# CU 600/1000V XLPE Insulation ARMOR-X® PVC Jacket XHHW-2. VFD Cable - CT Rated -Sunlight Resistant - For Direct Burial - Silicone Free

Type MC-HL Power Cable 600Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Continuous Corrugated Welded Armor - ARMOR-X®, Polyvinyl Chloride (PVC) Jacket with 3 Bare CU Ground

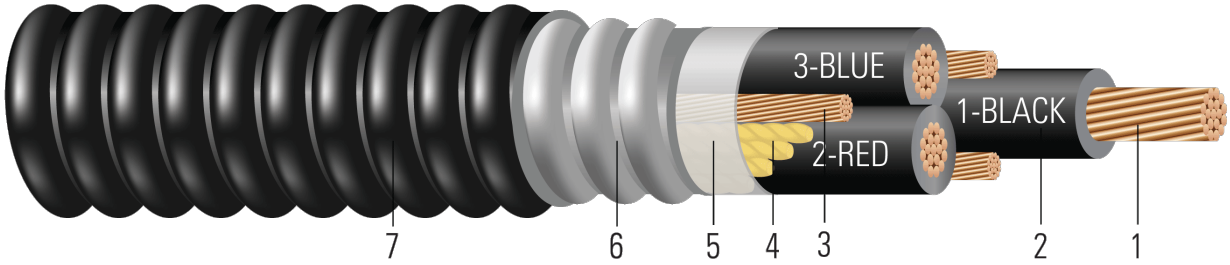


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Class B compressed stranded bare copper per ASTM B3 and B8
2. **Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
3. **Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and B8
4. **Filler:** Polypropylene filler
5. **Binder:** Polypropylene tape
6. **Armor:** ARMOR-X® Continuous Corrugated Welded Armor
7. **Overall Jacket:** Polyvinyl Chloride (PVC) Jacket

## APPLICATIONS AND FEATURES:

Southwire's 600 Volt Type MC-HL ARMOR-X® power cables are suited for use in wet and dry areas, conduits, ducts, troughs, trays, direct burial, aerial supported by a messenger, 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 in wet and dry locations, 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:


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- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 44 Thermoset-Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- UL 2225 Cables and Cable-Fittings For Use In Hazardous (Classified) Locations
- CSA C22.2 No. 123 Metal sheathed cables RA90-HL
- ICEA S-58-679 Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-58-679 Control Cable Conductor Identification Method 4
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- ICEA S-138-738 Power Cables Rated 2000 Volts or Less for use Between Variable Frequency Drives and Motors
- IEEE 1202 FT4 Vertical Tray Flame Test (70,000 Btu/hr) and ICEA T-29-520 - (210,000 Btu/hr)

## SAMPLE PRINT LEGEND:

{SQFTG_DUAL} SOUTHWIRE ARMOR-X® {UL} TYPE MC-HL 3/C XXX KCMIL (XXX{mm2}) CU XHHW-2 GW 3 X X AWG 90°C JACKET -40°C SUN. RES. DIR. BUR. FOR CT USE 600V IEEE1202/FT4 -- {CSA} RA90-HL AG14 XLPE -40°C 600V FT4 SR 90°C -- {NOM}-ANCE Tipo MC XHHW-2 CT FT4 -- VFD USA

## Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Cond. Number | Strand Count | Diameter Over Conductor | Insul. Thickness | Ground | Dia. Over Armor | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight | Jacket Color |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | No. of Strands | inch | mil | No. x AWG | inch | mil | inch | lb/1000ft | lb/1000ft | |
| 550593◊ | 8 | 3 | 7 | 0.142 | 45 | 3 x 14 | 0.75 | 50 | 0.856 | 193 | 408 | BK |
| 890513◊ | 6 | 3 | 7 | 0.178 | 45 | 3 x 12 | 0.84 | 50 | 0.946 | 307 | 548 | BK |
| 890514◊ | 4 | 3 | 7 | 0.225 | 45 | 3 x 12 | 0.92 | 50 | 1.026 | 449 | 717 | BK |
| 890515◊ | 2 | 3 | 7 | 0.283 | 45 | 3 x 10 | 1.06 | 50 | 1.166 | 718 | 1063 | BK |
| 890516◊ | 1/0 | 3 | 19 | 0.362 | 55 | 3 x 10 | 1.35 | 50 | 1.456 | 1085 | 1676 | BK |
| 890517◊ | 2/0 | 3 | 19 | 0.405 | 55 | 3 x 10 | 1.47 | 50 | 1.576 | 1342 | 1913 | BK |
| 890518 | 3/0 | 3 | 19 | 0.456 | 55 | 3 x 8 | 1.54 | 60 | 1.666 | 1724 | 2390 | BK |
| 890519◊ | 4/0 | 3 | 19 | 0.512 | 55 | 3 x 8 | 1.67 | 60 | 1.796 | 2134 | 2838 | BK |
| 890520 | 250 | 3 | 37 | 0.558 | 65 | 3 x 8 | 1.845 | 60 | 1.971 | 2493 | 3312 | BK |
| 890521◊ | 350 | 3 | 37 | 0.661 | 65 | 3 x 6 | 2.2 | 60 | 2.326 | 3520 | 4517 | BK |
| 890522◊ | 500 | 3 | 37 | 0.789 | 65 | 3 x 6 | 2.29 | 75 | 2.448 | 4923 | 5963 | BK |
| 646751 | 600 | 3 | 61 | 0.866 | 80 | 3 x 6 | 2.67 | 75 | 2.828 | 5859 | 7181 | BK |
| 890523 | 750 | 3 | 61 | 0.968 | 80 | 3 x 4 | 3 | 75 | 3.158 | 7407 | 9322 | BK |
| TBA | 1000 | 3 | 61 | 1.117 | 80 | 3 x 4 | 3.22 | 75 | 3.37 | 9356 | 11358 | BK |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
TBA stock codes are estimations only and actual product may vary. Please wait until a stock code is assigned to purchase connectors and/or fittings.


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## Table 2 – Electrical and Engineering Data

| Stock Number | Cond. Size | Cond. Number | Min Bending Radius | Max Pull Tension | DC Resistance @ 25°C | AC Resistance @ 75°C | Inductive Reactance @ 60Hz | Allowable Ampacity At 75°C | Allowable Ampacity At 90°C |
|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | inch | lb | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 550593◊ | 8 | 3 | 6 | 396 | 0.653 | 0.81 | 0.052 | 50 | 55 |
| 890513◊ | 6 | 3 | 6.6 | 629 | 0.411 | 0.51 | 0.051 | 65 | 75 |
| 890514◊ | 4 | 3 | 7.2 | 1001 | 0.258 | 0.32 | 0.048 | 85 | 95 |
| 890515◊ | 2 | 3 | 8.2 | 1592 | 0.162 | 0.201 | 0.045 | 115 | 130 |
| 890516◊ | 1/0 | 3 | 10.2 | 2534 | 0.102 | 0.127 | 0.044 | 150 | 170 |
| 890517◊ | 2/0 | 3 | 11 | 3194 | 0.082 | 0.102 | 0.043 | 175 | 195 |
| 890518 | 3/0 | 3 | 11.7 | 4027 | 0.064 | 0.079 | 0.042 | 200 | 225 |
| 890519◊ | 4/0 | 3 | 12.6 | 5078 | 0.051 | 0.063 | 0.041 | 230 | 260 |
| 890520 | 250 | 3 | 13.8 | 6000 | 0.043 | 0.053 | 0.041 | 255 | 290 |
| 890521◊ | 350 | 3 | 16.3 | 8400 | 0.031 | 0.039 | 0.04 | 310 | 350 |
| 890522◊ | 500 | 3 | 17.1 | 12000 | 0.021 | 0.027 | 0.039 | 380 | 430 |
| 646751 | 600 | 3 | 19.8 | 14400 | 0.018 | 0.024 | 0.039 | 420 | 475 |
| 890523 | 750 | 3 | 22.1 | 18000 | 0.014 | 0.019 | 0.038 | 475 | 535 |
| TBA | 1000 | 3 | 23.6 | 24000 | 0.011 | 0.016 | 0.037 | 545 | 615 |

***** Ampacities based upon 2023 NEC Table 310.16. See NEC sections 310.15 and 110.14(C) for additional requirements.

VFD Sizing Calculator


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