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[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

## Consumer aftermarket product catalog

**Automotive and Hardware/Home Center  
circuit protection products and accessories****Bussmann**  
by **EATON**

A total retail program  
from the brand consumers  
have trusted for over 100  
years.

Bussmann is now a part of  
Eaton. Same great  
products plus even more.

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solutions. Expect more.



Leadership in Circuit Protection.

**The only company**  
that can provide a complete circuit  
protection solution for all applications.

**Only Eaton can deliver...**

- The most diverse solutions to mitigate arc flash energy to keep people and equipment safe
- The smallest and most cost effective way to meet selective coordination requirements
- The most experienced, time-tested solutions to meet national & local code requirements
- The easiest specifications with the most tested fuse/circuit breaker and circuit breaker/circuit breaker series rated combinations
- The only one-stop shop to solve your design challenges using our expertise and an unmatched portfolio

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### **Powering business worldwide**

As a global diversified power management company, we help customers worldwide manage the power needed for buildings, aircraft, trucks, cars, machinery and businesses.

Eaton's innovative technologies help customers manage electrical, hydraulic and mechanical power more reliably, efficiently, safely and sustainably.

We provide integrated solutions that help make energy, in all its forms, more practical and accessible.

With 2012 sales of \$16.3 billion, Eaton has approximately 103,000 employees around the world and sells products in more than 175 countries.

**[Eaton.com](http://Eaton.com)**

**EATON***Powering Business Worldwide*

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Bussmann circuit protection solutions comply with major industrial standards and agency requirements such as: BS, IEC, DIN, UL, NEMA, SAE, CSA, CE, C-UL, etc. and are manufactured at facilities that are ISO 9000 certified. This catalog is intended to present product data and provide technical information that will help the end user with design application. Bussmann reserves the right, without notice, to change design or construction of any products and to discontinue or limit distribution of any products. Bussmann also reserves the right to change or update, without notice, any technical information contained in this catalog. Once a product has been selected, it should be tested by the user in all possible applications. Further, Bussmann takes no responsibility for errors or omissions contained in this catalog, or for misapplication of any Bussmann product. Extensive product information is available in the Bussmann product data sheets available online at [www.bussmann.com](http://www.bussmann.com).

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### The driving force in circuit protection

Bussmann is a worldwide company that leads in developing circuit protection technology. With more than 50,000 different products across the entire fuse portfolio, Bussmann offers the broadest market coverage in the industry. This catalog focuses on hardware/home center and the automotive aftermarket products.

A leading manufacturer of automotive fuses since 1917, the Bussmann product line includes all the industry's latest circuit protection products – such as the new ATL and ATR micro blade fuses.

In addition to Bussmann's product coverage and innovative designs, there are the profit-building merchandising programs to boost your sales with attractive package assortments, high-impact displays and dynamic product merchandisers.

For additional products or technical information, contact your Bussmann sales representative, or contact our customer satisfaction team between 7:00 am and 6:00 pm Central Time at:

- (636) 527-1693
- (636) 527-1477
- Toll-free fax (877) 359-2675
- BussRetail@Eaton.com

Additional information about the products shown in this catalog, as well as all products that are available can be found in the Automotive and Hardware/Home Center price sheets.

### Automotive products

- Blade fuses
- Glass tube fuses
- Cartridge fuses
- Fusible links and limiters
- Circuit breakers
- Fuse holders, taps and blocks
- Switches and indicating lights
- Flashers
- Battery disconnect switches, fuses, separators and isolators
- Accessories
- Product displays and retail assortments

### Hardware/home center products

- Plug fuses
- Box cover units
- Cartridge fuses
- Appliance and electronic fuses
- Accessories
- Product displays and assortments

These are the mass-market products that are always in high demand. Plus, we provide a wide range of niche products - for foreign cars, special applications and more.

### About this catalog

- Only the most common numbers for each product are shown
- Complete product offerings are contained in the price sheets
- Circuit protection product specifications are listed on pages 48 to 50
- For fuses not shown in this catalog, visit [www.cooperbussmann.com/retail](http://www.cooperbussmann.com/retail).

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## Part Numbers and Package Options

### Part numbers

Some part numbers shown in this catalog are non-stock items. Always check the latest price sheet for product status and availability.

### Package options

In addition to boxed product, Bussmann makes many of its products available in packaging that is designed for various retail environments and needs. These packaging options do not apply to every product. Check the Bussmann price sheet for availability. Below are explanations of the various packaging options you'll see listed in the product tables of this catalog.

*Always consult the price sheet for minimum order quantities and increments.*

For more information, visit [www.cooperbussmann.com/retail](http://www.cooperbussmann.com/retail).

### Traditional pack

Ordering a traditional pack does not require adding an prefix and/or suffix to the basic product part number. Examples of traditional packed products are ATM, ATM\_LP, ATC and MAX blade fuses and Glass tube fuses that come in a reclosable tin. See the price sheet for availability and details on the traditional pack products.



### Blister pack

#### Prefix symbol: BP/

Blister packs are carded automotive and hardware/home center products that can be placed on a pegboard. They are generally ordered by placing a "BP/" prefix to the basic product part number.

In addition, automotive blister pack products will have an "-RP" or "-RPP" suffix. "-RP" and "-RPP" suffix blister packed products are trilingual.

#### Hardware blister pack example:

To order a blister pack of FRN-R-30 fuses, specify BP/FRN-R-30.



#### Automotive blister pack example:

To order a blister pack of ATC-4 fuses, specify BP/ATC-4-RP.



### Canadian packaging

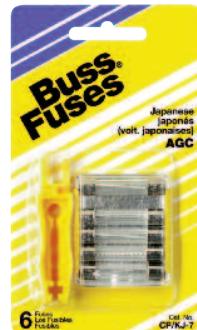
#### Prefix symbol: CP/

This is primarily for Canadian retailers where packaging requires English, French and Spanish labeling.

CP Packaging is blister packed carded product that can be placed on a pegboard. It is ordered by adding a "CP/" prefix to the basic product part number.

#### CP blister pack example:

To order a CP blister pack of MDL-2 fuses, specify CP/MDL-2.



### Value pack

#### Prefix symbol: VP/

Value packs are resealable clamshell or blister pack packages containing larger quantities of fuses than standard blister packs, and are ideal for small shops and mobile technicians.

#### Examples:

To order a value pack of ATM-5 fuses, specify VP/ATM-5-RP

To order a value pack of ATM-20ID easyID fuses, specify VP/ATM-20ID.



### Bulk pack

#### Prefix symbol: BK/

Available on select products, bulk pack fuses are available in polybags or boxes. See the price sheet for availability and details on bulk pack products.

#### Example:

To order a bulk pack box of AGC-30 fuses, specify BK/AGC-30.



### Reload

#### Suffix symbol: RLD

Available on select products, reloads are bulk fuses packed in a clear polybag with product label and bar code. Designed for reloading product into tilt-bins. See the price sheet for availability and details on reload pack products.

#### Example:

To order a reload of ATM-15 fuse, specify ATM-15RLD.



### Assortments

Designed for peg board display, assortments are a handy way to offer customers fuses in several ratings that will cover general applications.

#### Example:

To order an assortment with AGC and SFE fuses, specify the assortment number BP/AGC-SFE-A6-RP.



## ATR, ATL, ATM, and Blade Fuses

The industry standard - used in most domestic and imported cars today. All Bussmann blade fuses meet or exceed OEM and SAE standards.

### ATR blade fuses

#### 2-Leg micro fuses

New, space-saving fuses on newer vehicles, the ATR uses the same color-coding as ATM and ATC fuses.



Color code	Amps	Trad'l pack*	Blister pack*	Bulk pack**
Tan	5	ATR-5	BP/ATR-5-RP	BK/ATR-5
Brown	7½	ATR-7-½	BP/ATR-7-½-RP	BK/ATR-7-½
Red	10	ATR-10	BP/ATR-10-RP	BK/ATR-10
Blue	15	ATR-15	BP/ATR-15-RP	BK/ATR-15
Yellow	20	ATR-20	BP/ATR-20-RP	BK/ATR-20
Clear	25	ATR-25	BP/ATR-25-RP	BK/ATR-25
Green	30	ATR-30	BP/ATR-30-RP	BK/ATR-30

\* 5 Fuses per pack.

\*\* 50 Fuses per pack.

### ATM blade fuses

#### See page 8 for easyID™ illuminating versions

ATM fuses use the same universal color-coding as ATC fuses and feature an enclosed element for electrical isolation, corrosion resistance and longer service life.



Color code	Amps	Trad'l pack	Reload*	Blister pack**	Value pack***	Bulk pack†
Black	1	ATM-1	—	—	—	BK/ATM-1
Gray	2	ATM-2	ATM-2RLD	BP/ATM-2-RP	VP/ATM-2-RP	BK/ATM-2
Violet	3	ATM-3	ATM-3RLD	BP/ATM-3-RP	VP/ATM-3-RP	BK/ATM-3
Pink	4	ATM-4	—	BP/ATM-4-RP	VP/ATM-4-RP	BK/ATM-4
Tan	5	ATM-5	ATM-5RLD	BP/ATM-5-RP	VP/ATM-5-RP	BK/ATM-5
Brown	7½	ATM-7½	ATM-7½RLD	BP/ATM-7½-RP	VP/ATM-7½-RP	BK/ATM-7½
Red	10	ATM-10	ATM-10RLD	BP/ATM-10-RP	VP/ATM-10-RP	BK/ATM-10
Blue	15	ATM-15	ATM-15RLD	BP/ATM-15-RP	VP/ATM-15-RP	BK/ATM-15
Yellow	20	ATM-20	ATM-20RLD	BP/ATM-20-RP	VP/ATM-20-RP	BK/ATM-20
Clear	25	ATM-25	ATM-25RLD	BP/ATM-25-RP	VP/ATM-25-RP	BK/ATM-25
Green	30	ATM-30	ATM-30RLD	BP/ATM-30-RP	VP/ATM-30-RP	BK/ATM-30

\* 10 Fuses per pack.

