

AFC CABLE SYSTEMS MC LUMINARY CABLE™



MC Luminary Cable™

Lighting and low voltage circuits in one cable

For use with LED and Fluorescent dimming and SMART Buildings

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DESCRIPTION

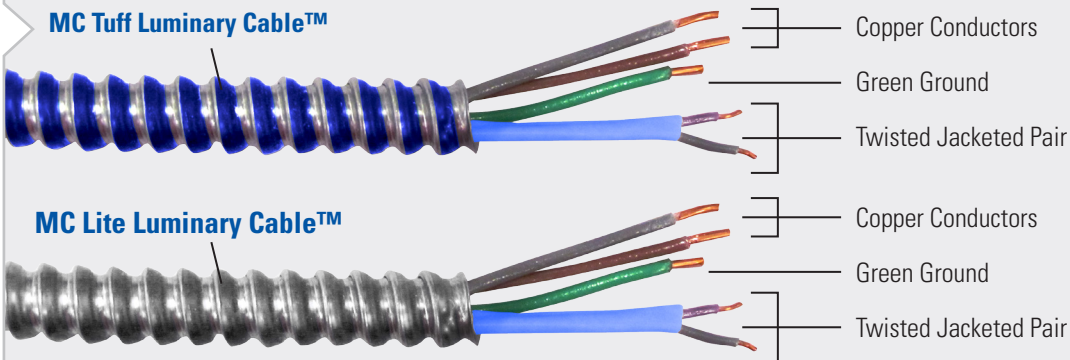
- Armor: Galvanized Interlocking Steel Strip (blue striped) or Interlocking Aluminum Strip
- Solid or Stranded Copper Conductors
- Insulated Conductor Type THHN or TFN
- Neutral Conductor: White or Gray
- Control Cables: 16 AWG Twisted jacketed pair (Purple/Gray)
- Permits conductors of control circuits to be placed in a cable with conductors of electric light, power, or Class 1 circuits

REFERENCES & RATINGS

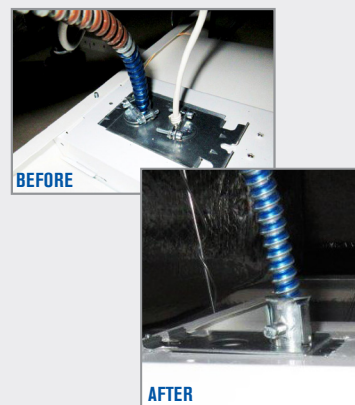
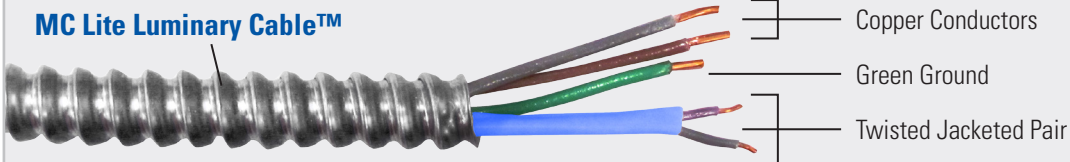
- UL 66, 83, 1479, 1569, 1581, 2556, File Reference E80042
- NEC® 250.118, 300.22(C), 392, 396, 330, 501, 502, 503, 530, 504, 505, 518, 520, 530, 645, 725
- Federal Specification A-A-59544 (formerly J-C-30B)
- Meets all applicable OSHA and HUD Requirements
- May be surface mounted, fished and/or embedded in plaster
- Cable Tray Rated, install per NEC®
- UL Classified 1, 2, and 3 hour through penetration (Fire Stop) product, R 14141
- Environmental Air-Handling Space Installation per NEC® 300.22(C)
- Made in USA of US and/or imported materials

