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

ENGINEERING SPECIFICATIONS

Standards

Underwriters Laboratories Standards UL-83, UL 1063, UL-1569, UL-1581, UL-2556 for type MC, Federal Specification A-A59544, NEMA RV 1-2014 NEMA WC70/ICEA S-95-658; 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

RoHS COMPLIANT

MADE IN USA

SMART COLOR iD®

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));
- 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 contain 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 aluminum armor is applied over the entire assembly.

1. Removable SmartColorID[1] Label
2. Interlocked Aluminum 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)[2]		Standard Packaging (ft)	
AWG/No.	Type	Ground			75°C	90°C	Coils	Reels
14/2	Solid	14 AWG Green Insulated	0.409	80	20	25	250'	1000'
14/3	Solid	14 AWG Green Insulated	0.435	97	20	25	250'	1000'
14/4	Solid	14 AWG Green Insulated	0.464	115	20	25	250'	1000'
12/2	Solid	12 AWG Green Insulated	0.487	106	25	30	250'	1000'
12/3	Solid	12 AWG Green Insulated	0.495	132	25	30	250'	1000'
12/4	Solid	12 AWG Green Insulated	0.509	158	25	30	250'	1000'
10/2	Solid	10 AWG Green Insulated	0.510	153	35	40	250'	1000'
10/3	Solid	10 AWG Green Insulated	0.549	193	35	40	250'	1000'
10/4	Solid	10 AWG Green Insulated	0.592	233	35	40	250'	1000'
14/2	Stranded	14 AWG Green Insulated	0.434	76.58	20	25	250'	1000'
14/3	Stranded	14 AWG Green Insulated	0.462	94.09	20	25	250'	1000'
14/4	Stranded	14 AWG Green Insulated	0.493	112.19	20	25	250'	1000'
12/2	Stranded	12 AWG Green Insulated	0.487	110	25	30	250'	1000'
12/3	Stranded	12 AWG Green Insulated	0.495	136	25	30	250'	1000'
12/4	Stranded	12 AWG Green Insulated	0.530	162	25	30	250'	1000'
10/2	Stranded	10 AWG Green Insulated	0.533	158	35	40	250'	1000'
10/3	Stranded	10 AWG Green Insulated	0.574	199	35	40	250'	1000'
10/4	Stranded	10 AWG Green Insulated	0.619	241	35	40	250'	1000'
8/2	Stranded	10 AWG Green Insulated	0.649	215	50	55	200'	500'/1000'
8/3	Stranded	10 AWG Green Insulated	0.705	280	50	55	200'	500'/1000'
8/4	Stranded	10 AWG Green Insulated	0.783	347	50	55	200'	500'/1000'
6/2	Stranded	8 AWG Green Insulated	0.727	307	65	75	125'	500'/1000'
6/3	Stranded	8 AWG Green Insulated	0.820	408	65	75	125'	500'/1000'
6/4	Stranded	8 AWG Green Insulated	0.901	547	65	75	100'	500'/1000'
4/3	Stranded	8 AWG Green Insulated	0.935	584	85	95	100'	500'
4/4	Stranded	8 AWG Green Insulated	1.029	739	85	95	100'	500'
3/3	Stranded	6 AWG Green Insulated	1.018	727	100	115	100'	500'
3/4	Stranded	6 AWG Green Insulated	1.131	919	100	115	100'	500'
2/3	Stranded	6 AWG Green Insulated	1.071	862	115	130	100'	500'
2/4	Stranded	6 AWG Green Insulated	1.195	1100	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 310.16. See 110.14(C), 240.4(D) and 310.15(B)&(C) 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(C)(1).

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. 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.

NOTE

MC Cable Connectors are required to be listed for use with MC Cable per 330.6. Anti-Short Bushings are not required.

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:

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1. Interlocked Aluminum 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	1.166	1060	130	145	1000' Reels
1/4	Stranded	6 AWG Green Insulated	1.309	1361	130	145	1000' Reels
1/0-3	Stranded	6 AWG Bare	1.212	1258	150	170	1000' Reels
1/0-4	Stranded	6 AWG Bare	1.334	1625	150	170	1000' Reels
2/0-3	Stranded	6 AWG Bare	1.306	1526	175	195	1000' Reels
2/0-4	Stranded	6 AWG Bare	1.441	1980	175	195	1000' Reels
3/0-3	Stranded	4 AWG Bare	1.414	1906	200	225	1000' Reels
3/0-4	Stranded	4 AWG Bare	1.561	2470	200	225	1000' Reels
4/0-3	Stranded	4 AWG Bare	1.535	2325	230	260	1000' Reels
4/0-4	Stranded	4 AWG Bare	1.696	3026	230	260	1000' Reels
250-3	Stranded	4 AWG Bare	1.702	2730	255	290	1000' Reels
250-4	Stranded	4 AWG Bare	1.862	3578	255	290	1000' Reels
300-3	Stranded	3 AWG Bare	1.773	3362	285	320	1000' Reels
300-4	Stranded	3 AWG Bare	1.962	4395	285	320	1000' Reels
350-3	Stranded	3 AWG Bare	1.930	3754	310	350	1000' Reels
350-4	Stranded	3 AWG Bare	2.120	4927	310	350	1000' Reels
400-3	Stranded	3 AWG Bare	1.969	4382	335	380	1000' Reels
400-4	Stranded	3 AWG Bare	2.182	5738	335	380	1000' Reels
500-3	Stranded	2 AWG Bare	2.208	5286	380	430	1000' Reels
500-4	Stranded	2 AWG Bare	2.423	6952	380	430	1000' Reels
600-3	Stranded	2 AWG Bare	2.433	6351	420	475	1000' Reels
600-4	Stranded	2 AWG Bare	2.465	7880	420	475	1000' Reels
750-3	Stranded	1 AWG Bare	2.644	7833	475	535	1000' Reels
750-4	Stranded	1 AWG Bare	2.910	10325	475	535	1000' Reels

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