\*\* 5 Fuses per pack.

\*\*\* 25 Fuses per pack.

† 500 Fuses per pack.



#### ATR fuse emergency kit

Available in a kit with one of each ATR fuse rating and a fuse puller. Order part # BP/ATR-A7-RPP.



Small footprint blister packaging makes selling more profitable by using less space.

### ATL blade fuses

#### 3-Leg micro fuses

New, space-saving fuse on newer vehicles, the ATL fuses combine protection for two circuits in one package, using the same color-coding as ATM and ATC fuses.



Color code	Amps	Trad'l pack*	Bulk pack**
Tan	5	ATL-5	BK/ATL-5
Brown	7½	ATL-7½	BK/ATL-7½
Red	10	ATL-10	BK/ATL-10
Blue	15	ATL-15	BK/ATL-15

\* 5 Fuses per pack.

\*\* 50 Fuses per pack.



#### ATL fuse emergency kit

Available in a kit with one of each ATL fuse rating and a fuse puller. Order part # BP/ATL-A4-RPP.



### Low-profile ATM blade fuses

Low-profile ATM fuses have the same ratings and universal color-coding as ATM and ATC fuses.

Color code	Amps	Trad'l pack*	Blister pack*	Value pack**	Bulk pack***
Gray	2	ATM-2LP	—	—	BK/ATM-2LP
Violet	3	ATM-3LP	—	—	BK/ATM-3LP
Pink	4	ATM-4LP	—	—	BK/ATM-4LP
Tan	5	ATM-5LP	BP/ATM-5LP-RP	—	BK/ATM-5LP
Brown	7½	ATM-7½LP	BP/ATM-7½LP-RP	—	BK/ATM-7½LP
Red	10	ATM-10LP	BP/ATM-10LP-RP	VP/ATM-10LP-RP	BK/ATM-10LP
Blue	15	ATM-15LP	BP/ATM-15LP-RP	VP/ATM-15LP-RP	BK/ATM-15LP
Yellow	20	ATM-20LP	BP/ATM-20LP-RP	VP/ATM-20LP-RP	BK/ATM-20LP
Clear	25	ATM-25LP	BP/ATM-25LP-RP	—	BK/ATM-25LP
Green	30	ATM-30LP	BP/ATM-30LP-RP	—	BK/ATM-30LP

\* 5 Fuses per pack.

\*\* 25 Fuses per pack.

\*\*\* 500 Fuses per pack.



Small footprint blister packaging makes selling more profitable by using less space.

## ATC™ and Maxi™ Blade Fuses

### ATC blade fuses

*See page 8 for easyID™ illuminating versions*

ATC Blade fuses use the industry standard color-coding to indicate amp rating. Bussmann ATC fuses are UL Recognized and feature an enclosed element for electrical isolation, corrosion resistance and longer service life.



Color code	Amps	Trad'l pack	Reload*	Blister pack**	Value pack*	Bulk pack***
Black	1	ATC-1	—	BP/ATC-1-RP	—	BK/ATC-1
Gray	2	ATC-2	—	BP/ATC-2-RP	—	BK/ATC-2
Violet	3	ATC-3	ATC-3RLD	BP/ATC-3-RP	VP/ATC-3-RP	BK/ATC-3
Pink	4	ATC-4	ATC-4RLD	BP/ATC-4-RP	VP/ATC-4-RP	BK/ATC-4
Tan	5	ATC-5	ATC-5RLD	BP/ATC-5-RP	VP/ATC-5-RP	BK/ATC-5
Brown	7½	ATC-7½	ATC-7½RLD	BP/ATC-7½-RP	VP/ATC-7½-RP	BK/ATC-7½
Red	10	ATC-10	ATC-10RLD	BP/ATC-10-RP	VP/ATC-10-RP	BK/ATC-10
Blue	15	ATC-15	ATC-15RLD	BP/ATC-15-RP	VP/ATC-15-RP	BK/ATC-15
Yellow	20	ATC-20	ATC-20RLD	BP/ATC-20-RP	VP/ATC-20-RP	BK/ATC-20
Clear	25	ATC-25	ATC-25RLD	BP/ATC-25-RP	VP/ATC-25-RP	BK/ATC-25
Green	30	ATC-30	ATC-30RLD	BP/ATC-30-RP	VP/ATC-30-RP	BK/ATC-30
Bl-Gn	35	ATC-35	—	—	—	BK/ATC-35
Orange	40	ATC-40	—	BP/ATC-40-RP	VP/ATC-40-RP	BK/ATC-40

\* 25 Fuses per pack.

\*\* 5 Fuses per pack.

\*\*\* 2000 Fuses per pack.

### Maxi (MAX) blade fuses

*See page 9 for easyID™ illuminating versions*

Maxi Fuses protect circuits in the wiring harness - usually found under the hood, in a fuse panel or supplementary panel near the battery. Ideal for aftermarket accessories (such as high-end stereos) that require protection up to 80 amps.



Color code	Amps	Trad'l. pack	Blister pack*	Bulk pack**
Yellow	20	MAX-20	BP/MAX-20-RP	BK/MAX-20
Gray	25	MAX-25	—	BK/MAX-25
Green	30	MAX-30	BP/MAX-30-RP	BK/MAX-30
Brown	35	MAX-35	—	—
Orange	40	MAX-40	BP/MAX-40-RP	BK/MAX-40
Red	50	MAX-50	BP/MAX-50-RP	BK/MAX-50
Blue	60	MAX-60	BP/MAX-60-RP	BK/MAX-60
Tan	70	MAX-70	BP/MAX-70-RP	BK/MAX-70
Clear	80	MAX-80	BP/MAX-80-RP	BK/MAX-80

\* 1 Fuse per pack.

\*\* 250 Fuses per pack.



*Small footprint blister packaging makes selling more profitable by using less space.*



*Small footprint blister packaging makes selling more profitable by using less space.*

**easyID™ Automotive Illuminating Fuses and Fuse Holders**

**Bussmann**  
 by EATON

## easyID

*Blown fuse indication*

### Finding the open fuse is easy with the Bussmann family of easyID blade fuses and holders

A drop-in replacement, up to 100 amps, is now available for applications that can benefit from open fuse indication. The easyID illuminating blade fuses and holders use LED technology if a fuse has blown, making them easy to spot in fuse panels tucked up under dark dashboards.

#### easyID ATM fuses

Following on the popularity and wide application of ATM fuses, the easyID illuminating ATM fuse is available in popular amp ratings with trilingual blister packaging that's designed for easy retail selling.



#### BP/ATM-AID fuse assortment

Contains one each of 10, 15, 20, 25 and 30 amp fuses.

#### ATM-FP-AID fuse emergency kit

Contains one each of 10, 15, 20, 25 and 30 amp fuses plus a fuse puller.

#### ATM-ID-SK service kit

Contains six each of 5, 10, 15, 20, 25 and 30 amp fuses, making this service kit ideal for fleet maintenance departments.

Color code	Amps	2 Fuse blister pack	10 Fuse value pack	50 Fuse bulk pack
Violet	3	BP/ATM-3ID	—	BK/ATM-3ID
Tan	5	BP/ATM-5ID	—	BK/ATM-5ID
Brown	7½	BP/ATM-7½ID	—	BK/ATM-7½ID
Red	10	BP/ATM-10ID	VP/ATM-10ID	BK/ATM-10ID
Blue	15	BP/ATM-15ID	VP/ATM-15ID	BK/ATM-15ID
Yellow	20	BP/ATM-20ID	VP/ATM-20ID	BK/ATM-20ID
Clear	25	BP/ATM-25ID	VP/ATM-25ID	BK/ATM-25ID
Green	30	BP/ATM-30ID	VP/ATM-30ID	BK/ATM-30ID

#### easyID ATC fuses

With a large installed base, the ATC easyID illuminating fuse has great selling potential in popular amp ratings with trilingual blister packaging that's designed for easy retail selling.



#### BP/ATC-AID fuse assortment

Contains one each of 10, 15, 20, 25 and 30 amp fuses.

#### ATC-FP-AID fuse emergency kit

Contains one each of 10, 15, 20, 25 and 30 amp fuses plus a fuse puller.

#### ATC-ID-SK service kit

Contains seven each of 5, 10, 15, 20, 25 and 30 amp fuses, making this kit ideal for fleet maintenance departments.

Color code	Amps	2 Fuse blister pack	10 Fuse value pack	50 Fuse bulk pack
Violet	3	BP/ATC-3ID	—	BK/ATC-3ID
Tan	5	BP/ATC-5ID	—	BK/ATC-5ID
Brown	7½	BP/ATC-7½ID	—	BK/ATC-7½ID
Red	10	BP/ATC-10ID	VP/ATC-10ID	BK/ATC-10ID
Blue	15	BP/ATC-15ID	VP/ATC-15ID	BK/ATC-15ID
Yellow	20	BP/ATC-20ID	VP/ATC-20ID	BK/ATC-20ID
Clear	25	BP/ATC-25ID	VP/ATC-25ID	BK/ATC-25ID
Green	30	BP/ATC-30ID	VP/ATC-30ID	BK/ATC-30ID
Blue-Green	35	BP/ATC-35ID	—	—
Orange	40	BP/ATC-40ID	—	BK/ATC-40ID



Small footprint two fuse, trilingual blister pack maximizes sales potential.



