





Eaton Bussmann® series circuit protection devices: 100 years of history

Eaton products can help safeguard virtually all forms of electronic equipment and devices. For over 100 years, Eaton's Bussmann series has been at the forefront of cutting-edge design and development of circuit protection devices for the industrial, automotive, energy management, computing, medical, and consumer markets.

Eaton offers its Bussmann series one-time fuses, fuse accessories, PTC resettable fuses, and ESD suppressors in a broad range of specifications for numerous applications.

Fuses

Almost every electronic device – from portable and consumer devices to those utilized in automotive, medical, and industrial applications – requires some degree of protection against overcurrent events. The most efficient and reliable form of overcurrent protection is the one-time fuse. As the name implies, a one-time fuse opens a circuit to prevent damage from short circuit overcurrent or overload conditions as a positive disconnect and can be replaced afterward.

Eaton's fuses serve two critical purposes: they protect components, equipment, and people from the risk of electric fire or shock caused by damaging overcurrents; they reliably isolate subsystems from the main system once a fault has occurred.

PTC resettable fuses

Eaton Bussmann series Positive Temperature Coefficient (PTC) resettable fuses are circuit protection devices that provide overcurrent and overtemperature protection. PTC resettable fuses can provide overcurrent protection during fault events similar to one-time fuses, but they are resettable, allowing them to achieve longer use over the product's lifetime.

Each PTC fuse consists of a positive temperature coefficient material whose internal resistance increases exponentially with an increase in operating temperature. Eaton PTC resettable fuses have two functional states — ON and OFF. In the ON, or "tripped" state, the device offers very high resistance in response to faults such

as short-circuiting or overheating. This limits current flow through the device until the fault is removed and the material cools, then reverts to low resistance mode. In the OFF, or "standby" state, the device maintains a low resistance as the current is within a safe range.

Selecting Eaton Bussmann series fuses

Eaton offers an extensive selection of fuses in a variety of configurations. Selecting the most suitable fuse for a specific application involves considering a wide variety of parameters. However, this catalog offers a simplified approach for choosing Eaton Bussmann® series fuses based on fuse type, technology, and footprint.

For more information on Eaton's fuses, check out our <u>fuse technology page</u> or our <u>parametric search tool</u>. Similarly, you can learn more about selecting fuse holders and consult Eaton's fuse accessory selection guide for relevant product specifications.

Circuit protection devices & applications

Cartridge and axial leaded fuses

1/4" x 1-1/4" (6.3 x 32 mm) - 3AG/3AB

1/4" x 1" (6.3 x 25 mm) - 8AG

1/4" x 7/8" - 7AG

1/4" x 5/8" - 1AG

1/4" with length rejection

5 x 20 mm

5 x 15 mm - 2AG

3 x 10 mm

3 x 8 mm

Fuseholders

Panel mount fuseholder

In-line fuseholder

Fuseblock

Circuit board mount fuseholders

Fuseclips

Radial leaded fuses

Rectangular body

Cylindrical body

Surface mount fuses

0603 (1608)

1206 (3216)

2410 (6125)

4010 (1025)

4818 (1245)

PTC resettable fuses

Surface mount

Low resistance surface mount

Radial (through hole)

Applications

	CC	MP	UTII	VG			CON	ISUI	MER			ΕN	IERG	iΥ		IND	JST	RIAL	_	N	ИED	ICA	L	TR/	NS	POR	TAT	ION
	Wireless Communication	Wired Communication	Storage	Servers	Appliances	Toys	TV/Monitor/Display	Set-Top Boxes	Wearable Electronics	Personal Communications	Personal Computing / Peripherals	Metering	Distribution	Generation	Mission Critical Power	Lighting & Security	Building & Home Control	Test & Measurement	Manufacturing Automation	Hospital Systems	Equipment	Consumable	Personal	Interior	Infotainment	Lighting	Safety Systems	Under-the-Hood
Cartridge fuse (1/4 inch)	•	•		•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•		•					
Cartridge fuse (3 mm)						•	•	•		•	•							•	•				•					
Cartridge fuse (5 mm)		•		•	•	•	•	•			•	•	•	•	•	•	•	•	•	•	•		•					
Radial leaded fuse				•	•		•	•		•	•				•	•	•	•	•	•	•		•					
surface mount fuses		•	•	•	•	•	•	•	•	•	•				•	•	•	•	•		•		•	•	•	•	•	•
Fuse holders		•		•	•	•	•	•				•	•	•	•	•	•	•	•	•	•		•					
ESD Suppressors		•	•	•	•	•	•	•	•	•	•					•	•	•	•	•	•	•	•	•	•			
PTC Resettable fuses						•	•	•	•	•	•						•						•					

