

# TYPE MC-COPPER CONDUCTOR-ALUMINUM ARMOR/THHN INNERS



## ENGINEERING SPECIFICATIONS:

### Standards:

Underwriters Laboratories Standards UL-83, UL-1569 for type MC, NEMA WC70/ICEA S-95-658, Federal Specification A-A59544, IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test, and the National Electrical Code (NEC), ARRA 2009; Section 1605 "Buy American" Compliant



Listed E-301130



### Applications: Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in industrial, commercial, and multi-residential buildings
- 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)
- 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)
- Permitted in Class I Div. 2, Class II Div.2, and Class III Div. 1 Hazardous Locations and listed for use in UL 1, 2, and 3 Hour Through-Penetration Firestop Systems

SmartColorID®

## 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.

### Type MC-Copper Conductor-Aluminum Armor/THHN/THWN-2 Inners 600V

Conductors			Overall Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps)*		Standard Packaging	
AWG/No.	Type	Green Ground			75°C	90°C	Coil (ft)	Reel (ft)
14/2	Solid	14 AWG	0.409	80	15	15	250'	1000'
14/3	Solid	14 AWG	0.435	97	15	15	250'	1000'
14/4	Solid	14 AWG	0.464	115	15	15	250'	1000'
12/2	Solid	12 AWG	0.487	106	20	20	250'	1000'
12/3	Solid	12 AWG	0.495	132	20	20	250'	1000'
12/4	Solid	12 AWG	0.509	158	20	20	250'	1000'
10/2	Solid	10 AWG	0.510	153	30	30	250'	1000'
10/3	Solid	10 AWG	0.549	193	30	30	250'	1000'
10/4	Solid	10 AWG	0.592	233	30	30	250'	1000'
12/2	Stranded	12 AWG	0.487	110	20	20	250'	1000'
12/3	Stranded	12 AWG	0.495	136	20	20	250'	1000'
12/4	Stranded	12 AWG	0.530	162	20	20	250'	1000'
10/2	Stranded	10 AWG	0.533	158	30	30	250'	1000'
10/3	Stranded	10 AWG	0.574	199	30	30	250'	1000'
10/4	Stranded	10 AWG	0.619	241	30	30	250'	1000'
8/2	Stranded	10 AWG	0.649	215	50	55	200'	500'/1000'
8/3	Stranded	10 AWG	0.705	280	50	55	200'	500'/1000'
8/4	Stranded	10 AWG	0.783	347	50	55	200'	500'/1000'
6/2	Stranded	8 AWG	0.727	307	65	75	125'	500'/1000'
6/3	Stranded	8 AWG	0.820	408	65	75	125'	500'/1000'
6/4	Stranded	8 AWG	0.901	547	65	75	100'	500'/1000'
4/3	Stranded	8 AWG	0.935	584	85	95	100'	500'
4/4	Stranded	8 AWG	1.029	739	85	95	100'	500'
3/3	Stranded	6 AWG	1.018	727	100	115	100'	500'
3/4	Stranded	6 AWG	1.131	919	100	115	100'	500'
2/3	Stranded	6 AWG	1.071	862	115	130	100'	500'
2/4	Stranded	6 AWG	1.195	1100	115	130	100'	500'

Note: Ampacities are based on Table 310.15(B)(16) of the NEC. \*Ampacities shown are for general use as specified by the NEC, Section 310.15.

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)(2)(a).

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

### Standard Conductor Color Coding

Number	120/208Y	Number	277/480Y
2	Black/White	2	Brown/Gray
3	Black /Red/White	2	Orange/Gray
4	Black /Red/Blue/White	2	Yellow/Gray
Ground	Green	2	Purple/Gray
		3	Brown/Yellow/Gray
		3	Brown/Orange/Gray
		4	Brown/Orange/Yellow/Gray
		4	Brown/Yellow/Purple/Gray
		Ground	Green

Additional colors available subject to ERQ

SmartColorID® Legend:

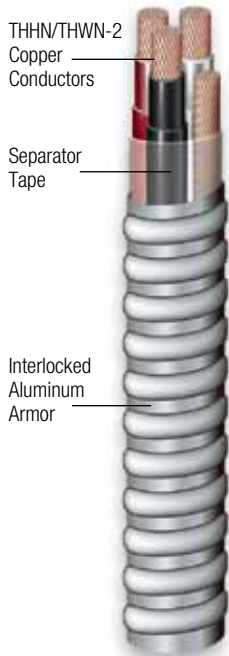


See page 104 for complete legend

# TYPE MC-COPPER CONDUCTOR ALUMINUM ARMOR/THHN INNERS



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### Standards:

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### Applications:

- Permitted use for service power and feeder distribution in industrial, commercial, and multi-residential buildings
- 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)
- Allowable in assembly occupancies (NEC 518.4)
- Permissible in theaters, audience areas of motion pictures, television studios, and similar locations (NEC 520.5)
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## Type MC-Copper Conductor Aluminum Armor/THHN/THWN-2 Inners 600V

Conductors			Outside Diameter Over Armor (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps)*		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

Note: Ampacities are based on Table 310.15(B)(16) of the NEC. \*Ampacities shown are for general use as specified by the NEC, Section 310.15.

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

### Feedback:

Installation costs reduced up to 50% over conduit and wire. Weight of aluminum armor is as much as 45% lighter than steel. Insulating anti-short bushings are supplied with each reel. For ease of installation and pulling, cable is reverse wound on reels.

### Standard Conductor Color Coding

Number	120/208Y
2	Black/White
3	Black/Red/White
4	Black/Red/Blue/White
Ground	Bare

Additional colors available subject to ERQ

Number	277/480Y
2	Brown/Gray
2	Orange/Gray
2	Yellow/Gray
2	Purple/Gray
3	Brown/Yellow/Gray
3	Brown/Orange/Gray
4	Brown/Orange/Yellow/Gray
4	Brown/Yellow/Purple/Gray
Ground	Bare