TYPE MC - COPPER CONDUCTOR - STEEL ARMOR
XHHW-2 INNERS

ENGINEERING SPECIFICATIONS

Standards

Underwriters Laboratories Standards UL-44, 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

Listed E-301130

RoHS COMPLIANT

SmartColorID®

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 XHHW-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 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. XHHW-2 Stranded 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	Stranded	14 AWG Green Insulated	0.464	144	20	25	250'	1000'
14/3	Stranded	14 AWG Green Insulated	0.498	169	20	25	250'	1000'
14/4	Stranded	14 AWG Green Insulated	0.536	195	20	25	250'	1000'
12/2	Stranded	12 AWG Green Insulated	0.503	176	25	30	250'	1000'
12/3	Stranded	12 AWG Green Insulated	0.542	210	25	30	250'	1000'
12/4	Stranded	12 AWG Green Insulated	0.584	245	25	30	250'	1000'
10/2	Stranded	10 AWG Green Insulated	0.553	227	35	40	250'	1000'
10/3	Stranded	10 AWG Green Insulated	0.597	275	35	40	250'	1000'
10/4	Stranded	10 AWG Green Insulated	0.646	325	35	40	250'	1000'
8/2	Stranded	10 AWG Green Insulated	0.677	359	50	55	200'	500'/1000'
8/3	Stranded	10 AWG Green Insulated	0.757	447	50	55	200'	500'/1000'
8/4	Stranded	10 AWG Green Insulated	0.834	534	50	55	200'	500'/1000'
6/2	Stranded	8 AWG Green Insulated	0.791	484	65	75	125'	500'/1000'
6/3	Stranded	8 AWG Green Insulated	0.884	610	65	75	125'	500'/1000'
6/4	Stranded	8 AWG Green Insulated	0.974	733	65	75	100'	500'/1000'
4/3	Stranded	8 AWG Green Insulated	0.964	803	85	95	100'	500'
4/4	Stranded	8 AWG Green Insulated	1.070	986	85	95	100'	500'
3/3	Stranded	6 AWG Green Insulated	1.049	969	100	115	100'	500'
3/4	Stranded	6 AWG Green Insulated	1.164	1190	100	115	100'	500'
2/3	Stranded	6 AWG Green Insulated	1.103	1123	115	130	100'	500'
2/4	Stranded	6 AWG Green Insulated	1.228	1393	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.
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 or coils, but not required per Section 330.40 of the NEC. 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

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CONSTRUCTION

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1. Interlocked Galvanized Lightweight Steel Armor
2. Separator Tape
3. XHHW-2 Stranded Copper Conductors

Conductors			Overall 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	1.195	1520	130	145	1000' Reels
1/4	Stranded	6 AWG Green Insulated	1.336	1881	130	145	1000' Reels
1/0-3	Stranded	6 AWG Bare	1.213	1746	150	170	1000' Reels
1/0-4	Stranded	6 AWG Bare	1.335	2185	150	170	1000' Reels
2/0-3	Stranded	6 AWG Bare	1.308	2019	175	195	1000' Reels
2/0-4	Stranded	6 AWG Bare	1.441	2531	175	195	1000' Reels
3/0-3	Stranded	4 AWG Bare	1.415	2478	200	225	1000' Reels
3/0-4	Stranded	4 AWG Bare	1.562	3115	200	225	1000' Reels
4/0-3	Stranded	4 AWG Bare	1.536	2967	230	260	1000' Reels
4/0-4	Stranded	4 AWG Bare	1.697	3755	230	260	1000' Reels
250-3	Stranded	4 AWG Bare	1.648	3411	255	290	1000' Reels
250-4	Stranded	4 AWG Bare	1.822	4334	255	290	1000' Reels
300-3	Stranded	3 AWG Bare	1.760	3579	285	320	1000' Reels
300-4	Stranded	3 AWG Bare	1.948	4642	285	320	1000' Reels
350-3	Stranded	3 AWG Bare	1.862	4508	310	350	1000' Reels
350-4	Stranded	3 AWG Bare	2.061	5763	310	350	1000' Reels
400-3	Stranded	3 AWG Bare	1.956	4606	335	380	1000' Reels
400-4	Stranded	3 AWG Bare	2.167	5996	335	380	1000' Reels
500-3	Stranded	2 AWG Bare	2.131	6117	380	430	1000' Reels
500-4	Stranded	2 AWG Bare	2.363	7865	380	430	1000' Reels
600-3	Stranded	2 AWG Bare	2.411	7211	420	475	1000' Reels
600-4	Stranded	2 AWG Bare	2.677	9294	420	475	1000' Reels
750-3	Stranded	1 AWG Bare	2.631	8844	475	535	1000' Reels
750-4	Stranded	1 AWG Bare	2.923	11431	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.
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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. Weight of aluminum armor is as much as 45% less steel. Insulating anti-short bushings are supplied with each reel or coil, but not required per Section 330.40 of the NEC. For ease of installation and pulling, cable is reverse wound on reels.

Standard Conductor Color Coding

No.	120V/208V/240V
2	Black/White
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Ground	Bare

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