Cartridge and axial leaded fuses

6.3 x 32 mm 1/4" x 1-1/4" (3AG/3AB)



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>ABC</u>	250 Vac 125 Vdc	0.25 to 30 A	10 kA (Vac) 10kA (Vdc)	UL 248	fast-acting
<u>AGC</u>	250 Vac	0.10 to 40 A	10 kA	UL 248	fast-acting
<u>GBB</u>	250 Vac 125 Vdc	1.0 to 30 A	10 kA (Vac) 10kA (Vdc)	UL 248	very fast-acting
GBA/GLD	125 Vac	0.50 to 15 A	10 kA	UL 248	fast-acting
<u>MDA</u>	250 Vac 125 Vdc	0.25 to 30 A	10 kA (Vac) 10kA (Vdc)	UL 248	time-delay
<u>MDH</u>	600 Vac	21 A	200 A	UL 248	high I2t
MDL	250 Vac	0.0625 to 30 A	10 kA	UL 248	time-delay
MDQ	250 Vac	0.0625 to 15 A	1 kA	UL 248	very time-delay
<u>TDC10</u>	1000 Vac	0.05 to 25 A	250 A	BS2950A	fast-acting
TDC11	1000 Vac	0.05 to 10 A	100 A	BS2950A	time-delay

6.3 x 25 mm 1/4" x 1" (8AG)





Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>AGX</u>	250 Vac	0.1 to 30 A	10 kA	UL 248	fast-acting
<u>TDC180</u>	240 Vac	1.0 to 13 A	6 kA	BS1362	fast / medium acting
<u>TDC600</u>	600 Vac	2.0 to 10 A	10 kA	BS1362	fast-acting
TCP70	70 Vdc	5.0 A to 30 A	2.5 kA	UL 248	high inrush

1/4" x 7/8" (7AG)



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>AGW</u>	32 Vac	1.0 to 30 A	1 kA	UL 248	fast-acting

1/4" x 5/8" (1AG)



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
AGA	250 Vac	0.25 to 10 A	1 kA	UL 248	fast-acting

1/4" with length rejection



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>SFE</u>	32 V	4.0 to 30 A	-	UL 275	fast-acting

5 x 20 mm



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>GMA</u>	250 Vac	0.063 to 15 A	10 kA	UL 248	fast-acting
<u>GMC</u>	250 Vac	0.063 to 10 A	10 kA	UL 248	medium time-delay
<u>GMD</u>	250 Vac	0.125 to 4 A	10 kA	UL 248	time-delay
<u>S500</u>	250 Vac	0.032 to 10 A	100 A	IEC 60127-2	fast-acting
<u>S501</u>	250 Vac	0.05 to 10 A	1.5 kA	IEC 60127-2	fast-acting
<u>S505</u>	250 Vac	0.5 to 12 A	1.5 kA	IEC 60127-2	time-delay
<u>S505SC</u>	250 Vac	1.0 A to 10 A	1.5 kA	IEC 60127-2	time-delay
<u>S505H</u>	600 Vac 400 Vdc	0.5 to 10 A	1.5 kA (Vac) 1.5 kA (Vdc)	IEC 60127-2	time-delay
<u>S505SCH</u>	250 Vac	3.15 to 6.3 A	1.5 kA	IEC 60127-2	time-delay high l2t
<u>S506</u>	250 Vac	0.032 to 15 A	125 A	IEC 60127-2	time-delay

5 x 15 mm (2AG)



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>C515</u>	250 Vac	0.125 to 7 A	10 kA	UL 248	time-delay
<u>C517</u>	350 Vac	3.0 A	10 kA	UL 248	fast-acting
<u>C518</u>	250 Vac	0.1 to 5 A	10 kA	UL 248	fast-acting
<u>C519</u>	250 Vac	0.125 to 5 A	10 kA	UL 248	time-delay
<u>C520</u>	250 Vac	0.1 to 5 A	10 kA	UL 248	fast-acting

3 x 10 mm



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>C310FH</u>	250 Vac	1.25 to 2 A	150 A	IEC 60127-3	fast-acting
<u>C310-SC</u>	250 Vac	2.0 to 8.0 A	80 A	IEC 60127-3	time-delay

3 x 8 mm



Fuse family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>C308F</u>	250 Vac 250 Vdc	0.04 to 0.25 A	4 kA (Vac) 4 kA (Vdc)	EN60079-11	fast-acting