Small footprint two fuse, trilingual blister pack maximizes sales potential.

**easyID™ Automotive Illuminating Fuses and Fuse Holders**

**easyID**

*Blown Fuse Indication*

**easyID Maxi™ (MAX) fuses**

Used for protecting circuits in wiring harnesses or fuse panels found under the hood, Maxi fuses are increasingly popular on domestic and import vehicles. With ratings up to 100 amps, the Bussmann easyID Maxi illuminating fuse line is a sure seller with trilingual blister packaging that's designed for easy retail selling.



Small footprint one fuse, trilingual blister pack maximizes sales potential.

**easyID FMX female Maxi fuses**

Following on the popularity and wider application of FMX fuses for late-model vehicles, the easyID FMX fuse, with LED blown fuse indication, is available in popular amp ratings with trilingual blister packaging that's designed for easy retail selling.

Color code	Amps	1 Fuse blister pack
Blue	20	BP/FMX-20ID
Pink	30	BP/FMX-30ID
Green	40	BP/FMX-40ID
Red	50	BP/FMX-50ID
Yellow	60	BP/FMX-60ID



Small footprint one fuse, trilingual blister pack maximizes sales potential.



**easyID holders for ATM, ATC and MAX fuses**

Customers now have a way to get blown fuse indication when adding circuits with ATM, ATC and MAX easyID in-line fuse holders. Available as boxed product or in attractive, trilingual blister packaging that's designed for easy retail selling.

Fuse type	Boxed part no.	Blister pack	Max volts /amps	Lead-wire	Description
ATM	ATM-FHID	BP/ATM-FHID	32V/20A	2x4"/#16	In-line fuse holder with protective cap and open fuse illuminating LED
ATC	ATC-FHID	BP/ATC-FHID	32V/20A	2x6"/#16	In-line fuse holder with protective cap and open fuse illuminating LED
MAX	MAX-FHID	—	32V/60A	2x5"/#6	In-line fuse holder with protective cap and open fuse illuminating LED



Fuses not included.



Small footprint ATM and ATC easyID in-line fuse Holders in trilingual blister packs maximize sales potential.

### Female Maxi™ fuses

Developed to meet the demand for smaller components, the FMX and low-profile FMX female Maxi fuses offer high amp protection in compact packages. Both FMX and low-profile FMX fuses are available in amp ratings from 20 to 60A.

The new FMM micro Maxi fuse meets the latest demand for smaller, high current circuit protection products being found on new model vehicles

See page 9 for *easyID™* FMX female Maxi fuses

#### FMX

##### Female Maxi fuses



Color code	Amps	Trad'l pack	Blister pack
Blue	20	FMX-20	BP/FMX-20-RP
White	25	FMX-25	BP/FMX-25-RP
Pink	30	FMX-30	BP/FMX-30-RP
Green	40	FMX-40	BP/FMX-40-RP
Red	50	FMX-50	BP/FMX-50-RP
Yellow	60	FMX-60	BP/FMX-60-RP

Also available in a five piece value blister pack assortment containing one each of 20, 30, 40, 50 & 60A ratings. Order part number VP-FMX-A5-RP.

#### FMX\_LP

##### Low-profile female Maxi fuses



Color code	Amps	Trad'l pack	Blister pack
Blue	20	FMX-20LP	BP/FMX-20LP-RP
White	25	FMX-25LP	BP/FMX-25LP-RP
Pink	30	FMX-30LP	BP/FMX-30LP-RP
Green	40	FMX-40LP	BP/FMX-40LP-RP
Red	50	FMX-50LP	BP/FMX-50LP-RP
Yellow	60	FMX-60LP	BP/FMX-60LP-RP

#### JFH-00

##### Fuse holder for FMX fuses\*

Water resistant fuse holder for regular and low-profile FMX Maxi fuses up to 32Vdc and 50A max.

Available one per box, order part number JFH-00.



\* Complete installation requires purchase of additional components not sold by Bussmann retail.

Required components:

- Connector housing (Bussmann transportation part # 340024-A-2)
- Terminals (Delphi part #s 12129383 and 12065905 spring)
- Cable seals (Delphi part # 12129381)

Optional components:

- Terminal position clips (Bussmann transportation part # 32004-TP)
- Connector position clips (Bussmann transportation part # 32004-CP)

#### FMM

##### Micro FMX fuses



Color code	Amps	Trad'l pack*	Blister pack	Bulk pack**
Grey	15	FMM-15	BP/FMM-15-RP	BK/FMM-15
Blue	20	FMM-20	BP/FMM-20-RP	BK/FMM-20
White	25	FMM-25	BP/FMM-25-RP	BK/FMM-25
Pink	30	FMM-30	BP/FMM-30-RP	BK/FMM-30
Green	40	FMM-40	BP/FMM-40-RP	BK/FMM-40

\* Packed 1 per unit pack box, 10 per shelf carton, and 240 per master pack.

\*\* 50 Fuses per pack.

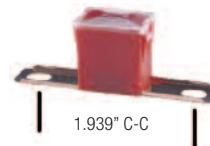
### FL Series cartridge fuses

Used primarily in Japanese-designed vehicles for wiring harness protection.

#### FLB

##### Bolt-mount fuses

Fits  $1\frac{3}{16}$ " bolt terminal fuse block.



1.939" C-C

Color code	Amps	Trad'l pack	Blister pack
Pink	30	FLB-30	BP/FLB-30-RP
Green	40	FLB-40	BP/FLB-40-RP
Red	50	FLB-50	BP/FLB-50-RP
Yellow	60	FLB-60	BP/FLB-60-RP
Brown	70	FLB-70	BP/FLB-70-RP
Black	80	FLB-80	BP/FLB-80-RP
Blue	100	FLB-100	BP/FLB-100-RP
Gray	120	FLB-120	BP/FLB-120-RP
Maroon	140	FLB-140	BP/FLB-140-RP

#### FLD

##### Bolt-mount fuses

Fits  $\frac{9}{16}$ " bolt terminal fuse block.



1.413" C-C

Color code	Amps	Trad'l pack	Blister pack
Pink	30	FLD-30	BP/FLD-30-RP
Green	40	FLD-40	BP/FLD-40-RP
Red	50	FLD-50	BP/FLD-50-RP
Yellow	60	FLD-60	BP/FLD-60-RP
Brown	70	FLD-70	BP/FLD-70-RP
Black	80	FLD-80	BP/FLD-80-RP
Blue	100	FLD-100	BP/FLD-100-RP
Gray	120	FLD-120	BP/FLD-120-RP
Maroon	140	FLD-140	BP/FLD-140-RP

#### FLF

##### Female fuses



Color code	Amps	Trad'l pack	Blister pack
Lt-Blue	20	FLF-20	BP/FLF-20-RP
Pink	30	FLF-30	BP/FLF-30-RP
Green	40	FLF-40	BP/FLF-40-RP
Red	50	FLF-50	BP/FLF-50-RP
Yellow	60	FLF-60	BP/FLF-60-RP

#### FLG

##### Female fuses



Color code	Amps	Trad'l pack	Blister pack
Red	50	FLG-50	BP/FLG-50-RP
Yellow	60	FLG-60	BP/FLG-60-RP
Black	80	FLG-80	BP/FLG-80-RP

#### FLM

##### Male fuses



Color code	Amps	Trad'l pack	Blister pack
Pink	30	FLM-30	BP/FLM-30-RP
Green	40	FLM-40	BP/FLM-40-RP
Yellow	60	FLM-60	BP/FLM-60-RP
Black	80	FLM-80	BP/FLM-80-RP
Blue	100	FLM-100	BP/FLM-100-RP
Gray	120	FLM-120	BP/FLM-120-RP
Violet	140	FLM-140	—

#### FLN

##### Female fuses with tab



Color code	Amps	Trad'l pack	Blister pack
Brown	25	FLN-25	BP/FLN-25-RP
Green	30	FLN-30	BP/FLN-30-RP

#### FLS

##### Miniature female fuses



Color code	Amps	Trad'l pack	Blister pack
Pink	30	FLS-30	BP/FLS-30-RP
Green	40	FLS-40	BP/FLS-40-RP

### Fusible link wire

The BP/FL-14 and BP/FL-16 fusible link wire kits include 14Vdc wire with printed wire gauge label. BP-FLW-14 is a six foot coil of bulk fusible link wire.

Part no.	Description
BP/FL-14	9 inches of 14 gauge fusible link wire with $\frac{3}{8}$ " and $\frac{1}{4}$ " terminals and crimp connector
BP/FL-16	9 inches of 16 gauge fusible link wire with $\frac{1}{4}$ " and $\frac{3}{16}$ " terminals and crimp connector
BP/FLW-14	6 foot coil of 14 gauge fusible link wire



### ANN and ANL current limiters

Used to protect charging systems in battery-operated vehicles like forklifts and golf carts, the ANN and ANL limiters offer high amp ratings in a compact  $\frac{7}{8}$ " x  $3\frac{3}{16}$ " size. Durable glass-laminated melamine body and riveted construction provides a rugged package and clear window provides visual indication.

