TYPE MC - COPPER CONDUCTOR - STEEL 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

Applications

Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial, industrial, and non-patient care areas/spaces of health care facilities;
- Acceptable for power, lighting, control, and signal circuits;
- 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)) and allowable in assembly occupancies (NEC 518.4);
- Allowable installations in approved raceways and cable trays (NEC 392) and 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 14 AWG through 750 KCMIL. Encore's Metal-Clad Cable is constructed with soft-drawn copper, Type THHN/THWN-2 conductors rated 90°C dry locations sizes 14 AWG through 1 AWG contain a green insulated ground. All conductors are cabled together with a separator tape, containing the identification print legend to form the cable core. Interlocked galvanized lightweight steel armor is applied over the entire assembly.

1. Removable SmartColorID[1] Label
2. Interlocked Galvanized Lightweight Steel Armor
3. Separator Tape
4. THHN/THWN-2 Stranded or Solid Copper Conductors

Conductors			Overall Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps)†		Standard Packaging (ft)	
AWG/No.	Type	Ground			75°C	90°C	Coils	Reels
14/2	Solid	14 AWG Green Insulated	0.401	123	20	25	250'	1000'
14/3	Solid	14 AWG Green Insulated	0.427	144	20	25	250'	1000'
14/4	Solid	14 AWG Green Insulated	0.456	166	20	25	250'	1000'
12/2	Solid	12 AWG Green Insulated	0.487	155	25	30	250'	1000'
12/3	Solid	12 AWG Green Insulated	0.495	185	25	30	250'	1000'
12/4	Solid	12 AWG Green Insulated	0.501	215	25	30	250'	1000'
10/2	Solid	10 AWG Green Insulated	0.502	210	35	40	250'	1000'
10/3	Solid	10 AWG Green Insulated	0.541	256	35	40	250'	1000'
10/4	Solid	10 AWG Green Insulated	0.584	302	35	40	250'	1000'
12/2	Stranded	12 AWG Green Insulated	0.487	160	25	30	250'	1000'
12/3	Stranded	12 AWG Green Insulated	0.495	191	25	30	250'	1000'
12/4	Stranded	12 AWG Green Insulated	0.522	223	25	30	250'	1000'
10/2	Stranded	10 AWG Green Insulated	0.525	219	35	40	250'	1000'
10/3	Stranded	10 AWG Green Insulated	0.566	266	35	40	250'	1000'
10/4	Stranded	10 AWG Green Insulated	0.611	313	35	40	250'	1000'
8/2	Stranded	10 AWG Green Insulated	0.641	347	50	55	200'	500'/100'
8/3	Stranded	10 AWG Green Insulated	0.713	431	50	55	200'	500'/100'
8/4	Stranded	10 AWG Green Insulated	0.783	514	50	55	200'	500'/100'
6/2	Stranded	8 AWG Green Insulated	0.743	466	65	75	125'	500'/100'
6/3	Stranded	8 AWG Green Insulated	0.827	586	65	75	125'	500'/100'
6/4	Stranded	8 AWG Green Insulated	0.909	745	65	75	100'	500'/100'
4/3	Stranded	8 AWG Green Insulated	0.943	790	85	95	100'	500'
4/4	Stranded	8 AWG Green Insulated	1.047	972	85	95	100'	500'
3/3	Stranded	6 AWG Green Insulated	1.026	953	100	115	100'	500'
3/4	Stranded	6 AWG Green Insulated	1.139	1172	100	115	100'	500'
2/3	Stranded	6 AWG Green Insulated	1.079	1102	115	130	100'	500'
2/4	Stranded	6 AWG Green Insulated	1.203	1368	115	130	100'	500'

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

[2] 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.

For equipment marked for use at higher temperatures, the conductor ampacity shall be limited to the following per NEC 110.14(C):

60°C when terminated to equipment for circuits rated 100 amperes or less or marked for size 14 AWG through 1 AWG conductor.

75°C when terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.

90°C for ampacity derating purposes.

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. 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

No.	120V/208V/240V
2	Black/White
3	Black/Red/White
4	Black/Red/Blue/White
Ground	Green

No.	277V/480V
2	Brown/Gray
3	Brown/Orange/Gray
4	Brown/Orange/Yellow/Gray
Ground	Green

Additional colors available subject to ERQ

SmartColorID Legend:

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

Applications

Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and 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)) as well as 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 14 AWG through 750 KCMIL, Encore's Metal-Clad Cable is constructed with soft-drawn copper, Type THHN/THWN-2 conductors rated 90°C dry locations. Sizes 14 AWG through 1 AWG contains a green insulated grounding conductor. Larger sizes are supplied with a bare ground conductor. All conductors are cabled together with separator tape containing the identification print legend to form the cable core. Interlocked galvanized lightweight steel armor is applied over the entire assembly.

1. Interlocked Galvanized Lightweight Steel Armor
2. Separator Tape
3. THHN/THWN-2 Copper Conductors

Conductors			Outside Diameter Over Armor (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps)[1]		Standard Packaging (ft)
AWG/No.	Type	Ground			75°C	90°C	
1/3	Stranded	6 AWG Green Insulated	1.174	1322	130	145	1000' Reels
1/4	Stranded	6 AWG Green Insulated	1.317	1658	130	145	1000' Reels
1/0-3	Stranded	6 AWG Bare	1.220	1531	150	170	1000' Reels
1/0-4	Stranded	6 AWG Bare	1.342	1928	150	170	1000' Reels
2/0-3	Stranded	6 AWG Bare	1.314	1822	175	195	1000' Reels
2/0-4	Stranded	6 AWG Bare	1.449	2309	175	195	1000' Reels
3/0-3	Stranded	4 AWG Bare	1.442	2228	200	225	1000' Reels
3/0-4	Stranded	4 AWG Bare	1.569	2828	200	225	1000' Reels
4/0-3	Stranded	4 AWG Bare	1.543	2677	230	260	1000' Reels
4/0-4	Stranded	4 AWG Bare	1.704	3417	230	260	1000' Reels
250-3	Stranded	4 AWG Bare	1.661	3238	255	290	1000' Reels
250-4	Stranded	4 AWG Bare	1.837	4151	255	290	1000' Reels
300-3	Stranded	3 AWG Bare	1.755	3752	285	320	1000' Reels
300-4	Stranded	3 AWG Bare	1.962	4829	285	320	1000' Reels
350-3	Stranded	3 AWG Bare	1.874	4304	310	350	1000' Reels
350-4	Stranded	3 AWG Bare	2.076	5545	310	350	1000' Reels
400-3	Stranded	3 AWG Bare	1.969	4817	335	380	1000' Reels
400-4	Stranded	3 AWG Bare	2.182	6223	335	380	1000' Reels
500-3	Stranded	2 AWG Bare	2.144	5882	380	430	1000' Reels
500-4	Stranded	2 AWG Bare	2.377	7616	380	430	1000' Reels
600-3	Stranded	2 AWG Bare	2.465	7002	420	475	1000' Reels
600-4	Stranded	2 AWG Bare	2.737	9084	420	475	1000' Reels
750-3	Stranded	1 AWG Bare	2.691	8546	475	535	1000' Reels
750-4	Stranded	1 AWG Bare	2.990	11107	475	535	1000' Reels

[1] 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.
For equipment marked for use at higher temperatures, the conductor ampacity shall be limited to the following per NEC 110.14(C):
75°C when terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG. 90°C for ampacity derating purposes.
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

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