

Type MC-HCF-AIA

600 V Copper PVC/Nylon, Al Bonding Wire in Contact with Armor, 90 °C



A Viakable Company

Features

UL Listed as MC.

Single conductors are dual rated THHN/THWN-2, meeting 90 °C in Wet and Dry Locations.

All Singles meet the VW-1 flame test.

Insulation is rated Gas and Oil resistant II.

Cables is rated for CT use.

Listed for use in UL 1, 2 and 3 Hour Through Penetration Fire-stop Systems C-AJ-310, C-AJ-3111, C-AJ-3112, W-L-3077, W-L-3078.

For ease of pulling and installation, the cable is reverse wound on reel. For coils, pull from inside end to ensure ease of installation.

Application

For installations requiring redundant, dedicated or isolated grounding paths.

Health Care Facilities: For branch circuit wiring in patient care areas of hospitals, medical centers, nursing homes, dental offices, clinics, outpatient facilities and other health care facilities in accordance with NEC® articles 517, 330 and 300.4 as applicable. (Note: Use in hazardous anesthetizing areas is not permitted.)

For places of assemblies and theaters per NEC articles 518 and 520, respectively.

In cable tray and approved raceways.

In dry locations and embedded in plaster finish on brick or other masonry except in damp or wet locations.

Per NEC 300.22 (C), in environmental air-handling spaces.

Class I Div. 2, Class II Div 2, and Class III Div. 1 Hazardous locations, in accordance with NEC.

Requires use of UL Listed MCI-A fittings.

Standards

UL 1569

Metal Clad cables.

UL 83

Thermoplastic-Insulated Wires and cables.

UL 1685

Vertical-Tray Fire-Propagation and Smoke-Release Test for Electrical and Optical-Fiber Cables.

Federal Specification A-A-59544 (formerly J-C-30B).

RoHS-2 Compliant.

Specifications

ICEA S-95-658/NEMA WC70

Maximum operating voltage:

- 600 volts

Maximum conductor operation temperatures:

- 90 °C Dry

Engineering Information

1. Conductor: Soft annealed uncoated copper solid wire per ASTM B3, or soft annealed uncoated copper Class B or C concentric stranding or unilay (19 wires) per ASTM B8.

Sizes: 14 AWG up to 10 AWG.

Number of Conductors: 2 and 3.



2. Insulation Circuit & Ground:

Flame retardant thermoplastic polyvinyl chloride (PVC) and nylon covering.

Conductor's and Ground ID:

120 / 208V				
# Cdr.	Color Code		Ground	Al Bond
2	BK	WE	GN	Bare
3	BK	WE	RD	GN

480Y / 277V				
# Cdr.	Color Code		Ground	Al Bond
2	BN		GY	GN
2		OE	GY	GN
2		YW	GY	GN
2			PE	GY
3	BN	OE	GY	GN
3		OE	GY	GN
3	BN	YW	GY	GN
3		YW	PE	GY
3	BN		PE	GY

3. Assembly: All insulated conductors, phases and grounding, are individually wrapped in a binder tape and twisted together.

4. Bare aluminum grounding/ bonding conductor: It is located outside the individually wrapped assembly of other conductors and in contact with the interlocked aluminum armor.

5. Armor: Easy to identify green color aluminum interlocked armor. It is applied over the assembly of conductors, tape and in contact with aluminum grounding/bonding conductor.

Technical Data

600 V Copper PVC/Nylon, Green Insulated Ground, Aluminum Bonding Wire in Contact with Armor, 90 °C

Conductor		Grounding Wire		Nominal O.D. in	Mass lb/kft
Size AWG / # Conductors	Conductor Color	Insulated Ground (Green)	Solid Aluminum Bonding Ground		
Solid Copper Conductors with Solid Aluminum Bonding Ground Conductor 120/208 V					
14-2	BK/WE	14	12	0.542	110.6
14-3	BK/WE/RD	14	12	0.552	129.69
12-2	BK/WE	12	10	0.563	140.23
12-2	RD/WE	12	10	0.563	140.24
12-2	BE/WE	12	10	0.563	140.24
12-3	BK/WE/RD	12	10	0.596	167.39
10-2	BK/WE	10	8	0.650	196.28
10-2	RD/WE	10	8	0.650	196.28
10-2	BE/WE	10	8	0.650	196.28
10-3	BK/WE/RD	10	8	0.690	238.81
Stranded Copper Conductors with Solid Aluminum Bonding Ground Conductor 120/208 V					
12-2	BK/WE	12	10	0.585	146.76
12-2	RD/WE	12	10	0.585	146.76
12-2	BE/WE	12	10	0.585	146.76
12-3	BK/WE/RD	12	10	0.621	175.65
10-2	RD/WE	10	8	0.687	206.29
10-3	RD/WE/RD	10	8	0.728	250.98
Multiple Neutrals: Solid Copper Conductors with Solid Aluminum Bonding Ground Conductor					
12-2	BK/RD	12	10	0.563	140.24
12-2	WE-BK/WE-RD			0.563	140.24
12-3	BK/WE/RD	12	10	0.596	167.38
12-3	WE-BK/WE-RD/WE-BE			0.596	167.38
10-2	BK/RD	10	8	0.650	196.28
10-2	WE-BK/WE-RD			0.650	196.28
10-3	BK/WE/RD	10	8	0.690	238.81
10-3	WE-BK/WE-RD/WE-BE			0.690	238.81
Multiple Neutrals: Stranded Copper Conductors with Solid Aluminum Bonding Ground Conductor					
12-2	BK/RD	12	10	0.585	146.76
12-2	WE-BK/WE-RD			0.585	146.76

The above data are approximate and subject to normal manufacturing tolerances. Where required, the compatibility with glands, connectors and accessories should be verified using actual dimensions of the product. Other sizes available upon request.

Ampacities: Refer to beginning of section.

Color Abbreviations						
Black	Brown	Orange	Yellow	Purple	Grey	Green
BK	BN	OE	YW	PE	GY	GN