MC LUMINARY CABLE™

MC Tuff Luminary Cable™



MC Lite Luminary Cable™



MC LUMINARY SPECIFICATIONS

PRODUCT CODE		TRADE SIZE	AVAILABILITY	LENGTH (FT)		APPROXIMATE WEIGHT	ARMOR O.D.
COIL	REEL			COIL	REEL	LBS/1,000FT	INCHES
MC TUFF LUMINARY SOLID							
18BEB42T500	18BEB60T500	16-2 (1TPJ) Purple, Gray 12-2 Black, White, Green	In Stock	250	1000	223.9	0.633
18BEB42T504	18BEB60T504	16-2 (1TPJ) Purple, Gray 12-2 Red, White, Green	FEB 2015	250	1000	223.9	0.633
18BEB42T505	18BEB60T505	16-2 (1TPJ) Purple, Gray 12-2 Blue, White, Green	FEB 2015	250	1000	223.9	0.633
18BEB42T501	18BEB60T501	16-2 (1TPJ) Purple, Gray 12-2 Brown, Gray, Green	In Stock	250	1000	223.9	0.633
18BEB42T502	18BEB60T502	16-2 (1TPJ) Purple, Gray 12-2 Orange, Gray, Green	JAN 2015	250	1000	223.9	0.633
18BEB42T503	18BEB60T503	16-2 (1TPJ) Purple, Gray 12-2 Yellow, Gray, Green	JAN 2015	250	1000	223.9	0.633
18BMB42T500	18BMB60T500	16-2 (1TPJ) Purple, Gray 12-3 Black, Red, White, Green	JAN 2015	250	1000	255.7	0.683
18BMB42T501	18BMB60T501	16-2 (1TPJ) Purple, Gray 12-3 Brown, Orange, Gray Green	JAN 2015	250	1000	255.7	0.683
18BKB42T500	18BKB60T500	16-2 (1TPJ) Purple, Gray 10-2 Black, White, Green	JAN 2015	250	1000	270.8	0.671
18BKB42T501	18BKB60T501	16-2 (1TPJ) Purple, Gray 10-2 Brown, Gray, Green	JAN 2015	250	1000	270.8	0.671
MC LITE LUMINARY SOLID							
18BF-42-500	18BF-60-500	16-2 (1TPJ) Purple, Gray 12-2 Black, White, Green	In Stock	250	1000	148.8	0.633
18BF-42-504	18BF-60-504	16-2 (1TPJ) Purple, Gray 12-2 Red, White, Green	FEB 2015	250	1000	148.8	0.633
18BF-42-505	18BF-60-505	16-2 (1TPJ) Purple, Gray 12-2 Blue, White, Green	FEB 2015	250	1000	148.8	0.633
18BF-42-501	18BF-60-501	16-2 (1TPJ) Purple, Gray 12-2 Brown, Gray, Green	In Stock	250	1000	148.8	0.633
18BF-42-502	18BF-60-502	16-2 (1TPJ) Purple, Gray 12-2 Orange, Gray, Green	JAN 2015	250	1000	148.8	0.633
18BF-42-503	18BF-60-503	16-2 (1TPJ) Purple, Gray 12-2 Yellow, Gray, Green	JAN 2015	250	1000	148.8	0.633
18BG-42-500	18BG-60-500	16-2 (1TPJ) Purple, Gray 12-3 Black, Red, White, Green	JAN 2015	250	1000	168.1	0.683
18BG-42-501	18BG-60-501	16-2 (1TPJ) Purple, Gray 12-3 Brown, Orange, Gray, Green	JAN 2015	250	1000	168.1	0.683
18BH-42-500	18BH-60-500	16-2 (1TPJ) Purple, Gray 10-2 Black, White, Green	JAN 2015	250	1000	184.0	0.671
18BH-42-501	18BH-60-501	16-2 (1TPJ) Purple, Gray 10-2 Brown, Gray, Green	JAN 2015	250	1000	184.0	0.671
MC LITE LUMINARY STRANDED (16-2 SOLID)							
18SF-42-500	18SF-60-500	16-2 (1TPJ) Purple, Gray 12-2 Black, White, Green	DEC 2014	250	1000	149.0	0.638
18SF-42-501	18SF-60-501	16-2 (1TPJ) Purple, Gray 12-2 Brown, Gray, Green	DEC 2014	250	1000	149.0	0.638

Other custom constructions available subject to minimums and manufacturing lead-times; contact your AFC Representative for more information.

