# MC-AP™ HCF Type MC All Purpose Health Care Facility THHN/THWN Circuit Size Copper Conductor 120/208V Colors Green Aluminum Armor

Copper THHN Insulated Conductors. Full-Sized Aluminum Equipment Grounding/Bonding Conductor. UL Listed 600 Volt. Rated VW1. Lightweight Aluminum Interlocked Armor is Part of Equipment Bonding/Grounding Path.

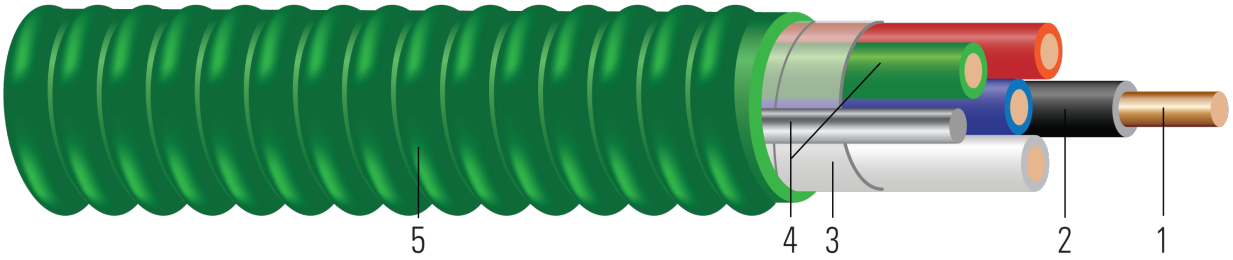


Image not to scale. See Table 1 for dimensions.

## CONSTRUCTION:

1. **Conductor:** Solid or 19 strands class C compressed copper per ASTM B3 and ASTM B8
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Binder:** Mylar tape
4. **Ground:** A Green insulated Polyvinyl Chloride with Nylon Sheath Type THHN/THWN ground. Redundant grounding provided by a bare 8000 series aluminum grounding/bonding conductor and armor.
5. **Armor:** Green Aluminum Interlocked Armor

## APPLICATIONS AND FEATURES:

**Southwire MC-AP HCF Type MC All Purpose Health Care Facility Cable is suitable for use as follows:**

- Branch-circuit wiring for patient care areas of hospitals, medical centers, and other health care facilities (when installed in accordance with NEC® Articles 517 and 330, and mechanically protected per Article 300.4). Such areas include nursing homes, dental offices, clinics, and outpatient facilities. Use in hazardous anesthetizing areas is prohibited.
- Applications requiring redundant, dedicated or isolated grounding paths.
- Fished or embedded in plaster.
- Concealed or exposed installations.
- Environmental air-handling spaces per NEC 300.22 (C).
- Places of Assembly per NEC 518.4 and theaters per NEC 520.5.
- Installation in cable tray and approved raceways.
- Under raised floors for information technology equipment conductors and cables per NEC 645.5(D) & 645.5(D)(2)
- Class I Div. 2, Class II Div 2, & Class III Div. 1 Hazardous Locations.
- Use with UL Listed MCI-A fittings.
- Binder tape with print legend wrapped around assembly.
- Type THHN/THWN rated 90ºC Dry.
- Armor is in contact with aluminum grounding/bonding conductor and serves as a redundant equipment grounding path component

**Southwire Armorlite® Type MC Cable - meets or exceeds the following requirements:**

- UL Online Product Guide Info - Metal-Clad Cable (PJAZ) ( www.ul.com )
- Federal Specification A-A59544 (formerly J-C-30B)


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UPDATED: Dec. 31, 2024, 11:08 p.m.UTC REVISION: 1.000.003

- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

## SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- UL 83 Thermoplastic Insulated Wires and Cables
- UL 1569 Metal-Clad Cables
- UL 1479 Standard for Safety Fire Tests of Penetration Firestops
- UL 1685 FT4 Vertical-Tray Fire Propagation and Smoke Release Test
- IEEE 1202 FT4 Flame Test (70,000) BTU/hr Vertical Tray Test
- RoHS-2 (European Directive 2011/65/EU)
- Buy American: Compliant with Buy American Requirements, found in 49 U.S.C. § 5323(j); specify "Made in the USA Only!" when ordering to ensure your project receives American made products.

## SAMPLE PRINT LEGEND:

SOUTHWIRE E96627 {UL} TYPE MC XX AWG THHN OR THWN CDRS FOR USE IN CABLE TRAYS 600 VOLTS

### Table 1 – Weights and Measurements

| Stock Number | Cond. Size | Conductor Number | Color | Diameter Over Conductor | Conductor Stranding | Insulation Thickness | Ground Size | Diameter Over Armor | Copper Weight | Overall Weight |
|---|---|---|---|---|---|---|---|---|---|---|
| | AWG/ Kcmil | | | inch | | mils | No. x AWG | inch | lbs/1000ft | lbs/1000ft |
| 12 AWG \| SOLID Strands | | | | | | | | | | |
| 589380 | 12 | 4 | BE,WE/BE,WE/ BK,BK,GN | 0.081 | SOLID | 15 | 1x12 | 0.574 | 100 | 172 |

All dimensions are nominal and subject to normal manufacturing tolerances
◊ Cable marked with this symbol is a standard stock item
**Note:** Conductor number = number of phase conductors plus neutral. Does not include green ground.
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.

### Table 2 – Electrical and Engineering Data

| Cond. Size | Conductor Number | Min. Bend Radius | DC Resistance at 25°C | AC Resistance at 75°C | Inductive Reactance @ 60Hz | Allowable Ampacity Raceway 75°C | Allowable Ampacity Raceway 90°C |
|---|---|---|---|---|---|---|---|
| AWG/ Kcmil | | Inches | Ω/1000ft | Ω/1000ft | Ω/1000ft | Amp | Amp |
| 12 AWG \| SOLID Strands | | | | | | | |
| 12 | 4 | 4 | 1.662 | 2.063 | 0.054 | 20 | 24 |

***** Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.
***** Ampacities have been adjusted for more than Three Current-Carrying Conductors.

MCAP Savings Calculator


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