

# TYPE MC - COPPER CONDUCTOR - MULTI-CIRCUIT - ALUMINUM ARMOR - 600V

THHN/THWN-2 INNERS

## ENGINEERING SPECIFICATIONS

### Standards

Underwriters Laboratories Standards UL-83, UL-1569, UL-158, UL-2556 for type MC; Federal Specification A-A59544, NEMA RV 1-2014 IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test; NFPA 70 (NEC®) Article 330; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-301130



Listed E-301130



### Applications

Type MC cable shall be permitted as follows:

- Permitted multiple circuits use for branch circuits in residential, commercial, industrial, and non-patient care areas/spaces of health care facilities;
- Acceptable for power, lighting, control, and signal circuits;
- Allowable in concealed or exposed systems;
- Permitted use in dry locations and embedded in plaster finish on brick or other masonry except in damp or wet locations;
- Utilized for environmental air-handling spaces (NEC 300.22(C)(1));
- Allowable in assembly occupancies (NEC 518.4);
- Permissible in theaters, audience areas of motion pictures, television studios, and similar locations (NEC 520.5);
- Allowable installations in approved raceways and cable trays (NEC 392);
- Suitable for installation under raised floors for IT equipment (NEC 645.5(E));
- Permitted in Class I Div. 2, Class II Div. 2, and Class III Div. 1 Hazardous Locations;
- Listed for use with UL 1479 - 1, 2, and 3 Hour Through-Penetration Firestop Systems.

## CONSTRUCTION

Available in sizes 12 AWG and 10 AWG with oversized neutral conductors or an insulated green ground conductor. Encore Wire Metal-Clad Cable is constructed with soft-drawn copper, Type THHN/THWN-2 conductors rated 90°C dry locations. All conductors are cabled together with a separator tape containing the identification print legend to form the cable core. Interlocked aluminum armor is applied over the entire assembly.



- 1 Removable SmartColorID<sup>1</sup> Label
- 2 Interlocked Aluminum Armor
- 3 Separator Tape
- 4 Multiple Neutrals
- 5 THHN/THWN-2 Solid or Stranded Copper Conductor

Circuit Conductor AWG/No.	Conductor Type	Neutral Conductor AWG/No. <sup>2</sup>	Ground Conductor AWG/No.	Overall Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) <sup>2</sup>		Standard Packaging (ft)	
						75°C	90°C	Coils	Reels
12/4	Solid	12/2	12/1	0.550	209	25	30	250'	1000'
12/6	Solid	12/2	12/1	0.636	262	25	30	250'	1000'
12/9	Solid	12/3	12/1	0.721	358	25	30	200'	1000'
10/4	Solid	10/2	10/1	0.651	311	35	40	200'	1000'
10/6	Solid	10/2	10/1	0.756	391	35	40	125'	1000'
10/9	Solid	10/3	10/1	0.936	552	35	40	125'	1000'
12/4	Stranded	12/2	12/1	0.581	214	25	30	250'	1000'
12/6	Stranded	12/2	12/1	0.656	268	25	30	200'	1000'
12/9	Stranded	12/3	12/1	0.736	366	25	30	200'	1000'
10/4	Stranded	10/2	10/1	0.681	322	35	40	200'	1000'
10/6	Stranded	10/2	10/1	0.771	401	35	40	125'	1000'

<sup>1</sup> SmartColorID manufactured under Patent No. 7,954,530, 8,454,785, 8,826,960 & 8,905,108

<sup>2</sup> Ampacity of conductors are based on NFPA 70 (NEC) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.

When the neutral is considered current-carrying conductor, the ampacity of 4/C cables shall be reduced by a factor of 0.80 per NEC 310.15(B)(3)(a).

The above data is approximate and subject to normal manufacturing tolerances.

## FEATURES

Installation costs reduced up to 50% over raceway and wire. Weight of aluminum armor is as much as 45% less than steel. Insulating anti-short bushings are supplied with each reel or coil, but not required by Section 330.40 of the NEC. SmartColorID labels are spaced at regular intervals on the exterior of the metal sheathing and are removable. For ease of installation and pulling, cable is reverse wound on reels. Coils are designed to be pulled from the inside.



### Standard Conductor Color Coding

No. of Conductors	120V/208V/240V/277V/480V
6	Black/Black w/ White SmartStripe White/White w/ Black Stripe (neutral) Red/Red w/ White SmartStripe Green Ground Conductor
8	Black/Black w/ White SmartStripe White/White w/ Black SmartStripe (neutral) Red/Red w/ White SmartStripe Blue/Blue w/ White SmartStripe Green Ground Conductor
12	Black/Black w/ White SmartStripe/Black w/ Red SmartStripe White/White w/ Black SmartStripe/White w/ Red SmartStripe (neutral) Red/Red w/ White SmartStripe/Red w/ Black SmartStripe Blue/Blue w/ White SmartStripe/Blue w/ Red Stripe Green Ground Conductor

Additional colors available subject to ERQ