MC Luminary Cable is intended for use in non shielded applications



SPECIFICATION
FOR
MC TUFF® LUMINARY CABLE,
METAL CLAD CABLE, TYPE MC

SCOPE

This specification covers MC-TUFF® LUMINARY CABLE, a Type MC Multi-Conductor Metal Clad Cable. The cable contains copper conductors in sizes 16 AWG through 10 AWG for continuous operation at a maximum conductor temperature of 90°C dry. These cables carry appropriate Underwriters Laboratories Listing Mark for Metal-Clad Cable and are suitable for use as branch circuits, feeders or lighting cable in both exposed or concealed work or in cable trays in accordance with the applicable sections of the National Electrical Code. They are UL Classified under File R14141 as a One, Two or Three- Hour Through-Penetrating Product (XHLY) for Use in Through-Penetration Firestop Systems (XHEZ).

REFERENCE STANDARDS

UL 1569 Standard for Metal Clad Cable
UL 1581 Standard for Electrical Wires, Cables, and Flexible Cords
UL 66 Standard for Fixture Wires
UL 83 Standard for Thermoplastic Insulated Wires and Cables
UL 1479, (ASTM 814) Fire Tests of Through-Penetration Fire Stops
Federal Specification A-A-59544, Wire and Cable, Electrical (formerly J-C-30B)
NEC® Articles 230.43, 300-22(C), 392, 396, 330, 518, 520, 530, 645 and 725
Permitted for use in Cable Trays

GENERAL CONSTRUCTION

Copper Conductors
Type THHN Insulation for Power Conductors
Type TFN for Control Conductors
Polypropylene or Polyester Assembly Tape
Galvanized Steel Armor

CONDUCTORS

The electrical and physical properties of the copper conductors shall conform with the applicable standards referenced above, Table 1 of this specification and shall be soft-annealed copper in compliance with the latest edition of ASTM B3 and/or B8.

INSULATION/JACKET

The polyvinylchloride/Nylon (Polyamide Polymer), Type THHN and Type TFN Insulation/Jacket shall be a heat, flame, moisture resistant dielectric layer manufactured and tested in compliance with Underwriters Laboratories Standards UL 83 - Standard for Thermoplastic Insulated Wires and Cables and UL 66 - Standard for Fixture Wires. The insulation and jacket diameter shall be in accordance with Table 1 of this specification and the insulation shall exhibit the physical and electrical properties outlined below:

<u>Typical Values</u>			
Insulating Resistance			
At 75°C, 1 Day Immersion, Megohms/1000 Ft.			6.1
S.I.C., 1000 hertz, at 75°C			7.21
% Change 1-14 Days			0.0
% Change 7-14 Days			0.7
Dielectric Strength @ 75°C, Short Term			
Test in Water, Volts/Mil			80.0
% Power Factor	<u>40V/Mil</u>	<u>80V/Mil</u>	<u>Stability Factor</u>
1 Day Immersion	4.2	4.3	0.1
7 Day Immersion	4.8	4.9	0.1
14 Day Immersion	4.5	4.6	0.1
Dielectric Retention			
14 Days Immersion @ 75°C			100%

GROUNDING CONDUCTOR(S)

Insulated grounding conductors sized in accordance with Table 6.1 of Underwriters Standard UL 1569 shall be cabled with the circuit conductors and shall be identified in compliance with Section 35 of UL 1569. Additional grounding conductors are available subject to inquiry.

CONTROL CONDUCTORS

The Control Circuit is comprised of two 16 AWG Type TFN Insulated Conductors twisted together with an overall polyvinylchloride jacket that isolates the control conductors from the power cables.

ASSEMBLY TAPE

The power conductors, control conductor assembly and grounding conductor shall be cabled (twisted) with a suitable lay length and covered with a tough, durable polypropylene or polyester assembly tape.

GALVANIZED STEEL ARMOR

A blue galvanized steel armor shall be applied over the cabled wire assembly with an interlock in compliance with Section 13 of UL 1569.