Fuseholders

Panel mount fuseholder



Family	Max voltage rating	Max current rating	Fuses accepted	Circuit connections	3rd party certifications
HTB-xxI	250 V	20 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire Quick-connect	UL CSA
HTB-xxM	250 V	16 A	5 x 20 mm	Wire Quick-connect	UL CSA VDE
<u>HKP</u>	250 V	30 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire Quick-connect	UL CSA
HVP	480 V	30 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire Quick-connect	UL
<u>HK</u>	250 V	20 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire	UL CSA
<u>HMR</u>	250 V	30 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire	
<u>HGA</u>	250 V	30 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire	
HLD	250 V	15 A	1/4" x 1 1/4" (6.3 mm x 32 mm)	Wire Quick-connect	UL
<u>HJM</u>	250 V	30 A	1/4" x 1" (6.3 mm x 25 mm)	Wire Quick-connect	UL
<u>HJL</u>	250 V	15 A	1/4" x 1" (6.3 mm x 25 mm)	Wire	

In-line fuseholder



Family	Max voltage rating	Max current rating	Fuses accepted	Circuit connections	3rd party certifications
<u>HHN</u>	32 V	30 A	1/4" x 1 1/4" (6.3 mm to 32 mm)	Wire	
<u>HHB</u>	32 V	30 A	1/4" x 7/8" to 1/4" x 1 1/4"	Wire	
<u>HFA</u>	250 V	20 A	1/4" x 1 1/4" (6.3 mm to 32 mm)	Wire Quick-connect	UL
<u>HFB</u>	32 V	30 A	1/4" x 1 1/4" (6.3 mm to 32 mm)	Wire	
<u>HHK</u>	32 V	20 A	1/4" x 1 1/4" (6.3 mm to 32 mm)	Wire	
<u>HRK</u>	32 V	15 A	1/4" x 7/8" to 1/4" x 1 1/4"	Wire	
HHI/HHJ	32 V	30 A	1/4" x 1" to 1/4" x 1 1/4"	Wire	
<u>HHT</u>	250 Vac 32 Vdc	10 A	5 mm x 15 mm to 5 mm x 20 mm	Wire	
HHF-JFCU	32 Vdc	20 A	ATC blade fuses	Wire	
HVI	600 V	20 A	1/4" x 1 1/4" (6.3 mm to 32 mm)	Wire Quick-connect	UL

Fuseblock





Family	Max voltage rating	Max current rating	Fuses accepted	Circuit connections	3rd party certifications
<u>S-8000</u>	300 V	30 A	1/4" x 1 1/4"	Solder Quick-connect Screw	UL CSA
HTC-15M	250 V	20 A	5 mm x 20 mm	Thru-hole	cURus
HTC-60M	250 V	20 A	5 mm x 20 mm	Thru-hole	
HTC-78M	250 V	20 A	5 mm x 20 mm	Thru-hole	cURus
3828-X	250 V	30 A	1/4" x 1"	Screw	

Circuit board mount fuseholders





Family	Max voltage rating	Max current rating	Fuses accepted	Circuit connections	3rd party certifications
<u>HBx-I</u>	250 V	16 A	1/4" x 1 1/4"	Thru-hole	UL CSA SEMKO VDE
HBx-M	250 V	16 A	5 x 20 mm	Thru-hole	UL CSA SEMKO VDE
<u>H15</u>	250 V	10 A	5 x 20 mm	Thru-hole	cURus VDE
BK-PCS	250 V	6.3 A	Radial	Thru-hole	

Fuseclips





Family	Max current rating	Fuses accepted	Circuit connections	3rd party certifications
	40 A	10 mm	Thru-hole	cURus
	30 A	1/4" (6.3 mm)	Thru-hole	cURus
<u>1Axxxx</u>	10 A	5 mm	Thru-hole	
	15 A	ATC/ATM auto blade fuses	Thru-hole	
HTC-2xx	6.3 A	5 mm	Thru-hole	

Radial leaded fuses

Rectangular body



Family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>SS-5</u>	250 Vac	0.2 to 6.3 A	63 A	UL 248	time-delay
<u>SS-5F</u>	250 Vac	0.8 to 10 A	50 A	UL 248	fast-acting
<u>SS-5H</u>	300 Vac	1.0 to 6.3 A	100 A	IEC 60127-3	time-delay
SS-5FH	350 Vac 150 Vdc	3.15 A	100 A	UL 248	fast-acting
PC Tron	250 Vac 450 Vdc	0.5 to 5 A	5.9 kA	UL	fast-acting

Cylindrical body



Family	Max voltage rating	Ampacity range	Max interrupting rating	Performance standard	Opening characteristics
<u>SR-5</u>	250 Vac	0.10 to 6.3 A	63 A	IEC 60127-3	time-delay
SR-5F	250 Vac	0.8 to 10 A	50 A	UL 248	fast-acting
<u>SR-5H</u>	300 Vac	0.4 to 6.3 A	100 A	IEC 60127-3	time-delay
GMW	125 Vac	0.01 to 5 A	35 A	UL	fast-acting

