



**AFC**  
CABLE SYSTEMS®

## PRODUCT CATALOG

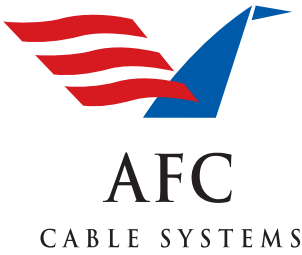
**AFC Cable Systems, Cable Catalog**



### *Featuring*

- AFC's ColorSpec™ ID System
- MC TUFF® Cable with copper ground
- MC-Lite® Cable with copper ground
- HCF® Cable with copper ground
- AC Cable with ColorSpec™
- Specialty Cables
- Lighting, Power & Appliance Whips
- Temp-Lites™





Since 1926



## Save Time and Money with AFC Cable Products

AFC's armored cable products are pre-wired factory assemblies that removes the likelihood of conductor damage during installation. The flexible metal armor provides mechanical protection of the electrical conductors while enabling them to be bent around corners or fished through existing walls. Plus, our full line of Type MC cables all include one or more copper equipment grounding conductors.

Since 1926 AFC has been providing electrical products that are safe and allow for fast installation in a variety of applications. And now more than ever before contractors need to save time.

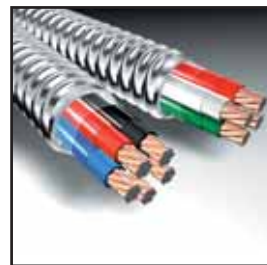
Fast paced and extremely competitive bidding processes require that electrical contractors get the time saving products they need, when they need them every time. To that end AFC Cable Systems is investing in the future. We opened a new manufacturing facility that will not only give us better production efficiencies, but will increase production overall.

From our full line of ColorSpec™ armored cables to cables specifically designed for concrete encasement or electrical harmonic imbalances, AFC has the right cable for the job.

In this catalog you'll find not only the specification details you need, we've included comprehensive information on the ColorSpec ID System, MSDS sheet, and installation guidelines.

AFC Cables Systems Inc., your partner for over seven decades.

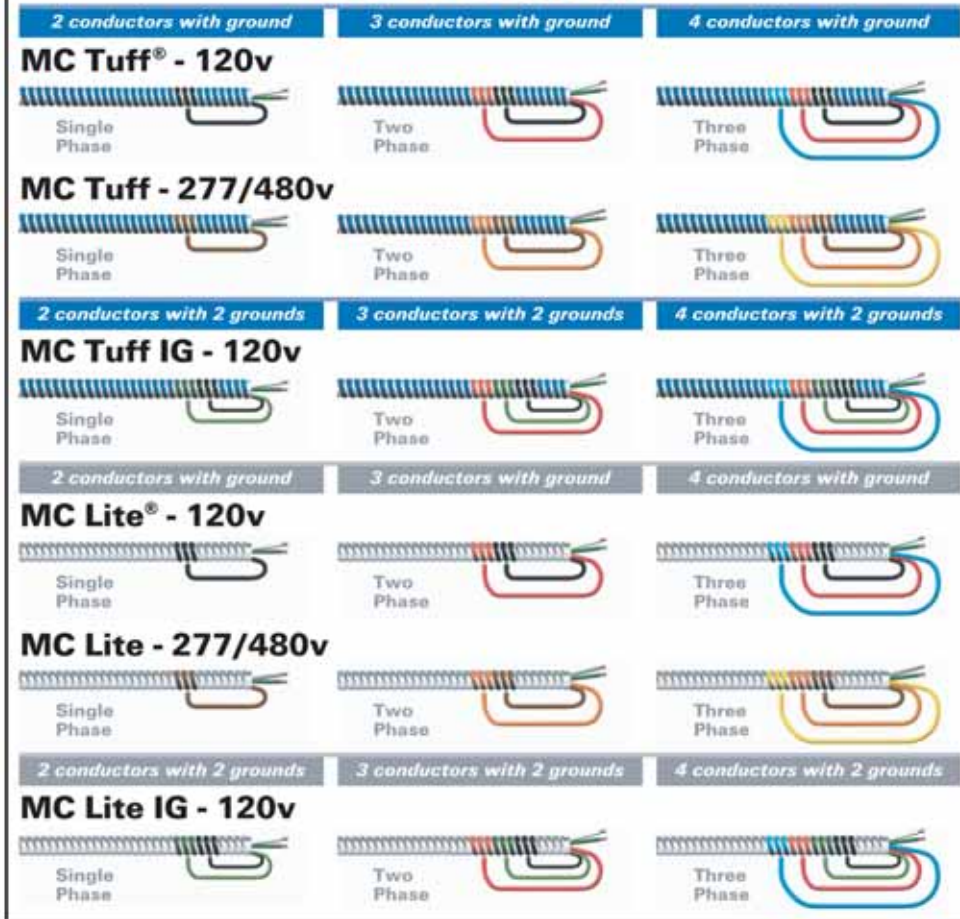
**800-757-6996**



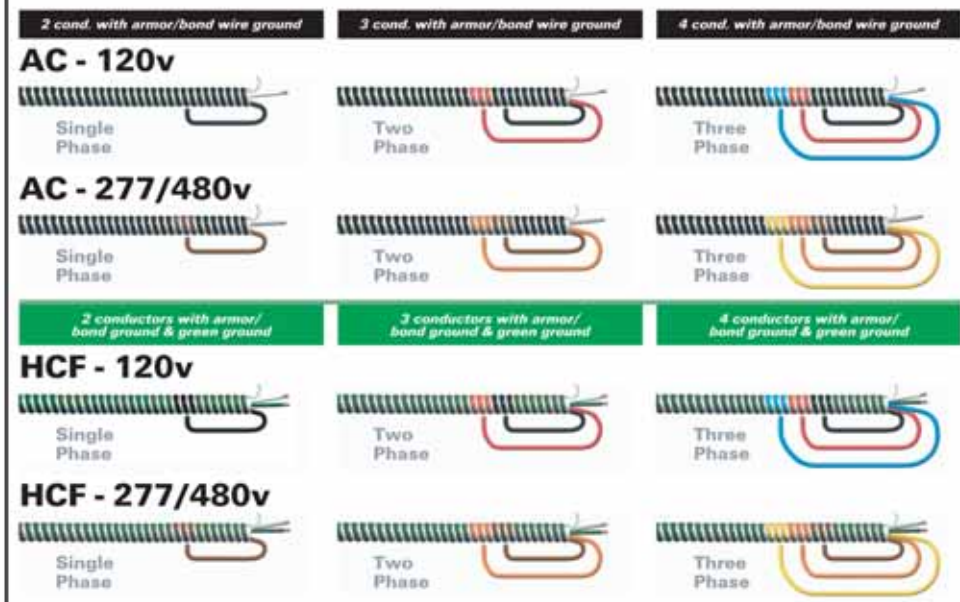


# COLORSPEC® ID SYSTEM

## MC Cable



## AC Cable



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# Cable Applications Chart

Application(s)	NEC®	Type AC	Type MC
Hospitals, Nursing Homes, Health Care Facilities	517.13, 250.118	HCF-90, HCF-Lite	Fire Alarm/Control
Places of Assembly*	518	HCF-90, HCF-Lite	MC, MC-Lite, MC TUFF, Fire Alarm/Control, Super Neutral, Home Run, MC TUFF I.G.
Fire Alarm Systems, Remote Control Circuits	760, 725.8(B)		Fire Alarm/Control
Under Computer Room Raised Floors, Business Equipment, Electronic Discharge Lighting	330, 645		Super Neutral, MC TUFF I.G., MC TUFF, MC-Lite
Direct Burial in Wet, Dry, Oily Areas**	330.10,***		Parking Deck/Lot
Multi-conductor Runs, Commercial/Industrial/Utility	330		MC, MC-Lite, MC TUFF, Super Neutral, Home Run, MC TUFF I.G., Parking Deck/Lot
Redundant Ground	250.118, 517.13, 645	HCF-90, HCF-Lite	MC TUFF I.G., MC-Lite IG
Environmental Air-Handling Spaces	300.22(C), 760.71(D)****	AC-90, AC-Lite, HCF-90, HCF-Lite	MC, MC-Lite, MC TUFF, Fire Alarm/Control, Super Neutral, Home Run, MC TUFF I.G., MC-Lite IG
Branch Circuits in Hotels & Multi-family Dwellings	320, 330	AC-90, AC-Lite	MC, MC-Lite, MC TUFF
Office Partition Furniture	605		Super Neutral, MC TUFF I.G., MC-Lite IG
Parking Decks, Lots, Garages	330.10***		Parking Deck/Lot
Air Conditioners, Factory Installations	330, 350, 356		Parking Deck/Lot

\* Over 100 People

\*\* Also hazardous locations up to Class 1, Div. 2

\*\*\* Also 230.43, 511.7, 513.7(A), 514.7, 515.7(A), 516.7(A)

\*\*\*\* Fire Alarm/Control Cable Only

NOTE: Local electrical codes may differ. Please consult appropriate authority.

THIS CHART HAS BEEN PREPARED AS A CONVENIENT REFERENCE TO SOME OF OUR PRODUCTS' MOST COMMON APPLICATIONS. FOR MORE DETAILED INFORMATION, REFER TO THE APPROPRIATE SECTION OF THIS BROCHURE AND THE NEC®.

## Allowable Ampacities of Insulated Conductors

The wires inside a cable assembly product have an ampacity rating based on the type of insulation extruded over the conductors, the type of conductors, and the conductor size.

NEC Table 310.16 should be used to review the ampacity rating for THHN, THWN, and XHHW insulations for copper conductors in sizes 18 AWG through 2000 kcmil.

## MSDS Sheet for AFC Cables

SINCE 1926



272 Duchaine Boulevard, New Bedford, MA 02745

• Telephone: 508-998-1131 • 800-757-6996 • Fax: 508-998-1447 • [www.afcweb.com](http://www.afcweb.com)

**Subject: Material Safety Data Sheets (MSDS)**

An official notice from OSHA confirms that the electrical products (cables, conduits, fittings, modular wiring, etc.) manufactured by AFC come under the classification of "Articles" under the Hazard Communication Standard. By definition, an article is defined as a product that does not "release or otherwise result in exposure to hazardous chemicals under normal conditions of use."

Consequently, the electrical products manufactured by AFC

do not require Material Safety Data Sheets.

The lubricants used in the manufacturing of conduits and cables are also covered by OSHA as non-hazardous and are primarily vegetable based materials.

Please contact us if you have any additional questions.

# Type MC Metal Clad Cables



### Type MC 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.

- Where not subject to physical damage; 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
- 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 or as open runs
- In locations classified as hazardous as permitted in NEC Articles 501, 502, 503, 504, and 505
- As aerial cable on a messenger

### Type MC Cables – Uses Not Permitted:

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

Type MC cables have 2 or more solid or stranded copper conductors in sizes 18 AWG and larger.

The construction of AFC's 600 Volt MC cable consists of copper circuit and grounding conductors covered with thermoplastic insulation, an overall polypropylene cable assembly tape and an outer galvanized steel or aluminum interlocked armor.

The armor of interlocked Type MC cable is not an equipment grounding means. Type MC cable requires a bare or green grounding conductor.

Type MC cable should be cut with an armored cable rotary cutter. Rotary cutters have many advantages over other methods. Nicking and cutting of the conductors is eliminated and the cuts can be made quickly and safely.

In addition to our standard MC products, AFC offers lightweight steel MC TUFF® and MC in a variety of specialty configurations, most featuring the time saving ColorSpec™ ID System. These configurations, specialty cables, are designed for applications such as fire alarm circuits, direct burial or modular office furniture. This section describes the different varieties of MC cable offered by AFC.

For more information about the proper use and application of AC & MC cables, visit AFC University on the Internet at [www.afcweb.com/afcu](http://www.afcweb.com/afcu)



NEC® is a registered trademark of the National Fire Protection Association



## MC TUFF®

**Lightweight Steel Metal Clad Cable**

**High Strength, Lightweight Galvanized Steel Armor featuring ColorSpec®**

### Features & Benefits

**High strength, lightweight interlocking steel armor**  
**Blue armor for easy identification**

**May be used with set-screw connectors U.L. listed for use with MC Cable**

**Superior EMI shielding vs. aluminum armor**

**U.L. classified for through-wall penetrations**

**All Types of MC Cables from AFC contain one or more copper grounding conductors**

### Applications

Commercial, industrial, multi-residential branch circuits and feeder wiring-services for power, lighting, control and signal circuits – exposed or concealed – fished, surface mounted, embedded in plaster – environmental air-handling spaces – open or messenger supported aerial runs – dry locations – in hazardous locations to Class I & II Div. 2 and Class III, Div. 1 & 2 (as specified in NEC Articles 501, 502, 503) – places of assembly – applications requiring superior EMI shielding

### Product Specifications

MC TUFF® Lightweight Steel Metal Clad Cable (120 Volt colors)

MC TUFF® Lightweight Steel Metal Clad Cable (480Y/277 Volt colors)

Refer to page:

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## MC TUFF® IG

**Lightweight Interlocking Steel Isolated Ground Cable**

**High Strength, Lightweight Galvanized Steel Armor featuring ColorSpec®**

### Features & Benefits

**High strength, lightweight steel armor**

**Features 2 green grounds, 1 solid green, 1 with yellow stripe**

**Blue armor with additional green stripe for easy identification**

**Ideal where isolated, redundant or dedicated grounding is required**

**May be used with set-screw connectors U.L. listed for use with MC Cable**

**Superior EMI shielding vs. aluminum armor**

**U.L. classified for through-wall penetrations**

**All Types of MC Cables from AFC contain one or more copper grounding conductors**

### Applications

Commercial, industrial, multi-residential branch circuits and feeder wiring approved for MC cable requiring isolated, redundant or dedicated grounding conductors – services for power, lighting, control and signal circuits – exposed or concealed – fished, surface mounted, embedded in plaster – environmental air-handling spaces – open or messenger supported aerial runs – dry locations – in hazardous locations to Class I & II Div. 2 and Class III, Div. 1 & 2 (as specified in NEC Articles 501, 502, 503) – places of assembly

### Product Specifications

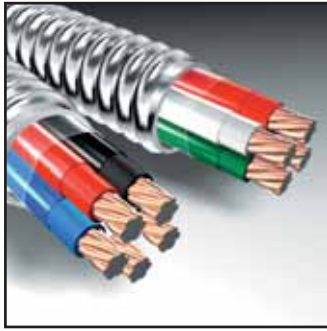
MC TUFF® IG Isolated Ground Lightweight Steel Metal Clad Cable

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\* U.S. Patent #5,350,885, #5,468,914, #5,708,235, #5,557,071 & patent pending



# Type MC Steel Metal Clad Cable (8 AWG-2 – 4/0 AWG-4 )

## Galvanized Steel Armor

### Features & Benefits

**Galvanized interlocking steel armor**

**May be used with set-screw connectors U.L. listed for use with MC Cable**

**Superior EMI shielding vs. aluminum armor**

**U.L. classified for through-wall penetrations**

**All Types of MC Cables from AFC contain one or more copper grounding conductors**

### Applications

Commercial, industrial, multi-residential branch circuits and feeder wiring-services for power, lighting, control and signal circuits – exposed or concealed – fished, surface mounted, embedded in plaster – environmental air-handling spaces – open or messenger supported aerial runs – dry locations – in hazardous locations to Class I & II Div. 2 and Class III, Div. 1 & 2 (as specified in NEC Articles 501, 502, 503) – places of assembly – applications requiring superior EMI shielding

### Product Specifications

Type MC Steel Metal Clad Cable (8 AWG-2 – 4/0 AWG-4 )

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# MC-Lite<sup>®</sup> Metal Clad Cable

## Aluminum Interlocking Armor featuring ColorSpec<sup>®</sup>

### Features & Benefits

**Aluminum armor with Phase/Circuit Stripes \***

**U.L. classified for through-wall penetrations**

**All Types of MC Cables from AFC contain one or more copper grounding conductors**



### Applications

Commercial, industrial, multi-residential branch circuits and feeder wiring – services for power, lighting, control and signal circuits – exposed or concealed – fished, surface mounted, embedded in plaster – environmental air-handling spaces – open or messenger supported aerial runs – dry locations – in hazardous locations to Class I & II Div. 2 and Class III, Div. 1 & 2 (as specified in NEC Articles 501, 502, 503) – places of assembly

### Product Specification

MC-Lite<sup>®</sup> Metal Clad Aluminum Cable (120V and 480Y/277V conductor colors, no stripes)

MC-Lite<sup>®</sup> Metal Clad Aluminum Cable (120V colors)

MC-Lite<sup>®</sup> Metal Clad Aluminum Cable (480Y/277V colors)

MC-Lite<sup>®</sup> IG Metal Clad Aluminum Cable (120V colors)

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## Fire Alarm/Control Cable™

Galvanized Interlocking Steel Armor Color Coded Red featuring ColorSpec®



### Features & Benefits

Easy to identify red armor

Fully plenum rated – FPLP

Dual rated Type MC

Available with twisted shielded pairs

May be used with set-screw connectors U.L. listed for use with MC Cable

Superior EMI shielding vs. aluminum armor

U.L. classified for through-wall penetrations

All Types of MC Cables from AFC contain one or more copper grounding conductors

### Applications

Fire alarm wiring or remote control hook-up connecting main fire alarm control panel with pull stations, smoke detectors and alarms – remote control circuits from magnetic motor starters, contactors, relays and signals – exposed, concealed, in cable trays, ducts, plenums or other environmental air-handling spaces – FPLP – in hazardous locations up to Class I & II, Div. 2 and Class III, Div. 1 & 2 (as specified in NEC Articles 501, 502, 503)

### Product Specification

Fire Alarm/Control Cable™

Fire Alarm/Control Cable™ Technical Chart

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## Super Neutral Cable®

Galvanized Interlocking Steel or (optional) Aluminum Armor

### Features & Benefits

Designed to minimize the effects of harmonic currents on the neutral conductors generated by non-linear loads

Features oversized neutral conductor or one neutral per phase

Cable designs and conductor color schemes compatible with most modular office furniture

U.L. classified for through-wall penetrations

All Types of MC Cables from AFC contain one or more copper grounding conductors

### Applications

Branch circuit and feeder wiring for computers, programmable controllers, electronic discharge lighting, office machines and other electronic equipment that introduce additive harmonic currents from non-linear switching loads – compatible with most modular office furniture – under raised floors, above suspended ceilings, in environmental air-handling spaces – applications requiring superior EMI shielding (steel armor only)

### Product Specification

Super Neutral Cable®

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# Parking Deck/Lot Cable™ PVC Jacketed Metal Clad Cable

