

TYPE MC - ALUMINUM CONDUCTOR - ALUMINUM ARMOR - 600V

THHN/THWN-2 CONDUCTORS (6 AWG - 4/0 AWG)

ENGINEERING SPECIFICATIONS

Standards

Underwriters Laboratories® Standards UL-83, UL-1569, UL-1581, UL-2556 for type MC; Federal Specification AA-59544; IEEE 1202 (70,000 Btu/hr) Vertical Cable Tray Flame Test; NFPA 70 (NEC®) Article 330; NEMA RV-1; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-301130



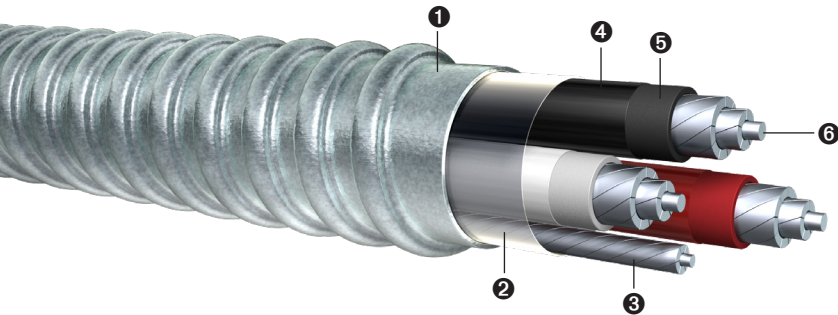
APPLICATIONS

Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial and industrial locations;
- Permitted for use in non-patient care areas of health care facilities (NEC 517.12);
- Acceptable for power, lighting, control, and signal circuits;
- Allowable in concealed or exposed installations;
- Permitted use in dry locations or when 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 installations 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 and listed for use in UL 1, 2, and 3-Hour Through-Penetration Firestop Systems.

CONSTRUCTION

Available in sizes 6 AWG through 750 KCMIL, Encore Wire's Metal-Clad Cable is constructed with Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836. Type THHN/THWN-2 conductors rated 90°C dry. Sizes 6 AWG through 750 KCMIL contain bare aluminum ground wire. All conductors are cabled together with separator tape, which contains the identification print legend. Interlocked aluminum armor is applied over the assembly. AVAILABLE WITH LIGHTWEIGHT GALVANIZED STEEL ARMOR.



- 1 Interlocked Aluminum Armor
- 2 Separator Tape
- 3 Bare Compact Stranded Ground Conductor, AA-8000 Series
- 4 Nylon Jacket
- 5 PVC Insulation
- 6 Compact Stranded Conductor, AA-8000 Series

Phase Conductors				Ground Conductor		Outside Diameter over Armor (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) ¹		Standard Packaging (ft)	
AWG or KCMIL/ No. of Conductors	No. of Strands	Insulation Thickness (in)	Nylon Thickness (in)	Bare Ground (AWG)	No. of Strands			75°C	90°C	Coils	Reels
6/3	7	0.030	.0050	6 AWG	7	0.741	215	50	60	125'	500' 1000'
6/4	7	0.030	.0050	6 AWG	7	0.805	257	50	60	125'	500' 1000'
4/3	7	0.040	.0060	6 AWG	7	0.874	295	65	75	100'	500'
4/4	7	0.040	.0060	6 AWG	7	0.956	363	65	75	100'	500'
3/3	7	0.040	.0060	6 AWG	7	0.972	336	75	85	100'	500'
3/4	7	0.040	.0060	6 AWG	7	1.069	418	75	85	100'	500'
2/3	7	0.040	.0060	4 AWG	7	0.998	406	90	100	100'	500'
2/4	7	0.040	.0060	4 AWG	7	1.092	504	90	100	100'	500'
1/3	8	0.050	.0070	4 AWG	7	1.120	505	100	115	-	1000'
1/4	8	0.050	.0070	4 AWG	7	1.243	650	100	115	-	1000'
1/0-3	10	0.050	.0070	4 AWG	7	1.214	605	120	135	-	1000'
1/0-4	10	0.050	.0070	4 AWG	7	1.310	760	120	135	-	1000'
2/0-3	12	0.050	.0070	4 AWG	7	1.299	705	135	150	-	1000'
2/0-4	12	0.050	.0070	4 AWG	7	1.430	891	135	150	-	1000'
3/0-3	15	0.050	.0070	4 AWG	7	1.399	828	155	175	-	1000'
3/0-4	15	0.050	.0070	4 AWG	7	1.542	1052	155	175	-	1000'
4/0-3	19	0.050	.0070	2 AWG	7	1.511	1009	180	205	-	1000'
4/0-4	19	0.050	.0070	2 AWG	7	1.669	1282	180	205	-	1000'

Standard Conductor Color Coding

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

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

Additional colors available subject to ERQ

FEATURES

Installation costs reduced up to 50% over conduit and wire; aluminum armor weight is up to 45% less than steel; while not required by Section 330.40, insulating anti-short bushings are supplied with each reel; for ease of installation and pulling, cable is reverse wound on reels.

