

# AHC/AHC5/AHCF

## High voltage 6.3 mm x 32 mm fast-acting fuse



### Product features

- High voltage ceramic tube fuse
- Compact 3AB footprint:  
6.3 mm x 32 mm (1/4" x 1 1/4")
- Fast-acting performance
- Up to 500 Vac/Vdc rating
- Cartridge and axial lead versions available
- Very high interrupting ratings to help safely protect against dangerous high fault currents
- Fuse accessories (cartridge version):  
[HVP Panel mount fuse holder \(480V\)](#)  
[HVI In-line fuse holder \(600V\)](#)  
[S-8000 Panel mount fuse block \(600V\)](#)  
[1Axxxx \(up to 600V\) fuse clips](#)

### Agency information

- cURus recognition file number:  
E19180 Guide JDYX2 and JDYX8



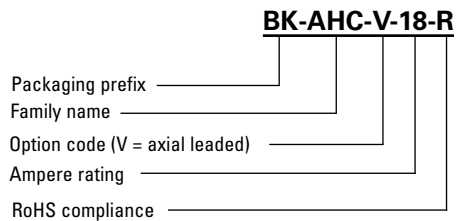
### Applications

- Industrial control panels
- Motor control - UL 508A panels
- Uninterruptible power supplies (UPS)
- Variable frequency drives
- Energy storage and battery systems
- High voltage power conversion

### Environmental compliance



### Ordering part number



### Packaging prefix

- **Blank**  
5 pieces in tin case for AHC(F)-XX-R, AHC5-30-R, 4 pieces in tin case for AHC(F)-V-XX-R, AHC5-V-30-R
- **BK1-**  
1000 pieces in polybag for AHC(F)-XX-R, AHC5-30-R
- **BK-**  
100 pieces in carton for both AHC(F)-XX-R & AHC(F)-V-XX-R & AHC(F)-V2-XX-R, AHC5-30-R & AHC5-V-30-R & AHC5-V2-30-R
- **TR-**  
500 pieces on reel for AHC(F)-V-XX-R, AHC5-V-XX-R

### Option code

- **-V-**  
Axial leads with 38.1 length – copper tinned wire with nickel plated brass over caps
- **-V2-**  
Axial leads with 50.8 length – copper tinned wire with nickel plated brass over caps



Powering Business Worldwide

### Electrical characteristics

Amp rating	1.0 In minimum	1.5 In maximum	2.0 In maximum	3.0 In maximum
AHC - (15 A to 30 A)	4 hours	60 minutes	30 minutes	10 seconds
AHC5-30	NA	60 minutes	30 minutes	10 seconds
AHCF - (18 A & 25 A)	4 hours	60 minutes	30 minutes	10 seconds
AHCF-30	NA	60 minutes	30 minutes	10 seconds