**Galvanized Steel Armor with PVC Jacket**

**Features & Benefits**

**Galvanized steel armor with PVC jacket**

**U.L. Rated for direct burial in earth or concrete encasement**

**Sunlight and oil resistant**

**Direct plow-in capability**

**All Types of MC Cables from AFC contain one or more copper grounding conductors**

**Applications**

Branch circuit and feeder wiring for lighting, control and signal circuits in wet, dirty or oily locations – buried directly in earth or concrete – surface mounted or trenched – parking deck or parking lot applications – golf courses, ski mountains, docks, marinas, pumping stations and stadium lighting – continuous runs to outdoor or underground swimming pool motors, pumps and related equipment (per NEC 680) – fished, exposed or concealed, in cable trays – in direct sunlight and hazardous locations up to Class I & II, Div. 2 and Class III, Div. 1 & 2 (NEC Articles 501, 502, 503)

**Product Specification**

Parking Deck/Lot Cable™ PVC Jacketed Metal Clad Cable

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# Home Run Cable®

**Galvanized Steel Armor**

**Features & Benefits**

**Versatile multi-conductor cable**

**Phase identified by color code with separate marking for circuit identification**

**U.L. classified for through-wall penetrations**

**All Types of MC Cables from AFC contain one or more copper grounding conductors**

**Applications**

Multi-conductor runs from panel board to junction box for power, lighting, control and signal circuits – repetitive homeruns in multi-story hotels, dormitories, commercial office buildings and warehouse applications – conductors must be derated per NEC Table 310.15(B)(2)(a) – exposed or concealed, fished – in cable trays and environmental air-handling spaces

**Product Specification**

Home Run Cable®

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# MC TUFF® Lightweight Steel Metal Clad Cable (120V) Technical Specifications

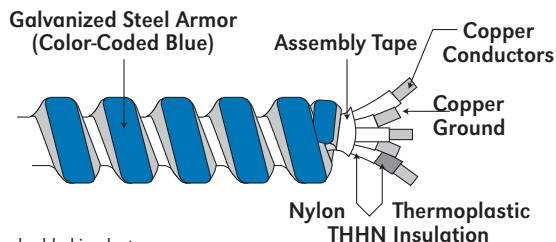


## Specification Description

<b>Specification</b>	<b>MC-TUFF ColorSpec ID System®</b>
Armor	Galvanized Interlocking Steel Strip (blue striped)
Conductors	Solid/Stranded Copper (see below)
Conductor Insulation	THHN/THWN (XHHW available by special order subject to lead time and minimum quantities)
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means – Insulated Green Grounding Conductor
Neutral Conductor	White
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- May be surface mounted, fished and/or embedded in plaster
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System®

	Additional black stripe denotes 2 conductor cable		Additional red and white stripes denote special 2 conductor cable
	Additional black and red stripe denotes 3 conductor cable		Additional light blue and white stripes denote special 2 conductor cable
	Additional black, red and light blue stripes denote 4 conductor cable		Additional red, light blue and white stripes denote special 3 conductor cable
			Additional black, light blue and white stripes denote special 3 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
1701B42T00	1701B60T00	14-2 Solid	14	250'	1000'	117	0.470
1702B42T00	1702B60T00	14-3 Solid	14	250'	1000'	140	0.480
1703B42T00	1703B60T00	14-4 Solid	14	250'	1000'	164	0.510
1704B42T00	1704B60T00	12-2 Solid	12	250'	1000'	147	0.495
1705B42T00	1705B60T00	12-3 Solid	12	250'	1000'	186	0.530
1706B42T00	1706B60T00	12-4 Solid	12	250'	1000'	223	0.565
1758B42T00	1758B60T00	12-2 Stranded	12	250'	1000'	152	0.495
1759B42T00	1759B60T00	12-3 Stranded	12	250'	1000'	191	0.530
1760B42T00	1760B60T00	12-4 Stranded	12	250'	1000'	225	0.565
1707B32T00	—	10-2 Solid	10	125'	—	222	0.560
1708B32T00	—	10-3 Solid	10	125'	—	268	0.600
1709B32T00	—	10-4 Solid	10	125'	—	313	0.645
1707B42T00	1707B60T00	10-2 Solid	10	250'	1000'	222	0.560
1708B42T00	1708B60T00	10-3 Solid	10	250'	1000'	268	0.600
1709B42T00	1709B60T00	10-4 Solid	10	250'	1000'	313	0.645
1761B32T00	—	10-2 Stranded	10	125'	—	227	0.560
1762B32T00	—	10-3 Stranded	10	125'	—	269	0.600
1763B32T00	—	10-4 Stranded	10	125'	—	319	0.645
1761B42T00	1761B60T00	10-2 Stranded	10	250'	1000'	227	0.560
1762B42T00	1762B60T00	10-3 Stranded	10	250'	1000'	269	0.600
1763B42T00	1763B60T00	10-4 Stranded	10	250'	1000'	319	0.645
<b>Specialty Colors</b>							
1704B42T04	1704B60T04	12-2 Solid (red, white)	12	250'	1000'	147	0.495
1704B42T05	1704B60T05	12-2 Solid (blue, white)	12	250'	1000'	147	0.495
1705B42T04	1705B60T04	12-3 Solid (red, blue, white)	12	250'	1000'	147	0.495
1705B42T05	1705B60T05	12-3 Solid (black, blue, white)	12	250'	1000'	147	0.495
1707B42T04	1707B60T04	10-2 Solid (red, white)	10	250'	1000'	222	0.560
1707B42T05	1707B60T05	10-2 Solid (blue, white)	10	250'	1000'	222	0.560
1708B42T04	1708B60T04	10-3 Solid (red, blue, white)	10	250'	1000'	268	0.600
1708B42T05	1708B60T05	10-3 Solid (black, blue, white)	10	250'	1000'	268	0.600

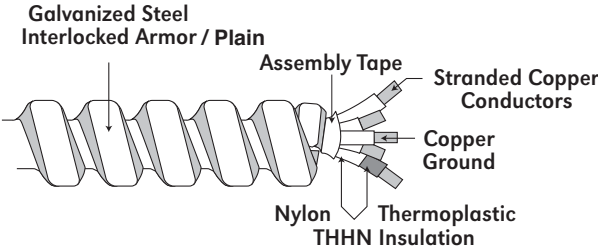
NOTE: All dimensions and weights are subject to normal manufacturing tolerances. **WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**SET SCREW CONNECTORS MAY BE USED WITH STEEL CABLES, SEE CONNECTOR CROSS-REFERENCE GUIDE PAGE 31 FOR DETAILS.**

# Type MC Steel Metal Clad Cable (8 AWG-2 – 4/0 AWG-4) Technical Specifications

### Specification Description

Specification	MC
Armor	Galvanized Interlocking Steel Strip
Conductors	Stranded Copper
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means – may be insulated or bare, see chart below
Neutral Conductor	White
Maximum Voltage Rating	600V



### References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



### Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code Coil	Product Code Reel	Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
				Coil	Reel		
<b>Stock Items</b>							
1715-40-00	1715-45-00	8-2 Stranded	10 solid	200'	500'	329	0.651
1716-40-00	1716-45-00	8-3 Stranded	10 solid	200'	500'	432	0.704
1717-32-00	1717-45-00	8-4 Stranded	10 solid	125'	500'	511	0.852
1719-32-00	1719-45-00	6-2 Stranded	8 Stranded	125'	500'	462	0.795
1720-32-00	1720-45-00	6-3 Stranded	8 Stranded	125'	500'	594	0.855
1721-30-00	1721-45-00	6-4 Stranded	8 Stranded	100'	500'	860	0.945
1724-30-00	1724-45-00	4-3 Stranded	8 Stranded	100'	500'	985	1.035
1725-30-00	1725-45-00	4-4 Stranded	8 Stranded	100'	500'	1195	1.135
1728-30-00	1728-45-00	3-3 Stranded	6 Stranded	100'	500'	1070	1.025
1729-30-00	1729-45-00	3-4 Stranded	6 Stranded	100'	500'	1260	1.120
1726-30-00	1726-45-00	2-3 Stranded	6 Stranded	100'	500'	1340	1.180
1727-30-00	1727-45-00	2-4 Stranded	6 Stranded	100'	500'	1640	1.295
1737-30-00	1737-45-00	1-3 Stranded	6 Stranded	100'	500'	1530	1.185
—	1738-99-00	1-4 Stranded	6 Stranded	††	††	1930	1.350
—	1770-99-00	1/0-3 Stranded	bare #6	††	††	1780	1.255
—	1771-99-00	1/0-4 Stranded	bare #6	††	††	2220	1.390
—	1772-99-00	2/0-3 Stranded	bare #6	††	††	2095	1.350
—	1773-99-00	2/0-4 Stranded	bare #6	††	††	2650	1.520
—	1774-99-00	3/0-3 Stranded	bare #4	††	††	2580	1.520
—	1775-99-00	3/0-4 Stranded	bare #4	††	††	3245	1.690
—	1776-99-00	4/0-3 Stranded	bare #4	††	††	3040	1.580
—	1777-99-00	4/0-4 Stranded	bare #4	††	††	3855	1.770

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

XHHW INSULATION BY SPECIAL ORDER. CALL FOR DETAILS.



# MC TUFF® ColorSpec ID System® (480Y/277V) Technical Specifications

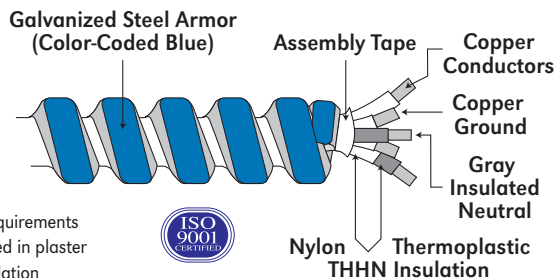


## Specification Description

<b>Specification</b>	<b>MC TUFF ColorSpec ID System®</b>
Armor	Galvanized Interlocking Steel Strip (blue striped)
Conductors	Solid or Stranded Copper (see below)
Conductor Insulation	THHN/THWN (XHHW available by special order subject to lead time and minimum quantities)
Assembly Covering	Polypropylene tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means – Insulated Green Grounding Conductor (additional insulated conductors optional)
Neutral Conductor	Gray
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Cable Tray installations per NEC
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD requirements
- May be surfaced mounted and embedded in plaster
- Environmental Air-Handling Space installation
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929



## AFC's ColorSpec ID System®

	Additional brown stripe denotes 2 conductor cable (brown conductor)		Additional orange and yellow stripes denote 3 conductor cable
	Additional orange stripe denotes 2 conductor cable (orange conductor)		Additional brown and yellow stripes denote 3 conductor cable
	Additional yellow stripe denotes 2 conductor cable (yellow conductor)		Additional brown and purple stripes denote 3 conductor cable
	Additional purple stripe denotes 2 conductor cable (purple conductor)		Additional brown, orange and yellow stripes denote 4 conductor cable
	Additional brown and orange stripes denote 3 conductor cable		Additional brown, yellow and purple stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code Coil	Product Code Reel	Trade Size	Grounding Conductors AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
				Coil	Reel		
1704B42T01	1704B60T01	12-2 Solid (brown, gray)	12 (solid green)	250'	1000'	147	0.495
1704B42T02	1704B60T02	12-2 Solid (orange, gray)	12 (solid green)	250'	1000'	147	0.495
1704B42T03	1704B60T03	12-2 Solid (yellow, gray)	12 (solid green)	250'	1000'	147	0.495
1704B42T07	1704B60T07	12-2 Solid (purple, gray)	12 (solid green)	250'	1000'	147	0.495
1758B42T01	1758B60T01	12-2 Stranded (brown, gray)	12 (solid green)	250'	1000'	152	0.495
1758B42T02	1758B60T02	12-2 Stranded (orange, gray)	12 (solid green)	250'	1000'	152	0.495
1758B42T03	1758B60T03	12-2 Stranded (yellow, gray)	12 (solid green)	250'	1000'	152	0.495
1705B42T01	1705B60T01	12-3 Solid (brown, orange, gray)	12 (solid green)	250'	1000'	186	0.530
1705B42T02	1705B60T02	12-3 Solid (orange, yellow, gray)	12 (solid green)	250'	1000'	186	0.530
1705B42T03	1705B60T03	12-3 Solid (brown, yellow, gray)	12 (solid green)	250'	1000'	186	0.530
1705B42T07	1705B60T07	12-3 Solid (brown, purple, gray)	12 (solid green)	250'	1000'	186	0.530
1705B42T27	1705B60T27	12-3 Solid (yellow, purple, gray)	12 (solid green)	250'	1000'	186	0.530
1759B42T01	1759B60T01	12-3 Stranded (brown, orange, gray)	12 (solid green)	250'	1000'	191	0.530
1706B42T01	1706B60T01	12-4 Solid (brown, orange, yellow, gray)	12 (solid green)	250'	1000'	223	0.565
1706B42T07	1706B60T07	12-4 Solid (brown, yellow, purple, gray)	12 (solid green)	250'	1000'	223	0.565
1760B42T01	1760B60T01	12-4 Stranded (brown, orange, yellow, gray)	12 (solid green)	250'	1000'	225	0.565
1707B42T01	1707B60T01	10-2 Solid (brown, gray)	10 (solid green)	250'	1000'	222	0.560
1707B42T02	1707B60T02	10-2 Solid (orange, gray)	10 (solid green)	250'	1000'	222	0.560
1707B42T03	1707B60T03	10-2 Solid (yellow, gray)	10 (solid green)	250'	1000'	222	0.560
1707B42T07	1707B60T07	10-2 Solid (purple, gray)	10 (solid green)	250'	1000'	222	0.560
1761B42T01	1761B60T01	10-2 Stranded (brown, gray)	10 (solid green)	250'	1000'	227	0.560
1708B42T01	1708B60T01	10-3 Solid (brown, orange, gray)	10 (solid green)	250'	1000'	268	0.600
1708B42T02	1708B60T02	10-3 Solid (orange, yellow, gray)	10 (solid green)	250'	1000'	268	0.600
1708B42T03	1708B60T03	10-3 Solid (brown, yellow, gray)	10 (solid green)	250'	1000'	268	0.600
1708B42T07	1708B60T07	10-3 Solid (brown, purple, gray)	10 (solid green)	250'	1000'	268	0.600
1708B42T27	1708B60T27	10-3 Solid (yellow, purple, gray)	10 (solid green)	250'	1000'	268	0.600
1762B42T01	1762B60T01	10-3 Stranded (brown, orange, gray)	10 (solid green)	250'	1000'	269	0.600
1709B42T01	1709B60T01	10-4 Solid (brown, orange, yellow, gray)	10 (solid green)	250'	1000'	313	0.645
1709B42T07	1709B60T07	10-4 Solid (brown, yellow, purple, gray)	10 (solid green)	250'	1000'	313	0.645
1763B42T01	1763B60T01	10-4 Stranded (brown, orange, yellow, gray)	10 (solid green)	250'	1000'	319	0.645

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order. **WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**SET SCREW CONNECTORS MAY BE USED WITH STEEL CABLES, SEE CONNECTOR CROSS-REFERENCE GUIDE PAGE 32 FOR DETAILS.**



# MC TUFF® I.G. Isolated Ground Lightweight Steel Metal Clad Cable Technical Specifications

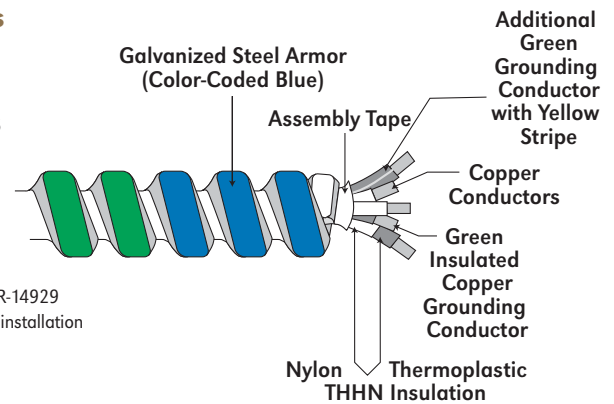


## Specification Description

<b>Specification</b>	<b>MC TUFF IG ColorSpec ID System®</b>
Armor	Galvanized Interlocking Steel* Strip (blue striped)
Conductors	Solid/Stranded Copper (see below)
Conductor Insulation	THHN/THWN (XHHW available by special order subject to lead time and minimum quantities)
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	2 grounding means — 2 grounding conductors: one solid green, one green with yellow stripe
Neutral Conductor	White
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 250.118, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Cable Tray installations per NEC
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System®



Additional black, and green stripe denotes 2 conductor cable with additional ground



Additional black, red and green stripes denote 3 conductor cable with additional ground



Additional black, red, light blue and green stripes denote 4 conductor cable with additional ground



Additional red, white and green stripes denote special 3 conductor cable with additional ground



Additional light blue, white and green stripes denote special 3 conductor cable with additional ground



## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code Coil	Reel	Trade Size	Grounding Conductors AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
				Coil	Reel		
<b>Stock Items</b>							
1705B42T80	1705B60T80	12-2 Solid	12	250'	1000'	186	0.530
1706B42T80	1706B60T80	12-3 Solid	12	250'	1000'	223	0.565
1710B42T80	1710B60T80	12-4 Solid	12	250'	1000'	330	0.580
1759B42T80	1759B60T80	12-2 Stranded	12	250'	1000'	191	0.530
1708B42T80	1708B60T80	10-2 Solid	10	250'	1000'	268	0.600
1709B42T80	1709B60T80	10-3 Solid	10	250'	1000'	313	0.645
1711B42T80	1711B60T80	10-4 Solid	10	250'	1000'	391	0.670
<b>Specialty Colors</b>							
1705B42T84	1705B60T84	12-2 Solid (red, white)	12	250'	1000'	186	0.530
1705B42T85	1705B60T85	12-2 Solid (blue, white)	12	250'	1000'	186	0.530
1708B42T84	1708B60T84	10-2 Solid (red, white)	10	250'	1000'	268	0.600
1708B42T85	1708B60T85	10-2 Solid (blue, white)	10	250'	1000'	268	0.600

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.  
\* Aluminum available by special order and subject to lead times and minimum quantities.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**SET SCREW CONNECTORS MAY BE USED WITH STEEL CABLES, SEE CONNECTOR CROSS-REFERENCE GUIDE PAGE 34 FOR DETAILS.**

# MC-Lite<sup>®</sup> Metal Clad Aluminum Cable

## Technical Specifications (120V & 480Y/277V, Plain Armor No Striping)

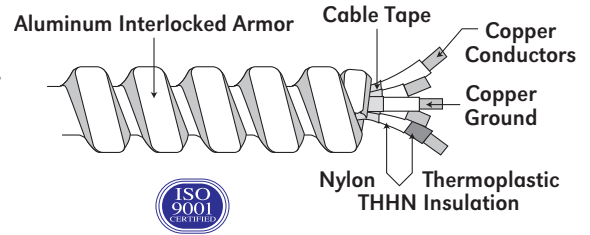
### Specification Description

Specification	MC Lite
Armor	Interlocking Aluminum Strip
Conductors	Solid/Stranded Copper
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means – Insulated Green Grounding Conductor
Neutral Conductor	White for 120V circuits Gray for 480Y/277V circuits

Maximum Voltage Rating 600V

### References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- May be surface mounted, fished and/or embedded in plaster
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour through-penetration Fire Wall
- Environmental Air-Handling Space installation



Also available in 480Y/277V colors sizes 10-2 through 6-4. See chart below.

