



Fast-acting, fully-rated fuses provide reliable protection against very high fault currents



Eaton's AHC and AHCA are high voltage, fast-acting, fully-rated fuses for overcurrent protection in axial and radial-leaded constructions.

Product description

Eaton's AHC and AHCA are high voltage, fast-acting, fully-rated fuses for overcurrent protection in axial and radial-leaded constructions. They provide reliable protection against very high fault currents in electronic applications from automobiles to consumer, computing, energy, industrial, and medical devices and equipment. Eaton AHC/AHCA fuses have very high voltage and current interrupt ratings. The AHCA meets AEC-Q200 qualification for automotive applications. As fully-rated fuses, AHC/AHCA allow for design footprints to be shrunk further than traditional midget (10x38 mm) fuses, reducing weight and cost without sacrificing performance.

Features and benefits

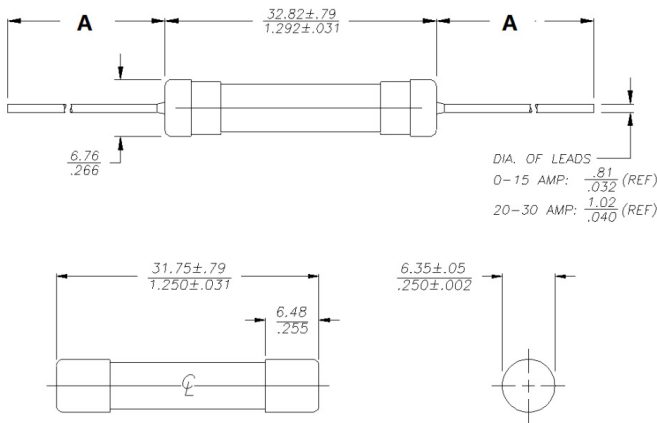
- Fully-rated fuses (100% carry for 4 hours, minimum)
- High voltage ratings up to 500 Vac/dc
- High current interrupt ratings up to 20 kA for both 500 Vac/dc
- Fast-acting performance to help limit let-through currents
- Nominal current ratings up to 30 A to cross 10 x 38 mm fuses
- AEC-Q200 qualified versions available for automotive applications

Product specifications

Part number	Current rating	Voltage rating		Interrupting rating @ rated voltage		Typical DC cold resistance ¹
	(A)	(Vac)	(Vdc)	(Aac)	(Adc)	(mΩ)
AHC-xx-R	12-30	450-500	450-500	10000-20000	10000-20000	3.1-10
AHCA-xx-R	12-30	450-500	450-500	10000-20000	10000-20000	3.1-10

Dimensions- mm/(inches)

Drawing not to scale



Part number	Dimension A
AHC-V-XX-R/AHCA-V-XX-R	38.1 mm (ref)
AHC-V2-XX-R	50.8 mm (ref)
BK-AHC-V-XX-R	38.1 mm (ref)
BK-AHC-V2-XX-R	50.8 mm (ref)
TR-AHC-V-XX-R	20 mm (ref)

AHC-xx-R General specifications

Operating temperature: -40 °C to +125 °C (with derating)

Terminal strength: MIL-STD-202G, Method 211A, Test Condition A, Pull force 10N/10S

Thermal shock: MIL-STD-202, Method 107G: -65 °C to +125 °C, 5 cycles

Mechanical shock: MIL-STD-202 Method 213. Condition A: Half-sine shock pulse, peak=50 g's, 11 ms, total 18 shocks

Vibration: According to IEC60068-2-6: The specimens shall be subjected to a simple harmonic motion having an amplitude of 0.03 inch (0.06 inch maximum total excursion), the frequency being varied uniformly between the approximate limits of 10 and 55 hertz (Hz). The entire frequency range, from 10 to 55 Hz and return to 10 Hz, shall be traversed in approximately 1 minute.

Humidity: MIL-STD-202G, Method 103B, Test Condition A: 95% RH, 40 °C, 240 hours

Solderability: IEC-60127-2, A.3.3: No steam ageing. Immersion conditions: +250 °C +/-3 °C, 3s +/-0.3s

AHCA-xx-R General specifications

Life test: MIL-STD-202, Method 108A, except Circulating air environment at 125 °C ± 2 °C, apply 60% rated current for 1,000 hours

Load humidity test: MIL-STD-202, Method 103B, test Condition A except: Environmental chamber 85% + 2% relative humidity at 85 °C + 2 °C, 10% rated voltage for 240 hours

Terminal strength: MIL-STD-202G, Method 211A, Test condition A. Pull force test. The force applied to the terminal shall be 5 pounds.

Temperature cycling test: MIL-STD-202, Method 107G. Condition B-3: -65 C ~ 125 C, 100 cycles

Mechanical shock test: MILSTD 202 Method 213. Condition C: 100 g, 6 s, half sine

High frequency vibration test: MIL STD 202 Method 204; 5g's for 20 minutes, 12 cycles each of 3 orientations. Test from 10 to 2000 Hz.

Resistance to solder heat: MIL-STD202 Method 210 Condition B

Salt spray: MIL-STD-202G, Method 101E, Test condition B. (NaCl) content of from 4 to 6 percent for 48 hours.

Eaton
Electronics Division
 1000 Eaton Boulevard
 Cleveland, OH 44122
 United States
 Eaton.com/electronics

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