Both the ANN and ANL limiters use the SFR fuse block.

#### ANN

##### Very fast-acting limiters



##### ANN trad'l pack part no. (amps)

ANN-10	ANN-125	ANN-325
ANN-35	ANN-150	ANN-350
ANN-40	ANN-175	ANN-400
ANN-50	ANN-200	ANN-500
ANN-60	ANN-225	ANN-600
ANN-80	ANN-250	ANN-700
ANN-90	ANN-275	ANN-800
ANN-100	ANN-300	—

#### ANL

##### Non time-delay limiters



##### ANL trad'l pack part no. (amps)

ANL-35	ANL-150	ANL-350
ANL-40	ANL-175	ANL-400
ANL-50	ANL-200	ANL-500
ANL-60	ANL-225	ANL-600
ANL-80	ANL-250	ANL-675
ANL-100	ANL-275	ANL-750
ANL-125	ANL-300	—
ANL-130	ANL-325	—

#### SFR

##### Block for ANL & ANN Limiters

Open stud fuse block handles up to 800 amps. Available only without cover.

Order part number **SFR**.



### AMG

#### Stud-mount fuses

AMG fuses are for high current applications on select late model vehicles and available in ratings from 80A to 500A. Use with the HMEG fuse block - see below.



Amps	Trad'l pack	Blister pack
80	AMG-80	—
100	AMG-100	—
125	AMG-125	—
150	AMG-150	—
175	AMG-175	BP/AMG-175-RP
200	AMG-200	—
225	AMG-225	—
250	AMG-250	—
300	AMG-300	—
400	AMG-400	—
450	AMG-450	—
500	AMG-500	—

### HMEG

#### Fuse block

For use with up to 500 amp AMG fuses, the HMEG bolt-in fuse holder features an impact resistant base and elastomer cover for full access and ease of wiring using 8 AWG to 1/0 wire.

Order part number **HMEG** or bulk part number **FMG-211** (packed 100 per box).



### AMI

#### Stud-mount fuses

Used in some late model vehicle systems for high power distribution.

Use with HMID fuse holder - see below.



Amps	Trad'l pack
30	AMI-30
40	AMI-40
50	AMI-50
60	AMI-60
70	AMI-70
80	AMI-80
100	AMI-100
125	AMI-125
150	AMI-150
200	AMI-200

### HMID

#### Fuse block

Use with up to 80 amp AMI fuses. Multiple blocks can be dovetailed together to form an assembly.

Removable, splash resistant cover for full access and ease of wiring using 8 AWG to 1/0 wire.

Order part number **HMID**.



## Automotive Circuit Breakers

Bussmann offers a large selection of automotive circuit breakers including both OEM-style and fuse-replacement devices.

Circuit breakers are available with three types of reset after an overcurrent event.

NOTE: Always follow the OEM's recommendations when replacing circuit breakers. Replace only with the same reset type and amp rating for aftermarket applications.

### Type I - automatic reset

Type I circuit breakers automatically reset after opening. If the fault or overcurrent condition still exists, the breaker will continue to cycle between ON and OFF positions until the overcurrent problem is corrected. These devices are sometimes called "cycling breakers." Type I/Automatic Reset circuit breakers do not address, or correct, overcurrent or fault conditions. They only react by cycling OFF and ON. Any overcurrent or fault condition that causes a Type I circuit breaker to operate should be corrected as soon as possible. Continued vehicle operation with an overcurrent or fault condition (causing the Type I circuit breaker to cycle) is NOT recommended.

### Type II - modified reset

Type II circuit breakers will remain "tripped" by an internal resistor (in the OFF position) as long as the circuit is powered. Type II breakers can be reset by turning the circuit off, or by turning the ignition switch to the OFF position. These devices are sometimes called "non-cycling breakers."

### Type III - manual reset

Type III circuit breakers will remain tripped (in the OFF position) until an indicator button or lever is manually reset. Some Type III breakers are available with a switch feature that allows the use of an external button to de-energize the circuit.

### Blade-type circuit breakers

Bussmann blade-type circuit breakers are available for ATM, ATC and MAXI fuse footprints in reset modes that correspond to SAE categories: SAE Type I (automatic reset), SAE Type II (modified reset) and SAE Type III (manual reset).

### High amp circuit breakers

High amp circuit breakers are available for automotive and marine applications in Type I and Type III reset modes. Typically used in auxiliary and accessory circuits for trucks, busses, RVs and boats, they are available in weatherproof/waterproof panel and flush mount versions. They can also be used in battery charging systems that use battery isolators to manage and protect batteries in multi-battery installations.

See page 49 for circuit breaker specifications.



Small footprint blister packaging makes selling more profitable by using less space.

### ATM footprint circuit breakers

Type I CB211 and Type II CB212 circuit breakers match the ATM fuse footprint.

Ultra-thin, to fit in tight spaces, they're the smallest automotive circuit breakers on the market and comply with SAE standard J553.

#### CB211

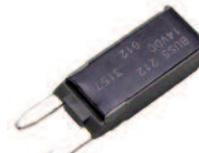
Type I ATM circuit breaker



Amps	Trad'l pack	Blister pack
7½	CB211-7½	—
10	CB211-10	BP/CB211-10-RP
15	CB211-15	BP/CB211-15-RP
20	CB211-20	BP/CB211-20-RP
25	CB211-25	BP/CB211-25-RP
30	CB211-30	BP/CB211-30-RP

#### CB212

Type II ATM circuit breaker



Amps	Trad'l pack
10	CB212-10
15	CB212-15
20	CB212-20
25	CB212-25
30	CB212-30

#### MMB

Type I, wide ATM footprint circuit breaker for GM vehicles



Amps	Trad'l pack	OEM part no.
15	MMB-15	12135171
20	MMB-20	12135072

### Mini devices

Transorb, resistor and diode electrical protection devices easily install in common ATM fuse holders and blocks. These circuit protection devices provide voltage and current limiting functionality and are designed for the on- and off-highway requirements of trucks, RVs, construction, agriculture, ATV and material handling equipment.

- Transorb** - Protects against voltage spikes.  
 Clamp rating: 27Vdc.  
 Power rating: 1500W
- Resistor** - Drops circuit voltage.  
 Power rating: 5W.  
 Resistance: 68Ω.
- Diode** - Prevents reverse current flow.  
 Amp rating: 6A.



Trad'l pack	Description
CB22901-1.5	Transorb voltage spike protector
CB22902-68	Resistor voltage drop device
CB22903-6	Diode reverse current protector
CB22903-6V	Diode reverse current protector with wing key

#### ATC circuit breakers

Type I CB221 and Type II CB222 circuit breakers match the ATC fuse footprint. They are the thinnest available in the aftermarket and comply with SAE standard J553. CB227 complies with SAE J553 and SAE J1171 for ignition protection. Bussmann also offers the ACB-20, CCB-25, and FCB-20 breakers as replacements for specific OEM applications.

#### ACB-20

Type I ATC circuit breaker for GM vehicles



Amps	Trad'l pack	OEM no.
20	ACB-20	12040816

#### CB221

Type I ATC circuit breakers



Amps	Trad'l pack
7½	CB221-7½
10	CB221-10
15	CB221-15
20	CB221-20
25	CB221-25
30	CB221-30

#### CB222

Type II ATC circuit breakers



Amps	Trad'l pack
10	CB222-10
15	CB222-15
20	CB222-20
25	CB222-25
30	CB222-30

#### CB223

Type III ATC circuit breakers



Amps	Trad'l pack
7½	CB223-7½
10	CB223-10
15	CB223-15
20	CB223-20
25	CB223-25
30	CB223-30

#### CB227

Type III ATC low-profile circuit breakers



Color code	Amps	Trad'l pack
Tan	5	CB227-05
Moss Green	6	CB227-06
Brown	7½	CB227-7½
Red	10	CB227-10
Blue	15	CB227-15
Yellow	20	CB227-20
White	25	CB227-25
Green	30	CB227-30

#### CBB-30

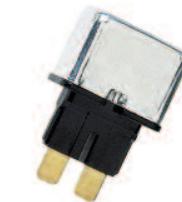
Type II ATC circuit breaker



Amps	Trad'l pack	Blister pack
30	CBB-30	BP/CBB-30-RP

#### CCB-25

Type I ATC circuit breaker for Chrysler vehicles



Amps	Trad'l pack	OEM no.
CCB-25	CCB-25	4527053

#### FCB-20

Type II ATC circuit breaker for Ford vehicles



Amps	Trad'l pack	Blister pack	OEM no.
20	FCB-20	BP/FCB-20	D9AB-14526-BA

#### UCB

Type I ATC circuit breakers

UCB breakers feature "snap-off" universal blades to fit tight fuse block spacing or recessed fuse terminals.



Color code	Amps	Trad'l pack	Blister pack	Bulk pack*
Plain	6	UCB-6	—	—
Brown	8	UCB-8	—	BK/UCB-8
Red	10	UCB-10	BP/UCB-10-RP	BK/UCB-10
Blue	15	UCB-15	BP/UCB-15-RP	BK/UCB-15
Yellow	20	UCB-20	BP/UCB-20-RP	BK/UCB-20
Plain	25	UCB-25	BP/UCB-25-RP	—
Green	30	UCB-30	BP/UCB-30-RP	BK/UCB-30

\* 100 circuit breakers per pack.

## Automotive Circuit Breakers

### Maxi™ circuit breakers

Bussmann Maxi circuit breakers are the only breakers on the market to match the Maxi fuse footprint and body dimensions.