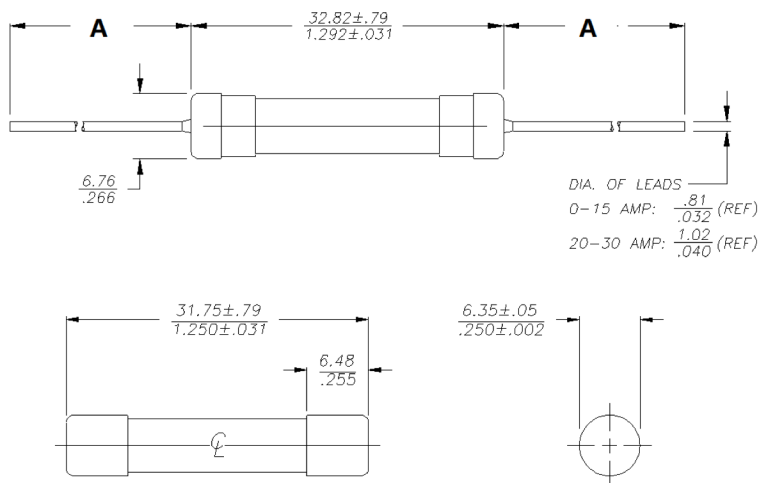
### Product specifications

Part number	Current rating (A)	Voltage rating (Vac)	Voltage rating (Vdc)	Interrupting rating @ rated voltage <sup>3</sup> (A)	Typical resistance <sup>1</sup> (mΩ)	Typical voltage drop <sup>2</sup> (mV)	Vac Interrupting rating power factor
AHC-15	15	500	500	20,000	6.6	170	0.35 ~ 0.4
AHC-18	18	500	-	20,000	5	145	0.55 ~ 0.6
AHCF-18	18	500	500	20,000	5	145	0.99 ~ 1
AHC-20	20	500	-	20,000	4.7	145	0.55 ~ 0.6
AHCF-20	20	500	500	20,000	4.7	145	0.99 ~ 1
AHC-25	25	500	-	20,000	3.9	175	0.55 ~ 0.6
AHCF-25	25	500	500	20,000	3.9	175	0.99 ~ 1
AHC5-30	30	500	-	20,000	3.3	225	0.55 ~ 0.6
AHC-30	30	450	450	10,000	2.9	165	0.35
AHCF-30	30	500	500	20,000	3.3	225	0.99 ~ 1

1. Typical resistance measured at <10% of rated current at +23 °C
2. Typical voltage drop measured at +23 °C and rated current
3. DC interrupting rating measured at rated voltage, time constant 1.95 - 2 ms

### Dimensions- mm/inches

Drawing not to scale



Part number	Dimension A
AHC(5)(F)-V-XX-R	38.1 mm (REF)
AHC(5)(F)-V2-XX-R	50.8 mm (REF)
BK-AHC(5)(F)-V-XX-R	38.1 mm (REF)
BK-AHC(5)(F)-V2-XX-R	50.8 mm (REF)
TR-AHC(5)(F)-V-XX-R	20 mm (REF)

**General specifications**

---

Operating temperature: -55 °C to +125 °C with proper correction factor applied

---

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.

---

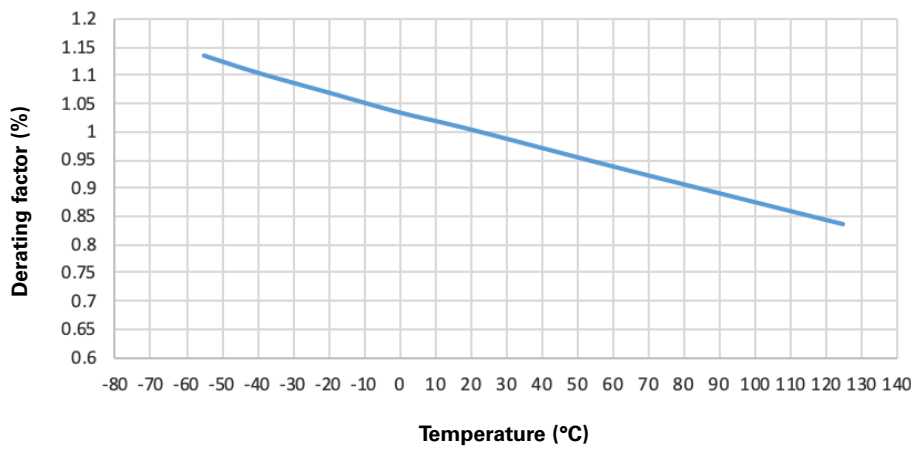
Humidity: MIL-STD-202G, Method 103B, Test Condition A: 95% RH, 0 °C, 240 hours

