

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

Patents: encorewire.com/patents



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; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-301130

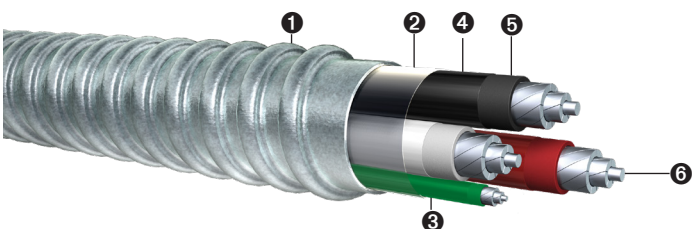
APPLICATIONS

Type MC cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial, industrial, and 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);
- Permitted as ariel cable on a messenger (NEC 396.10(A));
- 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
- Listed for use with UL 1479 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 locations. Sizes 6 AWG through 750 KCMIL contain a green insulated aluminum grounding conductor. 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. AVAILABLE WITH A PVC JACKET FOR WET AND DAMP LOCATIONS.



- 1 Interlocked Aluminum Armor
- 2 Separator Tape
- 3 Green Insulated 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)	Green Ground (AWG)	No. of Strands	Insulation Thickness (in)	Nylon Thickness (in)			75°C	90°C	
250-3	22	0.060	0.008	2	7	0.040	0.006	1.695	1228	205	230	1000' Reels
250-3	22	0.060	0.008	1	8	0.050	0.007	1.719	1258	205	230	1000' Reels
250-4	22	0.060	0.008	1	8	0.050	0.007	1.916	1591	205	230	1000' Reels
300-3	21	0.060	0.008	1	8	0.050	0.007	1.815	1431	230	260	1000' Reels
300-4	21	0.060	0.008	1	8	0.050	0.007	2.077	1898	230	260	1000' Reels
350-3	24	0.060	0.008	1	8	0.050	0.007	1.904	1601	250	280	1000' Reels
350-4	24	0.060	0.008	1/0	10	0.050	0.007	2.197	2154	250	280	1000' Reels
350-4	24	0.060	0.008	4/0	19	0.050	0.007	2.264	2279	250	280	1000' Reels
400-3	27	0.060	0.008	1	8	0.050	0.007	1.988	1770	270	305	1000' Reels
400-4	27	0.060	0.008	1/0	10	0.050	0.007	2.292	2379	270	305	1000' Reels
400-4	27	0.060	0.008	3/0	15	0.050	0.007	2.334	2454	270	305	1000' Reels
500-3	34	0.060	0.008	1	8	0.050	0.007	2.189	2181	310	350	1000' Reels
500-3	34	0.060	0.008	2/0	12	0.050	0.007	2.222	2241	310	350	1000' Reels
500-3	34	0.060	0.008	3/0	15	0.050	0.007	2.244	2282	310	350	1000' Reels
500-3	34	0.060	0.008	250	22	0.060	0.008	2.300	2391	310	350	1000' Reels
500-4	34	0.060	0.008	2/0	12	0.050	0.007	2.482	2852	310	350	1000' Reels
500-4	34	0.060	0.008	3/0	15	0.050	0.007	2.504	2893	310	350	1000' Reels
500-4	34	0.060	0.008	250	22	0.060	0.008	2.562	3003	310	350	1000' Reels
600-3	41	0.070	0.009	1/0	10	0.050	0.007	2.402	2612	340	385	1000' Reels
600-3	41	0.070	0.009	4/0	19	0.050	0.007	2.458	2735	340	385	1000' Reels
600-3	41	0.070	0.009	350	24	0.060	0.008	2.537	2908	340	385	1000' Reels
600-3	41	0.070	0.009	400	27	0.060	0.008	2.560	2965	340	385	1000' Reels
600-4	41	0.070	0.009	3/0	15	0.050	0.007	2.724	3424	340	385	1000' Reels
750-3	47	0.070	0.009	1/0	10	0.050	0.007	2.607	3109	385	435	1000' Reels
750-3	47	0.070	0.009	3/0	15	0.050	0.007	2.621	3178	385	435	1000' Reels
750-4	47	0.070	0.009	3/0	15	0.050	0.007	2.937	4076	385	435	1000' Reels
750-4	47	0.070	0.009	750	47	0.070	0.009	3.200	4758	385	435	1000' Reels

¹ Ampacity of conductors are based on the National Electrical Code (NFPA 70) Table 310.16. See 110.14(C), 240.4(D) and 310.15(B)&(C) for other limitations where applicable.