#### CB1911

##### Type I MAX circuit breakers



Part no. (amps)	Traditional pack
CB1911-10	CB1911-10
CB1911-15	CB1911-15
CB1911-20	CB1911-20
CB1911-25	CB1911-25
CB1911-30	CB1911-30
CB1911-35	CB1911-35
CB1911-40	CB1911-40
CB1911-50	CB1911-50

#### CB1921

##### Type II MAX circuit breakers



Part no. (amps)	Traditional pack
CB1921-10	CB1921-10
CB1921-15	CB1921-15
CB1921-20	CB1921-20
CB1921-25	CB1921-25
CB1921-30	CB1921-30

### Glass tube footprint breakers

#### CBF

##### Type II circuit breakers for glass tube fuse blocks

CBF circuit breakers can be used to replace glass fuses in blocks for  $1/4" \times 1\frac{1}{4}"$  fuses.

Part no. (amps)	Trad'l pack	Blister pack
CBF-10	CBF-10	—
CBF-15	CBF-15	—
CBF-20	CBF-20	BP/CBF-20-RP
CBF-25	CBF-25	—
CBF-30	CBF-30	BP/CBF-30-RP
CBF-35	CBF-35	—
CBF-40	CBF-40	—



Small footprint blister packaging makes selling more profitable by using less space.

### Heavy-duty circuit breakers

Ideal for many heavy-duty and truck applications, Bussmann stud-terminal and quick-connect circuit breakers are available with and without a mounting bracket and comply with SAE standard J553.

#### CB123-B

##### Type III 10-32 stud-terminal circuit breakers with crosswise bracket and cover



Part no. (amps)	Traditional pack
CB123-10B	CB123-10B
CB123-15B	CB123-15B
CB123-20B	CB123-20B
CB123-30B	CB123-30B
CB123-40B	CB123-40B
CB123-50B	CB123-50B

#### CB123-HB

##### Type III 10-32 stud-terminal circuit breakers with lengthwise bracket and cover



Part no. (amps)	Traditional pack
CB123-10HB	CB123-10HB
CB123-15HB	CB123-15HB
CB123-20HB	CB123-20HB
CB123-30HB	CB123-30HB
CB123-40HB	CB123-40HB
CB123-50HB	CB123-50HB

#### CBC

##### Type I 10-32 stud-terminal circuit breakers



Part no. (amps)	Traditional pack
CBC-8	CBC-8
CBC-10	CBC-10
CBC-15	CBC-15
CBC-20	CBC-20
CBC-25	CBC-25
CBC-30	CBC-30
CBC-35	CBC-35
CBC-40	CBC-40
CBC-50	CBC-50

#### CBC-B

##### Type I 10-32 stud-terminal circuit breakers with crosswise bracket



Part no. (amps)	Trad'l pack	Blister pack
CBC-8B	CBC-8B	—
CBC-10B	CBC-10B	—
CBC-15B	CBC-15B	—
CBC-20B	CBC-20B	BP/CBC-20B-RP
CBC-25B	CBC-25B	—
CBC-30B	CBC-30B	BP/CBC-30B-RP
CBC-35B	CBC-35B	—
CBC-40B	CBC-40B	BP/CBC-40B-RP
CBC-50B	CBC-50B	BP/CBC-50B-RP

**CBC-BWP**

Type I 10-32 stud-terminal weatherproof circuit breakers



Part no. (amps)	Traditional pack
CBC-20BWP	CBC-20BWP
CBC-30BWP	CBC-30BWP

**CBC-HB**

Type I 10-32 stud-terminal circuit breakers with lengthwise bracket



Part no. (amps)	Traditional pack	Blister pack
CBC-10HB	CBC-10HB	—
CBC-15HB	CBC-15HB	—
CBC-20HB	CBC-20HB	BP/CBC-20HB-RP
CBC-25HB	CBC-25HB	—
CBC-30HB	CBC-30HB	BP/CBC-30HB-RP
CBC-40HB	CBC-40HB	BP/CBC-40HB-RP
CBC-50HB	CBC-50HB	BP/CBC-50HB-RP

**CBP-BA**

Type I 10-32 stud-terminal circuit breakers with crosswise bracket



Part no. (amps)	Traditional pack
CBP-20BA	CBP-20BA
CBP-25BA	CBP-25BA
CBP-30BA	CBP-30BA
CBP-40BA	CBP-40BA
CBP-50BA	CBP-50BA

**Quick-connect circuit breakers**

For use in trucks, RVs, boats, buses, etc. featuring 1/4" quick-connect terminals for easy installation.

**CB174**

Type III panel-mount circuit breakers with 1/4" quick-connect terminals



Part no. (amps)	Traditional pack
CB174-10	CB174-10
CB174-15	CB174-15
CB174-20	CB174-20
CB174-30	CB174-30

**CBT-M**

Type II circuit breakers for Mack trucks with 1/4" blades on 1" centers



Part no. (amps)	Traditional pack
CBT-10M	CBT-10M
CBT-15M	CBT-15M
CBT-20M	CBT-20M
CBT-25M	CBT-25M
CBT-30M	CBT-30M

**CBT-N**

Type II circuit breakers for Navistar trucks with 1/4" blades on 1.08" centers



Part no. (amps)	Traditional pack
CBT-15N	CBT-15N
CBT-20N	CBT-20N
CBT-25N	CBT-25N
CBT-30N	CBT-30N

**CBU**

Type I circuit breaker with 1/4" quick-connect terminals on 0.99" centers with crosswise bracket



Part no. (amps)	Traditional pack
CBU-30B	CBU-30B

### High amp circuit breakers

High amp circuit breakers are typically used in auxiliary and accessory circuits for trucks, buses, RVs and marine applications.

#### CB181F

Type I waterproof, flush-mount circuit breakers with SEMS nuts installed



Amps	Part no. (boxed only)
60	CB181F-60
70	CB181F-70
80	CB181F-80
90	CB181F-90
100	CB181F-100
110	CB181F-110
120	CB181F-120
135	CB181F-135
150	CB181F-150

#### CB184F

Type III waterproof, flush-mount, manual reset circuit breakers with SEMS nuts installed



Amps	Part no. (boxed only)
25	CB184F-25
30	CB184F-30
35	CB184F-35
40	CB184F-40
50	CB184F-50
60	CB184F-60
70	CB184F-70
80	CB184F-80
90	CB184F-90
100	CB184F-100
110	CB184F-110
120	CB184F-120
135	CB184F-135
150	CB184F-150

#### CB185

Type III switchable, waterproof, flush-mount manual reset circuit breakers with  $\frac{1}{4}$ -28 threaded stud terminals with SEMS nuts installed, and black reset lever



Amps	Boxed	Blister pack
25	CB185-25	—
30	CB185-30	—
35	CB185-35	—
40	CB185-40	—
50	CB185-50	BP/CB185-50
60	CB185-60	—
70	CB185-70	—
80	CB185-80	—
90	CB185-90	—
100	CB185-100	BP/CB185-100
110	CB185-110	—
120	CB185-120	BP/CB185-120
135	CB185-135	BP/CB185-135
150	CB185-150	BP/CB185-150

All high amp circuit breakers comply with the SAE J1117 standard for ignition protection and have applications in battery charging systems that use battery isolators to manage and protect batteries in multi-battery installations. Offered in flush-mount or panel-mount.

#### CB185P

Type III switchable, panel-mount, manual reset circuit breakers with SEMS nuts installed



Amps	Part no. (boxed only)
25	CB185P-25
30	CB185P-30
35	CB185P-35
40	CB185P-40
50	CB185P-50
60	CB185P-60
70	CB185P-70
80	CB185P-80
90	CB185P-90
100	CB185P-100
110	CB185P-110
120	CB185P-120
135	CB185P-135
150	CB185P-150

#### CB285F

Type III switchable, waterproof, flush-mount manual reset circuit breakers with M6 threaded stud terminals with stainless steel nuts and washers installed, and yellow reset lever



Amps	Part no. (boxed only)
30	CB285F-30
40	CB285F-40
50	CB285F-50
60	CB285F-60
70	CB285F-70
80	CB285F-80
90	CB285F-90
100	CB285F-100
120	CB285F-120
150	CB285F-150

**Marine-rated circuit breakers**

Specifically designed to meet the needs of marine applications, the CB187F and CB187P offer 5kA interrupting ratings and ignition protection per ABYC E-11.

Usable as an ON/OFF switch (capable of withstanding 3000 on/off cycles @48Vdc), they have corrosion resistant plating on  $\frac{5}{16}$ -18 copper terminals.

