

# TYPE MC - ALUMINUM CONDUCTOR - STEEL ARMOR - PVC JACKET - 600V

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

Patents: [encorewire.com/patents](http://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) Flame Test; NFPA 70 (NEC®) Article 330; NEMA RV-1, NEMA WC70/CEA 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

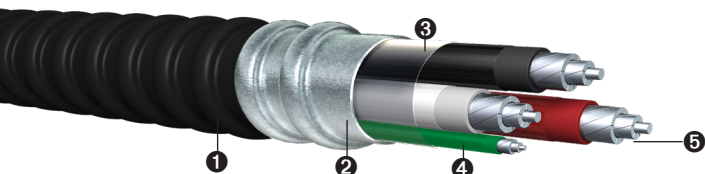
### APPLICATIONS

Type MC Cable shall be permitted as follows:

- Permitted use for services, feeders, and branch circuits in residential, commercial, industrial, and non-patient care area /space of health care facilities (NEC 517.12);
- 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);
- 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));
- For use with branch circuits to swimming pool, hot tubs, and spa applications per 680.14 and 330.12(2)(a) and (b);
- 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 or wet 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 steel armor is applied. Overall sunlight-resistant, flame-retardant black PVC jacket. AVAILABLE WITH A LIGHTWEIGHT ALUMINUM ARMOR.



- 1 Black PVC Jacket
- 2 Interlocked Steel Armor
- 3 Separator Tape
- 4 Green Insulated Compact Stranded Ground Conductor, AA-8000 Series
- 5 THHN/THWN-2 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) <sup>1</sup>		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	0.060	1.815	1855	205	230	1000' Reel
250/3	22	0.060	0.008	1	8	0.050	0.007	1.719	0.060	1.839	1894	205	230	1000' Reel
250/4	22	0.060	0.008	1	8	0.050	0.007	1.916	0.060	2.036	2302	205	230	1000' Reel
300/3	21	0.060	0.008	1	8	0.050	0.007	1.815	0.060	1.935	2104	230	260	1000' Reel
300/4	21	0.060	0.008	1	8	0.050	0.007	2.077	0.060	2.197	2808	230	260	1000' Reel
350/3	24	0.060	0.008	1	8	0.050	0.007	1.904	0.060	2.024	2308	250	280	1000' Reel
350/4	24	0.060	0.008	1/0	10	0.050	0.007	2.197	0.060	2.317	3119	250	280	1000' Reel
350/4	24	0.060	0.008	4/0	19	0.050	0.007	2.264	0.075	2.414	3340	250	280	1000' Reel
400/3	27	0.060	0.008	1	8	0.050	0.007	1.988	0.060	2.108	2509	270	305	1000' Reel
400/4	27	0.060	0.008	1/0	10	0.050	0.007	2.292	0.075	2.442	3454	270	305	1000' Reel
400/4	27	0.060	0.008	3/0	15	0.050	0.007	2.334	0.075	2.484	3549	270	305	1000' Reel
500/3	34	0.060	0.008	1	8	0.050	0.007	2.189	0.060	2.309	3142	310	350	1000' Reel
500/3	34	0.060	0.008	2/0	12	0.050	0.007	2.222	0.060	2.342	3218	310	350	1000' Reel
500/3	34	0.060	0.008	3/0	15	0.050	0.007	2.244	0.060	2.364	3269	310	350	1000' Reel
500/3	34	0.060	0.008	250	22	0.060	0.008	2.300	0.075	2.450	3470	310	350	1000' Reel
500/4	34	0.060	0.008	2/0	12	0.050	0.007	2.482	0.075	2.632	4020	310	350	1000' Reel
500/4	34	0.060	0.008	3/0	15	0.050	0.007	2.504	0.075	2.654	4071	310	350	1000' Reel
500/4	34	0.060	0.008	250	22	0.060	0.008	2.562	0.075	2.712	4209	310	350	1000' Reel
600/3	41	0.070	0.009	1/0	10	0.050	0.007	2.402	0.075	2.552	3741	340	385	1000' Reel
600/3	41	0.070	0.009	4/0	19	0.050	0.007	2.458	0.075	2.608	3891	340	385	1000' Reel
600/3	41	0.070	0.009	350	24	0.060	0.008	2.537	0.075	2.687	4102	340	385	1000' Reel
600/3	41	0.070	0.009	400	27	0.060	0.008	2.560	0.075	2.710	4169	340	385	1000' Reel
600/4	41	0.070	0.009	3/0	15	0.050	0.007	2.724	0.075	2.874	4709	340	385	1000' Reel
750/3	47	0.070	0.009	1/0	10	0.050	0.007	2.607	0.075	2.757	4337	385	435	1000' Reel
750/3	47	0.070	0.009	3/0	15	0.050	0.007	2.621	0.075	2.771	4413	385	435	1000' Reel
750/4	47	0.070	0.009	3/0	15	0.050	0.007	2.937	0.075	3.087	5464	385	435	1000' Reel
750/4	47	0.070	0.009	750	47	0.070	0.009	3.200	0.085	3.370	6335	385	435	1000' Reel

#### 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

#### FEATURES

Installation costs reduced up to 50% over conduit and wire; aluminum armor weight is up to 45% less than steel; or 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.

