

Armorlite® Type MC THHN/THWN Circuit Size Copper Conductor Neutral Per Phase With Phase ID

Copper THHN/THWN Insulated Singles. Dedicated Neutral Conductor for Each Phase Conductor. Green Insulated Copper Grounding Conductor. UL Listed 600 Volts. Rated VW-1. Lightweight Aluminum Interlocked Armor. Phase With Phase ID

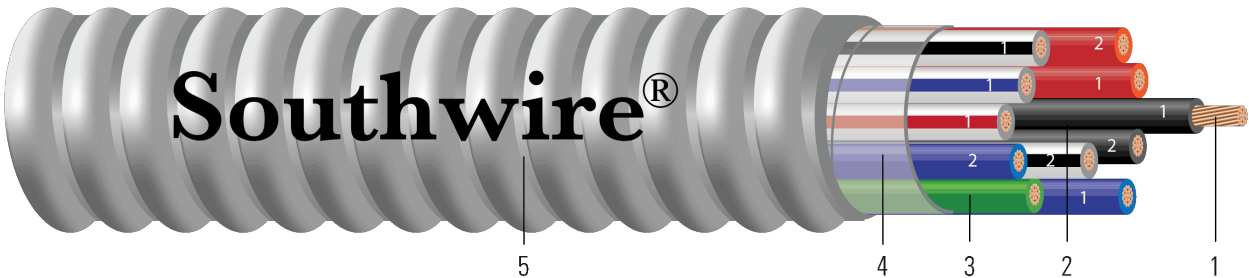


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** 19 strands class C compressed copper per ASTM B8
2. **Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Ground:** Green insulated ground. Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
4. **Binder:** Mylar tape
5. **Armor:** Aluminum Interlocked Armor

Contact [Southwire SPEED™ Services](#) to request a quote.

APPLICATIONS AND FEATURES:

Southwire Armorlite® Type MC Cable Neutral-per-phase products comply with NEC 200.4 requirements (added in the 2011 NEC) for the installation and marking of neutral conductors. Neutrals are not to be used for more than one circuit (branch, multiwire branch, or ungrounded feeder). See NEC 200.4 for complete requirements.

Southwire Armorlite® Type MC Cable - Neutral per phase is suitable for use as follow:

- Applications affected by harmonics generated from non-linear switching loads, such as computers, variable frequency drives, electrical test equipment, and office equipment.
- Multiple circuits for branch, feeder and service power distribution in commercial, industrial, institutional, and multi-residential buildings.
- 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.
- Binder tape with print legend wrapped around assembly.
- Type THHN/THWN rated 90°C Dry.

Southwire Armorlite® Type MC Cable -Neutral per phase 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)
- NFPA 70 (National Electrical Code), Article 330
- Listed for use in UL 1, 2 and 3 Hour Through Penetration Firestop Systems

SPECIFICATIONS:

- 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
- 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:

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 AWG/ Kcmil	Conductor Number	Color	Diameter Over Conductor inch	Conductor Stranding	Insulation Thickness mils	Ground Size No. x AWG	Num x Neutral Size No. x AWG	Diameter Over Armor inch	Copper Weight lbs/1000ft	Overall Weight lbs/1000ft
10 AWG 19 Strands											
677554	10	6	See Table	0.117	19	25	1x10	6x10	0.929	420	637

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. Does not include neutrals and green ground.

Table 2 – Electrical and Engineering Data

Cond. Size AWG/ Kcmil	Conductor Number	Neutral Stranding	Min. Bend Radius Inches	DC Resistance at 25°C Ω/1000ft	AC Resistance at 75°C Ω/1000ft	Inductive Reactance @ 60Hz Ω/1000ft	Allowable Ampacity Raceway 75°C Amp	Allowable Ampacity Raceway 90°C Amp
10 AWG 19 Strands								
10	6	6	6.5	1.040	1.253	0.050	17	20

† 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.

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





Color Table - Conductor number = total number of conductors

Cond. Num.	Black 1	Black 2	Black 3	Red 1	Red 2	Red 3	Blue 1	Blue 2	Blue 3	White/Black 1	White/Black 2	White/Black 3	White/Red 1	White/Red 2	White/Red 3	White/Blue 1	White/Blue 2	White/Blue 3	Green		
2	X									X										X	
4	X			X						X			X								X
6	X			X			X			X			X			X					X
12	X	X		X	X		X	X		X	X		X	X		X	X				X
18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

