: Polyvinyl Chloride (PVC)

# **APPLICATIONS AND FEATURES:**

Southwire's 15KV ARMOR-X<sup>®</sup> 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 Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B33 Standard Specification for Tin-Coated Soft or Annealed Copper Wire
- ASTM B496 Compact Round Concentric-lay-standard copper
- UL 1072 Medium-Voltage Power Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- UL 1685 Vertical-Tray Fire Propagation and Smoke Release Test
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable
- ICEA S-93-639 (NEMA WC 74) 5-46 KV Shielded Power Cable



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- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- AEIC CS-8 Specification for extruded dielectric shielded power cables rated for 5 through 46KV (Qualification Test Requirements)
- 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

#### **SAMPLE PRINT LEGEND:**

SOUTHWIRE ARMOR-X<sup>®</sup> {UL} MV-105 OR MC-HL 3/C SHIELDED XXX AWG CU 220 MILS NL-EPR 25%TS GW 1 X XXX AWG CU 90°C JKT DIR. BUR. FOR CT USE FT4 -40°C SUN. RES. 15KV 133% -- ABS CWCMC USA {YYYY} {NESC} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

#### Table 1 – Weights and Measurements

| Stock<br>Number | Cond.<br>Size | Strand<br>Count   | Diameter<br>Over<br>Conductor | Diameter<br>Over<br>Insulation | Diameter<br>Over<br>Insulation<br>Shield | Ground       | Diameter<br>Over armor | Jacket<br>Thickness | Approx.<br>OD | Copper<br>Weight | Approx.<br>Weight | Max Pull<br>Tension | Min<br>Bending<br>Radius |
|-----------------|---------------|-------------------|-------------------------------|--------------------------------|--|--------------|------------------------|---------------------|---------------|------------------|-------------------|---------------------|--------------------------|
|                 | AWG/<br>Kcmil | No. of<br>Strands | inch                          | inch                           | inch                                     | No. x<br>AWG | inch                   | mil                 | inch          | lb/<br>1000ft    | lb/<br>1000ft     | lb                  | inch                     |
| 890665          | 2/0           | 19                | 0.405                         | 0.884                          | 0.944                                    | 1x4          | 2.550                  | 75                  | 2.700         | 1593             | 3639              | 3194                | 18.9                     |

All dimensions are nominal and subject to normal manufacturing tolerances

 $\Diamond$  Cable marked with this symbol is a standard stock item

## Table 2 – Electrical and Engineering Data

| Cond.<br>Size | DC<br>Resistance @<br>25°C | AC<br>Resistance @<br>90°C | Capacitive<br>Reactance @<br>60Hz | Inductive<br>Reactance @<br>60Hz | Zero<br>Sequence<br>Impedance | Positive<br>Sequence<br>Impedance | Shield Short<br>Circuit<br>Current 6<br>Cycles | Allowable<br>Ampacity In<br>Duct 90/105°C | Allowable<br>Ampacity In Air<br>90/105°C |
|---------------|----------------------------|----------------------------|-----------------------------------|----------------------------------|-------------------------------|-----------------------------------|--|---|--|
| AWG/<br>Kcmil | Ω/1000ft                   | Ω/1000ft                   | MΩ*1000ft                         | Ω/1000ft                         | Ω/1000ft                      | Ω/1000ft                          | Amp  | Amp                                       | Amp                                      |
| 2/0           | 0.081                      | 0.102                      | 0.040                             | 0.042                            | 0.471 + j0.367                | 0.102 + j0.042                    | 2952   | 220/235                                   | 245/275                                  |

\* NEC ampacities are based on:

\* For Duct: Table 310.60(C)(13) Detail 1.

\* For Free Air: Table 310.60(C)(5).

\* Inductive impedance is based on non-ferrous conduit with one diameter spacing center-to-center.

\* Sequence Impedance values are based on Rho Earth Resistivity: 100 Ohm-Meter/1000ft.

\* Capacitive Reactance is between Phase-to-Shield.



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