---

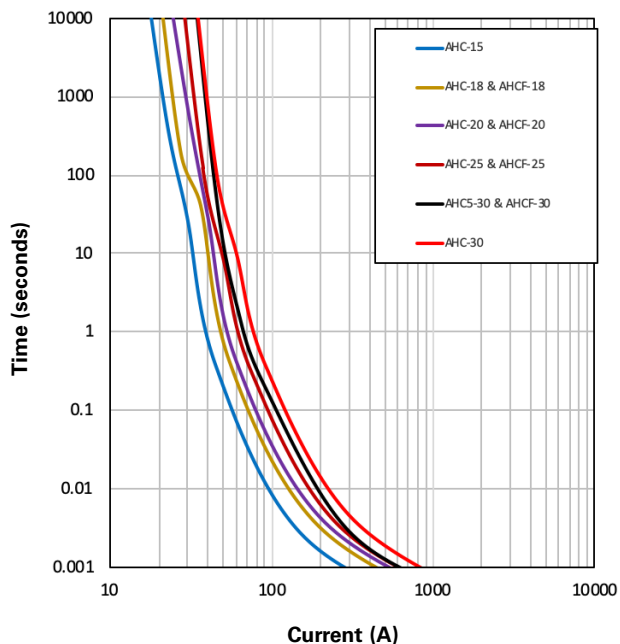
Solderability: IEC-60127-2, A.3.3: No steam ageing. Immersion conditions: +250 °C +/-3 °C, 3s +/-0.3s