**CB187F**

Type III marine-rated flush-mount manual reset circuit breakers with switch function and nuts/lock washers installed



Amps	Part no. (boxed only)
25	CB187F-25
30	CB187F-30
35	CB187F-35
40	CB187F-40
50	CB187F-50
60	CB187F-60
70	CB187F-70
80	CB187F-80
100	CB187F-100
110	CB187F-110
120	CB187F-120
135	CB187F-135
150	CB187F-150
200	CB187F-200

**CB187P**

Type III marine-rated panel-mount manual reset circuit breakers with switch function and nuts/lock washers installed



Amps	Part no. (boxed only)
25	CB187P-25
30	CB187P-30
35	CB187P-35
40	CB187P-40
50	CB187P-50
60	CB187P-60
70	CB187P-70
80	CB187P-80
90	CB187P-90
100	CB187P-100
110	CB187P-110
120	CB187P-120
135	CB187P-135
150	CB187P-150

**CB251**

Type I ignition protected weatherproof panel-mount manual reset circuit breakers with SEMS nuts installed, 32Vdc



Amps	Part no. (boxed only)
10	CB251-10
15	CB251-15
20	CB251-20
25	CB251-25
30	CB251-30
35	CB251-35
40	CB251-40
50	CB251-50

**CB255**

Type III ignition protected, weatherproof, panel-mount manual reset circuit breakers with "Push-to-Trip" option and SEMS nuts installed, 32Vdc



Amps	Part no. (boxed only)
10	CB255-10
15	CB255-15
20	CB255-20
25	CB255-25
30	CB255-30
35	CB255-35
40	CB255-40
50	CB255-50

## Fuse Holders

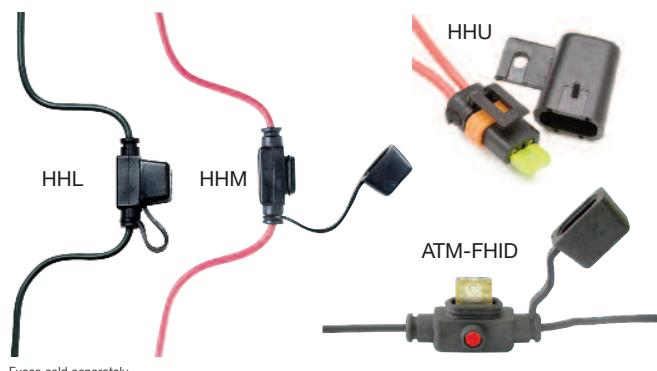
Bussmann offers a complete line of fuse holders to install blade or glass tube fuses. Choose water resistant and/or splash-proof versions for extra protection in special applications. Four available connector types meet the needs of technicians and do-it-yourselfers:

- **Wire loop:** To install, simply cut the wire, strip ends and attach each end to the circuit. Requires using additional connectors. See part numbers HHK, HMJ, HMK, HRI, HRJ and HRK.
  - **Open wire:** To install, simply strip lead ends and attach each end to the circuit. Requires using additional connectors. See part numbers ATC-FHID, ATM-FHID, MAX-FHID, HHC, HHD, HHF, HHG, HHL, HHM, HHN, HHR, HHU and HHX.
  - **Crimp-on:** Strip the wire, insert into fuse holder and crimp tightly, and you're done. No additional hardware needed. See part numbers HFA, HFB and HHB.
  - **Self-stripping:** To install simply locate fuse holder at a convenient spot along the wire. Snap fuse holder closed around wire to automatically pierce insulation. See part number HHS.
  - **Solder:** To install simply solder the wire onto the holder's terminals. See part number HKP.
  - **Quick-connect:** Attach fully insulated female terminal onto the  $1/4$ " quick-connect terminals. See part numbers HKP-HH, HTB-26I, HTB-38I, HTB-68I and HTB-88I. Select fuse holders by matching it to the wire size being fused. An undersized fuse holder will increase electrical resistance and reduce performance in the circuit.
- NOTE: Never install a fuse with a larger amp rating than specified for the application, holder or wire size.

### In-line ATM fuse holders

Trad'l pack	Blister pack	Max volts/amps	Leadwire	Description
HHL	BP/HHL-RP	32V/20A	2x4"/#16	Holder with cover
HHM	BP/HHM-RP	32V/30A	2x4"/#12	Holder with cover
HHU	BP/HHU	32V/30A	2x4"/#12	Water-resistant holder
ATM-FHID*	BP/ATM-FHID*	32V/20A	2x4"/#16	Holder with protective cover and open fuse illuminating LED

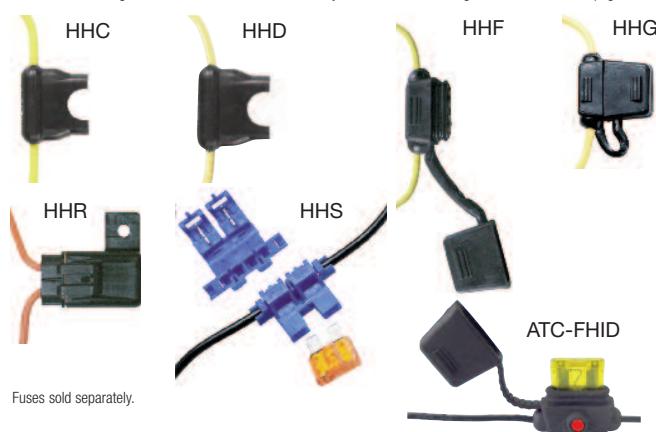
\* For use with regular ATM fuses. For details on the easyID™ line of illuminating ATM blade fuses, see page 8.



### In-line ATC fuse holders

Trad'l pack	Blister pack	Max volts/amps	Leadwire	Description
HHC	BP/HHC-RP	32V/20A	2x4"/#16	Yellow water-resistant holder
HHD	BP/HHD-RP	32V/30A	2x4"/#12	Heavy-duty fuse holder
—	BP/HHD-30-RP	32V/30A	2x4"/#12	Holder with ATC-30A fuse
HHF	BP/HHF-RP	32V/20A	2x4"/#16	Holder with protective cover
HHG	BP/HHG-RP	32V/30A	2x4"/#12	Heavy-duty holder with cover
HHR	BP/HHR	32V/30A	2x5"/#12	Heavy-duty water-resistant holder
—	BP/HHS-RP	32V/20A	#18 to 14	Self-stripping fuse holder
ATC-FHID*	BP/ATC-FHID*	32V/20A	2x6"/#16	Holder with protective cover and open fuse illuminating LED

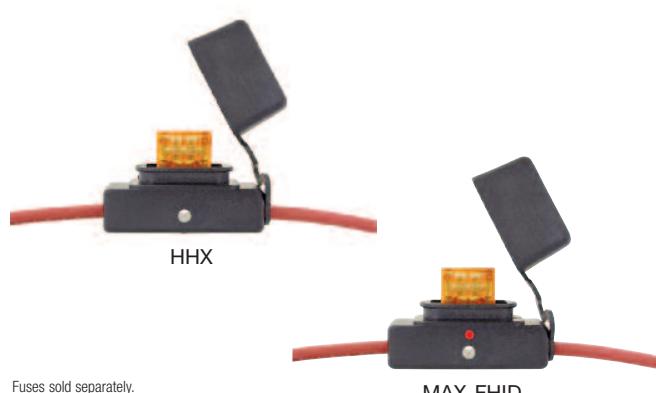
\* For use with regular ATC fuses. For details on the easyID™ line of illuminating ATC blade fuses, see page 8.



### In-line Maxi fuse holders

Boxed part no.	Blister pack	Max volts/amps	Lead-wire	Description
HHX	—	32V/60A	2x5"/#6	Fuse holder with cover
MAX-FHID*		32V/60A	2x5"/#6	Fuse holder with protective cap and open fuse illuminating LED

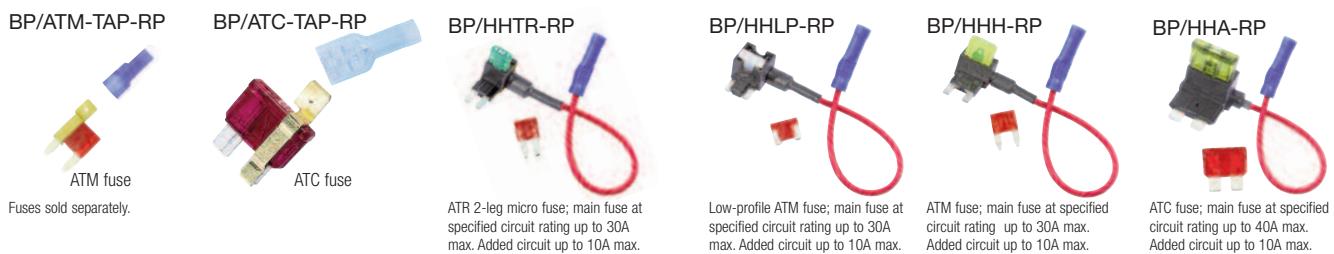
\* For use with regular Maxi fuses. For details on the easyID™ line of illuminating Maxi blade fuses, see page 9.