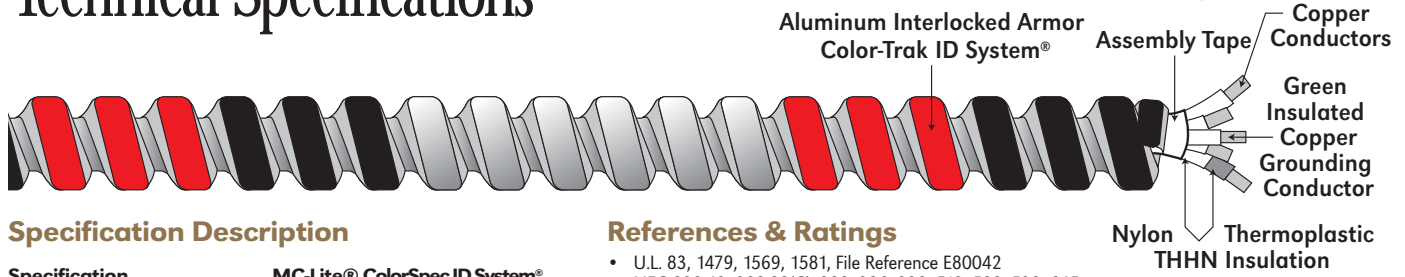
### Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code	Coil	Reel	Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
					Coil	Reel		
<b>Stock Items 120V Conductor Colors</b>								
2107-32-00	—	—	10-2 Solid (black, white)	10 (solid green)	125'	—	170	0.560
2108-32-00	—	—	10-3 Solid (black, red, white)	10 (solid green)	125'	—	215	0.600
2109-32-00	—	—	10-4 Solid (black, red, blue, white)	10 (solid green)	125'	—	260	0.645
2107-42-00	2107-60-00	—	10-2 Solid (black, white)	10 (solid green)	250'	1000'	170	0.560
2108-42-00	2108-60-00	—	10-3 Solid (black, red, white)	10 (solid green)	250'	1000'	215	0.600
2109-42-00	2109-60-00	—	10-4 Solid (black, red, blue, white)	10 (solid green)	250'	1000'	260	0.645
2161-42-00	2161-60-00	—	10-2 Stranded (black, white)	10 (solid green)	250'	1000'	170	0.560
2162-42-00	2162-60-00	—	10-3 Stranded (black, red, white)	10 (solid green)	250'	1000'	215	0.600
2163-42-00	2163-60-00	—	10-4 Stranded (black, red, blue, white)	10 (solid green)	250'	1000'	260	0.645
2115-40-00	2115-45-00	—	8-2 Stranded (black, white)	10 (solid green)	200'	500'	265	0.635
2116-40-00	2116-45-00	—	8-3 Stranded (black, red, white)	10 (solid green)	200'	500'	335	0.685
2117-32-00	2117-45-00	—	8-4 Stranded (black, red, blue, white)	10 (solid green)	125'	500'	415	0.835
2119-32-00	2119-45-00	—	6-2 Stranded (black, white)	8 (solid green)	125'	500'	370	0.795
2120-32-00	2120-45-00	—	6-3 Stranded (black, red, white)	8 (solid green)	125'	500'	480	0.855
2121-30-00	2121-45-00	—	6-4 Stranded (black, red, blue, white)	8 (solid green)	100'	500'	595	0.945
2124-30-00	2124-45-00	—	4-3 Stranded (black, red, white)	8 (solid green)	100'	500'	690	1.035
2125-30-00	2125-45-00	—	4-4 Stranded (black, red, blue, white)	8 (solid green)	100'	500'	870	1.135
2128-30-00	2128-45-00	—	3-3 Stranded (black, red, white)	6 (solid green)	100'	500'	815	1.025
2129-30-00	2129-45-00	—	3-4 Stranded (black, red, blue, white)	6 (solid green)	100'	500'	1025	1.120
2126-30-00	2126-45-00	—	2-3 Stranded (black, red, white)	6 (solid green)	100'	500'	1000	1.180
2127-30-00	2127-45-00	—	2-4 Stranded (black, red, blue, white)	6 (solid green)	100'	500'	1260	1.295
2137-30-00	2137-45-00	—	1-3 Stranded (black, red, white)	6 (solid green)	100'	500'	1195	1.185
<b>480Y/277V Conductor Colors</b>								
2107-42-01	2107-60-01	—	10-2 Stranded (brown, gray)	10 (solid green)	250'	1000'	170	0.560
2107-42-02	2107-60-02	—	10-2 Stranded (orange, gray)	10 (solid green)	250'	1000'	170	0.560
2107-42-03	2107-60-03	—	10-2 Stranded (yellow, gray)	10 (solid green)	250'	1000'	170	0.560
2108-42-01	2108-60-01	—	10-3 Stranded (brown, orange, gray)	10 (solid green)	250'	1000'	215	0.600
2108-42-02	2108-60-02	—	10-3 Stranded (orange, yellow, gray)	10 (solid green)	250'	1000'	215	0.600
2108-42-03	2108-60-03	—	10-3 Stranded (brown, yellow, gray)	10 (solid green)	250'	1000'	215	0.600
2109-42-01	2109-60-01	—	10-4 Stranded (brown, orange, yellow, gray)	10 (solid green)	250'	1000'	260	0.645
2115-40-01	2115-45-01	—	8-2 Stranded (brown, gray)	10 (solid green)	200'	500'	329	0.635
2116-40-01	2116-45-01	—	8-3 Stranded (brown, orange, gray)	10 (solid green)	200'	500'	432	0.685
2117-32-01	2117-45-01	—	8-4 Stranded (brown, orange, yellow, gray)	10 (solid green)	125'	500'	511	0.835
2119-32-01	2119-45-01	—	6-2 Stranded (brown, gray)	8 (solid green)	125'	500'	462	0.795
2120-32-01	2120-45-01	—	6-3 Stranded (brown, orange, gray)	8 (solid green)	125'	500'	594	0.855
2121-30-01	2121-45-01	—	6-4 Stranded (brown, orange, yellow, gray)	8 (solid green)	100'	500'	595	0.945

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order.  
\* Stranded conductors available by special order.



# MC-Lite® Metal Clad Aluminum Cable (120V) Technical Specifications



## Specification Description

Specification	MC-Lite® ColorSpec ID System®
Armor	Interlocking Aluminum Strip
Conductors	Solid/Stranded Copper
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means – Insulated Green Grounding Conductor
Neutral Conductor	White for 120V circuits
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- May be surface mounted, fished and/or embedded in plaster
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour through-penetration Fire Wall
- Environmental Air-Handling Space installation

## AFC's ColorSpec ID System®

	Additional black stripe denotes 2 conductor cable		Additional red and white stripes denote special 2 conductor cable
	Additional black and red stripe denotes 3 conductor cable		Additional light blue and white stripes denote special 2 conductor cable
	Additional black, red and light blue stripes denote 4 conductor cable		Additional red, light blue and white stripes denote special 3 conductor cable
	Additional black, light blue and white stripes denote special 3 conductor cable		

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
2101S42-00	2101S60-00	14-2 (black, white)	14 (solid green)	250'	1000'	80	0.470
2102S42-00	2102S60-00	14-3 (black, red, white)	14 (solid green)	250'	1000'	100	0.480
2103S42-00	2103S60-00	14-4 (black, red, blue, white)	14 (solid green)	250'	1000'	120	0.510
2104S42-00	2104S60-00	12-2 (black, white)	12 (solid green)	250'	1000'	110	0.495
2105S42-00	2105S60-00	12-3 (black, red, white)	12 (solid green)	250'	1000'	135	0.530
2106S42-00	2106S60-00	12-4 (black, red, blue, white)	12 (solid green)	250'	1000'	170	0.565
2107S42-00	2107S60-00	10-2 (black, white)	10 (solid green)	250'	1000'	160	0.560
2108S42-00	2108S60-00	10-3 (black, red, white)	10 (solid green)	250'	1000'	215	0.600
2109S42-00	2109S60-00	10-4 (black, red, blue, white)	10 (solid green)	250'	1000'	260	0.645
<b>Stranded Conductors</b>							
2158S42-00	2158S60-00	12-2 Stranded (black, white)	12 (solid green)	250'	1000'	110	0.495
2159S42-00	2159S60-00	12-3 Stranded (black, red, white)	12 (solid green)	250'	1000'	135	0.530
2160S42-00	2160S60-00	12-4 Stranded (black, red, blue, white)	12 (solid green)	250'	1000'	170	0.565
2161S42-00	2161S60-00	10-2 Stranded (black, white)	10 (solid green)	250'	1000'	160	0.560
2162S42-00	2162S60-00	10-3 Stranded (black, red, white)	10 (solid green)	250'	1000'	215	0.600
2163S42-00	2163S60-00	10-4 Stranded (black, red, blue, white)	10 (solid green)	250'	1000'	260	0.645
<b>"Special 120V Colors"</b>							
2104S42-04	2104S60-04	12-2 (red, white)	12 (solid green)	250'	1000'	110	0.495
2104S42-05	2104S60-05	12-2 (blue, white)	12 (solid green)	250'	1000'	110	0.495
2105S42-04	2105S60-04	12-3 (red, blue, white)	12 (solid green)	250'	1000'	135	0.530
2105S42-05	2105S60-05	12-3 (black, blue, white)	12 (solid green)	250'	1000'	135	0.530
2107S42-04	2107S60-04	10-2 (red, white)	10 (solid green)	250'	1000'	160	0.560
2107S42-05	2107S60-05	10-2 (blue, white)	10 (solid green)	250'	1000'	160	0.560
2108S42-04	2108S60-04	10-3 (red, blue, white)	10 (solid green)	250'	1000'	215	0.600
2108S42-05	2108S60-05	10-3 (black, blue, white)	10 (solid green)	250'	1000'	215	0.600

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order.

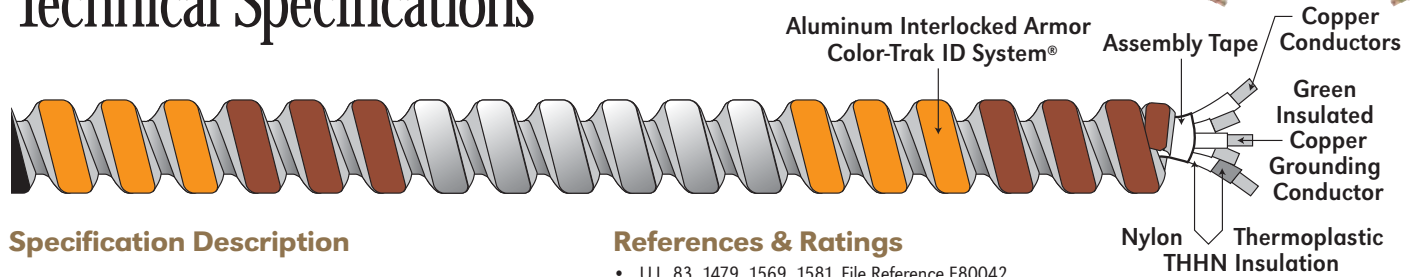
**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS**

MC-Lite® is also available in 8AWG and larger, see page 12.



# MC-Lite<sup>®</sup> Aluminum Cable (480Y/277V)

## Technical Specifications



### Specification Description

Specification	MC-Lite <sup>®</sup> ColorSpec ID System <sup>®</sup>
Armor	Interlocking Aluminum Strip
Conductors	Solid/Stranded Copper
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means - Insulated Green Grounding Conductor
Neutral Conductor	Gray for 480Y/277V circuits
Maximum Voltage Rating	600V

### References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- May be surface mounted, fished and/or embedded in plaster
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour through-penetration Fire Wall
- Environmental Air-Handling Space installation

### AFC's ColorSpec ID System<sup>®</sup>

	Additional brown stripe denotes 2 conductor cable (brown conductor)		Additional orange and yellow stripes denote 3 conductor cable
	Additional orange stripe denotes 2 conductor cable (orange conductor)		Additional brown and yellow stripes denote 3 conductor cable
	Additional yellow stripe denotes 2 conductor cable (yellow conductor)		Additional brown and purple stripes denote 3 conductor cable
	Additional purple stripe denotes 2 conductor cable (purple conductor)		Additional brown, orange and yellow stripes denote 4 conductor cable
	Additional brown and orange stripes denote 3 conductor cable		Additional brown, yellow and purple stripes denote 4 conductor cable

### Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
2104S42-01	2104S60-01	12-2 (brown, gray)	12 (solid green)	250'	1000'	110	0.495
2105S42-01	2105S60-01	12-3 (brown, orange, gray)	12 (solid green)	250'	1000'	135	0.530
2106S42-01	2106S60-01	12-4 (brown, orange, yellow, gray)	12 (solid green)	250'	1000'	170	0.565
2107S42-01	2107S60-01	10-2 (brown, gray)	10 (solid green)	250'	1000'	160	0.560
2108S42-01	2108S60-01	10-3 (brown, orange, gray)	10 (solid green)	250'	1000'	215	0.600
2109S42-01	2109S60-01	10-4 (brown, orange, yellow, gray)	10 (solid green)	250'	1000'	260	0.645
<b>Stranded Conductors</b>							
2158S42-01	2158S60-01	12-2 Stranded (brown, gray)	12 (solid green)	250'	1000'	110	0.495
2159S42-01	2159S60-01	12-3 Stranded (brown, orange, gray)	12 (solid green)	250'	1000'	135	0.530
2160S42-01	2160S60-01	12-4 Stranded (brown, orange, yellow, gray)	12 (solid green)	250'	1000'	170	0.565
2161S42-01	2161S60-01	10-2 Stranded (brown, gray)	10 (solid green)	250'	1000'	160	0.560
2162S42-01	2162S60-01	10-3 Stranded (brown, orange, gray)	10 (solid green)	250'	1000'	215	0.600
2163S42-01	2163S60-01	10-4 Stranded (brown, orange, yellow, gray)	10 (solid green)	250'	1000'	260	0.645
<b>"Special 480Y/277V Colors"</b>							
2104S42-02	2104S60-02	12-2 (orange, gray)	12 (solid green)	250'	1000'	110	0.495
2104S42-03	2104S60-03	12-2 (yellow, gray)	12 (solid green)	250'	1000'	110	0.495
2104S42-07	2104S60-07	12-2 (purple, gray)	12 (solid green)	250'	1000'	110	0.495
2105S42-02	2105S60-02	12-3 (orange, yellow, gray)	12 (solid green)	250'	1000'	135	0.530
2105S42-03	2105S60-03	12-3 (brown, yellow, gray)	12 (solid green)	250'	1000'	135	0.530
2105S42-07	2105S60-07	12-3 (brown, purple, gray)	12 (solid green)	250'	1000'	135	0.530
2106S42-07	2106S60-07	12-4 (purple, brown, yellow, gray)	12 (solid green)	250'	1000'	170	0.565
2107S42-02	2107S60-02	10-2 (orange, gray)	10 (solid green)	250'	1000'	160	0.560
2107S42-03	2107S60-03	10-2 (yellow, gray)	10 (solid green)	250'	1000'	160	0.560
2107S42-07	2107S60-07	10-2 (purple, gray)	10 (solid green)	250'	1000'	160	0.560
2108S42-02	2108S60-02	10-3 (orange, yellow, gray)	10 (solid green)	250'	1000'	215	0.600
2108S42-03	2108S60-03	10-3 (brown, yellow, gray)	10 (solid green)	250'	1000'	215	0.600
2108S42-07	2108S60-07	10-3 (brown, purple, gray)	10 (solid green)	250'	1000'	215	0.600
2109S42-07	2109S60-07	10-4 (purple, brown, yellow, gray)	10 (solid green)	250'	1000'	260	0.645
<b>Stranded "Special 480Y/277V Colors"</b>							
2158S42-02	2158S60-02	12-2 Stranded (orange, gray)	12 (solid green)	250'	1000'	110	0.495
2158S42-03	2158S60-03	12-2 Stranded (yellow, gray)	12 (solid green)	250'	1000'	110	0.495

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS**

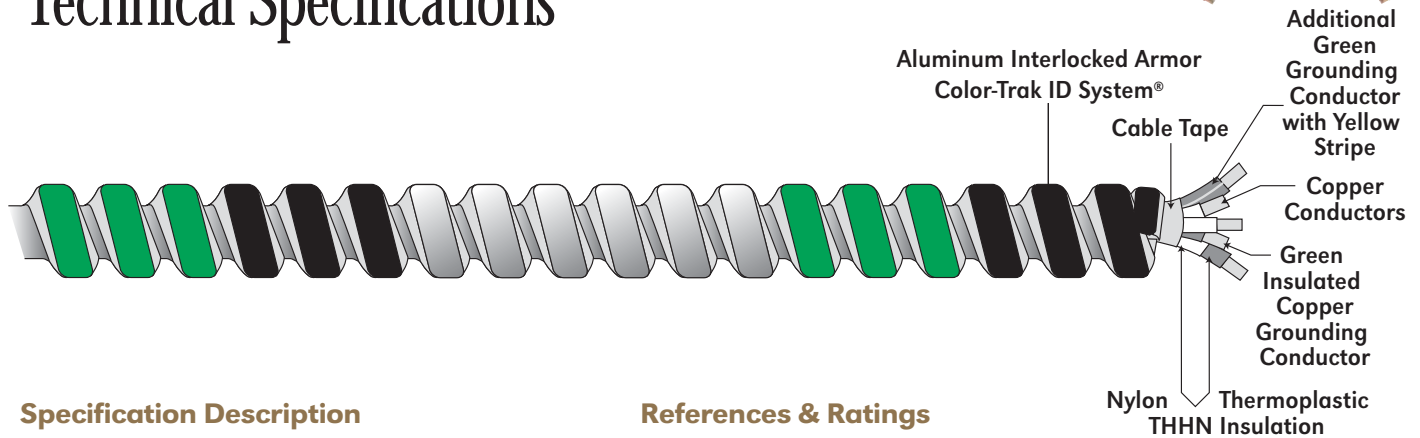
MC-Lite<sup>®</sup> is also available in 8AWG and larger, see page 12.







# MC-Lite® IG Isolated Ground Technical Specifications



## Specification Description

Specification	MC-Lite® IG ColorSpec ID System®
Armor	Interlocking Aluminum Strip
Conductors	Solid/Stranded Copper
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	2 grounding means – 2 grounding conductors: one solid green, one green with yellow stripe
Neutral Conductor	White for 120V
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 250.118, 300.22(C), 392, 396, 330, 518, 520, 530, 645
- Cable Tray installations per NEC
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- U.L. Classified 1, 2 and 3-hour through-penetration Fire Wall
- Environmental Air-Handling Space installation

## AFC's ColorSpec ID System®

	Additional black, and green stripe denotes 2 conductor cable with additional ground		Additional red, white and green stripes denote special 3 conductor cable with additional ground
	Additional black, red and green stripes denote 3 conductor cable with additional ground		Additional light blue, white and green stripes denote special 3 conductor cable with additional ground
	Additional black, red, light blue and green stripes denote 4 conductor cable with additional ground		

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
2105S42-80	2105S60-80	12-2 (black, white)	12 (solid green)	250'	1000'	135	0.530
2105S42-84	2105S60-84	12-2 (red, white)	12 (solid green)	250'	1000'	135	0.530
2105S42-85	2105S60-85	12-2 (blue, white)	12 (solid green)	250'	1000'	135	0.530
2106S42-80	2106S60-80	12-3 (black, red, white)	12 (solid green)	250'	1000'	170	0.565
2110S42-80	2110S60-80	12-4 (black, red, blue, white)	12 (solid green)	250'	1000'	205	0.625
2108S42-80	2108S60-80	10-2 (black, white)	10 (solid green)	250'	1000'	215	0.600
2108S42-84	2108S60-84	10-2 (red, white)	10 (solid green)	250'	1000'	215	0.600
2108S42-85	2108S60-85	10-2 (blue, white)	10 (solid green)	250'	1000'	215	0.600
2109S42-80	2109S60-80	10-3 (black, red, white)	10 (solid green)	250'	1000'	260	0.645
2111S42-80	2111S60-80	10-4 (black, red, blue, white)	10 (solid green)	250'	1000'	310	0.715
2159S42-80	2159S60-80	12-2 Stranded (black, white)	12 (solid green)	250'	1000'	145	0.530

**NOTE:** All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS**



# Fire Alarm/Control Cable™ Type MC – FPLP Fully Plenum Rated Technical Specifications

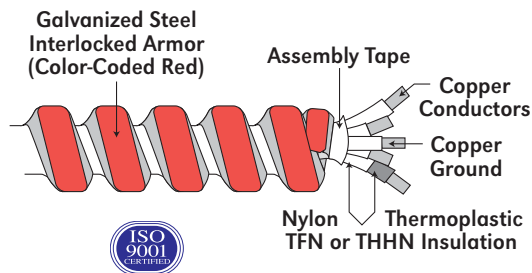


## Specification Description

Specification	Fire Alarm/Control Cable
Armor	Galvanized Interlocking Steel Strip (red-striped)
Conductors	Solid Copper
Conductor Insulation	TFN 18 & 16 AWG and/or THHN 14 & 12 AWG
Assembly	Polyester Assembly Tape; Twisted Shielded: Laminated Aluminum/Mylar® Shield with Tinned Copper drain wire
Maximum Temperature Rating	FPLP: 105°C (dry) MC: 90°C (dry)
Grounding	One or more grounding conductors may be bare or insulated green, see chart below
Neutral Conductor	White
Maximum Voltage Rating	300V (FPLP) 600V (MC)

## References & Ratings

- U.L. 66, 83, 1424, 1479, 1569, 1581, File Reference E80042
- NEC 300.22(C), 392, 330, 430.2, 518, 530, 645, 725, 760, 760.71(D)
- Federal Specification A-A-59544 (formerly J-C-30B)
- Cable Tray installations per NEC
- 1, 2 and 3-hour Through-Penetration Fire Wall Rated File R-14929
- NFPA 262 (formerly U.L. 910) Plenum Rated - Type FPLP



**For the electrical properties of Red Fire Alarm/Control Cable and twists per foot information, see page 39.**

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code	Product Code			Trade Size	Grounding Conductor AWG	Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
	250' Coil	500' Reel	750' Reel				
<b>Solid TFN</b>							
1801R42-00	1801R45-00	1801R47-00	1801R60-00	18-2 Solid (black, white)	18 bare	115	0.410
1803R42-00	1803R45-00	1803R47-00	1803R60-00	18-4 Solid (black, white, red, blue)	18 bare	130	0.430
1805R42-00	1805R45-00	1805R47-00	1805R60-00	18-6 Solid (black, white, red, blue, yellow, orange)	18 bare	170	0.490
1807R42-00	1807R45-00	1807R47-00	1807R60-00	18-8 Solid (black, white, red, blue, yellow, orange, brown, purple)	18 bare	190	0.510
1810R42-00	1810R45-00	1810R47-00	1810R60-00	16-2 Solid (black, white)	16 bare	130	0.420
1813R42-00	1813R45-00	1813R47-00	1813R60-00	16-4 Solid (black, white, red, blue)	16 bare	155	0.440
1815R42-00	1815R45-00	1815R47-00	1815R60-00	16-6 Solid (black, white, red, blue, yellow, orange)	16 bare	205	0.510
1817R42-00	1817R45-00	1817R47-00	—	16-8 Solid (black, white, red, blue, yellow, orange, brown, purple)	16 bare	230	0.520
<b>Solid THHN</b>							
1834R42-00	1834R45-00	1834R47-00	1834R60-00	14-2 Solid (black, white)	14 (solid green)	175	0.470
1837R42-00	1837R45-00	1837R47-00	1837R60-00	14-4 Solid (black, white, red, blue)	14 (solid green)	230	0.510
1823R42-00	1823R45-00	—	—	14-6 Solid (black, white, red, blue, yellow, orange)	14 (solid green)	250	0.520
1824R42-00	1824R45-00	—	—	14-8 Solid (black, white, red, blue, yellow, orange, brown, purple)	14 (solid green)	325	0.585
1835R42-00	1835R45-00	1835R47-00	1835R60-00	12-2 Solid (black, white)	12 (solid green)	215	0.495
1840R42-00	1840R45-00	—	1840B60-00	12-4 Solid (black, white, red, blue)	12 (solid green)	295	0.565
<b>Twisted Shielded Pairs</b>							
1850R42-00	1850R45-00	1850R47-00	1850R60-00	18-2 Solid (1 pair) (black, white)	18 tinned <sup>†</sup>	120	0.420
1827R42-00	1827R45-00	1827R47-00	1827R60-00	18-2 Solid (1 pair) (black, red) & 14-2 Solid (1 pair) (black, white)	18 & 14 tinned <sup>†</sup>	290	0.640
1860R42-00	1860R45-00	1860R47-00	1860R60-00	16-2 Solid (1 pair) (black, white)	16 tinned <sup>†</sup>	135	0.430
1843R42-00	1843R45-00	1843R47-00	1843R60-00	16-4 Solid (2 pair) (black, white) (red, blue)	2-16 tinned <sup>†</sup>	160	0.450
1895R42-06	1895R45-06	1895R47-06	1895R60-06	16-2 Solid (1 pair) (black, red)	16 tinned <sup>†</sup> , & 16 (solid green)	190	0.500
4901R42-00	4901R45-00	4901R47-00	4901R60-00	16-2 Solid (1 pair) (black, white) & 12-2 Solid (1 pair) (black, red)	16 tinned <sup>†</sup> , & 12 (solid green)	280	0.585
1828R42-00	1828R45-00	1828R47-00	1828R60-00	14-2 Solid (1 pair) (black, white)	16 tinned <sup>†</sup> , & 14 (solid green)	170	0.470
1881R42-00	1881R45-00	—	—	14-4 Solid (2 pair) (black, red) (blue, white)	2-16 tinned <sup>†</sup> , & 14 (solid green)	230	0.565
<b>Specialty Colors</b>							
1834R42-05	1834R45-05	1834R47-05	1834R60-05	14-2 Solid (blue, white)	14 (solid green)	175	0.470
1834R42-06	1834R45-06	1834R47-06	1834R60-06	14-2 Solid (black, red)	14 (solid green)	175	0.470
1834R42-23	1834R45-23	1834R47-23	1834R60-23	14-2 Solid (orange, yellow)	14 (solid green)	175	0.470
1834R42-37	1834R45-37	1834R47-37	1834R60-37	14-2 Solid (brown, purple)	14 (solid green)	175	0.470
1834R42-44	1834R45-44	1834R47-44	1834R60-44	14-2 Solid (gray, gray*)	14 (solid green)	175	0.470
1837R42-05	1837R45-05	1837R47-05	1837R60-05	14-4 Solid (blue, blue*, white, white*)	14 (solid green)	230	0.510
1837R42-06	1837R45-06	1837R47-06	1837R60-06	14-4 Solid (black, black*, red, red*)	14 (solid green)	230	0.510

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

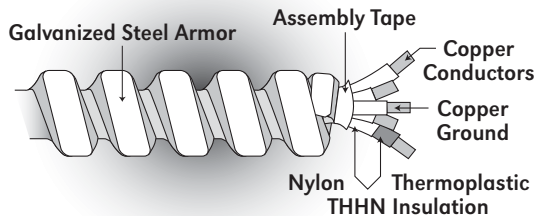
\* with silver stripe

† Tinned copper drain/grounding conductor.

# Super Neutral Cable® - Type MC Neutral per Phase or Oversized Neutral Technical Specifications

## Specification Description

Specification	Super Neutral Cable
Armor	Galvanized Interlocking Steel* Strip
Conductors	Solid (8 AWG stranded)
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One or more grounding conductors insulated green, see chart below
Neutral Conductors	Neutral per phase or oversized neutral configurations, white/white with phase stripe
Maximum Voltage Rating	600V



## References & Ratings

- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396.10(A), 330, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Conductors must be derated per NEC Table 310.15(B)(2)(a)

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

250' Coil	Product Code			Phase Conductor AWG	Neutral Conductor AWG	Grounding Conductor AWG	Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
	500' Reel	750' Reel	1000' Reel					
<b>Oversize Neutral Design</b>								
2908-42-00	2908-45-00	2908-47-00	2908-60-00	12-1 Solid(a)	10-1(f)	12-1(k)	220	0.510
2909-42-00	2909-45-00	2909-47-00	2909-60-00	12-2 Solid(b)	10-1(f)	12-1(k)	260	0.540
2910-42-00	2910-45-00	2910-47-00	2910-60-00	12-3 Solid(c)	10-1(f)	12-1(k)	315	0.580
2907-42-00	2907-45-00	2907-47-00	2907-60-00	12-3 Solid(c)	10-1(f)	12-2(l)	345	0.590
2905-42-00	2905-45-00	2905-47-00	2905-60-00	12-3 Solid(c)	8-1(f)	12-1(k)	345	0.595
2918-42-00	2918-45-00	2918-47-00	2918-60-00	12-4 Solid(e)	10-2(g)	12-2(l)	435	0.660
2913-42-00	2913-45-00	2913-47-00	2913-60-00	10-3 Solid(c)	6-1(f)	10-1(k)	485	0.720
2970-42-00	2970-45-00	2970-47-00	2970-60-00	10-4 Solid(e)	8-2(g)	10-2(l)	628	0.800
<b>Neutral Per Phase Design</b>								
2916-42-00	2916-45-00	2916-47-00	2916-60-00	12-2 Solid(b)	12-2(h)	12-2(l)	335	0.580
2911-42-00	2911-45-00	2911-47-00	2911-60-00	12-3 Solid(c)	12-3(i)	12-2(l)	385	0.620
2960-42-00	2960-45-00	2960-47-00	2960-60-00	12-4 Solid(d)	12-3(j)	12-2(l)	420	0.659
2965-42-00	2965-45-00	2965-47-00	2965-60-00	10-2 Solid(b)	10-2(h)	10-2(l)	450	0.670
2912-42-00	2912-45-00	2912-47-00	2912-60-00	10-3 Solid(c)	10-3(i)	10-2(l)	545	0.720

NOTE: All dimensions and weights are subject to normal manufacturing tolerances.  
 \* Aluminum available by special order and subject to lead times and minimum quantities.

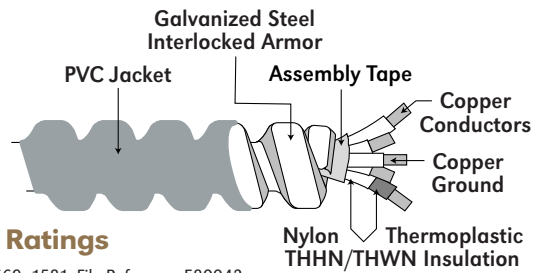
Super Neutral Cables are also available with application-specific combinations of circuit, neutral and grounding conductors.

- (a) black
- (b) black/red
- (c) black/red/blue
- (d) black/red/pink/tan
- (e) black/red/blue/pink
- (f) white
- (g) white/white with black stripe
- (h) white with black stripe/white with red stripe
- (i) white with black stripe/white with red stripe/white with blue stripe
- (j) white/white with pink stripe/white with tan stripe
- (k) green
- (l) green/green with yellow stripe

# Parking Deck/Lot Cable™ Type MC

## Specification Description

<b>Specification</b>	<b>Parking Deck/Lot Cable</b>
Armor & Jacket	Galvanized Interlocking Steel Strip with gray PVC jacket. Other jacket colors available by special order
Conductors	Solid/Stranded Copper (see below)
Conductor Insulation	THHN/THWN**
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry); 75°C (wet)
<b>Grounding</b>	<b>Insulated Green Grounding Conductor</b>
Neutral Conductors	White for 120V circuits Gray for 480Y/277V circuits
Maximum Voltage Rating	600V



## References & Ratings

- U.L. 66, 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.5, 392, 396.10(A), 330, 501, 502, 503, 511.7, 513.7(A), 514.7, 515.7(A), 516.7(A), 680.21(A)
- Federal Specification A-A-59544 (formerly J-C-30B)
- Passes 210,000 BTU Vertical Tray Flame Test
- U.L. listed for Cable Tray use and FT4
- U.L. listed for Concrete Encasement
- U.L. listed Sunlight Resistant
- U.L. listed Oil Resistant II
- Hazardous locations up to Class I & II, Div. 2 and Class III, Div. 1 & 2 (NEC Articles 501, 502, 503)



## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code Stock Items		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor/Jacket Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
<b>120 Volt</b>							
2304-42-00	2304-60-00	12-2 Solid	12	250'	1000'	280	0.495/0.605
2305-42-00	2305-60-00	12-3 Solid	12	250'	1000'	320	0.530/0.640
2306-42-00	2306-60-00	12-4 Solid	12	250'	1000'	370	0.565/0.675
2307-42-00	2307-60-00	10-2 Solid	10	250'	1000'	355	0.560/0.670
2308-42-00	2308-60-00	10-3 Solid	10	250'	1000'	415	0.600/0.710
2309-42-00	2309-60-00	10-4 Solid	10	250'	1000'	480	0.645/0.755
2316-99-00	2316-99-00	8-3 Stranded††	10	—	—	560	0.685/0.795
2320-99-00	2320-99-00	6-3 Stranded††	8	—	—	805	0.855/0.965
<b>480Y/277 Volt</b>							
2304-42-01	2304-60-01	12-2 Solid (brown)	12	250'	1000'	280	0.495/0.605
2305-42-01	2305-60-01	12-3 Solid (brown, orange)	12	250'	1000'	320	0.530/0.640
2306-42-01	2306-60-01	12-4 Solid (brown, orange, yellow)	12	250'	1000'	370	0.565/0.675
2307-42-01	2307-60-01	10-2 Solid (brown)	10	250'	1000'	355	0.560/0.670
2308-42-01	2308-60-01	10-3 Solid (brown, orange)	10	250'	1000'	415	0.600/0.710
2309-42-01	2309-60-01	10-4 Solid (brown, orange, yellow)	10	250'	1000'	480	0.645/0.755

Note: All dimensions and weights subject to normal manufacturing tolerances. †† Cut to length.

# AFC Parking Deck/Lot Cable™ Connectors

(Connector not approved for use in direct burial applications)

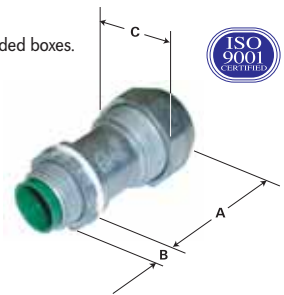
## Specification Description

<b>Specification</b>	<b>PVC Jacketed Cable Connector</b>
MC Cable Connector	Reasonably priced connectors that are appropriate for use with PVC Jacket MC cable (Parking Deck/Lot Cable™).
Fits cable sizes	12/2 to 8/3 cable
Max. Armor O.D. inch	☆ Fits sizes .610 - .720
Max. Armor with Jacket O.D. inch	☆☆ Fits sizes .685 - .792
Thread Type	Tapered Threads
Material	Zinc die cast with external knockout gasket.

## References & Ratings

- Tapered external NPT threads allow conductors to be installed in threaded boxes.
- UL-listed "raintight" and concrete incasement.
- U.L. Standard UL-514B, File Reference Number E202876
- NEMA Standard: FB-1
- UNSPEC: 30211709
- Simple installation starts by stripping back PVC jacket at the end of cable, loosen the nut, slip cable into the connector until cable is fully inserted, then tighten the connector nut.

- ☆ Fits sizes 12/2 - 10/3
- ☆☆ Fits sizes 10/4 - 8/3



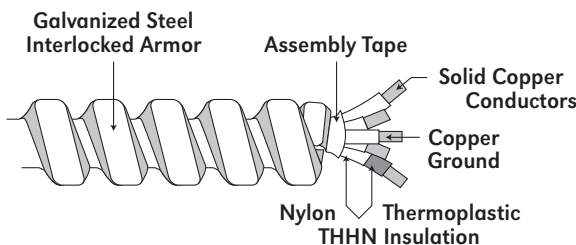
## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Catalog Number	Product Code	Thread Size (in)	Unit Quantity	Standard Package	Weight/C Pounds	Connector Dimensions		
						Dimension A	Dimension B	Dimension C
☆ AFC595-U	0124-15-00	1/2" Connector	15	60	11.7	1-3/4"	17/32"	1-7/32"
☆ AFC595-I	0125-15-00	1/2" Insulated Connector	15	60	11.7	1-3/4"	17/32"	1-7/32"
☆☆ AFC596-U	0126-15-00	1/2" Connector	15	60	16.5	1-3/4"	17/32"	1-9/32"
☆☆ AFC596-I	0127-15-00	1/2" Insulated Connector	15	60	16.5	1-3/4"	17/32"	1-9/32"

# Home Run Cable® - Type MC Technical Specifications

## Specification Description

Specification	Home Run Cable
Armor	Galvanized Interlocking Steel* Strip
Conductors	Solid Copper
Conductor Insulation	THHN/THWN
Assembly Covering	Polypropylene Tape
Maximum Temperature Rating	90°C (dry)
Grounding	One grounding means – Insulated Green Grounding Conductor (additional grounding conductors optional**)
Maximum Voltage Rating	600V



## References & Ratings



- U.L. 83, 1479, 1569, 1581, File Reference E80042
- NEC 230.43, 300.22(C), 392, 396, 330, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation
- Conductors must be derated per NEC Table 310.15(B)(2)(a)

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code Reel	Trade Size	Grounding Conductor AWG	Length (feet) Reel	Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
<b>Stock Items</b>					
1901-45-00	12-6 Solid	12	500'	345	0.580
1901-60-00	12-6 Solid	12	1000'	345	0.580
1902-45-00	12-8 Solid	12	500'	430	0.660
1902-60-00	12-8 Solid	12	1000'	430	0.660
1911-45-00	10-6 Solid	10	500'	485	0.670
1911-60-00	10-6 Solid	10	1000'	485	0.670
1905-45-00	10-8 Solid	10	500'	600	0.765
1905-60-00	10-8 Solid	10	1000'	600	0.765
1927-99-00	10-12 Solid	10	††	805	0.890
1928-99-00	10-16 Solid	10	††	995	0.980

Note: All dimensions and weights subject to normal manufacturing tolerances.

Non-stock items require lead time and minimum quantity.

\* Aluminum available by special order and subject to lead times and minimum quantities.

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

†† Cut to order.

### Armored Cable Derating Example

#### 90°C RATED ARMORED CABLE 12 AWG WITH 4 COPPER CONDUCTORS.

- 1) Find conductor ampacity in NEC Table 310.16 - 12AWG, 90°C = 30 amperes
- 2) Find adjustment factor in NEC Article 310.15(B)(2)(a). - 30 x .80 = 24 amperes

## Stocking Sizes Color Codes:

### Conductors 120 Volt Colors

6	black, black/silver, red, red/silver, white, white/silver
8	black, black/silver, red, red/silver, blue, blue/silver, white, white/silver
12	3 black, 3 red, 3 blue, 3 white; each color numbered 1-3
16	4 black, 4 red, 4 blue, 4 white; each color numbered 1-4

# Type AC Armored Cables



## Type AC Cables – Uses Permitted:

The uses permitted for AC cable are governed by NEC Article 320 and any applicable local codes. Please refer to NEC Article 320 and your local authority having jurisdiction for additional information.

- Where not subject to physical damage for branch circuits and feeders in both exposed and concealed work and in cable trays where identified for such use
- In dry locations and embedded in plaster finish on brick or other masonry, except in damp or wet locations
- Run or fished in the air voids of masonry block or tile walls where the walls are not exposed or subject to excessive moisture or dampness
- Under raised floors, above suspended ceilings and in other environmental air handling spaces per NEC 300.22(C)

## Type AC Cables – Uses Not Permitted:

According to NEC Article 320.12, AC cable can not be installed in the following locations:

- In theaters and similar locations, except as provided in NEC Article 518, Places of Assembly
- In motion picture studios
- In locations classified as hazardous
- Where exposed to corrosive fumes or vapors
- On cranes or hoists
- In storage battery rooms
- In hoistways or on elevators, except as provided in NEC Section 620.21
- In commercial garages where prohibited in 511.4 and 511.7

AFC manufactures two varieties of armored (Type AC) cables, standard AC cable and HCF, Health Care Facilities Cable, both featuring the ColorSpec ID System.

**AC Cable:** Type AC cable consists of 2 to 4 copper conductors in sizes 14 gauge to 1 AWG inside an interlocked metal armor of steel or aluminum construction.

A 16 AWG aluminum bonding wire is inside of, and in physical contact with, the metal armor providing a low-impedance fault-return path required for the operation of overcurrent protection devices. The bonding wire is unique to Type AC cable and allows the outer metal armor in conjunction with the bonding wire to be used as the equipment ground.

It is important to note that the bare bond wire is not an equipment grounding conductor. It is the bond wire that, in combination with the interlocked metal armor, provides a low impedance equipment grounding path. AFC color codes its standard AC cable black for easy identification.

**HCF Health Care Facilities Cable:** HCF is constructed in the same manner as standard AC cable with the addition of a green grounding conductor. This additional ground allows HCF to be used in patient care areas of health care facilities (other than hazardous locations or emergency circuits in a health care setting) including hospitals, nursing homes, dental offices and medical centers per NEC 517.13. The bond wire/armor combination provides the cable's equipment ground while the insulated green grounding conductor provides a redundant or isolated ground. AFC color codes its HCF cable green for easy identification.

Type AC cable should be cut with an armored cable rotary cutter. Rotary cutters have many advantages over other methods. Nicking and cutting of the conductors is eliminated and the cuts can be made quickly and safely.

For more information about the proper use and application of AC & MC cables, visit AFC University on the Internet at [www.afcweb.com/afcu](http://www.afcweb.com/afcu)



## Type AC-90® & Type AC-Lite® Armored Cable

**Galvanized Steel or Aluminum Armor Color-Coded Black\***

### Features & Benefits

**Interlocking galvanized steel or aluminum strip**

**Easy to identify black armor**

**Integral bond wire/armor equipment ground fault path**

**U.L. classified for through-wall penetrations**



### Applications

Commercial, industrial, multi-residential branch circuits and feeder wiring – services for power, lighting, control and signal circuits – exposed or concealed – surface mounted, embedded in plaster finish on brick or other masonry (except wet or damp locations) – fished or run in air voids of masonry block or tile walls – under raised floors, above suspended ceilings and in other environmental air-handling spaces

### Product Specifications

Refer to page:

AC-90 Steel Armored Cable (120 Volt colors)	22
AC-90 Steel Armored Cable (480Y/277 Volt colors)	23
AC-Lite Aluminum Armored Cable (120 Volt conductor colors, plain armor, no stripes)	24
AC-Lite Aluminum Armored Cable (480Y/277 Volt colors)	25



## HCF-90® & HCF-Lite® Health Care Facilities Cable

**Galvanized Steel or Aluminum Armor Color-Coded Green\***

### Features & Benefits

**Interlocking galvanized steel or aluminum strip**

**Easy to identify green armor**

**Full size green grounding conductor plus armor/bond wire**

**combination provides redundant ground or isolated grounding capability**

**U.L. classified for through-wall penetrations**



### Applications

Branch circuits and feeders in areas of patient care in hospitals, nursing homes, outpatient facilities, dental offices, clinics and medical centers (other than hazardous anesthetizing locations) – data processing systems – places of assembly – under raised floors, above suspended ceilings and in other environmental air-handling spaces – exposed or concealed, surface mounted or fished – any application approved for AC cable requiring an isolated or redundant ground

### Product Specifications

Refer to page:

HCF-90 Steel Health Care Facilities Cable (120 Volt colors)	26
HCF-90 Steel Health Care Facilities Cable (480Y/277 Volt colors)	27
HCF-Lite Aluminum Health Care Facilities Cable (120 Volt colors)	28
HCF-Lite Aluminum Health Care Facilities Cable (480Y/277 Volt colors)	29

\* U.S. Patent #5,350,885, #5,468,914, #5,708,235, #5,557,071 & patent pending

# Type AC-90<sup>®</sup> Armored Cable (120V) Technical Specifications

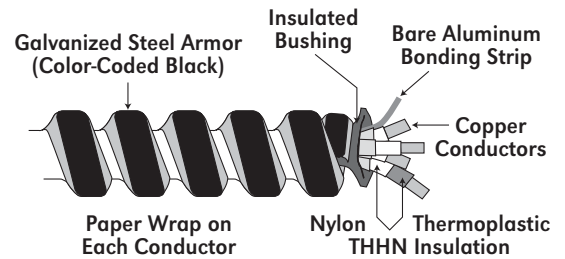


## Specification Description




Specification	AC-90 ColorSpec ID System <sup>®</sup>
Armor	Galvanized Interlocking Steel Strip (black striped)
Conductors	Solid/Stranded Copper (see below)
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination
Neutral Conductor	White
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour through-penetration Fire Wall
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System<sup>®</sup>

-  Black cable denotes 2 conductor cable
-  Additional red stripe denotes 3 conductor cable
-  Additional red and light blue stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel		Coil	Reel		
1401N42-00	1401N60-00	14-2 Solid	250'	1000'	180	0.433
1402N42-00	1402N60-00	14-3 Solid	250'	1000'	200	0.453
1403N42-00	1403N60-00	14-4 Solid	250'	1000'	250	0.486
1404N42-00	1404N60-00	12-2 Solid	250'	1000'	210	0.467
1405N42-00	1405N60-00	12-3 Solid	250'	1000'	245	0.489
1406N42-00	1406N60-00	12-4 Solid	250'	1000'	290	0.520
1407N32-00	1407N60-00	10-2 Solid	125'	1000'	250	0.476
1407N42-00	—	10-2 Solid	250'	—	250	0.476
1408N32-00	1408N60-00	10-3 Solid	125'	1000'	295	0.500
1408N42-00	—	10-3 Solid	250'	—	250	0.476
1409N32-00	1409N60-00	10-4 Solid	125'	1000'	380	0.541
1409N42-00	—	10-4 Solid	250'	—	250	0.476
1415N40-00	1415-45-00	8-2 Stranded	200'	500'	345	0.604
1416N40-00	1416-45-00	8-3 Stranded	200'	500'	420	0.637
1417-32-00	1417-45-00	8-4 Stranded	125'	500'	515	0.695
1419-32-00	1419-45-00	6-2 Stranded	125'	500'	445	0.700
1420-32-00	1420-45-00	6-3 Stranded	125'	500'	560	0.739
1421-30-00	1421-45-00	6-4 Stranded	100'	500'	685	0.807
1424-30-00	1424-45-00	4-3 Stranded	100'	500'	800	0.885
1425-30-00	1425-45-00	4-4 Stranded	100'	500'	995	0.971
1428-30-00	1428-45-00	3-3 Stranded	100'	500'	940	0.990
1429-30-00	1429-45-00	3-4 Stranded	100'	500'	1180	1.085
1426-30-00	1426-45-00	2-3 Stranded	100'	500'	1095	1.014
1427-30-00	1427-45-00	2-4 Stranded	100'	500'	1380	1.115

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

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**AFC Cable System's ColorSpec ID System<sup>®</sup> is available on 14-2 through 10-4**

**See page 38 for bond wire termination details.**





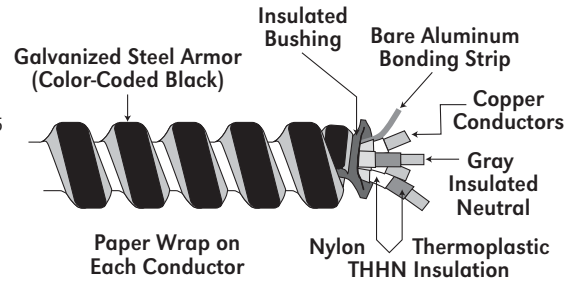
# Type AC-90® Steel Armored Cable (480Y/277V) Cable Technical Specifications

## Specification Description

Specification	AC-90 ColorSpec ID System®
Armor	Galvanized Interlocking Steel Strip (black striped)
Conductors	Solid Copper
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination
Neutral Conductor	Gray
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System®

- Additional brown stripe denotes 2 conductor cable (brown conductor)
- Additional orange stripe denotes 2 conductor cable (orange conductor)
- Additional yellow stripe denotes 2 conductor cable (yellow conductor)
- Additional brown and orange stripes denote 3 conductor cable
- Additional orange and yellow stripes denote 3 conductor cable
- Additional brown and yellow stripes denote 3 conductor cable
- Additional brown, orange and yellow stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel		Coil	Reel		
1404N42-01	1404N60-01	12-2 Solid (brown)	250'	1000'	210	0.467
1404N42-02	1404N60-02	12-2 Solid (orange)	250'	1000'	210	0.467
1404N42-03	1404N60-03	12-2 Solid (yellow)	250'	1000'	210	0.467
1405N42-01	1405N60-01	12-3 Solid (brown, orange)	250'	1000'	245	0.489
1405N42-02	1405N60-02	12-3 Solid (orange, yellow)	250'	1000'	245	0.489
1405N42-03	1405N60-03	12-3 Solid (brown, yellow)	250'	1000'	245	0.489
1406N42-01	1406N60-01	12-4 Solid (brown, orange, yellow)	250'	1000'	290	0.520
1407N32-01	1407N60-01	10-2 Solid (brown)	250'	1000'	250	0.476
1408N32-01	1408N60-01	10-3 Solid (brown, orange)	250'	1000'	295	0.500
1409N32-01	1409N60-01	10-4 Solid (brown, orange, yellow)	250'	1000'	380	0.541

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**See page 38 for bond wire termination details.**

# AC-Lite® Aluminum Armored Cable (120V)

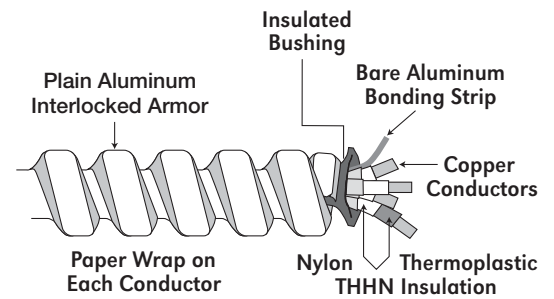
## Technical Specifications Plain Armor

### Specification Description

Specification	AC-Lite
Armor	Interlocking Aluminum Strip
Conductors	Solid/Stranded Copper (see below)
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination
Neutral Conductor	White
Maximum Voltage Rating	600V

### References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space Installation



### Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel		Coil	Reel		
2701-42-00	2701-60-00	14-2 Solid	250'	1000'	80	0.433
2702-42-00	2702-60-00	14-3 Solid	250'	1000'	100	0.453
2703-42-00	2703-60-00	14-4 Solid	250'	1000'	120	0.486
2704-42-00	2704-60-00	12-2 Solid	250'	1000'	100	0.467
2705-42-00	2705-60-00	12-3 Solid	250'	1000'	130	0.489
2706-42-00	2706-60-00	12-4 Solid	250'	1000'	155	0.520
2707-32-00	2707-60-00	10-2 Solid	125'	1000'	135	0.476
2708-32-00	2708-60-00	10-3 Solid	125'	1000'	180	0.500
2709-32-00	2709-60-00	10-4 Solid	125'	1000'	225	0.541
2707-42-00	—	10-2 Solid	250'	—	135	0.476
2708-42-00	—	10-3 Solid	250'	—	180	0.500
2709-42-00	—	10-4 Solid	250'	—	225	0.541
2715-40-00	2715-45-00	8-2 Stranded	200'	500'	210	0.604
2716-40-00	2716-45-00	8-3 Stranded	200'	500'	275	0.637
2717-32-00	2717-45-00	8-4 Stranded	125'	500'	355	0.695
2719-32-00	2719-45-00	6-2 Stranded	125'	500'	260	0.700
2720-32-00	2720-45-00	6-3 Stranded	125'	500'	395	0.739
2721-30-00	2721-45-00	6-4 Stranded	100'	500'	500	0.807
2724-30-00	2724-45-00	4-3 Stranded	100'	500'	590	0.885
2725-30-00	2725-45-00	4-4 Stranded	100'	500'	760	0.971
2728-30-00	2728-45-00	3-3 Stranded	100'	500'	720	0.990
2729-30-00	2729-45-00	3-4 Stranded	100'	500'	930	1.085
2726-30-00	2726-45-00	2-3 Stranded	100'	500'	885	1.014
2727-30-00	2727-45-00	2-4 Stranded	100'	500'	1150	1.115

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order. Not to be used with set screw type fittings or on DC circuits.

**See page 38 for bond wire termination details.**



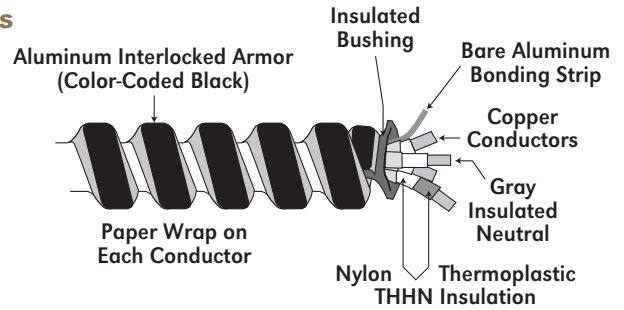
# Type AC-Lite<sup>®</sup> Aluminum Armored Cable (480Y/277V) Cable Technical Specifications

## Specification Description

Specification	AC-Lite ColorSpec ID System <sup>®</sup>
Armor	Interlocking Aluminum Strip (black striped)
Conductors	Solid Copper
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination
Neutral Conductor	Gray
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System<sup>®</sup>

- Additional brown stripe denotes 2 conductor cable (brown conductor)
- Additional orange stripe denotes 2 conductor cable (orange conductor)
- Additional yellow stripe denotes 2 conductor cable (yellow conductor)
- Additional brown and orange stripes denote 3 conductor cable
- Additional brown, orange and yellow stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Length (feet)		Approx. Weight/ 1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel		Coil	Reel		
2704N42-01	2704N60-01	12-2 Solid (brown)	250'	1000'	100	0.467
2704N42-02	2704N60-02	12-2 Solid (orange)	250'	1000'	100	0.467
2704N42-03	2704N60-03	12-2 Solid (yellow)	250'	1000'	100	0.467
2705N42-01	2705N60-01	12-3 Solid (brown, orange)	250'	1000'	130	0.489

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order. Not to be used with set screw type fittings or on DC circuits.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**See page 38 for bond wire termination details.**

# HCF-90<sup>®</sup> Steel Healthcare Facilities Cable (120V) Cable Technical Specifications

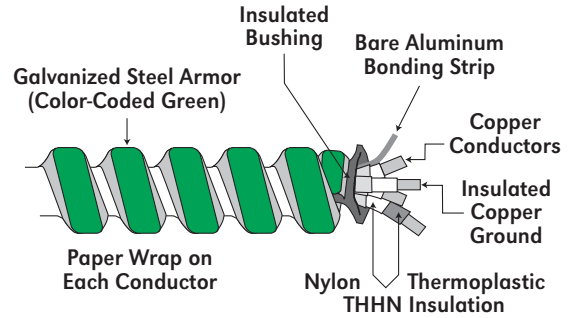


## Specification Description






<b>Specification</b>	<b>HCF-90 ColorSpec ID System<sup>®</sup></b>
Armor	Galvanized Interlocking Steel Strip (green striped)
Conductors	Solid Copper
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination plus insulated green grounding conductor (2 grounding means)
Neutral Conductor	White
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 517.13, 518, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System<sup>®</sup>

-  Additional black stripe denotes 2 conductor cable
-  Additional red and white stripes denote special 2 conductor cable
-  Additional black, and red stripe denotes 3 conductor cable
-  Additional light blue and white stripes denote special 2 conductor cable
-  Additional black, red and light blue stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code	Coil	Reel	Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
					Coil	Reel		
<b>Stock Items</b>								
1504G42-00	1504G60-00	1504G60-00	12-2 Solid	12	250'	1000'	220	0.489
1505G42-00	1505G60-00	1505G60-00	12-3 Solid	12	250'	1000'	260	0.520
1506G42-00	1506G60-00	1506G60-00	12-4 Solid	12	250'	1000'	300	0.545
1507G32-00	1507G60-00	1507G60-00	10-2 Solid	10	125'	1000'	290	0.500
1508G32-00	1508G60-00	1508G60-00	10-3 Solid	10	125'	1000'	345	0.541
1509G32-00	1509G60-00	1509G60-00	10-4 Solid	10	125'	1000'	405	0.587
1507G42-00	—	—	10-2 Solid	10	250'	—	290	0.500
1508G42-00	—	—	10-3 Solid	10	250'	—	345	0.541
1509G42-00	—	—	10-4 Solid	10	250'	—	405	0.587
<b>Specialty Colors</b>								
1504G42-04	1504G60-04	1504G60-04	12-2 Solid (red, white)	12	250'	1000'	220	0.489
1504G42-05	1504G60-05	1504G60-05	12-2 Solid (blue, white)	12	250'	1000'	220	0.489

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Sizes 14 AWG, 8 AWG, & larger available by special order and subject to lead time and minimum quantities.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**Emergency circuits require special consideration in healthcare settings. Review NEC 517.30 (C)(3)(3) for guidance on the use of HCF cables on emergency circuits.**

**See page 38 for bond wire termination details.**



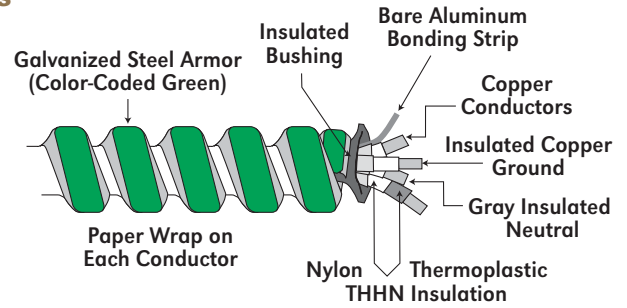
# HCF-90® Steel Healthcare Facilities Cable (480Y/277V) Cable Technical Specifications

## Specification Description

<b>Specification</b>	<b>HCF-90 ColorSpec ID System®</b>
Armor	Galvanized Interlocking Steel Strip (green striped)
Conductors	Solid Copper
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination plus insulated green grounding conductor (2 grounding means)
Neutral Conductor	Gray
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 517.13, 518, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System®

- Additional brown stripe denotes 2 conductor cable (brown conductor)
- Additional orange stripe denotes 2 conductor cable (orange conductor)
- Additional yellow stripe denotes 2 conductor cable (yellow conductor)
- Additional brown and orange stripes denote 3 conductor cable
- Additional brown, orange and yellow stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
1504G42-01	1504G60-01	12-2 Solid (brown)	12	250'	1000'	220	0.489
1504G42-02	1504G60-02	12-2 Solid (orange)	12	250'	1000'	220	0.489
1504G42-03	1504G60-03	12-2 Solid (yellow)	12	250'	1000'	220	0.489
1505G42-01	1505G60-01	12-3 Solid (brown, orange)	12	250'	1000'	260	0.520
1506G42-01	1506G60-01	12-4 Solid (brown, orange, yellow)	12	250'	1000'	300	0.545

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order. Sizes 14 AWG, 8 AWG, & larger available by special order and subject to lead time and minimum quantities.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**Emergency circuits require special consideration in healthcare settings. Review NEC 517.30 (C)(3)(3) for guidance on the use of HCF cables on emergency circuits.**

**See page 38 for bond wire termination details.**

# HCF-Lite<sup>®</sup> Aluminum Healthcare Facilities Cable (120V) Cable Technical Specifications

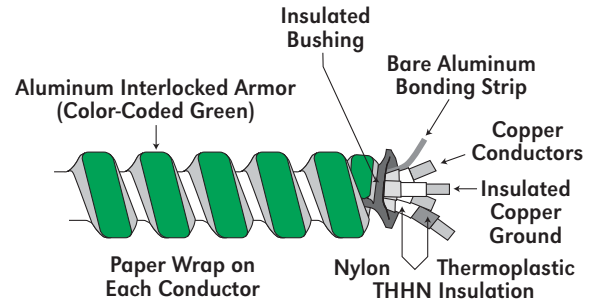


## Specification Description

Specification	HCF-Lite ColorSpec ID System <sup>®</sup>
Armor	Aluminum Interlocking Strip (green striped)
Conductors	Solid/Stranded Copper (see below)
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16AWG integral Bond Wire/Armor combination plus insulated green grounding conductor (2 grounding means)
Neutral Conductor	White
Maximum	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 517.13, 518, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System<sup>®</sup>

	Additional black stripe denotes 2 conductor cable		Additional red and white stripes denote special 2 conductor cable
	Additional black and red stripe denotes 3 conductor cable		Additional light blue and white stripes denote special 2 conductor cable
	Additional black, red and light blue stripes denote 4 conductor cable		Additional red, light blue and white stripes denote special 3 conductor cable
			Additional black, light blue and white stripes denote special 3 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code	Coil	Reel	Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
					Coil	Reel		
<b>Stock Items</b>								
2804G42-00		2804G60-00	12-2 Solid	12	250'	1000'	130	0.489
2805G42-00		2805G60-00	12-3 Solid	12	250'	1000'	155	0.520
2806G42-00		2806G60-00	12-4 Solid	12	250'	1000'	185	0.545
2858G42-00		2858G60-00	12-2 Stranded	12	250'	1000'	130	0.489
2859G42-00		2859G60-00	12-3 Stranded	12	250'	1000'	155	0.520
2860G42-00		2860G60-00	12-4 Stranded	12	250'	1000'	185	0.545
2807G32-00		—	10-2 Solid	10	125'	—	180	0.500
2808G32-00		—	10-3 Solid	10	125'	—	225	0.541
2809G32-00		—	10-4 Solid	10	125'	—	275	0.587
2807G42-00		2807G60-00	10-2 Solid	10	250'	1000'	180	0.500
2808G42-00		2808G60-00	10-3 Solid	10	250'	1000'	225	0.541
2809G42-00		2809G60-00	10-4 Solid	10	250'	1000'	275	0.587
<b>Specialty Colors</b>								
2804G42-04		2804G60-04	12-2 Solid (red, white)	12	250'	1000'	130	0.489
2804G42-05		2804G60-05	12-2 Solid (blue, white)	12	250'	1000'	130	0.489
2805G42-04		2805G60-04	12-3 Solid (red, blue, white)	12	250'	1000'	155	0.520
2805G42-05		2805G60-05	12-3 Solid (black, blue, white)	12	250'	1000'	155	0.520

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Not to be used with set screw type fittings or on DC circuits. Sizes 14 AWG, 8 AWG, & larger available by special order and subject to lead time and minimum quantities.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**Emergency circuits require special consideration in healthcare settings. Review NEC 517.30 (C)(3)(3) for guidance on the use of HCF cables on emergency circuits.**

**See page 38 for bond wire termination details.**

# HCF-Lite<sup>®</sup> Aluminum Healthcare Facilities Cable (480Y/277V) Cable Technical Specifications

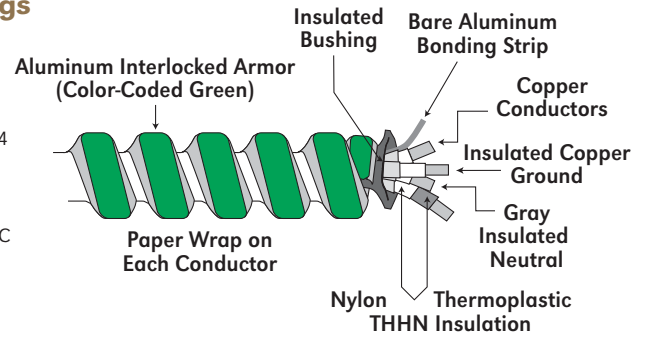


## Specification Description

Specification	HCF-Lite ColorSpec ID System <sup>®</sup>
Armor	Aluminum Interlocking Strip (green striped)
Conductors	Solid Copper
Conductor Insulation	THHN
Conductor Insulation Covering	Paper Wrap
Maximum Temperature Rating	90°C (dry)
Grounding	16 AWG integral Bond Wire/Armor combination plus insulated green grounding conductor (2 grounding means)
Neutral Conductor	Gray
Maximum Voltage Rating	600V

## References & Ratings

- U.L. 4, 83, 1479, 1581, File Reference E7330
- NEC 250.118, 300.22(C), 392, 320, 517.13, 518, 645
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- Cable Tray installations per NEC
- U.L. Classified 1, 2 and 3-hour Through-Penetration Fire Wall File R-14929
- Environmental Air-Handling Space installation



## AFC's ColorSpec ID System<sup>®</sup>



Additional brown stripe denotes 2 conductor cable (brown conductor)



Additional orange stripe denotes 2 conductor cable (orange conductor)



Additional yellow stripe denotes 2 conductor cable (yellow conductor)



Additional brown and orange stripes denote 3 conductor cable



Additional brown, orange and yellow stripes denote 4 conductor cable

## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Grounding Conductor AWG	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel			Coil	Reel		
2804G42-01	2804G60-01	12-2 Solid (brown)	12	250'	1000'	130	0.489
2804G42-02	2804G60-02	12-2 Solid (orange)	12	250'	1000'	130	0.489
2804G42-03	2804G60-03	12-2 Solid (yellow)	12	250'	1000'	130	0.489
2805G42-01	2805G60-01	12-3 Solid (brown, orange)	12	250'	1000'	155	0.5201
2806G42-01	2806G60-01	12-4 Solid (brown, orange, yellow)	12	250'	1000'	185	0.545

NOTE: All dimensions and weights are subject to normal manufacturing tolerances. Other conductor colors available by special order.

Not to be used with set screw type fittings or on DC circuits.

Sizes 14 AWG, 8 AWG, & larger available by special order and subject to lead time and minimum quantities.

**WARNING: DO NOT RE-IDENTIFY CONDUCTOR COLORS.**

**Emergency circuits require special consideration in healthcare settings.  
Review NEC 517.30 (C)(3)(3) for guidance on the use of HCF cables on emergency circuits.**

**See page 38 for bond wire termination details.**

# Connector Cross-Reference Guide

## MC TUFF Lightweight (MC) Steel Armor

Trade Size	Armor Min. O.D. (in.)	AFC	Adalet/PLM	Bridgeport	Madison	OZ–Gedney	Arlington
14-2	0.470	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	PK-75	845, 845R
14-3	0.480	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	PK-75	845, 845R
14-4	0.510	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	PK-75	845, 845R
12-2	0.495	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	PK-75	845, 845R
12-3	0.530	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	PK-75	845, 845R
12-4	0.565	AFC-50	AC6	570-DC, 570-MC	MAFC-50	PK-75	845, 845R
10-2	0.560	AFC-50	AC6	570-DC, 570-MC	MAFC-50	PK-75	845, 845R
10-3	0.600	AFC-50, 5075	AC6	575-MC	MAFC-50	PK-75	845, 845R
10-4	0.645	AFC-75, 5075	AC8	575-MC	MAFC-75	PK-751	L15A

Arlington 845 & 845R set screw style

## MC Metal Clad Cable (MC) Steel or MC-Lite Aluminum Armor

Trade Size	Armor Min. O.D. (in.)	AFC	Adalet/PLM	Bridgeport	Madison	Neer	OZ–Gedney	Arlington
14-2	0.470	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	C-510, TA-38	PK-75	845, 845R
14-3	0.480	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	C-510, TA-38	PK-75	845, 845R
14-4	0.510	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	C-510, TA-38	PK-75	845, 845R
12-2	0.495	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	C-510, TA-38	PK-75	845, 845R
12-3	0.530	AFC-50, 52	AC6	570-DC, 570-MC	MAFC-50, 52	C-510, TA-38	PK-75	845, 845R
12-4	0.565	AFC-50	AC6	570-DC, 575-MC	MAFC-50	C-510†, TA-38†	PK-75	845, 845R
10-2	0.560	AFC-50	AC6	570-DC, 575-MC	MAFC-50	C-510†, TA-38†	PK-75	845, 845R
10-3	0.600	AFC-50, 5075	AC6	575-MC	MAFC-50	–	PK-75	845, 845R
10-4	0.645	AFC-75, 5075	AC8	575-MC	MAFC-75	–	PK-751	845, 845R
8-2	0.651	AFC-75, 5075	AC8	561-DC2	MAFC-75	–	PK-751	L17
8-3	0.704	AFC-75, 5075	AC8	561-DC2	MAFC-75	–	PK-751	L17
8-4	0.852	AFC-75, 5075	AC8	561-DC2	MAFC-75	–	PK-101	L17
6-2	0.795	AFC-75	AC8	561-DC2	MAFC-75	–	PK-101	–
6-3	0.855	AFC-75	AC10	561-DC2	MAFC-75	–	PK-101	–
6-4	0.945	–	AC10	683-DC2	–	–	PK-125	–
4-2	0.945	–	AC10	683-DC2	–	–	PK-125	–
4-3	1.035	–	AC10	683-DC2	–	–	PK-125	–
4-4	1.135	–	AC12	684-DC2	–	–	PK-125	–
2-2	1.075	–	AC12	684-DC2	–	–	PK-125	–
2-3	1.180	–	AC12	684-DC2	–	–	PK-125	–
2-4	1.295	–	AC14	685-DC2	–	–	PK-125	–
1-3	1.185	–	AC12	684-DC2	–	–	PK-125	–
1-4	1.325	–	AC14	685-DC2	–	–	PK-150	–
1/0-3	1.255	–	AC14	685-DC2	–	–	PK-125	–
1/0-4	1.390	–	AC14	685-DC2	–	–	PK-150	–
2/0-3	1.350	–	AC14	685-DC2	–	–	PK-150	–
2/0-4	1.520	–	AC16	685-DC2	–	–	PK-200	–
3/0-3	1.520	–	AC16	685-DC2	–	–	PK-200	–
3/0-4	1.690	–	AC18	–	–	–	PK-200	–
4/0-3	1.580	–	AC16	–	–	–	PK-200	–
4/0-4	1.770	–	AC18	686-DC2	–	–	PK-200	–

† Steel Armor only.

The connector cross-reference guide is provided as a service to our customers. It is not intended to be a manufacturer's recommendation, or an all inclusive listing. The information contained herein is based on manufacturers' published literature. Consult appropriate manufacturer for more information.



**SUPER NEUTRAL** Super Neutral Cable (MC) Steel or Aluminum Armor

Product Code	Phase Conductors Size/No.	Neutral Conductors Size/No.	Grounding Conductors Size/No.	Armor Min. O.D. (in.)	AFC	Adalet/PLM	Madison	OZ-Gedney
2916	12-2	12-2	12-2	0.580	AFC-75	AC6	MAFC-75	PK-75
2911	12-3	12-3	12-2	0.620	AFC-75	AC6	MAFC-75	PK-751
2960	12-4	12-3	12-2	0.659	AFC-75	AC8	MAFC-75	PK-751
2965	10-2	10-2	10-2	0.670	AFC-75	AC8	MAFC-75	PK-751
2912	10-3	10-3	10-2	0.720	AFC-75, 5075	AC8	MAFC-75	PK-751
<b>Oversize Neutral Design</b>								
2908	12-1	10-1	12-1	0.510	AFC-50	AC6	MAFC-50	PK-75
2909	12-2	10-1	12-1	0.540	AFC-50	AC6	MAFC-50	PK-75
2910	12-3	10-1	12-1	0.580	AFC-75	AC6	MAFC-75	PK-75
2907	12-3	10-1	12-2	0.590	AFC-75	AC6	MAFC-75	PK-75
2905	12-3	8-1	12-1	0.595	AFC-75	AC6	MAFC-75	PK-75
2920	12-4	10-2	12-1	0.640	AFC-75	AC8	MAFC-75	PK-751
2918	12-4	10-2	12-2	0.660	AFC-75	AC8	MAFC-75	PK-751
2913	10-3	6-1	10-1	0.720	AFC-75, 5075	AC8	MAFC-75	PK-751
2970	10-4	8-2	10-2	0.800	AFC-75	AC8	MAFC-75	PK-101

† Steel armor only

†† Aluminum only

**HOME RUN** Home Run Cable (MC) Steel or Aluminum Armor

Trade Size	Armor Min. O.D. (in.)	AFC	Adalet/PLM	Bridgeport	Madison	OZ-Gedney
12-6	0.580	AFC-75	AC6	560-DC2	MAFC-75	PK-75
12-8	0.660	AFC-75	AC8	561-DC2	MAFC-75	PK-751
12-12	0.755	—	AC8	561-DC2	—	PK-751
12-16	0.830	—	AC8	561-DC2	—	PK-101
10-6	0.670	—	AC8	561-DC2	—	PK-751
10-8	0.765	—	AC8	561-DC2	—	PK-751
10-12	0.890	—	AC10	683-DC2	—	PK-101
10-16	0.980	—	AC10	683-DC2	—	PK-101

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**PARKING DECK/LOT CABLE Jacketed Metal Clad Cable (MC) (Non-Hazardous Locations)**

Trade Size	Min. O.D. (in.) Armor Jacket	Adalet/ PLM	AFC**	Appleton	Killark <sup>♦</sup>	OZ-Gedney	AFC Connector*	
12-2	0.495	0.605	JAG-065-05	AFC-50	TMC050A	MCRA-050	PG-66-05A	AFC595.*
12-3	0.530	0.640	JAG-065-05	AFC-50	TMC050A	MCRA-050	PG-66-05A	AFC595.*
12-4	0.565	0.675	JAG-075-05	AFC-50	TMC050A	MCRA-050	PG-78-05A	AFC595.*
10-2	0.560	0.670	JAG-075-05	AFC-50	TMC050A	MCRA-050	PG-78-05A	AFC595.*
10-3	0.600	0.710	JAG-075-05	AFC-75, 5075	TMC050A	MCRA-050	PG-78-05A	AFC595.*
10-4	0.645	0.755	JAG-085-05	AFC-75, 5075	TMC050A	MCRA-050	PG-78-05A	—
8-2	0.651	0.945	JAG-085-05	AFC-75, 5075	TMC050A	MCRA-050	PG-78-05A	—
8-3	0.704	0.795	JAG-085-05	AFC-75, 5075	TMC050LA	MCRA-075	PG-89-05A	—
8-4	0.852	0.945	JAG-099-07	AFC-75	TMC050LA	MCRA-075	PG-98-05A	—
6-2	0.795	0.905	JAG-095-05	AFC-75	TMC050LA	MCRA-075	PG-98-05A	—
6-3	0.855	0.965	JAG-099-07	—	TMC050LA	MCRA-075	PG-98-05A	—
6-4	0.945	1.055	JAG-121-10	—	TMC075LA	MCRA-100	PG-121-07A	—
4-3	1.035	1.145	JAG-113-07	—	TMC075LA	MCRA-100	PG-107-10A	—
4-4	1.135	1.245	JAG-138-10	—	TMC100A	MCRA-100	PG-138-10A	—
2-3	1.180	1.290	JAG-138-10	—	TMC100A	MCRA-125	PG-138-10A	—
2-4	1.295	1.405	JAG-156-12	—	TMC125A	MCRA-125	PG-163-12A	—
1-3	1.185	1.295	JAG-138-10	—	TMC100A	MCRA-125	PG-138-12A	—
1-4	1.325	1.435	JAG-156-12	—	TMC125A	MCRA-125	PG-163-12A	—
1/0-3	1.255	1.365	JAG-156-12	—	TMC100A	MCRA-125	PG-163-12A	—

\*\* Dry only: Concrete tight when taped – not for direct burial   ♦ Killark MCRA connectors meet various hazardous locations. Contact manufacturer for details.   \* Raintight see page 18 for details.