FINAL TESTS

The completed cable shall be tested in accordance with the applicable sections of Underwriters Laboratories Standard for Metal Clad Cable, UL 1569.

INSPECTION AND ACCEPTANCE

Orders are accepted based upon inspection and acceptance at the factory. After the material has been tested in accordance with this specification, approved and released for shipment from the factory, any claims are limited to those covered by the manufacturer's standard guarantee.

TABLE 1
SINGLE CONDUCTOR
COPPER DIAMETERS AND WEIGHTS

		<u>BARE</u>		<u>INSULATED (THHN) (TFN)</u>	
16	---	0.0508	7.81	0.090	10
14	---	0.0641	12.4	0.105	16
12	---	0.0808	19.8	0.125	24
10	---	0.1019	31.4	0.155	38
<u>STRANDED</u>					
14	7/.0242	0.0726	12.7	0.115	17
12	7/.0305	0.0915	20.2	0.135	25
10	7/.0385	0.116	32.1	0.170	39

TABLE 2
MC TUFF® LUMINARY METAL-CLAD CABLE
DIMENSIONS, WEIGHTS AND PACKAGING

<u>CONDUCTOR</u> <u>SIZE & NO.</u>	<u>STEEL</u>	<u>TOTAL</u>	<u>COIL</u>	<u>REEL</u>
	<u>O.D.</u>	<u>WEIGHT</u>	<u>LENGTH</u>	<u>LENGTH</u>
	<u>Inches</u>	<u>lbs./M'</u>	<u>ft.</u>	<u>ft.</u>
12-2 (BK-WE) + 16-2(PE-GY)	0.633	223.9	250	1000
12-2 (RD-WE) + 16-2(PE-GY)	0.633	223.9	250	1000
12-2 (BE-WE) + 16-2(PE-GY)	0.633	223.9	250	1000
12-2 (BN-GY) + 16-2(PE-GY)	0.633	223.9	250	1000
12-2 (OE-GY) + 16-2(PE-GY)	0.633	223.9	250	1000
12-4 (YW-GY) + 16-2(PE-GY)	0.633	223.9	250	1000

Notes:

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

MC TUFF LUMINARY – October 2014

SPECIFICATION
FOR
MC LITE® LUMINARY CABLE,
METAL CLAD CABLE, TYPE MC

SCOPE

This specification covers MC-LITE® LUMINARY CABLE, a Type MC Multi-Conductor Metal Clad Cable. The cable contains copper conductors in sizes 16 AWG through 10 AWG for continuous operation at a maximum conductor temperature of 90°C dry. These cables carry appropriate Underwriters Laboratories Listing Mark for Metal-Clad Cable and are suitable for use as branch circuits, feeders or lighting cable in both exposed or concealed work or in cable trays in accordance with the applicable sections of the National Electrical Code. They are UL Classified under File R14141 as a One, Two or Three- Hour Through-Penetrating Product (XHLY) for Use in Through-Penetration Firestop Systems (XHEZ).

REFERENCE STANDARDS

- UL 1569 Standard for Metal Clad Cable
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- UL 66 Standard for Fixture Wires
- UL 83 Standard for Thermoplastic Insulated Wires and Cables
- UL 1479, (ASTM 814) Fire Tests of Through-Penetration Fire Stops
- Federal Specification A-A-59544, Wire and Cable, Electrical (formerly J-C-30B)
- NEC® Articles 230.43, 300-22(C), 392, 396, 330, 518, 520, 530, 645 and 725
- Permitted for use in Cable Trays

GENERAL CONSTRUCTION

- Copper Conductors
- Type THHN Insulation for Power Conductors
- Type TFN for Control Conductors
- Polypropylene or Polyester Assembly Tape
- Aluminum Alloy Armor

CONDUCTORS

The electrical and physical properties of the copper conductors shall conform with the applicable standards referenced above, Table 1 of this specification and shall be soft-annealed copper in compliance with the latest edition of ASTM B3 and/or B8.

INSULATION/JACKET

The polyvinylchloride/Nylon (Polyamide Polymer), Type THHN and Type TFN Insulation/Jacket shall be a heat, flame, moisture resistant dielectric layer manufactured and tested in compliance with Underwriters Laboratories Standards UL 83 - Standard for Thermoplastic Insulated Wires and Cables and UL 66 - Standard for Fixture Wires. The insulation and jacket diameter shall be in accordance with Table 1 of this specification and the insulation shall exhibit the physical and electrical properties outlined below:

<u>Typical Values</u>			
Insulating Resistance			
At 75°C, 1 Day Immersion, Megohms/1000 Ft.			6.1
S.I.C., 1000 hertz, at 75°C			7.21
% Change 1-14 Days			0.0
% Change 7-14 Days			0.7
Dielectric Strength @ 75°C, Short Term			
Test in Water, Volts/Mil			80.0
% Power Factor	<u>40V/Mil</u>	<u>80V/Mil</u>	<u>Stability Factor</u>
1 Day Immersion	4.2	4.3	0.1
7 Day Immersion	4.8	4.9	0.1
14 Day Immersion	4.5	4.6	0.1
Dielectric Retention			
14 Days Immersion @ 75°C			100%

GROUNDING CONDUCTOR(S)

Insulated grounding conductors sized in accordance with Table 6.1 of Underwriters Standard UL 1569 shall be cabled with the circuit conductors and shall be identified in compliance with Section 35 of UL 1569. Additional grounding conductors are available subject to inquiry.

CONTROL CONDUCTORS

The Control Circuit is comprised of two 16 AWG Type TFN Insulated Conductors twisted together with an overall polyvinylchloride jacket that isolates the control conductors from the power cables.

ASSEMBLY TAPE

The power conductors, control conductor assembly and grounding conductor shall be cabled (twisted) with a suitable lay length and covered with a tough, durable polypropylene or polyester assembly tape.

ALUMINUM ALLOY ARMOR

A plain aluminum armor shall be applied over the cabled wire assembly with an interlock in compliance with Section 13 of UL 1569.

FINAL TESTS

The completed cable shall be tested in accordance with the applicable sections of Underwriters Laboratories Standard for Metal Clad Cable, UL 1569.

INSPECTION AND ACCEPTANCE

Orders are accepted based upon inspection and acceptance at the factory. After the material has been tested in accordance with this specification, approved and released for shipment from the factory, any claims are limited to those covered by the manufacturer's standard guarantee.

TABLE 1
SINGLE CONDUCTOR
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14	---	0.0641	12.4	0.105	16
12	---	0.0808	19.8	0.125	24
10	---	0.1019	31.4	0.155	38
<u>STRANDED</u>					
14	19/.0147	0.0726	12.7	0.115	17
12	19/.0185	0.0915	20.2	0.135	25
10	19/.0234	0.116	32.1	0.170	39

TABLE 2
MC LITE® LUMINARY METAL-CLAD CABLE
DIMENSIONS, WEIGHTS AND PACKAGING

<u>CONDUCTOR</u> <u>SIZE & NO</u>	<u>ALUM</u> <u>O.D.</u> <u>INCHES</u>	<u>TOTAL</u> <u>WEIGHT</u> <u>LBS/M FT</u>	<u>COIL</u> <u>LENGTH</u> <u>FEET</u>	<u>REEL</u> <u>LENGTH</u> <u>FEET</u>
12-2 (BK-WE) + 16-2(PE-GY)	0.633	144.8	250	1000
12-2 (RD-WE) + 16-2(PE-GY)	0.633	144.8	250	1000
12-2 (BE-WE) + 16-2(PE-GY)	0.633	144.8	250	1000
12-2 (BN-GY) + 16-2(PE-GY)	0.633	144.8	250	1000
12-2 (OE-GY) + 16-2(PE-GY)	0.633	144.8	250	1000
12-2 (YW-GY) + 16-2(PE-GY)	0.633	144.8	250	1000

Notes:

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

MC LITE LUMINARY – October 2014