## Fuse Taps and Holders

### ATR, low-profile ATM, ATM and ATC add-a-circuits and fuse taps

Blister pack	Description
BP/ATM-TAP-RP	5-count: taps into existing ATM fuse for additional non-fused circuit, includes crimp-on connector - fuses not included
BP/ATC-TAP-RP	5-count: taps into existing ATC fuse by fitting over the leg for additional non-fused circuit, includes crimp-on connector - fuses not included
BP/HHTR-RP	Adds a 10A max ATR 2-leg micro fuse circuit by inserting into an existing ATR fuse block with 5 inch #16 leadwire and crimp connector - fuses not included
BP/HHLP-RP	Adds a 10A max low-profile ATM fuse circuit by inserting into an existing ATM fuse block with 5 inch #16 leadwire and crimp connector - fuses not included
BP/HHH-RP	Adds a 10A max ATM fuse circuit by inserting into an existing ATM fuse block with 5 inch #16 leadwire and crimp connector - fuses not included
BP/HHA-RP	Adds a 10A max ATC fuse circuit by inserting into an existing ATC fuse block with 5 inch #16 leadwire and crimp connector - fuses not included



### Glass tube in-line holders for $\frac{1}{4}$ " diameter fuses

Trad'l pack	Blister pack	Fuse/size	Max volts/amps	Leads/terminals	Description/feature
HFA	—	$\frac{1}{4}$ " x $1\frac{1}{4}$ "	250V/20A	Crimp #12 to 16 wire	Water-resistant - black body
HFB	—	$\frac{1}{4}$ " x $11\frac{1}{4}$ "	32V/30A	Crimp #12 to 18 wire	Water-resistant - yellow body
HHB	BP/HHB-RP	$\frac{1}{4}$ " x $\frac{3}{8}$ " to $1\frac{1}{4}$ "	32V/30A	Crimp #12 to 16 wire	Universal - yellow body
HHK	BP/HHK-RP	$\frac{1}{4}$ " x $\frac{3}{8}$ " to $1\frac{1}{4}$ " & SFE-20	32V/20A	#14 leadwire/yellow	Universal nylon, twist lock, no fuse - black body
HHN	BP/HHN-RP	$\frac{1}{4}$ " x $1\frac{1}{4}$ "	32V/30A	#12 leadwire/yellow	Nylon heavy-duty with AGC-30 fuse - white body
HMJ	BP/HMJ-RP	For SFE-20 (included)	32V/20A	8" of #14 leadwire/black	With fuse and wire loop leads - black body
HMK	BP/HMK-RP	$\frac{1}{4}$ " x $1\frac{1}{4}$ " & SFE-20	32V/30A	#12 leadwire/black	No fuse, wire loop leads - black body
HRH	—	For SFE-9 (included)	32V/9A	19" of #14 leadwire	With fuse and wire loop leads - black body
HRI	—	For SFE-14 (included)	32V/14A	19" of #14 leadwire/black	With fuse and wire loop leads - gray body
HRJ	—	For SFE-20 (included)	32V/20A	19" of #14 leadwire/black	With fuse and wire loop leads - black body
HRK	BP/HRK-RP	$\frac{1}{4}$ " dia. x $\frac{3}{8}$ " to $1\frac{1}{4}$ "	32V/15A	#14 leadwire/black	Universal with wire loop leads and springs for different fuse lengths - black body



### Panel-mount holders for $\frac{1}{4}$ " x $1\frac{1}{4}$ " fuses

Trad'l pack	Blister pack	Description/mounting	Max. panel thickness	Knob type	Terminals	Max volts/amps
HKP	—	High-profile cover knob, rear hexnut	0.3"	Knob	Solder terminals	250V/30A
HKP-HH	BP/HKP-HH-RP	High-profile cover knob, rear hexnut	0.3"	Knob	$\frac{1}{4}$ " quick-connect terminals	250V/15A
HTB-26I	—	Low-profile cover knob, rear hexnut	0.3"	Knob	In-line $\frac{1}{4}$ " quick-connect terminals	250V/20A
HTB-38I	—	Low-profile cover knob, rear hexnut	0.3"	Screwdriver/Slotted	Right angle $\frac{1}{4}$ " quick-connect terminals	250V/20A
HTB-68I	—	Low-profile cover knob, front hexnut	0.3"	Knob	Right angle $\frac{1}{4}$ " quick-connect terminals	250V/20A
HTB-88I	—	Low-profile cover knob, through-hole snap	0.125"	Knob	Right angle $\frac{1}{4}$ " quick-connect terminals	250V/20A



## Fuse Panels and Blocks

**Bussmann**  
 by

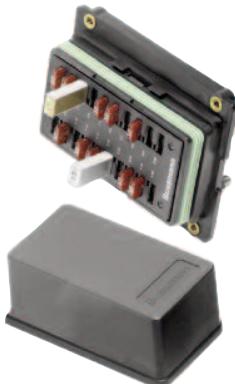
Designed for versatility, durability and ease-of-installation, Bussmann fuse panels and blocks deliver the ideal solution for many applications. Bussmann fuse panels and blocks are molded of high-performance thermoplastic, and feature high quality hardware in a choice of connector styles.

### RTMF ATM fuse panel

The Rear Terminal 20 Position RTMF Fuse Panel for ATM fuses provides efficient power distribution in a rugged compact package.

The RTMF offers a weather tight enclosure (IP66/67) for ATM fuses and circuit breakers when cover, cable seals, and cavity plugs are installed.\*

\* Electrical terminals, cable seals and cavity plugs are either Delphi Packard Metri-Pack® 280 Series terminals (sealed/tangless) or AMP® terminals. They accept #12-22 AWG wire sizes. Delphi Packard 280 Series cavity plugs are installed where wires are not used. Seals and cavity plugs not sold by Bussmann.



Shown with deep cover.  
 Fuses and circuit breakers sold separately.

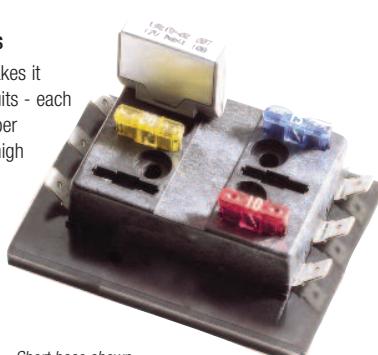
Part no. (boxed only)	Description
RTMF	20 position fuse block
RTMF-SC	20 position fuse block with shallow cover
RTMF-DC	20 position fuse block with deep cover

### 15600 Series ATC fuse panels

A single, common power input makes it simple to wire multiple fused circuits - each rated to 20 amps (95 amps max per panel), up to 32 volts. Molded of high grade thermoplastic, for superior performance, the 15600 Series Fuse Panel features  $\frac{1}{4}$ " quick-connect terminals for easy installation. Recessed fuse contacts provide finger-safe protection.

Available in short base (without ground pad terminal strip) and long base (includes ground pad terminal strip that provides  $\frac{1}{4}$ " quick connect terminals for separate ground lead connection).

**Note:** The 15600 Series ATC fuse panels are not intended for installation under the hood or in an environment that would expose them to water or extreme temperatures.



Short base shown.  
 Fuses and circuit breakers sold separately.

Fuse positions	Short base part no.	Short base blister pack	Long base part no.
4	15600-04-20	—	15600-04-21
6	15600-06-20	BP/15600-06-20	15600-06-21
8	15600-08-20	—	15600-08-21
10	15600-10-20	—	15600-10-21
12	15600-12-20	—	15600-12-21
14	15600-14-20	—	15600-14-21
16	15600-16-20	—	15600-16-21
18	15600-18-20	—	15600-18-21
20	15600-20-20	—	15600-20-21

### Power distribution relay module and fuse block

The sealed Power Fuse Module (CBPFM) and Power Relay Module (CBPRM) are compact power distribution modules for high current applications having extreme moisture and high vibration.

The CBPFM Power Fuse Module has two FMX fuse positions for separate circuits.

The 24 volt CBPRM Power Relay Module contains a 35A relay and two FMX fuse positions (one protects the relay and the other a single-circuit in-line fuse).

Both the CBPRM and CBPFM feature rugged M8 power input studs, and an IP66 removable, weather-tight cover to protect the fuse positions.

Electrical terminations not supplied by Bussmann, FMX fuses sold separately.



CBPFM Power Fuse Module

CBPRM Power Relay Module

### S-8202 Series 300 volt, 20 amp glass tube fuse blocks

S-8202 Series blocks with  $\frac{1}{4}$ " quick-connect 40° bend terminals are available in 1 up to 12 poles. Break-away design permits snapping off or combining poles to get the exact number required for the application. UL Recognized, 20 amps maximum.



Fuse block poles	Trad'l pack	Blister pack
1	S-8202-1	—
2	S-8202-2	BP/S-8202-2-RP
3	S-8202-3	—
4	S-8202-4	BP/S-8202-4-RP
5	S-8202-5	—
10	S-8202-10	—
12	S-8202-12	—

### S-8301 Series 300 volt, 30 amp glass tube fuse blocks

S-8301 Series blocks with screw connect terminals are available in 1 up to 12 poles. Break-away design permits snapping off or combining poles to get the exact number required for the application. UL Recognized, 30 amps maximum.



Fuse block poles	Trad'l pack
1	S-8301-1
2	S-8301-2
3	S-8301-3
4	S-8301-4
5	S-8301-5
6	S-8301-6
8	S-8301-8
12	S-8301-12

### Junction blocks

**C1938** Feed-through stud-type junction block  $\frac{3}{8}$ -16 thread/stud size, 250\* amps max.



BP/C1938

**JB3816-2** Non-feed through stud-type junction block  $\frac{3}{8}$ -16 thread/stud size, 250\* amps max.

BP/JB3816-2

\* Voltage rating dependent upon installation.

Poles	Trad'l pack	Blister pack	Description/color	Stud thread
1	—	BP/C1938	Stud junction feed through block - black	$\frac{3}{8}$ -16
1	JB3816-2	BP/JB3816-2	Stud junction block - black	$\frac{3}{8}$ -16
1	JB3816-3	—	Stud junction block - red	$\frac{3}{8}$ -16

### Terminal strips

**BP/C5237** Stud junction blocks are designed for trucks, RVs and wiring accessories. Available in 3, 6 and 8 terminal configurations, they are rated for applications to 30A, 300V (UL) / 600V (CSA).

Poles	Blister pack	Stud/type	Stud	Volts/amps
3	BP/C5237-3BC	Stud junction block	10-32	300V/30A
6	BP/C5237-6BC	Stud junction block	10-32	300V/30A
8	BP/C5237-8BC	Stud junction block	10-32	300V/30A



BP/C5237-BC

### Terminal blocks

TB200 and TB300 Series double row barrier blocks are nickel-plated brass with black thermoplastic construction and available only in bulk packs of 50 each.

