

TYPE MC - COPPER CONDUCTOR - OVERSIZED NEUTRAL - ALUMINUM ARMOR - 600V THHN/THWN-2 INNERS

ENGINEERING SPECIFICATIONS

Standards

Underwriters Laboratories Standards UL-83, UL-1569, UL-1581, 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



SmartColorID®

Applications

Type MC cable shall be permitted as follows:

- Power systems designed for use with nonlinear loads may result in harmonic currents needing an oversized neutral/grounded conductor;
- Permitted 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 an oversized neutral conductor and a green insulated 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 or galvanized lightweight steel armor is applied over the entire assembly.



- 1 Removable SmartColorID® Label
- 2 Interlocked Aluminum or Galvanized Lightweight Steel Armor
- 3 Separator Tape
- 4 Oversized Neutral
- 5 THHN/THWN-2 Solid Copper Conductors

Phase Conductor AWG/No.	Conductor Type	Neutral Conductor AWG/No. ²	Ground Conductor AWG/No. ³	Overall Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) ⁴		Standard Packaging (ft)
						75°C	90°C	
12/1	Solid	10/1	12/1	0.456	98	25	30	1000' Reels
12/2	Solid	10/1	12/1	0.486	146	25	30	1000' Reels
12/3	Solid	10/1	12/1	0.556	176	25	30	1000' Reels
12/3	Solid	8/1	12/1	0.566	201	25	30	1000' Reels
12/4	Solid	10/1	12/1	0.571	200	25	30	1000' Reels
12/4	Solid	8/1	12/1	0.596	239	25	30	1000' Reels
10/1	Solid	8/1	10/1	0.556	182	35	40	1000' Reels
10/2	Solid	8/1	10/1	0.596	222	35	40	1000' Reels
10/3	Solid	8/1	10/1	0.646	260	35	40	1000' Reels
10/4	Solid	8/1	10/1	0.686	301	35	40	1000' Reels
12/1	Stranded	10/1	12/1	0.471	124	25	30	1000' Reels
12/2	Stranded	10/1	12/1	0.516	152	25	30	1000' Reels
12/3	Stranded	10/1	12/1	0.551	179	25	30	1000' Reels
12/3	Stranded	8/1	12/1	0.586	205	25	30	1000' Reels
12/4	Stranded	10/1	12/1	0.591	206	25	30	1000' Reels
10/2	Stranded	8/1	10/1	0.606	226	35	40	1000' Reels
10/3	Stranded	8/1	10/1	0.656	266	35	40	1000' Reels
10/4	Stranded	8/1	10/1	0.706	308	35	40	1000' Reels

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

² Conductor sizes 8 AWG and larger are stranded.

³ Double Ground available upon request

⁴ 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 per 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

Oversized Neutrals	120V/208V/240V	Phase Conductors	120V/208V/240V
1	White	1	Black
		2	Black/Red
		3	Black/Red/Blue
Ground	120V/208V/240V	4	Black/Red/Blue/Orange
1	Green		

Additional colors available subject to ERQ

SmartColorID Legend:

