Type MC Cables

Type MC Metal Clad Cables – Uses Permitted:

The uses permitted for MC cable are governed by NEC® Article 330 and any applicable local codes. Please refer to NEC® Article 330 and your local authority having jurisdiction for additional information.

- For services, feeders and branch circuits
- For power, lighting, control and signal circuits
- Indoors, exposed or concealed
- Outdoors or in wet locations where the armor has an overall outer moisture resistant PVC jacket and the conductors are wet rated (Parking Deck/Lot Cable)
- Direct buried or in concrete encasement where identified for such use (Parking Deck/Lot Cable)
- Under raised floors, above suspended ceilings and in other environmental air-handling spaces per NEC® 300.22(C)
- In places of assembly
- In cable tray
- In locations classified as hazardous as permitted in NEC® Articles 501, 502, 503, 504, 505, and 530
- As aerial cable on a messenger
- In patient care areas in accordance with 517.13 and 517.30(C)(3)(3)

Type MC Cables – Uses Not Permitted:

- Where subject to physical damage
- Where exposed to destructive corrosive conditions unless the metallic sheath is suitable for the conditions or is protected by material suitable for the conditions

For more information about the proper use and application of AC & MC cables, visit Atkore University at www.afcweb.com/afcu.

NEC® is a registered trademark of the National Electrical Code®.



AFC ColorSpec® ID System

UL standard 1569 governs the manufacturing of Type MC cables. The standard was updated to include Type MC cables with a ground fault path consisting of an armor and full-sized bare aluminum ground wire, known as MCI-A cables (metal-clad interlocked ground cable). These cables are required to be terminated using connectors UL listed and marked for MCI-A cables per (UL 514-B).

In 2014, AFC Cable Systems® was the first to commercialize Metal Clad (MC) Cable with both power and control circuits under one armor, it became MC Luminary® Cable. UL created a new classification of MC Cables called MC-PCS (metal clad, power, control and signal). This new type of cable allows conductors of circuits to be placed in a cable with conductors (electric, lite power, or Class 1 circuits per NEC® Section 725.136(I)(1).

AFC Cable Systems® has expanded this family of products to include both an HCF version (MC Luminary HCF®) for applications that include areas of patient care, as well as another industry first, a complete line of multi-zone lighting cable configurations (MC Luminary MultiZone®).

MC-Quik® and MC-Stat® cables are Type MC designed as MCI-A cables. The grounding means of these Type MC cables is the armor plus the full-sized bare aluminum ground wire. MC-Stat® also contains a full sized green insulated copper grounding conductor as required by NEC® 517 for areas of patient care. MC-Quik® and MC-Stat® contain insulated copper circuit conductors with thermoplastic insulation and individual protective coverings versus an overall polypropylene tape. It is available in either galvanized steel or aluminum interlocked armor.

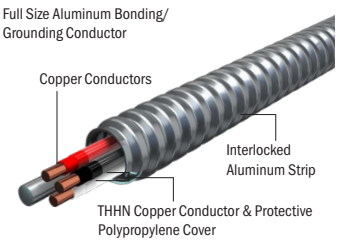
Type MC cables of traditional design will include one or more copper grounding conductors. The armor of these Type MC cables is not an approved equipment grounding means. Traditional Type MC cables consist of copper circuit and grounding conductors with thermoplastic insulation, an overall polypropylene assembly tape and an outer galvanized steel or aluminum interlocked metal armor.

Type MC cables should be cut with an armored cable rotary cutting tool which helps eliminate nicking and cutting of the conductors and removes the metal armor quickly and safely.

Type MC cables by AFC Cable Systems®, including the new MCI-A styles and traditional MC styles, display the ColorSpec® ID System for fast cable and system voltage identification.

MC-Quik® Lite Aluminum Armored Cable (Solid)

Type MCI-A Cables (120/208V & 277/480V) Technical Specifications



Armor
Interlocked Aluminum Strip

Conductors
Solid Copper

Conductor Insulation
Type THHN with Protective Polypropylene Covering on Each Insulated Conductor (No Assembly Tape)

Maximum Temperature Rating
90°C (Dry)

Grounding
Combined Armor and Full-Sized Aluminum Ground/Bond Conductor NEC® 250.118(10)(b)

Neutral Conductor
White 120/208V
Gray 277/480V

Maximum Voltage Rating
600V

References & Ratings
- UL 83, 1479, 1569, 1581, 2556, File Reference E80042
- Federal spec A-A-59544 (formerly J-C-30B)
- NEC® 230.43, 250.118, 300.22(C), 330, 392, 396, 501, 502, 503, 518, 520, 530, 645, 690.31(E)
- Meets all OSHA and HUD requirements
- May be surface mounted, fished and/or embedded in plaster
- UL Classified 1, 2, and 3 hour through (Fire) penetration product, R14141
- NEC® 300.22(C) Environmental Air Handling Spaces (Plenum)
- Cable Tray Rated, install per NEC®
- U.S. Patent No. 8,088,997 B2
- Made in USA of US and/or imported materials

Product Code		Trade Size AWG	Bare Alum. Bonding/ Bond Cond. AWG	Length (ft)		Approx. Weight/ 1,000ft (lb)	Armor Nom. O.D. (in)
250' Coil	1000' Reel			Coil	Reel		
120/208V Solid							
3101Z42-00	3101Z60-00	14-2 Solid ((Black, White)	12	250	1000	66	0.422
3102Z42-00	3102Z60-00	14-3 Solid (Black, Red, White)	12	250	1000	88	0.467
3103Z42-00*	3103Z60-00*	14-4 Solid (Black, Red, Blue, White)	12	250	1000	109	0.503
3104Z42-00	3104Z60-00	12-2 Solid (Black, White)	10	250	1000	90	0.463
3104Z42-04	3104Z60-04	12-2 Solid (Red, White)	10	250	1000	90	0.463
3104Z42-05	3104Z60-05	12-2 Solid (Blue, White)	10	250	1000	90	0.463
3105Z42-00	3105Z60-00	12-3 Solid (Black, Red, White)	10	250	1000	122	0.523
3105Z42-04*	3105Z60-04*	12-3 Solid (Red, Blue, White)	10	250	1000	122	0.523
3105Z42-05*	3105Z60-05*	12-3 Solid (Black, Blue, White)	10	250	1000	122	0.523
3106Z42-00	3106Z60-00	12-4 Solid (Black, Red, Blue, White)	10	250	1000	151	0.565
3107Z42-00	3107Z60-00	10-2 Solid (Black, White)	8	250	1000	131	0.525
3107Z42-04*	3107Z60-04*	10-2 Solid (Red, White)	8	250	1000	131	0.525
3107Z42-05*	3107Z60-05*	10-2 Solid (Blue, White)	8	250	1000	131	0.525
3108Z42-00	3108Z60-00	10-3 Solid (Black, Red, White)	8	250	1000	178	0.601
3108Z42-04*	3108Z60-04*	10-3 Solid (Red, Blue, White)	8	250	1000	178	0.601
3108Z42-05*	3108Z60-05*	10-3 Solid (Black, Blue, White)	8	250	1000	178	0.601
3109Z42-00	3109Z60-00	10-4 Solid (Black, Red, Blue, White)	8	250	1000	242	0.651
277/480V Solid							
3104Z42-01	3104Z60-01	12-2 Solid (Brown, Gray)	10	250	1000	90	0.463
3104Z42-02	3104Z60-02	12-2 Solid (Orange, Gray)	10	250	1000	90	0.463
3104Z42-03	3104Z60-03	12-2 Solid (Yellow, Gray)	10	250	1000	90	0.463
3104Z42-07*	3104Z60-07*	12-2 Solid (Purple, Gray)	10	250	1000	90	0.463
3105Z42-01	3105Z60-01	12-3 Solid (Brown, Orange, Gray)	10	250	1000	122	0.523
3105Z42-02*	3105Z60-02*	12-3 Solid (Orange, Yellow, Gray)	10	250	1000	122	0.523
3105Z42-03*	3105Z60-03*	12-3 Solid (Yellow, Brown, Gray)	10	250	1000	122	0.523
3106Z42-01	3106Z60-01	12-4 Solid (Brown, Orange, Yellow, Gray)	10	250	1000	151	0.565
3107Z42-01	3107Z60-01	10-2 Solid (Brown, Gray)	8	250	1000	131	0.525
3107Z42-02*	3107Z60-02*	10-2 Solid (Orange, Gray)	8	250	1000	131	0.525
3107Z42-03*	3107Z60-03*	10-2 Solid (Yellow, Gray)	8	250	1000	131	0.525
3108Z42-01	3108Z60-01	10-3 Solid (Brown, Orange, Gray)	8	250	1000	178	0.601
3108Z42-02	3108Z60-02	10-3 Solid (Orange, Yellow, Gray)	8	250	1000	178	0.601
3108Z42-03	3108Z60-03	10-3 Solid (Brown, Yellow, Gray)	8	250	1000	178	0.601
3109Z42-01	3109Z60-01	10-4 Solid (Brown, Orange, Yellow, Gray)	8	250	1000	242	0.651

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.

* Special Order, subject to lead times and minimum order quantities.

USE WITH AN MCI-A LISTED CONNECTOR