---

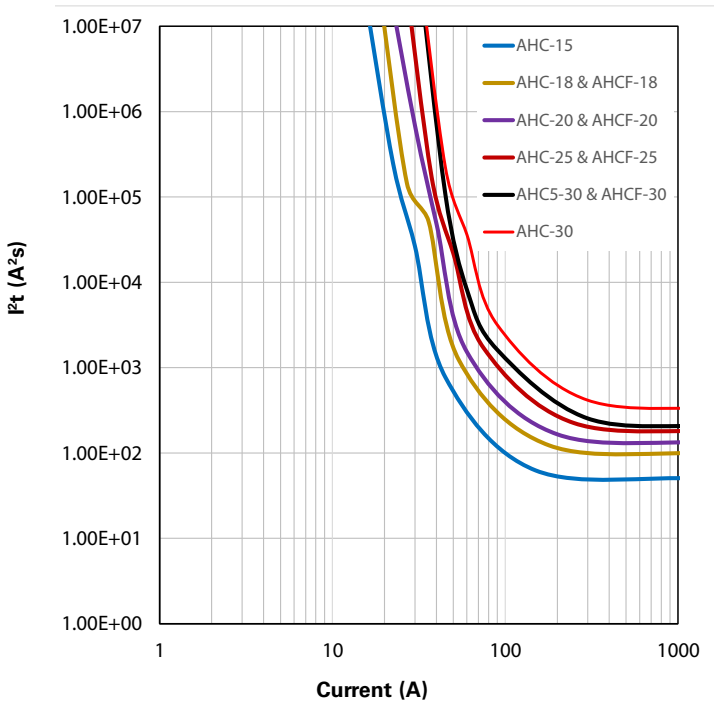
**Temperature derating curve**



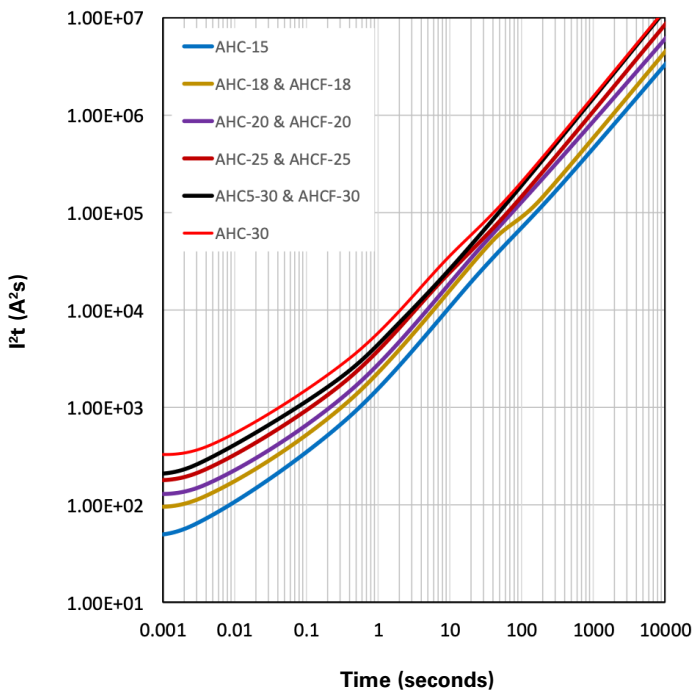
**Current vs. time curve**



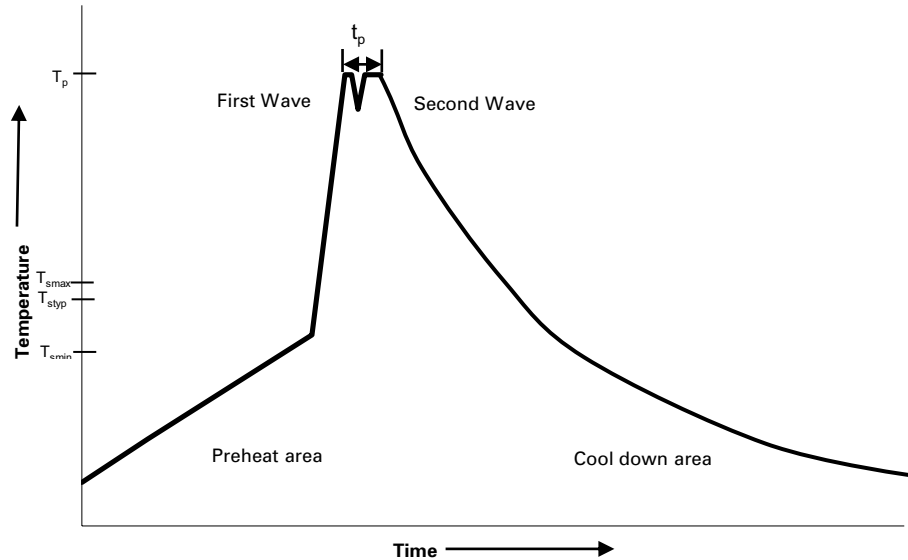
**I<sup>2</sup>t vs. current curve**



**I<sup>2</sup>t vs. time curve**



**Wave solder profile** (Axial lead only)



**Reference EN 61760-1:2006**

Profile feature	Standard SnPb solder	Lead (Pb) free solder
Preheat		
• Temperature min. ( $T_{smin}$ )	100 °C	100 °C
• Temperature typ. ( $T_{styp}$ )	120 °C	120 °C
• Temperature max. ( $T_{smax}$ )	130 °C	130 °C
• Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	70 seconds	70 seconds
$\Delta$ preheat to max Temperature	150 °C max.	150 °C max.
Peak temperature ( $T_p$ )*	235 °C – 260 °C	250 °C – 260 °C
Time at peak temperature ( $t_p$ )	10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate	~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25 °C to 25 °C	4 minutes	4 minutes

**Manual solder**

+350 °C (4-5 seconds by soldering iron), generally manual/hand soldering is not recommended

Life Support Policy: Eaton does not authorize the use of any of its products for use in life support devices or systems without the express written approval of an officer of the Company. Life support systems are devices which support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

Eaton reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Eaton also reserves the right to change or update, without notice, any technical information contained in this bulletin.

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

© 2022 Eaton  
All Rights Reserved  
Printed in USA  
Publication No. ELX1123 BU-ELX21131  
November 2022

Eaton is a registered trademark.

All other trademarks are property of their respective owners.

Follow us on social media to get the latest product and support information.