NEC Article 310.15(B)(1) for ambient temperature correction factors for temperatures other than 30°C (86°F).
NEC Table 310.15(C)(1) 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	Green

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

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; for ease of installation and pulling, cable is reverse wound on reels.

NOTE

MC Cable Connectors are required to be listed for use with MC Cable per 330.6. Anti-Short Bushings are not required.

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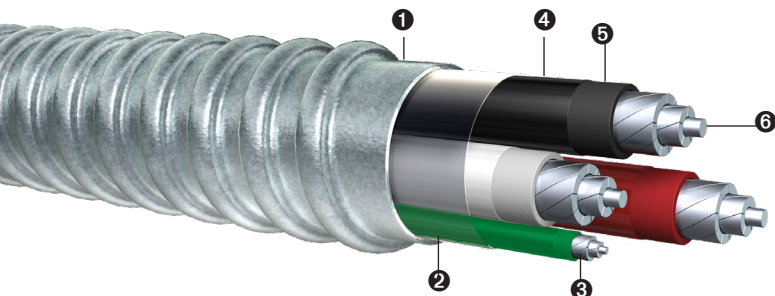
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6/3	7	0.030	0.005	6 AWG	7	0.030	0.005	0.797	211	50	55	125'	500'	1000'
6/4	7	0.030	0.005	6 AWG	7	0.030	0.005	0.865	255	50	55	125'	500'	1000'
4/3	7	0.040	0.006	6 AWG	7	0.030	0.005	0.959	339	65	75	100'	500'	
4/4	7	0.040	0.006	6 AWG	7	0.030	0.005	1.052	413	65	75	100'	500'	
3/3	7	0.040	0.006	6 AWG	7	0.030	0.005	1.007	382	75	85	100'	500'	
3/4	7	0.040	0.006	6 AWG	7	0.030	0.005	1.107	469	75	85	100'	500'	
2/3	7	0.040	0.006	4 AWG	7	0.040	0.006	1.098	465	90	100	100'	500'	
2/4	7	0.040	0.006	4 AWG	7	0.040	0.006	1.206	568	90	100	100'	500'	
1/3	8	0.050	0.007	4 AWG	7	0.040	0.006	1.200	559	100	115	-	1000'	
1/4	8	0.050	0.007	4 AWG	7	0.040	0.006	1.325	691	100	115	-	1000'	
1/0-3	10	0.050	0.007	4 AWG	7	0.040	0.006	1.271	642	120	135	-	1000'	
1/0-4	10	0.050	0.007	4 AWG	7	0.040	0.006	1.407	800	120	135	-	1000'	
2/0-3	12	0.050	0.007	4 AWG	7	0.040	0.006	1.347	743	135	150	-	1000'	
2/0-4	12	0.050	0.007	4 AWG	7	0.040	0.006	1.495	933	135	150	-	1000'	
3/0-3	15	0.050	0.007	4 AWG	7	0.040	0.006	1.437	866	155	175	-	1000'	
3/0-4	15	0.050	0.007	4 AWG	7	0.040	0.006	1.599	1,095	155	175	-	1000'	
4/0-3	19	0.050	0.007	2 AWG	7	0.040	0.006	1.563	1,050	180	205	-	1000'	
4/0-4	19	0.050	0.007	2 AWG	7	0.040	0.006	1.741	1,327	180	205	-	1000'	

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