<sup>1</sup> 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.

**PRINT LEGEND:** ENCORE WIRE CORP (SIZE) AA-8000 AL CDRS TYPE MC W/PVC JACKET 600 VOLTS (UL) TYPE THHN OR THWN-2 CDRS SUN-RES IEEE1202/FT4 DIR-BUR DATE TIME OPERATOR QC P#M#

800.962.9473

[www.encorewire.com](http://www.encorewire.com)



**ENCORE WIRE®**

Last Edit: 4/20/23

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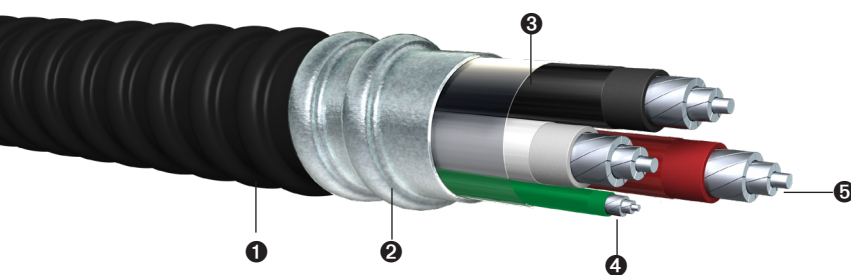
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6/3	7	0.030	0.005	6 AWG	7	0.030	0.005	0.797	0.050	0.897	409	50	55	125	500' Reel
6/4	7	0.030	0.005	6 AWG	7	0.030	0.005	0.865	0.050	0.965	470	50	55	125	500' Reel
4/3	7	0.040	0.006	6 AWG	7	0.030	0.005	0.959	0.050	1.059	664	65	75	100	500' Reel
4/4	7	0.040	0.006	6 AWG	7	0.030	0.005	1.052	0.050	1.152	771	65	75	100	500' Reel
3/3	7	0.040	0.006	6 AWG	7	0.030	0.005	1.007	0.050	1.107	725	75	85	100	500' Reel
3/4	7	0.040	0.006	6 AWG	7	0.030	0.005	1.107	0.050	1.207	848	75	85	100	500' Reel
2/3	7	0.040	0.006	4 AWG	7	0.040	0.006	1.098	0.050	1.198	840	90	100	100	500' Reel
2/4	7	0.040	0.006	4 AWG	7	0.040	0.006	1.206	0.050	1.306	983	90	100	-	1000' Reel
1/3	8	0.050	0.007	4 AWG	7	0.040	0.006	1.200	0.050	1.300	972	100	115	-	1000' Reel
1/4	8	0.050	0.007	4 AWG	7	0.040	0.006	1.325	0.050	1.425	1149	100	115	-	1000' Reel
1/0-3	10	0.050	0.007	4 AWG	7	0.040	0.006	1.271	0.050	1.371	1080	120	135	-	1000' Reel
1/0-4	10	0.050	0.007	4 AWG	7	0.040	0.006	1.407	0.050	1.507	1288	120	135	-	1000' Reel
2/0-3	12	0.050	0.007	4 AWG	7	0.040	0.006	1.347	0.050	1.447	1209	135	150	-	1000' Reel
2/0-4	12	0.050	0.007	4 AWG	7	0.040	0.006	1.495	0.050	1.595	1453	135	150	-	1000' Reel
3/0-3	15	0.050	0.007	4 AWG	7	0.040	0.006	1.437	0.050	1.537	1365	155	175	-	1000' Reel
3/0-4	15	0.050	0.007	4 AWG	7	0.040	0.006	1.599	0.060	1.719	1684	155	175	-	1000' Reel
4/0-3	19	0.050	0.007	2 AWG	7	0.040	0.006	1.563	0.060	1.683	1626	180	205	-	1000' Reel
4/0-4	19	0.050	0.007	2 AWG	7	0.040	0.006	1.741	0.060	1.861	1971	180	205	-	1000' Reel

#### Standard Conductor Color Coding

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