

TYPE MC - ALUMINUM CONDUCTOR - STEEL 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, NEMA WC70/ICEA S-95-658; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-301130



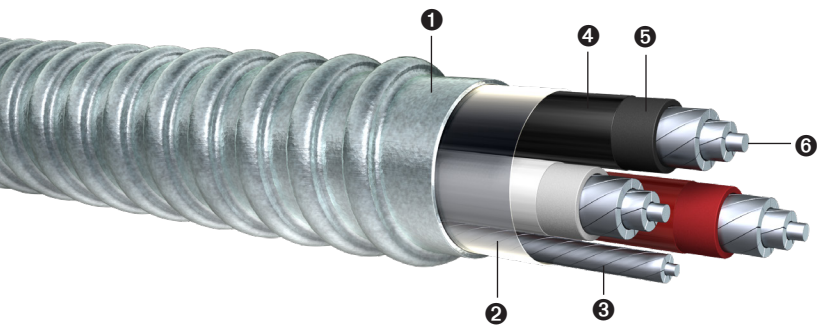
APPLICATIONS

Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial 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 a bare aluminum ground wire. All conductors are cabled together with separator tape, which contains the identification print legend. Interlocked steel armor is applied over the assembly.



- ❶ Interlocked Steel Armor
- ❷ Separator Tape
- ❸ Bare Compact Stranded Ground Conductor, AA-8000 Series
- ❹ Nylon Jacket
- ❺ PVC Insulation
- ❻ 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	0.747	396.81	50	55	125'	500' 1000'
6/4	7	0.030	.0050	6 AWG	7	0.812	459.60	50	55	125'	500' 1000'
4/3	7	0.040	.0060	6 AWG	7	0.890	523.21	65	75	100'	500'
4/4	7	0.040	.0060	6 AWG	7	0.972	616.12	65	75	100'	500'
3/3	7	0.040	.0060	6 AWG	7	0.944	578.41	75	85	100'	500'
3/4	7	0.040	.0060	6 AWG	7	1.072	720.00	75	85	100'	500'
2/3	7	0.040	.0060	4 AWG	7	1.053	704.31	90	100	100'	500'
2/4	7	0.040	.0060	4 AWG	7	1.162	839.20	90	100	100'	500'
1/3	8	0.050	.0070	4 AWG	7	1.174	835.63	100	115	-	1000'
1/4	8	0.050	.0070	4 AWG	7	1.272	992.36	100	115	-	1000'
1/0-3	10	0.050	.0070	4 AWG	7	1.245	904.11	120	135	-	1000'
1/0-4	10	0.050	.0070	4 AWG	7	1.369	1093.35	120	135	-	1000'
2/0-3	12	0.050	.0070	4 AWG	7	1.349	1005.41	135	150	-	1000'
2/0-4	12	0.050	.0070	4 AWG	7	1.469	1251.89	135	150	-	1000'
3/0-3	15	0.050	.0070	4 AWG	7	1.460	1189.43	155	175	-	1000'
3/0-4	15	0.050	.0070	4 AWG	7	1.579	1443.04	155	175	-	1000'
4/0-3	19	0.050	.0070	2 AWG	7	1.572	1399.75	180	205	-	1000'
4/0-4	19	0.050	.0070	2 AWG	7	1.669	1714.00	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; 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 - STEEL ARMOR - 600V

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

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, NEMA WC70/ICEA S-95-658; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E - 301130



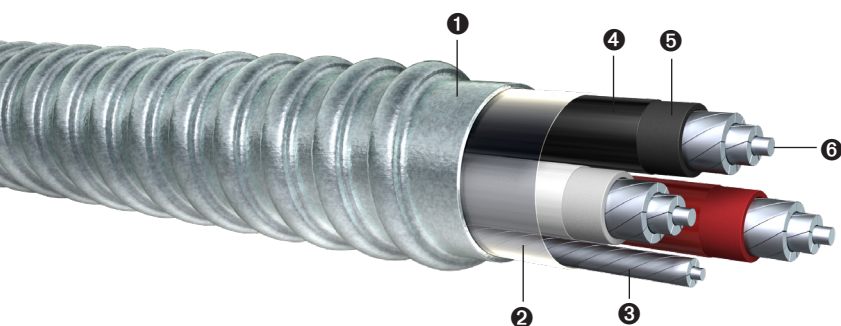
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Phase Conductors				Ground Conductor		Outside Diameter over Armor (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) ¹		Standard Packaging (ft)
AWG or KCMIL/ No. of Conductors	No. of Strands	Insulation Thickness (in)	Nylon Thickness (in)	Bare Ground (AWG)	No. of Strands			75°C	90°C	
250/3	22	.060	.008	2	7	1.6967	1737.08	205	230	1000' Reels
250/3	22	.060	.008	3/0	15	1.7867	1875.39	205	230	1000' Reels
250/4	22	.060	.008	1	8	1.9220	2154.75	205	230	1000' Reels
300/3	21	.060	.008	1	8	1.8744	1986.18	230	260	1000' Reels
300/4	21	.060	.008	1	8	2.0773	2441.57	230	260	1000' Reels
350/3	24	.060	.008	1	8	2.0436	2225.63	250	280	1000' Reels
350/4	24	.060	.008	1/0	10	2.2383	2750.53	250	280	1000' Reels
400/3	27	.060	.008	1	8	2.1362	2426.98	270	305	1000' Reels
400/4	27	.060	.008	1/0	10	2.3221	2999.82	270	305	1000' Reels
500/3	34	.060	.008	1	8	2.3022	2814.10	310	350	1000' Reels
500/3	34	.060	.008	2/0	12	2.4022	2909.12	310	350	1000' Reels
500/3	34	.060	.008	3/0	15	2.5022	2989.55	310	350	1000' Reels
500/4	34	.060	.008	3/0	15	2.6280	3615.08	310	350	1000' Reels
600/3	41	.070	.009	1	8	2.5680	3311.74	340	385	1000' Reels
600/3	41	.070	.009	1/0	10	2.6685	3380.92	340	385	1000' Reels
600/4	41	.070	.009	3/0	15	2.7674	4174.30	340	385	1000' Reels
750/3	47	.070	.009	1/0	10	2.7280	3869.62	385	435	1000' Reels
750/3	47	.070	.009	3/0	15	2.8680	3995.55	385	435	1000' Reels
750/4	47	.070	.009	3/0	15	2.9763	4889.68	385	435	1000' Reels
750/4	47	.070	.009	750	47	3.2012	5544.68	385	435	1000' 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.

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