**FIRE ALARM Fire Alarm Control Cable (MC)**

Trade Size	Armor Min. O.D. (in.)	AFC	Adalet/ PLM	Bridgeport	Madison	Neer	OZ-Gedney
18-2	0.410	—	AC6	570-RI	—	C-510	—
18-4	0.430	—	AC6	570-RI	—	C-510	PK-75
18-6	0.490	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
18-8	0.510	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
16-2	0.420	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
16-4	0.440	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
16-6	0.510	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
16-8	0.520	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
14-2	0.470	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
14-4	0.510	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
14-6	0.520	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
14-8	0.585	AFC-75	AC6	570-RI	MAFC-75	C-510†	PK-75
12-2	0.495	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
12-4	0.565	AFC-50	AC6	570-RI	MAFC-50	C-510†	PK-75
18-2*	0.420	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
16-2*	0.430	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
16-4**	0.450	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
14-2*	0.470	AFC-50	AC6	570-RI	MAFC-50	C-510	PK-75
18-2†14-2**	0.640	AFC-75	AC6	561-DC2	MAFC-75	—	PK-751

\* One twisted shielded pair   \*\* Two twisted shielded pairs

**MC TUFF IG Isolated Ground Cable (MC) Steel**

Trade Size	Armor Min. O.D. (in.)	AFC	Adalet/ PLM	Bridgeport	Madison	OZ-Gedney/ Neer	Regal	Arlington
12-2	0.530	AFC-50	AC6	570-DC, 570-MC	MAFC-50	PK-75/C-510	6620, 6231, 653	MC38DC
12-3	0.565	AFC-50	AC6	570-DC, 570-MC	MAFC-50	PK-75/C-510	6620, 6231	MC38DC
12-4	0.580	AFC-50	AC6	570-DC, 570-MC	MAFC-50	PK-75/C-510	6620, 6231	MC38DC
10-2	0.600	AFC-50	AC6	570-DC, 570-MC	MAFC-50	PK-75/GCI	6620	MC38DC
10-3	0.645	AFC-75, 5075	AC8	577-MC	MAFC-75	PK-751/GCI	—	MC38DC
10-4	0.670	AFC-75, 5075	AC8	577-MC	MAFC-75	PK-751/GCI	6232†	MC38DC

The connector cross-reference guide is provided as a service to our customers. It is not intended to be a manufacturer's recommendation, or an all inclusive listing. The information contained herein is based on manufacturers' published literature. Consult appropriate manufacturer for more information.

**AC Armored Cable (AC) Steel or Aluminum Armor**

Trade Size	Armor Min. O.D. (in.)	AFC	Appleton	Bridgeport	Madison	Neer	OZ-Gedney	Arlington	T&B
14-2	0.433	AFC-50, 52	7315V	565-DC2	MAFC-50, 52	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
14-3	0.453	AFC-50, 52	7315V	565-DC2	MAFC-50, 52	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
14-4	0.486	—	7315V	565-DC2	—	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
12-2	0.467	AFC-50, 52	7315V	565-DC2	MAFC-50, 52	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
12-3	0.489	AFC-50, 52	7315V	565-DC2	MAFC-50, 52	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
12-4	0.520	AFC-50, 52	7315V	565-DC2	MAFC-50, 52	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
10-2	0.476	AFC-50, 52	7315V	565-DC2	MAFC-50, 52	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
10-3	0.500	AFC-50	7315V	565-DC2	MAFC-50	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
10-4	0.541	AFC-75, 5075	7315V	635-DC2	MAFC-75	C-510, TA-38	C-1Z†, C-15L	MC38DC	300TB
8-2*	0.604	AFC-75	7315V	635-DC2	MAFC-75	—	C-1Z†, C-15L	MC38DC	300TB
8-3*	0.637	AFC-75, 5075	7287V	635-DC2	MAFC-75	—	KC-50	MC38DC	300TB
8-4*	0.695	AFC-75, 5075	7287V	653-DC2	MAFC-75	—	KC-50	—	—
6-2*	0.700	AFC-75	7287V	653-DC2	MAFC-75	—	KC-50	—	—
6-3*	0.739	AFC-75, 5075	7287V	653-DC2	MAFC-75	—	KC-50	—	302
6-4*	0.807	—	7287V	653-DC2	—	—	KC-50	—	302
4-2*	0.836	—	7287V	653-DC2	—	—	KC-50	—	302
4-3*	0.885	—	7287V	653-DC2	—	—	KC-50	—	302
4-4*	0.970	—	7289V	—	—	—	KC-75	—	304
2-3*	1.014	—	7289V	—	—	—	KC-75	—	304
2-4*	1.115	—	7289V	—	—	—	KC-100	—	—

**HCF Health Care Facilities Cable (AC) Steel or Aluminum Armor**

Trade Size	Armor Min. O.D. (in.)	AFC	Appleton	Bridgeport	Madison	Neer	OZ-Gedney	Arlington
14-2	0.453	AFC-50, 52	7315V	570-GI	MAFC-50, 52	C-510, TA-38	C-1Z†	MC38DC
14-3	0.486	AFC-50, 52	7315V	570-GI	MAFC-50, 52	C-510, TA-38	C-1Z†	MC38DC
14-4	0.522	—	7315V	570-GI	—	C-510, TA-38	C-1Z†	MC38DC
12-2	0.489	AFC-50, 52	7315V	570-GI	MAFC-50, 52	C-510, TA-38	C-1Z†	MC38DC
12-3	0.520	AFC-50, 52	7315V	570-GI	MAFC-50, 52	C-510, TA-38	C-1Z†	MC38DC
12-4	0.545	AFC-50	7315V	570-GI	MAFC-50†	C-510, TA-38	C-1Z†	MC38DC
10-2	0.500	AFC-50, 52	7315V	570-GI	MAFC-50†, 52	C-510, TA-38	C-1Z†	MC38DC
10-3	0.541	AFC-50, 52	7315V	570-GI	MAFC-50, 52	C-510, TA-38	C-1Z†	MC38DC
10-4	0.587	AFC-75, 5075	7315V	570-GI	MAFC-75	—	C-1Z†	MC38DC

† Steel Armor only

†† Aluminum only

\* Stranded conductors

**The connector cross-reference guide is provided as a service to our customers. It is not intended to be a manufacturer's recommendation, or an all inclusive listing. The information contained herein is based on manufacturers' published literature. Consult appropriate manufacturer for more information.**

# Comparison of AC, HCF, & MC Cables

	Armored Cable Type AC (ACTHH)	HCF Type AC (ACTHH)	Metal Clad Cable Type MC	Metal Clad Cable Type MC/IG®
<b>U.L. Mfg. Standard</b>	U.L. 4	U.L. 4	U.L. 1569	U.L. 1569
<b>NEC References</b>	Article 320, 645	Articles 320, 517, 518, 645	Articles 330, 518, 645	Articles 330, 518, 645
<b>Conductors</b>	Copper	Copper	Copper	Copper
<b>Conductor Insulation</b>	THHN 90° C	THHN 90° C	THHN 90° C	THHN 90° C
<b>Voltage Rating</b>	600V	600V	600V	600V
<b>Conductor Covering</b>	Paper wrap on each	Paper wrap on each	Polypropylene assembly tape overall	Polypropylene assembly tape overall
<b>No. of Conductors</b>	2-4 Circuit conductors	2-4 Circuit conductors plus ground	One or more with grounding conductor	One or more with two grounding conductors
<b>Sizes Manufactured</b>	14 AWG - 1 AWG	14 AWG - 1 AWG	18 AWG - 250 KCMIL	12 AWG & 10 AWG
<b>Armor</b>	Interlocked steel or aluminum	Interlocked steel or aluminum	Interlocked steel or aluminum	Interlocked steel
<b>Insulated Bushings</b>	Required	Required	Optional	Optional
<b>Cable Tray Rated</b>	Yes	Yes	Yes	Yes
<b>Fire Wall Rated</b>	Yes; 1, 2 and 3 hour rated for through penetrations	Yes; 1, 2 and 3 hour rated for through penetrations	Yes; 1, 2 and 3 hour rated for through penetrations	Yes; 1, 2 and 3 hour rated for through penetrations
<b>Min. Bend Radius</b>	5 times cable O.D.	5 times cable O.D.	7 times cable O.D.	7 times cable O.D.
<b>Identification Method</b>	Indent on armor	Indent on armor	Marker tape under armor or indent on armor	Marker tape under armor or indent on armor
<b>Grounding Means</b>	Combined armor/bond wire = 1 equipment	Combined armor/bond wire plus green grounding conductor = 2 grounding means	One green insulated or bare copper grounding conductor	Two insulated grounding conductors; green; green/yellow conductor
<b>Environmental Air Ceilings</b>	Yes; 300.22 (C)	Yes; 300.22 (C)	Yes; 300.22 (C)	Yes; 300.22 (C)
<b>Applications</b>	Branch circuits and feeders in both exposed and concealed work; embedded in plaster finish on brick or other masonry (except damp or wet locations); fished or run in air voids of masonry block or tile walls.	Branch circuits and feeders in hospitals, nursing homes and medical centers (areas of patient care); where redundancy of grounding is required; where an isolated or dedicated ground is required (e.g., computer power circuits).	Branch circuits, feeders and service for power, lighting, control, and signal circuits. Exposed or concealed, in any approved raceway. As open runs of cable or aerial cable on a messenger. In hazardous conditions as permitted in NEC Articles 501, 502, and 503.	Branch circuits, feeders and service for power, lighting, control, and signal circuits. Exposed or concealed, in any approved raceway. As open runs of cable or aerial cable on a messenger. In hazardous conditions as permitted in NEC Articles 501, 502, and 503.



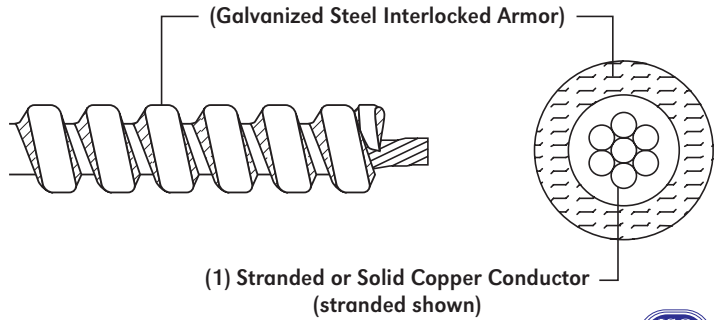
# Bare Armored Ground Cable Technical Specifications

## Specification Description

<b>Specification</b>	<b>Bare Armored Ground</b>
Armor	Galvanized interlocked steel
Conductors	Solid 8 AWG and 6 AWG 7 Strand 4 AWG

## References & Ratings

- U.L. 467 E82631
- NEC 250.118



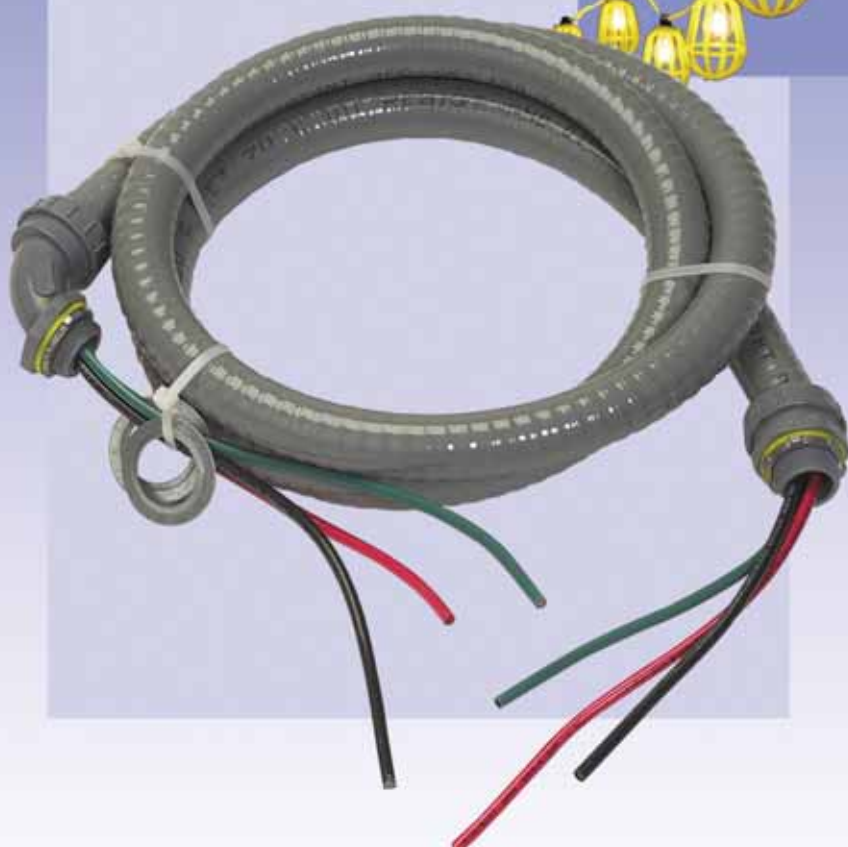
## Product Codes, Trade Sizes, Conductors, Packaging & Weights

Product Code		Trade Size	Length (feet)		Approx. Weight/1000 Feet (lbs.)	Armor Minimum O.D. (inches)
Coil	Reel		Coil	Reel		
1301-42-00	1301-60-00	8-1 Solid	250'	1000'	136	tba
1302-42-00	1302-60-00	6-1 Solid	250'	1000'	168	tba
1303-42-00	1303-45-00	4-1 Stranded	250'	500'	241	tba

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

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Temp-Lites™



Lighting,  
Power &  
Appliance  
Whips

# AFC TEMP-LITES™

## Description

Each carton contains a 100-foot light string with 10 sockets for lamps. The clip-on outer cage comes pre-assembled, making installation quick and easy. This durable cage is designed to be shock resistant and its flip-open design ensures easy lamping. Each lamp holder is supplied with a hanger and will accommodate up to a 150 watt lamp.

## Features

- Factory assembled – ready to install
- Lightweight and reusable
- Fast installation
- Available in U.L. listed and economy styles
- U.L. version wet rated



## References and Ratings (#7101 only)

- U.L. 1088
- U.L. File E178404

### U.L. listed Temp-Lites

### Standard Configuration

Catalog Number	Description	Length
7101	U.L. listed 14 AWG, 600V 2 conductor Outdoor/weather resistant Easy to install clip-on cage	100'/10 Lights

### Economy Temp-Lites – Non-U.L.

### Standard Configuration

Catalog Number	Description	Length
7131	14 AWG, 600V 2 conductor twisted black/white  One piece molded socket with built-in hanging support  Easy to install clip-on cage	100'/10 Lights

**U.L. listed model meets OSHA requirements.**

Custom options and configurations are available by special order – contact the factory for details.

# AFC Metallic Whips Type U.L.

## Specification Description

Conduit	Galvanized Type RW Steel Flexible Metal Conduit
Conductors	THHN 14AWG and Larger 18 & 16AWG TFN/TFFN
Maximum Temperature Rating	90°C (dry)
Grounding	NEC 250.118(5) many styles with green grounding conductor
Maximum Voltage Rating	600V
Connectors	Screw-in die cast connector is standard

### Solid Conductors

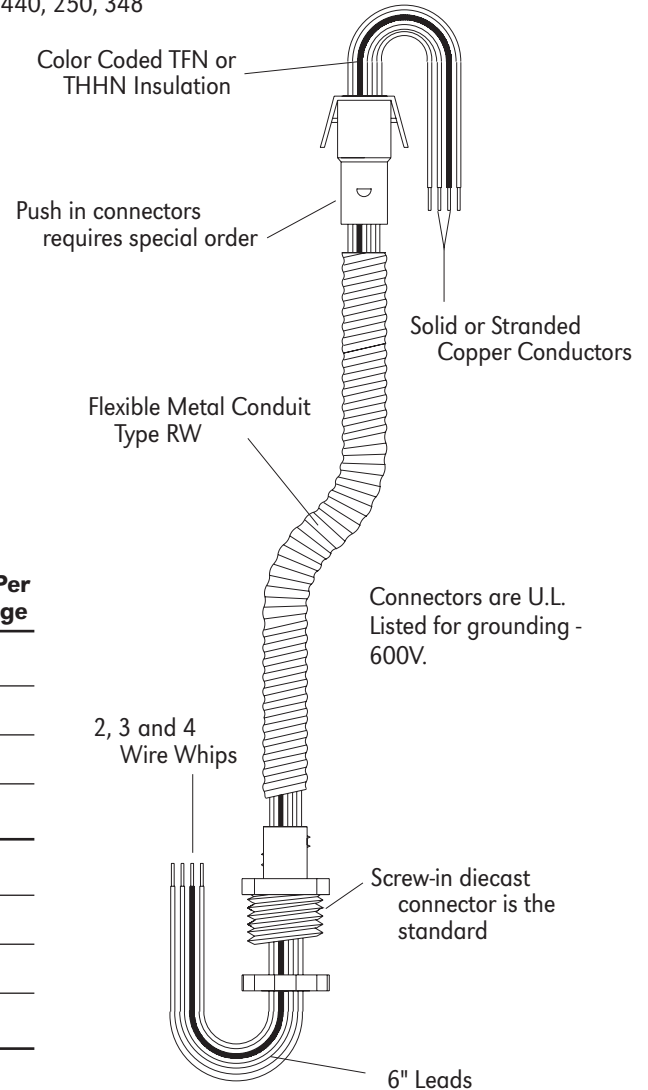
Description	Part Number	Units Per Package
3/8 F x 6	18-2 4521-21	30
	18-2 4521-30	100
	16-2 4511-21	30
	16-2 4511-30	100
	14-2 4501-21	30
	14-2 4501-30	100
	12-2 4578-21	30
	12-2 4578-30	100
3/8 F x 6	18-3 4522-21	30
	18-3 4522-30	100
	16-3 4512-21	30
	16-3 4512-30	100
	14-3 4502-21	30
	14-3 4502-30	100
	12-3 4579-21	30
	12-3 4579-30	100
3/8 F x 6	18-4 4523-21	30
	18-4 4523-30	100
	16-4 4513-21	30
	16-4 4513-30	100
	14-4 4503-21	30
	14-4 4503-30	100
	12-4 4580-21	30
	12-4 4580-30	100
1/2 F x 6	14-2 4701-15	15
	14-2 4701-24	50
	12-2 4704-15	15
	12-2 4704-24	50
1/2 F x 6	14-3 4702-15	15
	14-3 4702-24	50
	12-3 4705-15	15
	12-3 4705-24	50
1/2 F x 6	14-4 4703-15	15
	14-4 4703-24	50
	12-4 4706-15	15
	12-4 4706-24	50

### Stranded Conductors

Description	Part Number	Units Per Package
3/8 F x 6	18-2 4621-21	30
	18-2 4621-30	100
	16-2 4611-21	30
	16-2 4611-30	100
	14-2 4601-21	30
	14-2 4601-30	100
	12-2 4678-21	30
	12-2 4678-30	100
3/8 F x 6	18-3 4622-21	30
	18-3 4622-30	100
	16-3 4612-21	30
	16-3 4612-30	100
	14-3 4602-21	30
	14-3 4602-30	100
	12-3 4679-21	30
	12-3 4679-30	100
3/8 F x 6	18-4 4623-21	30
	18-4 4623-30	100
	16-4 4613-21	30
	16-4 4613-30	100
	14-4 4603-21	30
	14-4 4603-30	100
	12-4 4680-21	30
	12-4 4680-30	100
1/2 F x 6	14-2 4801-15	15
	14-2 4801-24	50
	12-2 4804-15	15
	12-2 4804-24	50
1/2 F x 6	14-3 4802-15	15
	14-3 4802-24	50
	12-3 4805-15	15
	12-3 4805-24	50
1/2 F x 6	14-4 4803-15	15
	14-4 4803-24	50
	12-4 4806-15	15
	12-4 4806-24	50

## References & Ratings

- U.L. File Reference E96572
- NEC 410, 430, 440, 250, 348



Connectors are U.L. Listed for grounding - 600V.

