

3/C CU 600V XLPE XHHW-2 ARMOR-X SOLONON® LSZH-TP Power Cable With Ground

Type MC-HL Power Cable 600 Volt Three Conductor Copper, Cross Linked Polyethylene (XLPE) insulation XHHW-2 Continuous Corrugated Welded Armor (Armor-X), Thermoplastic Solonon® Low Smoke Zero Halogen (LSZH-TP) Jacket with Bare CU Ground

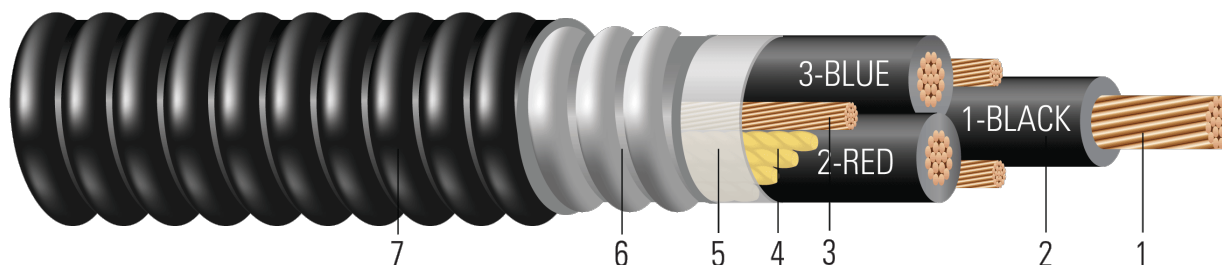


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Insulation:** Cross Linked Polyethylene (XLPE) Type XHHW-2
- Grounding Conductor:** Class B compressed stranded bare copper per ASTM B3 and ASTM B8
- Filler:** Paper filler (cable size 8 & 6 uses Polypropylene filler)
- Binder:** Polypropylene tape
- Armor:** Continuous Corrugated Welded Armor (Armor-X)
- Overall Jacket:** Thermoplastic Solonon® Low Smoke Zero Halogen (LSZH-TP) 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. Cables with 3 ground wires suitable for VFD application.

SPECIFICATIONS:

- ASTM B3 Standard Specification for 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 Vertical-Tray Fire Propagation and Smoke Release Test (1/0 and Larger)
- ICEA S-58-679 Control Cable Conductor Identification Method 3 (1-BLACK, 2-RED, 3-BLUE)
- ICEA S-95-658 (NEMA WC70) Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- ABS Listed as CWC/MC



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SAMPLE PRINT LEGEND:

{SQFTG_DUAL} SOUTHWIRE{R} MASTER-DESIGN {UL} ARMOR-X TYPE MC-HL 3/C XXX AWG (XX{mm²}) CU XHHW-2 GW 3 X X AWG 90{D}C SOLONON{R} JACKET -40{D}C ST1 SUN.RES. DIR. BUR. FOR CT USE 600V IEEE1202/FT4 -- VFD -- {NOM}-ANCE Tipo MC XHHW-2 CT FT4

Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Diameter Over Conductor | Insul. Thickness | Diameter Over Insulation | Ground | Diameter Over Armor | Jacket Thickness | Approx. OD | Copper Weight | Approx. Weight |
|--------------|---------------|-------------------------|------------------|--------------------------|--------------|---------------------|------------------|------------|---------------|----------------|
| | AWG/ Kcmil | inch | mil | inch | No. x AWG | inch | mil | inch | lb/1000ft | lb/1000ft |
| TBA | 8 | 0.139 | 45 | 0.229 | 3 x 14 | 0.700 | 50 | 0.800 | 193 | 399 |
| TBA | 6 | 0.174 | 45 | 0.264 | 3 x 12 | 0.790 | 50 | 0.890 | 307 | 547 |
| 647699 | 4 | 0.221 | 45 | 0.311 | 1 x 8 | 0.920 | 50 | 1.020 | 452 | 740 |
| 677933 | 2 | 0.277 | 45 | 0.367 | 1 x 6 | 1.020 | 50 | 1.120 | 718 | 1062 |
| TBA | 1/0 | 0.360 | 55 | 0.470 | 3 x 10 | 1.350 | 50 | 1.450 | 1084 | 1638 |
| TBA | 2/0 | 0.404 | 55 | 0.514 | 3 x 10 | 1.470 | 50 | 1.570 | 1342 | 1955 |
| 672673 | 2/0 | 0.406 | 58 | 0.522 | 3 x 10 | 1.470 | 60 | 1.590 | 1342 | 2011 |
| 586674 | 3/0 | 0.454 | 55 | 0.564 | 3 x 8 | 1.540 | 60 | 1.660 | 1724 | 2424 |
| TBA | 4/0 | 0.510 | 55 | 0.620 | 3 x 8 | 1.670 | 60 | 1.790 | 2134 | 2910 |
| TBA | 250 | 0.558 | 65 | 0.688 | 3 x 8 | 1.845 | 60 | 1.965 | 2493 | 3390 |
| TBA | 350 | 0.661 | 65 | 0.791 | 3 x 6 | 2.200 | 60 | 2.320 | 3521 | 4600 |
| TBA | 500 | 0.789 | 65 | 0.919 | 3 x 6 | 2.430 | 75 | 2.580 | 4924 | 6259 |
| TBA | 750 | 0.968 | 80 | 1.128 | 3 x 4 | 2.880 | 75 | 3.030 | 7408 | 9145 |

All dimensions are nominal and subject to normal manufacturing tolerances

◊ Cable marked with this symbol is a standard stock item

† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F). Ampacities have been adjusted for more than three current-carrying conductors based on Table 310.15(C) 1.



Table 2 – Electrical and Engineering Data

| Stock Number | Cond. Size | Min Bending Radius | Max Pull Tension | DC Resistance @ 25°C | AC Resistance @ 90°C | Inductive Reactance @ 60Hz | Allowable Ampacity At 60° C† | Allowable Ampacity At 75° C† | Allowable Ampacity At 90° C† |
|--------------|---------------|--------------------|------------------|----------------------|----------------------|----------------------------|------------------------------|------------------------------|------------------------------|
| | AWG/ Kcmil | inch | lb | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp | Amp |
| TBA | 8 | 5.6 | 396 | 0.652 | 0.815 | 0.033 | 40 | 50 | 55 |
| TBA | 6 | 6.2 | 630 | 0.411 | 0.514 | 0.031 | 55 | 65 | 75 |
| 647699 | 4 | 7.1 | 1002 | 0.258 | 0.323 | 0.030 | 70 | 85 | 95 |
| 677933 | 2 | 7.8 | 1593 | 0.162 | 0.203 | 0.028 | 95 | 115 | 130 |
| TBA | 1/0 | 10.2 | 2534 | 0.102 | 0.128 | 0.028 | 125 | 150 | 170 |
| TBA | 2/0 | 11.0 | 3194 | 0.081 | 0.102 | 0.027 | 145 | 175 | 195 |
| 672673 | 2/0 | 23.9 | 3194 | 0.081 | 0.102 | 0.027 | 145 | 175 | 195 |
| 586674 | 3/0 | 11.6 | 4027 | 0.064 | 0.081 | 0.027 | 165 | 200 | 225 |
| TBA | 4/0 | 12.5 | 5078 | 0.051 | 0.064 | 0.026 | 195 | 230 | 260 |
| TBA | 250 | 13.8 | 6000 | 0.043 | 0.055 | 0.027 | 215 | 255 | 290 |
| TBA | 350 | 16.2 | 8400 | 0.031 | 0.040 | 0.026 | 260 | 310 | 350 |
| TBA | 500 | 18.1 | 12000 | 0.022 | 0.029 | 0.025 | 320 | 380 | 430 |
| TBA | 750 | 21.2 | 18000 | 0.014 | 0.020 | 0.025 | 400 | 475 | 535 |

† Ampacities are based on Table 310.16 of the NEC 2020 Edition. Ampacities of insulated conductors rated up to and including 2000 Volts with not more than three current-carrying conductors in raceway, cable or direct buried based on ambient temperature of 30°C (86°F). Ampacities have been adjusted for more than three current-carrying conductors based on Table 310.15(C) 1.