Chip fuses

0603 (1608)





Family	Max voltage rating	Ampacity range	Max interrupting rating	Construction	Opening characteristics
<u>0603FA</u>	32 Vac 50 Vdc	0.25 to 5 A	50 A	Solid matrix	fast-acting
<u>0603HV</u>	63 Vdc	0.5 to 1.5 A	50 A	Solid matrix	fast-acting
<u>CC06H</u>	32 Vdc	1.0 to 8.0 A	50 A	Solid matrix	high I2t
CC06FA	63 Vdc	0.5 to 1.5 A	50 A	Solid matrix	fast-acting

1206 (3216)





Family	Max voltage rating	Ampacity range	Max interrupting rating	Construction	Opening characteristics
<u>3216FF</u>	32 Vac 63 Vdc	0.25 to 30 A	300 A (Vac/Vdc)	Solid matrix	fast-acting
<u>3216LV</u>	125 Vac 125 Vdc	0.25 to 1.5 A	125 A (Vac/Vdc)	Solid matrix	fast-acting
<u>3216TD</u>	32 Vac 32 Vdc	6.3 to 12 A	35 A (Vac/Vdc)	Wire in air	time-delay
CC12H	63 Vdc	0.25 to 30 A	200 A (Vdc)	Solid matrix	high I2t

Brick fuses

2410 (6125)





Family	Max voltage rating	Ampacity range	Max interrupting rating	Construction	Opening characteristics
<u>6125FF</u>	125 Vac 72 Vdc	0.5 to 15 A	50 A (Vac) 300 A (Vdc)	Wire in air	fast-acting
CB61F	125 Vac 125 Vdc	2.0 to 15 A	100A (Vac) 300 A (Vdc)	Wire in air	fast-acting
<u>6125TD</u>	125 Vac 60 Vdc	0.5 to 7 A	300 A (Vac/Vdc)	Wire in air	time-delay

4010 (1025)



Family	Max voltage rating	Ampacity range	Max interrupting rating	Construction	Opening characteristics	
<u>1025FA</u>	250 Vac 125 Vdc	0.25 to 15 A	50 A (Vac) 50 A (Vdc)	Wire in air	fast-acting	
<u>1025HC</u>	250 Vac 72 Vdc	20 to 50 A	300 A (Vac) 600 A (Vdc)	Wire in air	fast-acting	
<u>1025TD</u>	250 Vac 125 Vdc	0.25 to 5 A	50 A (Vac) 50 A (Vdc)	Wire in air	time-delay	
<u>TCP</u>	600 Vac 250 Vac	0.5 to 2 A	50 A (Vac) 60 A (Vdc)	Wire in air	time-delay	
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4818 (1245)



Family	Max voltage rating	Ampacity range	Max interrupting rating	Construction	Opening characteristics
1045HC	250 Vac 72 Vdc	40 to 50 A	300 A (Vac) 600 A (Vdc)	Wire in air	fast-acting

Surface mount





Family	Footprint	Voltage rating	Hold current range	Max fault current	3rd party certifications	
PTS0805	0805	6 to 24 Vdc	0.1 to 0.75 A	100 A	cURus TUV	
PTS1206	1206	6 to 60 Vdc	0.05 to 2 A	100 A	cURus TUV	
PTS1812	1812	6 to 60 Vdc	0.1 to 3 A	100 A	cURus TUV	

Low resistance surface mount





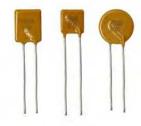






Family	Footprint	Voltage rating	Hold current range	Max fault current	3rd party certifications	
PTSLR0805	0805	6 Vdc	0.75 to 1.75 A	50 A	cURus TUV	
PTSLR1206	1206	6 Vdc	0.75 to 5.0 A	50 A	cURus TUV	
PTSLR1210	1210	6 Vdc	1.75 to 5.0 A	50 A	cURus TUV	
PTSLR1812	1812	6 Vdc	1.90 to 5.0 A	50 A	cURus TUV	

Through hole



Family	Footprint	Voltage rating	Hold current range	Max fault current	3rd party certifications
<u>PTR016V</u>	Radial	16 V	0.9 to 15 A	100 A	cURus TUV
PTR030V	Radial	30 V	0.9 to 9 A	100 A	cURus TUV
PTR060V	Radial	60 V	0.1 to 3.75 A	40 A	cURus TUV

Tools

Eaton's electronics product selection tools



PARAMETRIC SEARCH

Drill down into the Eaton Electronics product database to find the right part for your application.



IC MATCHING

Find the Eaton Electronics parts called out on IC manufacturers' demo and evaluation boards.



CROSS REFERENCE

Find a cross to a competitor's product or to an alternate Eaton Electronics part number.



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

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