Whips come with standard 120V color THHN conductors but are also available with 277V colors if specified on order.

3/8" whips have screw in die cast connectors on the 18AWG, 16AWG & 14AWG and set screw die cast for the 12AWG. 1/2" whips have screw in die cast connectors.

**2 conductor is black, white.**

**3 conductor is black, white, green.**

**4 conductor is black, white, red, green.**

**All whips are available in barrels and cartons.**



# AFC Non-Metallic Whips Type U.L.

## Specification Description

Conduit	Type LFNC-B, Non-metallic Liquidtight
Conductors	THHN/THWN 8 & 10 AWG
Maximum Temperature Rating	90°C (dry) 75°C (wet)
Grounding	NEC 250.118
Maximum Voltage Rating	600V

## References & Ratings

- U.L. File Reference E96572
- NEC 410, 430, 440, 250, 356



## Non-metallic Liquidtight Whips Standard Configurations

Product Code	Trade Size (inches)	Length (feet)	No. of Cond.	AWG (cond. size)	Put Up
8014	1/2"	4'	3	10	10 per box
8015	1/2"	6'	3	10	10 per box
8016	3/4"	4'	3	8	10 per box
8017	3/4"	6'	3	8	8 per box
8021	1/2"	4'	3	10	20 bulk
8022	1/2"	6'	3	10	15 bulk
8023	3/4"	4'	3	8	10 bulk
8024	3/4"	6'	3	8	10 bulk

Whips come with Black, Red, Green THHN/THWN conductors.

Other conductor colors available by special request.

All whips come with one straight non-metallic liquidtight connector and one 90° angle non-metallic liquidtight connector.

# Installation Instructions for AC & MC Cables

Armored cable (Type AC) and metal clad cable (Type MC) provide a fast and efficient way of wiring both new construction and remodeling work. Their flexible metal armor provides mechanical protection of the electrical conductors while enabling them to bend around corners. The cables are pre-wired at the factory eliminating the need to pull conductors into a raceway, which in turn greatly reduces the possibility of conductor damage during pulling.

The National Electrical Code has accepted AC and MC cables for decades, with statistics showing that they have an excellent fire safety record.

Because AC & MC cable can be fished for long distances, it is quick and easy to install. It's own weight can carry it between partitions and it can be run without concern for its contact with pipes or other obstructions.

Wire pullers, fish ropes or tapes, dispensers and lubricants are eliminated. AC & MC cable does the job in less space, with fewer bending restrictions and less cutting and connecting than most other wiring products.

Armored cable (Type AC) and Metal Clad cable (Type MC) have a flexible metal armor of similar outward appearance, but that is where the similarity ends. There are major differences in construction and uses permitted.

## Armored (Type AC) Cable Construction

As described by the National Electrical Code NEC® 2002 Article 320, armored cable Type AC is a “fabricated assembly of insulated conductors in a flexible metallic enclosure.”

Type AC cable is manufactured to UL Standard 4. It consists of 2 to 4 copper conductors in sizes 14 AWG to 1 AWG inside an interlocked metal armor of steel or aluminum construction. Type AC cable can have no more than four insulated conductors plus a grounding conductor (for a total of 5 conductors only) and cannot be manufactured larger than 1 AWG per UL 4.

A 16 AWG aluminum bonding wire is inside of, and in physical contact with, the metal armor providing a low-impedance fault-return path required for the operation of overcurrent protection devices. The bonding wire is unique to AC cable and allows the outer metal armor in conjunction with the bonding wire to be used as an equipment ground.

It is important to remember that the bare bond wire is not an equipment grounding conductor. It is the bond wire that, in combination with the interlocked metal armor, provides a low impedance equipment grounding path.

Each of the copper conductors is covered with a thermoplastic insulation (THHN with a 90°C rating) and are individually wrapped in a moisture resistant, fire retardant paper.

According to NEC Article 320.40, an insulated (anti-short) bushing is required when installing Type AC cable. It is installed at the time of termination and designed to protect the conductors from damage. AFC provides bushings in bags packaged with the cable.

## Metal Clad (Type MC) Cable Construction

As described by NEC Article 330, Metal Clad Type MC cable is a “factory assembly of one or more insulated circuit conductors with or without optical fiber members enclosed in an armor of interlocking metal tape or a smooth or corrugated metallic sheath.”

Type MC cable is manufactured to UL Standard 1569. MC cables have 2 or more solid or stranded conductors in sizes 18 AWG and larger. The number of conductors allowed in an MC cable is not restricted by UL. The conductors may be of copper, aluminum or copper-clad aluminum.

The metal armor may be a smooth tube, a corrugated tube, or an interlocked metal armor. AFC Cable Systems manufactures MC cable with interlocked metal armor and copper conductors.

The make-up of AFC Cable System’s 600 volt interlocked armor MC cable consists of:

- Copper circuit and grounding conductors covered with thermoplastic insulation
- An overall polypropylene cable assembly tape
- An outer galvanized steel or aluminum interlocked armor

Unlike Type AC cable, the armor of interlocked Type MC cable is not an equipment grounding means and Type MC cable requires a bare or green grounding conductor.

## Let’s review the major differences between AC and MC cables.

	TYPE AC CABLE	TYPE MC CABLE
NUMBER OF CONDUCTORS	Limited to a maximum of 4 conductors plus a grounding conductor.	Not limited to the number of conductors.
SIZE OF CONDUCTORS	14 AWG to 1 AWG	18 AWG or larger
GROUNDING	Contains a 16 AWG bond wire in constant contact with the metal armor allowing the armor and bond wire combination to be used as an equipment ground.	Does not contain a bonding wire and the armor is not an equipment ground, but supplements the internal grounding conductor equaling one grounding path.
CONDUCTOR WRAPPING	Individual conductors are wrapped in a moisture resistant, fire retardant paper.	Individual conductors are not wrapped in paper but do have an overall polypropylene assembly tape.

Along with these differences in construction, there are also differences in the uses permitted for these cables as discussed previously.

## Green Hospital Grade Type Cable

This additional ground allows HCF cables to be used in patient care areas of health care facilities (other than hazardous locations) including hospitals, nursing homes, dental offices, outpatient facilities and medical centers per NEC 517.13.

The separate green grounding conductor satisfies the requirement of Article 517 that:

“In an area used for patient care, the grounding terminals of all receptacles and all non-current-carrying conductive surfaces of fixed electric equipment likely to become energized that are subject to personal contact, operating at over 100 volts, shall be grounded by an insulated copper conductor.”

The armor and bonding strip combination satisfies the requirement that:

“...all branch circuits serving patient care areas shall be provided with a ground path for fault current by installation in a metal raceway system or cable assembly. The metal raceway system, or cable armor or sheath assembly, shall itself qualify as an equipment grounding return path in accordance with Section 250.118.”

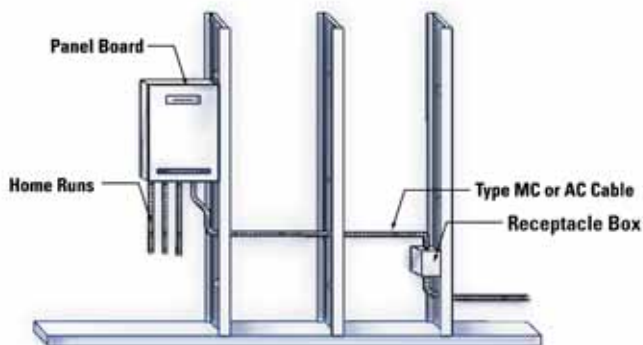
(NOTE: Read NEC 517.30(C)(3)(3) for complete details on wiring of emergency healthcare circuits.)

## Installing AC & MC Cable

Type AC & MC cable is installed after the rough-in phase of locating and setting all boxes and enclosures. Rough-in occurs when all the interior and exterior walls are framed but before the sheet rock is installed.

The first step in the rough-in phase is to determine the number of home run circuits and from where the wiring will originate. Once this is done, time should be taken to determine the best and shortest routes for each cable run. Long runs of spider web type routing not only require more cable but increase voltage drop. This is very important to consider when locating boxes for receptacles, lights and switches. If long runs are required, oversizing the circuit conductors is recommended to limit voltage drop.

### MC or AC Cable Installation



AC & MC cable is available on reels and in coils. If using a reel, simply draw the cable from the end of the reel. If using a coil, draw the cable from the center of the coil to prevent kinking.



A coil of MC cable

## Bridging Cable Across Open Spaces

In general, AC and MC cable must hug the surface it is wired over. The NEC prohibits bridging across open spaces with the following five exceptions:

- 1) When the cable is fished.
- 2) When flexibility is required a box may be installed near a motor or appliance using a short piece of free AC cable up to 24 inches long, between the box and motor or appliance.
- 3) Lengths of not more than 6 feet from the last point of support for connections within an accessible ceiling to lighting fixtures or equipment.
- 4) Where installed in cable trays.
- 5a) For **Type AC** cable in other than vertical runs through holes or notches in framing members where distance between members does not exceed 4½ feet and is securely fastened in place by an approved means within 12 inches of each box, cabinet, conduit body or other cable termination.
- 5b) For **Type MC** cable in other than vertical runs through holes or notches in framing members where the distance between members does not exceed 6 feet. Cables containing four or fewer conductors sized no larger than AWG 10 must be secured within 12 inches of each box, cabinet, fitting or other cable termination.

## Bending Radius

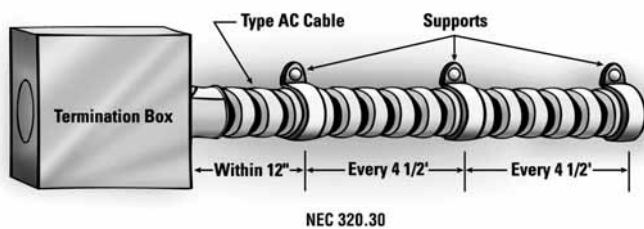
Care should be taken not to exceed the bending radius of the cables when routing around corners. According to NEC Article 320.24, for AC cable, the radius of the curve of the inner edge of any bend shall not be less than 5 times the diameter of the cable. NEC Article 330.24(B) states that for MC Cable, the radius shall not be less than 7 times the external diameter of the cable.



## Supporting AC & MC Cables

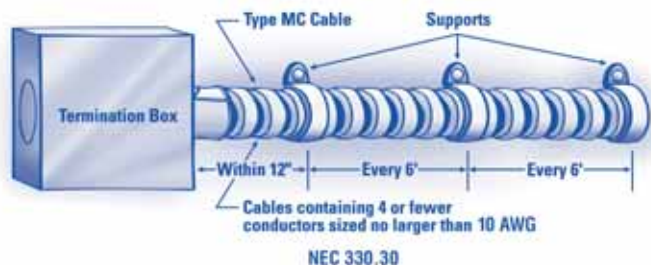
All cable runs must be continuous from outlet to outlet. According to NEC Article 320.30, AC cable must be supported and secured at intervals of 4½ feet or less (unless routed through a framing member) and within 12 inches of every termination.

### Supporting Type AC Cable



According to NEC Article 330.30, MC cable must be supported and secured at intervals of 6 feet or less (unless routed through a framing member) and cables containing four or fewer conductors sized no larger than 10 AWG must be secured within 12 inches of every termination.

### Supporting Type MC Cable



As noted, AC and MC cable support requirements are waived when the cable is fished. This is a major advantage of AC and MC cable in remodeling work over other wiring products that cannot be fished.

AC and MC cable may also be installed in cable tray, per NEC Article 392. Cable is only required to be secured in this installation for vertical runs.

## Terminating AC & MC Cables

When terminating or splicing at a junction, outlet or switch box, cut the cable so that 6 inches of free conductor is left for connections or splices. Use an approved connector and insure a proper bond by firmly tightening the connectors to both the box and the cable. Please note: set screw connectors cannot be used with aluminum armor Type AC cable.

To terminate an AC cable, insert an anti-short bushing and bend back the exposed length of bonding wire. The bonding wire can be bent back



before or after the bushing is inserted. There are several techniques used for this procedure as pictured on this page.

Insert the cable into the connector and secure the connector into the box. Be sure that the anti-short bushing is plainly visible in the connector for easy inspection. The same procedure is followed for MC cable with the exception that there is no bonding wire.

Although anti-short bushings are only required by the NEC for AC cable, most manufacturers recommend their use with MC cable.

### Preparing AC Cable for Termination



Method 1 - Bend back over anti-short

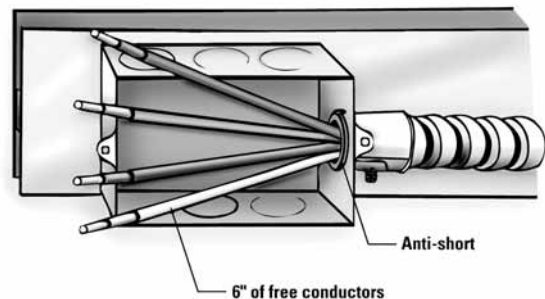
Method 3 - Back-wrap under anti-short



Method 2 - Bend back under anti-short

Method 4 - Back-wrap over anti-short

### Terminating AC & MC Cables



MC cable installed in a box with 6 inches of free conductors left for connections or splices.

# Fire Alarm/Control Cable™ Performance Charts

## Electrical Properties (ohms to neutral per 1000 feet)

Conductor Size AWG	XL, Reactance <sup>1</sup>	Rac, Resistance, 75°C <sup>2</sup>	Z, Effective <sup>3</sup> Impedance
18	.047	7.77	6.24
16	.043	4.89	3.93
14	.042	3.07	2.48
12	.040	1.93	1.57

<sup>1</sup> In Steel Armor

<sup>2</sup> To correct for 90°C, multiply by 1.048

<sup>3</sup> Effective Impedance is defined as  $R \cos(\Theta) + X \sin(\Theta)$  where  $\Theta$  is the power factor angle of the circuit. Effective impedance values shown in the table above are valid at 80% power factor.

## Mutual Capacitance (pico farads per foot)

Conductor Size AWG	Twisted Pair <sup>1</sup>	Twisted Shielded Pair <sup>2</sup>
18	30.0	47.3
16	33.5	54.8
14	36.3	60.7
12	38.8	66.4

<sup>1</sup> Between conductors

<sup>2</sup> Between one conductor and the other conductor(s) plus the shield

## Inductance (L) to neutral, per 1000 feet is typically 0.0002mH for sizes 18 AWG through 250 kcmil

$$[*L = 0.1404 \text{ Log}_{10}(\text{GMD}/\text{GMR}) \times 10^{-3} \text{ Henrys to neutral per 1000 feet}]$$

## Twists per Foot

Size	Total Number of Conductors Including Ground	Conductor Diameter	Length of Lay	Twists per Foot
18	3	0.08	2.8	4.3
18	4	0.08	3.2	3.8
18	5	0.08	3.3	3.7
16	3	0.09	3.2	3.8
16	4	0.09	3.6	3.3
16	5	0.09	3.7	3.3
14	3	0.105	3.7	3.3
14	4	0.105	4.2	2.9
14	5	0.105	4.3	2.8
12	3	0.125	4.4	2.7
12	4	0.125	5.0	2.4
12	5	0.125	5.1	2.4



	# CONDUCTORS *							IDENTIFIER STRIPES	
		MC-Lite	MC-Lite IG	MC TUFF	MC TUFF IG	AC-90 & AC-Lite	HCF-90 & HCF-Lite	RULE: Circuit colors, 2nd ground, and neutrals on specialty color cables will be on the armor. EXCEPTION: No black circuit ID on type AC cables. * Number of conductors excluding 1st ground.	
120V COLORS	2	✓		✓			✓		
	3	✓		✓			✓		
	4	✓		✓					
	2		✓		✓				Green indicates 2nd ground
	3		✓		✓				Green indicates 2nd ground
	4		✓		✓				Green indicates 2nd ground
	3					✓			Black conductor not shown on armor
	4					✓			Black conductor not shown on armor
480Y/277V COLORS	2	✓	✓		✓	✓			} 2 conductor available in these colors
			✓		✓	✓			
			✓		✓	✓			
			✓						
	3	✓	✓		✓	✓			} 3 conductor available in these colors
			✓		✓				
			✓		✓				
			✓						
4	✓	✓		✓	✓			} 4 conductor available in these colors	
		✓							
SPECIALTY COLORS	2		✓			✓			} 2 conductor available in these colors Green indicates 2nd ground
			✓			✓			
				✓					
				✓					
	3		✓			✓			} 3 conductor available in these colors
			✓			✓			

# AFC Fittings is Your Best Connection

## Since 1994 AFC Fittings

has been providing good old fashion quality. From connectors for Type MC, AC and HCF cables, to flexible metal conduit and liquid-tight flexible conduits (metallic and non-metallic) or steel EMT, Set Screw and

Compression Fittings, AFC has just about any type of terminating means you require. Quality and Service are the hallmarks of doing business with AFC Fittings.

AFC

### Armored Cable and Flexible Metal Conduit Connectors

- AFC Steel Box Connectors are design coordinated with AC & MC Cable and Flex from AFC Cable Systems.



AFC

### Parking Deck and Parking Lot Cable

- Reasonably priced connectors that are appropriate for use with PVC Jacket MC cable (Parking Deck/Lot Cable™)



AFC

### Malleable Liquidtight Insulated and Uninsulated Fittings

- Designed and engineered to ensure excellent performance thanks to it's heavy-duty, impact resistant construction.



AFC

### Non-Metallic Liquidtight Connectors

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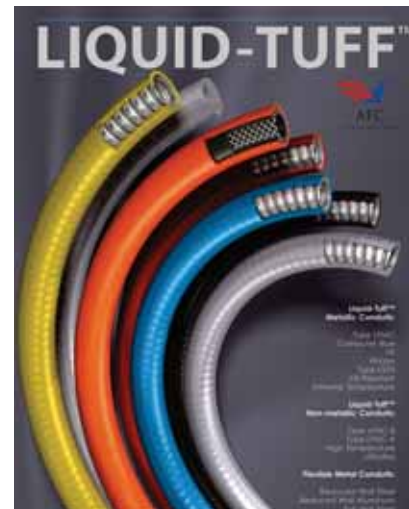
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