

TYPE MC - ALUMINUM CONDUCTOR - STEEL ARMOR - PVC JACKET - 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 2014; 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



Listed E-301130



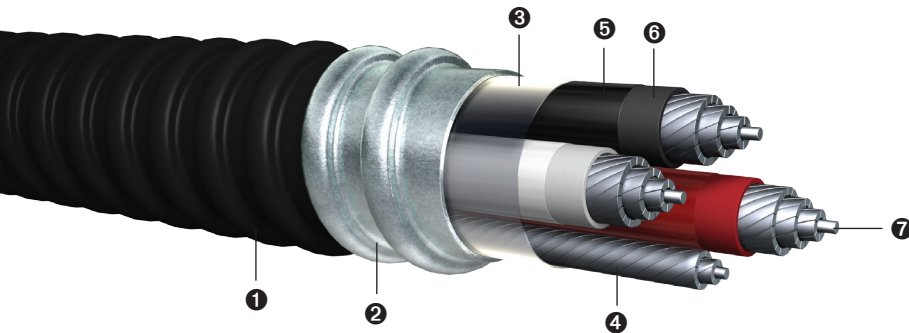
APPLICATIONS

Type MC Cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial, industrial, and non-patient care area/space of health care facilities;
- Permitted for direct burial in the earth or when embedded in concrete per NEC 330.12(2)(a);
- Acceptable for power, lighting, control, and signal circuits;
- Allowable in concealed or exposed installations;
- Permitted in wet locations per NEC 330.10(A)(11);
- 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. Overall sunlight-resistant, flame-retardant black PVC jacket.



- ❶ Black PVC Jacket
- ❷ Interlocked Steel Armor
- ❸ Separator Tape
- ❹ Bare Compact Stranded Ground Conductor, AA-8000 Series
- ❺ Nylon Jacket
- ❻ PVC Insulation
- ❼ Compact Stranded Conductor, AA-8000 Series

Phase Conductors				Ground Conductor		Outside Diameter over Armor (in)	PVC Jacket Thickness (in)	Outside Diameter over Jacket (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	0.0050	6 AWG	7	0.747	0.050	0.847	479	50	55	250'	1000'
6/4	7	0.030	0.0050	6 AWG	7	0.812	0.050	0.912	548	50	55	250'	1000'
4/3	7	0.040	0.0060	6 AWG	7	0.890	0.050	0.990	620	65	75	250'	1000'
4/4	7	0.040	0.0060	6 AWG	7	0.972	0.050	1.072	721	65	75	250'	1000'
3/3	7	0.040	0.0060	6 AWG	7	0.944	0.050	1.044	681	75	85	250'	1000'
3/4	7	0.040	0.0060	6 AWG	7	1.072	0.050	1.172	835	75	85	250'	1000'
2/3	7	0.040	0.0060	4 AWG	7	1.053	0.050	1.153	819	90	100	250'	1000'
2/4	7	0.040	0.0060	4 AWG	7	1.162	0.050	1.262	965	90	100	250'	1000'
1/3	8	0.050	0.0070	4 AWG	7	1.174	0.050	1.274	962	100	115	250'	1000'
1/4	8	0.050	0.0070	4 AWG	7	1.272	0.050	1.372	1128	100	115	250'	1000'
1/0-3	10	0.050	0.0070	4 AWG	7	1.245	0.050	1.345	1037	120	135	250'	1000'
1/0-4	10	0.050	0.0070	4 AWG	7	1.369	0.050	1.469	1239	120	135	250'	1000'
2/0-3	12	0.050	0.0070	4 AWG	7	1.349	0.050	1.449	1149	135	150	250'	1000'
2/0-4	12	0.050	0.0070	4 AWG	7	1.469	0.050	1.569	1409	135	150	-	1000'
3/0-3	15	0.050	0.0070	4 AWG	7	1.460	0.050	1.560	1346	155	175	-	1000'
3/0-4	15	0.050	0.0070	4 AWG	7	1.579	0.060	1.699	1642	155	175	-	1000'
4/0-3	19	0.050	0.0070	2 AWG	7	1.572	0.060	1.692	1598	180	205	-	1000'
4/0-4	19	0.050	0.0070	2 AWG	7	1.669	0.060	1.789	1925	180	205	-	1000'

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.

