Duraclad® Type MC THHN/THWN Circuit Size Copper Conductor Isolated Ground 120/208V Colors

Copper THHN/THWN Insulated Singles. Two Insulated Grounding Conductors. UL Listed. 600 Volts. Rated VW-1. Galvanized Steel Interlocking Armor.

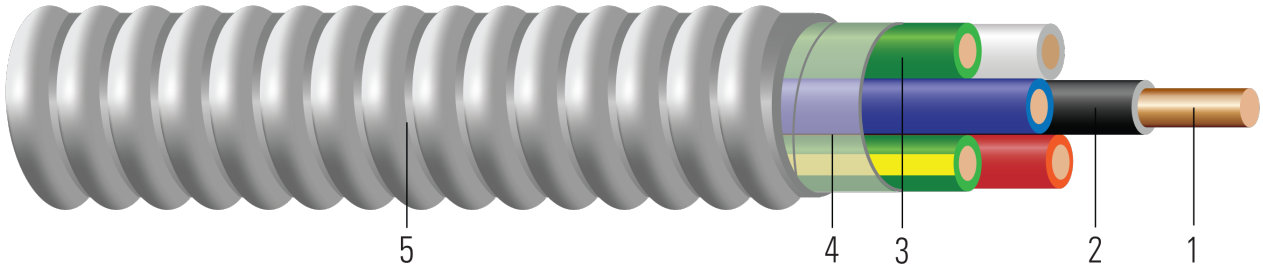

Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

1. **Conductor:** Solid copper per ASTM B3 or 19-strand combination unilay copper per ASTM B3 and B787
2. **Insulation:** Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
3. **Grounds:** Two insulated green and green/yellow grounds. Polyvinyl Chloride with Nylon Sheath Type THHN/THWN
4. **Binder:** Mylar tape
5. **Armor:** Galvanized Steel Interlocking Armor

APPLICATIONS AND FEATURES:

Southwire Duraclad® Type MC Isolated Ground Cable is suitable for use as follow:

- Applications requiring redundant, dedicated or isolated grounding paths
- 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
- Unjacketed Type MC cables are rated for dry, indoor locations only per NEC 330.10(A)(10)
- Type THHN/THWN rated 90ºC dry

Southwire Duraclad® Type MC Isolated Ground 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)
- 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 B787 19 Wire Combination Unilay-Stranded Copper Conductors

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- 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:

STEEL MC CABLE W/CU CDRS THHN-THWN MAXIMUM VOLTAGE 600V, FOR USE IN CABLE TRAY 90°C - WET OR DRY LOCATIONS GASOLINE & OIL RESISTANT CDRS. (GREEN INSULATED GROUND)

Table 1 – Weights and Measurements

Stock Number	Cond. Size	Conductor Number	Color	Diameter Over Conductor	Conductor Stranding	Insulation Thickness	Ground Size	Num x Neutral Size	Diameter Over Armor	Copper Weight	Overall Weight
	AWG/ Kcmil			inch		mils	No. x AWG	No. x AWG	inch	lbs/ 1000ft	lbs/ 1000ft
12 AWG | SOLID Strands											
587524	12	6	BK,RD,BE,GN,WE/ BK,WE/RD,WE/BE	0.081	SOLID	15	1x12	3x12	0.587	140	270
10 AWG | 19 Strands											
557781	10	8	SEE TABLE	0.113	19	20	2x10	4x10	0.88	322	654

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 neutrals. Does not include green and green/yellow 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	6	4.1	1.662	2.063	0.054	20	24
10 AWG | 19 Strands							
10	8	6.2	1.04	1.291	0.05	24	28

***** 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.

Color

Table - Conductor number = number of phase conductors plus neutrals. Does not include green and green/ yellow ground (/ means stripe RD/WE is Red with White Stripe)

Size (Strand)	Cond. Number	Stock Code	Color
10 (19)	8	557781	BK, RD, BE, BK/WE, WE, WE/RD, WE/BE, WE/BK, GN, GN/YW

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