¹ Ampacity of conductors are based on the National Electrical Code (NFPA 70) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.

NEC Article 310.15(B)(2)(a) for ambient temperature correction factors for temperatures other than 30°C (86°F).

NEC Table 310.15(B)(3)(a) for ampacity adjustment factors, as applicable, for more than three current-carrying conductors.

NEC Article 110.14(C) for conductor temperature limitations for equipment rated 100 amps or less, or for equipment rated for more than 100 amps.

The above data is approximate and subject to manufacturing tolerances.

TYPE MC - ALUMINUM CONDUCTOR - ALUMINUM ARMOR - 600V

THHN/THWN-2 CONDUCTORS (250 KCMIL - 750 KCMIL)

ENGINEERING SPECIFICATIONS

Standards

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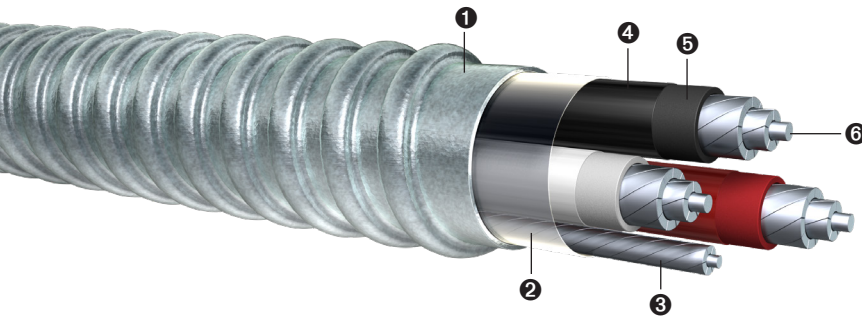
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- ① Interlocked Aluminum Armor
- ② Separator Tape
- ③ Bare Compact Stranded Ground Conductor, AA-8000 Series
- ④ Nylon Jacket
- ⑤ PVC Insulation
- ⑥ Compact Stranded Conductor, AA-8000 Series

Phase Conductors				Ground Conductor		Outside Diameter over Armor (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) ¹		Standard Packaging (ft)
AWG or KCMIL/ No. of Conductors	No. of Strands	Insulation Thickness (in)	Nylon Thickness (in)	Bare Ground (AWG)	No. of Strands			75°C	90°C	
250/3	22	.060	.008	2	7	1.651	1186	205	230	1000' Reels
250/3	22	.060	.008	3/0	15	1.668	1285	205	230	1000' Reels
250/4	22	.060	.008	1	8	1.824	1628	205	230	1000' Reels
300/3	21	.060	.008	1	8	1.758	1475	230	260	1000' Reels
300/4	21	.060	.008	1	8	1.945	1865	230	260	1000' Reels
350/3	24	.060	.008	1	8	1.858	1636	250	280	1000' Reels
350/4	24	.060	.008	1/0	10	2.076	2107	250	280	1000' Reels
400/3	27	.060	.008	1	8	1.950	1810	270	305	1000' Reels
400/4	27	.060	.008	1/0	10	2.168	2329	270	305	1000' Reels
500/3	34	.060	.008	1	8	2.116	2145	310	350	1000' Reels
500/3	34	.060	.008	2/0	12	2.151	2196	310	350	1000' Reels
500/3	34	.060	.008	3/0	15	2.169	2230	310	350	1000' Reels
500/4	34	.060	.008	3/0	15	2.383	2836	310	350	1000' Reels
600/3	41	.070	.009	1	8	2.333	2538	340	385	1000' Reels
600/3	41	.070	.009	1/0	10	2.333	2560	340	385	1000' Reels
600/4	41	.070	.009	3/0	15	2.622	3358	340	385	1000' Reels
750/3	47	.070	.009	1/0	10	2.537	3063	385	435	1000' Reels
750/3	47	.070	.009	3/0	15	2.553	3125	385	435	1000' Reels
750/4	47	.070	.009	3/0	15	2.853	4020	385	435	1000' Reels
750/4	47	.070	.009	750	47	3.233	4644	385	435	1000' Reels

Standard Conductor Color Coding

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Ground	Bare

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