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 ERO

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.

TYPE MC - ALUMINUM CONDUCTOR - STEEL ARMOR - PVC JACKET - 600V THHN/THWN-2 CONDUCTORS (250 KCMIL - 750 KCMIL)

ENGINEERING SPECIFICATIONS

Standards

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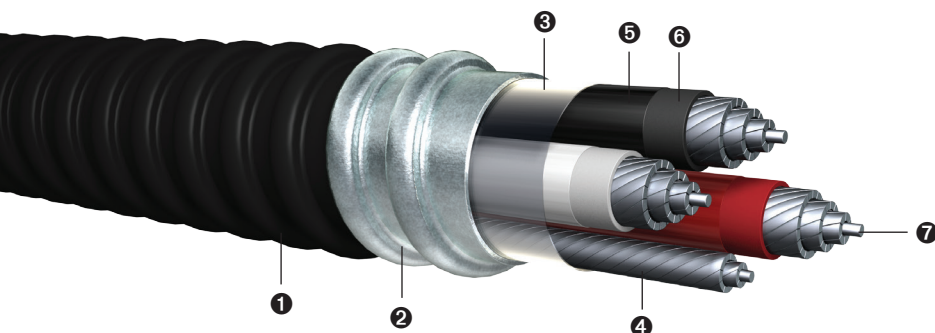
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- 3 Separator Tape
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- 5 Nylon Jacket
- 6 PVC Insulation
- 7 Compact Stranded Conductor, AA-8000 Series

Phase Conductors				Ground Conductor		Outside Diameter over Armor (in)	PVC Jacket Thickness (in)	Outside Diameter over Jacket (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	0.060	0.0080	2 AWG	7	1.697	0.060	1.817	1949	205	230	1000' Reels
250/3	22	0.060	0.0080	3/0 AWG	15	1.787	0.060	1.907	2099	205	230	1000' Reels
250/4	22	0.060	0.0080	1 AWG	8	1.922	0.060	2.042	2394	205	230	1000' Reels
300/3	21	0.060	0.0080	1 AWG	8	1.874	0.060	1.994	2389	230	260	1000' Reels
300/4	21	0.060	0.0080	1 AWG	8	2.077	0.060	2.197	2701	230	260	1000' Reels
350/3	24	0.060	0.0080	1 AWG	8	2.044	0.060	2.164	2482	250	280	1000' Reels
350/4	24	0.060	0.0080	1/0 AWG	10	2.238	0.060	2.358	3032	250	280	1000' Reels
400/3	27	0.060	0.0080	1 AWG	8	2.136	0.060	2.256	2694	270	305	1000' Reels
400/4	27	0.060	0.0080	1/0 AWG	10	2.322	0.075	2.472	3359	270	305	1000' Reels
500/3	34	0.060	0.0080	1 AWG	8	2.302	0.075	2.452	3174	310	350	1000' Reels
500/3	34	0.060	0.0080	2/0 AWG	12	2.402	0.075	2.552	3286	310	350	1000' Reels
500/3	34	0.060	0.0080	3/0 AWG	15	2.502	0.075	2.652	3380	310	350	1000' Reels
500/4	34	0.060	0.0080	3/0 AWG	15	2.628	0.075	2.778	4025	310	350	1000' Reels
600/3	41	0.070	0.0090	1 AWG	8	2.568	0.075	2.718	3714	340	385	1000' Reels
600/3	41	0.070	0.0090	1/0 AWG	10	2.669	0.075	2.819	3797	340	385	1000' Reels
600/4	41	0.070	0.0090	3/0 AWG	15	2.767	0.075	2.917	4606	340	385	1000' Reels
750/3	47	0.070	0.0090	1/0 AWG	10	2.728	0.075	2.878	4297	385	435	1000' Reels
750/3	47	0.070	0.0090	3/0 AWG	15	2.868	0.075	3.018	4445	385	435	1000' Reels
750/4	47	0.070	0.0090	3/0 AWG	15	2.976	0.075	3.126	5353	385	435	1000' Reels
750/4	47	0.070	0.0090	750 KCMIL	47	3.201	0.085	3.371	6108	385	435	1000' Reels

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