



CU Compressed 2.4kV EPR Insulation 100% IL LSZH-TS Jacket. MV 90

Type MV-90 Single Conductor Copper, Ethylene Propylene Rubber (EPR) Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS) Jacket. Silicone Free



Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8 (Tinned Copper per ASTM B33 optional)
2. **Conductor Shield:** Semi-conducting cross-linked copolymer
3. **Insulation:** Ethylene Propylene Rubber (EPR)
4. **Overall Jacket:** Thermoset SOLONON® Low Smoke Zero Halogen (LSZH-TS)

APPLICATIONS AND FEATURES:

Southwire's 2.4KV cables are suited for use in wet and dry areas, conduits, ducts, troughs, and where superior electrical properties are desired. These cables are capable of operating continuously at the conductor temperature not in excess of 90°C for normal operation, 130°C for emergency overload, and 250°C for short circuit conditions. Rated at -25°C for cold bend. Rated for 1000 lbs./FT maximum sidewall pressure. Silicone Free.

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
- CT USE Sizes 1/0 AWG and Larger
- 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:

{SOFTG_DUAL} SOUTHWIRE® POWER CABLE {UL} XXX AWG CU XXX MILS EPR/SOLONON XL JKT 2400V NONSHIELDED MV-90 WET/DRY ST1 OIL RES II FOR CT USE MAXIMUM 2400 VOLTS





Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Strand Count | Diameter Over Conductor | Diameter Over Insulation | Insul. Thickness | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | Max Pull Tension | Min Bending Radius | Conduit Size* |
|--------------|---------------|----------------|-------------------------|--------------------------|------------------|------------------|------------|---------------|----------------|------------------|--------------------|---------------|
| | AWG/ Kcmil | No. of Strands | inch | inch | mil | mil | inch | lb/1000ft | lb/1000ft | lb | inch | inch |
| 611178 | 500 | 37 | 0.789 | 1.09 | 140 | 110 | 1.332 | 1543 | 2091 | 4000 | 10.6 | 4 |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

* Conduit size based on 3 phase 40% fill-factor without ground

* #2 awg non "LS" rated

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°C | Allowable Ampacity In Air 90°C |
|---------------|----------------------|----------------------|----------------------------|-------------------------|-----------------------------|---------------------------------|--------------------------------|
| AWG/ Kcmil | Ω/1000ft | Ω/1000ft | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 500 | 0.022 | 0.030 | 0.0337 | 0.012 + j0.014 | 0.02 + j0.023 | 470 | 695 |

* Ampacities are based on:

* For Duct: Table 310.60(C)(77) Detail 1.

* For Free Air: Table 310.60(C)(69).

* 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.