Poles	Part no.	Stud/Type	Screw	Volts/amps
4	TB200-04B	Double row barrier block	6-32	300V/20A
6	TB200-06B	Double row barrier block	6-32	300V/20A
8	TB200-08B	Double row barrier block	6-32	300V/20A
10	TB200-10B	Double row barrier block	6-32	300V/20A
15	TB200-15B	Double row barrier block	6-32	300V/20A
4	TB300-04B	Double row barrier block	8-32	600V/30A
6	TB300-06B	Double row barrier block	8-32	600V/30A
8	TB300-08B	Double row barrier block	8-32	600V/30A
10	TB300-10B	Double row barrier block	8-32	600V/30A
12	TB300-12B	Double row barrier block	8-32	600V/30A
20	TB300-20B	Double row barrier block	8-32	600V/30A

TB200-B



TB300-B



## Switches & Indicating Lights

**Bussmann**  
 by EATON

### Toggle and rocker switches

Bussmann offers a line of single pole toggle switches, rocker switches and duck bill toggle switches, and indicating lights in a variety of styles, colors and finishes for replacement applications or custom installations.

#### Toggle switches with disconnect terminals

Color	"BP" part no.*	"CP" part no.**	Function	Rating	Feature
Black	BP/SDN	CP/STP	ON/OFF	12V/20A	—
Black	BP/STF	CP/STF	ON/OFF/ON	12V/20A	—
Chrome	BP/STT	CP/STT	ON/OFF	12V/20A	Red LED

\* Blister pack.

\*\* Canadian compliant blister pack.



#### Illuminated toggle switches with disconnect terminals

Color	"BP" part no.*	"CP" part no.**	Function	Rating	Feature
Amber	BP/STA	CP/STA	ON/OFF	12V/20A	—
Blue	BP/STB	CP/STB	ON/OFF	12V/20A	—
Green	BP/STG	CP/STG	ON/OFF	12V/20A	—
Red	BP/STR	CP/STR	ON/OFF	12V/20A	—

\* Blister pack.

\*\* Canadian compliant blister pack.



#### Duckbill toggle switches with disconnect terminals

Color	Part no.*	Function	Rating	Feature
Amber	BP/SDA	ON/OFF	12V/20A	Illuminated
Chrome	BP/STC	ON/OFF	12V/20A	—
Black	BP/STN	ON/OFF	12V/20A	—

\* Blister pack only.



#### Metal housing toggle switches with screw terminals

Color	Part no.*	Function	Rating	Feature
Chrome	BP/STE	ON/OFF	12V/15A	—
Chrome	BP/STJ	ON/OFF	12V/25A	—
Chrome	BP/STK	ON/OFF/ON	12V/15A	—

\* Blister pack only.

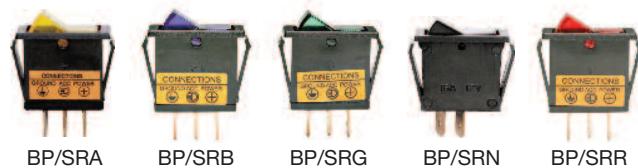


#### Rocker switches with disconnect terminals

Color	"BP" part no.*	"CP" part no.**	Function	Rating	Feature
Amber	BP/SRA	—	ON/OFF	12V/16A	Illuminated
Blue	BP/SRB	—	ON/OFF	12V/16A	Illuminated
Green	BP/SRG	—	ON/OFF	12V/16A	Illuminated
Black	BP/SRN	—	ON/OFF	12V/16A	—
Red	BP/SRR	CP/SRR	ON/OFF	12V/16A	Illuminated

\* Blister pack.

\*\* Canadian compliant blister pack.



#### Indicating lights with disconnect terminals

Color	"BP" part no.*	"CP" part no.**	Volts	Terminals	Feature
Blue	BP/LB	CP/LB	12V	Quick-Con.	—
Green	BP/LG	CP/LG	12V	Quick-Con.	—
Red	BP/LR	CP/LR	12V	Quick-Con.	—

\* Blister pack.

\*\* Canadian compliant blister pack.



## Automotive Flashers

Bussmann offers a complete line of flashers that meet SAE standards for a variety of vehicles. To select the proper replacement flasher, match these three specifications:

- **Specific versus variable load.** Specific load flashers flash only a certain number of lamps. Variable load flashers handle a range of amps, such as when pulling a trailer.
- **Lamp capacity.** Designates the total number of lamps in the circuit for the left or right directional signal.
- **Number of terminals.** Select either a two or three blade flasher to match the socket in the panel.

### Thermal flashers

- Use heat build-up to flash circuit ON and OFF.
- Features an audible click, alerting driver that a directional signal is engaged.
- Generally used in older vehicles.
- Operates correctly under variable load – flashing the designated vehicle lamps only; or additional lamps when towing a trailer.
- Does not indicate lamp outage.



NO.535 NO.550 NO.552 NO.575 NO.577 *Extra Loud*

### Heavy-duty electronic flashers

- Use electronic circuitry — not heat — to operate.
- Superior service life and excellent performance in extreme climates.
- Original equipment on many domestic/imported late-model cars and light trucks.
- Direct plug-in replacement — no adapter required.
- Indicates lamp outage by flashing at twice normal speed, and features an audible click when engaged.



NO.243 NO.244 NO.246 NO.726 NO.727  
NO.756, 757,  
758, 759, 760



NO.761 NO.762 NO.763 & 764 NO.850 NO.852

### Super heavy-duty electronic flashers

- Provides variable load functionality in heavy-duty applications.
- Replacement flasher for domestic cars, light trucks and vans.
- Electronic design provides superior service life.



NO.232 NO.233 NO.234

### Thermal and electronic 12 and 24 Vdc flashers

Trad'l pack	Blister pack	Flasher type	Terminals	Volts	Amps	Number of bulbs
NO.535	—	Thermal	3	6	5.2	2-6
NO.550	BP/550-RP	Thermal	3	12	12.8	2-6
NO.552	BP/552-RP	Thermal	2	12	12.8	2-6
NO.575	BP/575-RP	Thermal	2	12	12.8	1-8
NO.577	BP/577-RP	Therm./ex. loud	2	12	14	2-6
NO.243	—	H-D electronic	2	12	25	12
NO.244	—	H-D electronic	3	12	25	12
NO.246	—	H-D electronic	3	12	25	*
NO.726	BP/726-RP	H-D electronic	4	12	12.6	2-4
NO.727	BP/727-RP	H-D electronic	5	12	12.6	2-4
NO.756	BP/756-RP	H-D electronic	3	12	12.6	2-6
NO.757	BP/757-RP	H-D electronic	3	12	12.6	2-6
NO.758	BP/758-RP	H-D electronic	3	12	12.6	2-6
NO.759	BP/759-RP	H-D electronic	3	12	12.6	3-6
NO.760	BP/760-RP	H-D electronic	3	12	12.6	2-6
NO.761	BP/761-RP	H-D electronic	3	12	12.6	2-6
NO.762	BP/762-RP	H-D electronic	4	12	12.6	3-6
NO.763	—	H-D electronic	2	12	12	16
NO.764	—	H-D electronic	2	12	12	20
NO.850	—	H-D electronic	3	12	25	10HZ/5TS
NO.852	—	H-D electronic	2	12	35	16HZ/8TS
NO.232	BP/232-RP	S-D electronic	2	12	20	1-10
NO.233	BP/233-RP	S-D electronic	3	12	20	1-10
NO.234	BP/234-RP	S-D electronic	3	24	20	1-10

\* Alternating.



Small footprint blister packaging makes selling more profitable by using less space. Selling is easier with trilingual marking of part number, flasher type and number of terminals.

## Battery disconnect switches

### BP/BMS-1

Top post anti-theft battery switch. Complete with HHM fuse holder, ATM-20 fuse, ring terminals and stainless steel bolt and wing nut.



### BP/BMS-2

Side post anti-theft battery switch for GM vehicles. Complete with HHM fuse holder, ATM-20 fuse and ring terminals.



### 15968-1

Heavy-duty switch is designed to open the circuit between the battery and load of a battery powered system - typically in large truck applications. Rated at 50Vac/dc maximum, 400A continuous, it can withstand cranking or surge currents up to 2000A for 5 seconds maximum.



Part no.	Description
BP/BMS-1	Top post anti-theft master switch with HHM fuse holder, ATM-20 fuse and ring terminals
BP/BMS-2	Side post anti-theft master switch with HHM fuse holder, ATM-20 fuse and ring terminals
15968-1	Heavy-duty disconnect; 50Vac/dc, 400A maximum

\* Non-stock part.

## CBBF battery fuses

These fuses are suitable for main and auxiliary circuit protection (alternator outputs, starter motor inputs and accessories) in demanding environments or tight space constraints. Marine-rated under SAE J1117 for ignition protection. Use with CBBF-MBC mounting bar.



Amps	Part no.
30	CBBF-30
40	CBBF-40
50	CBBF-50
60	CBBF-60
70	CBBF-75
80	CBBF-80
90	CBBF-90
100	CBBF-100
125	CBBF-125
150	CBBF-150
175	CBBF-175
200	CBBF-200
250	CBBF-250
300	CBBF-300

## CBBF-MBC

Mounting bar with  $\frac{1}{4}$ -20 stud, nut and cover for the CBBF battery fuse.



Order part number CBBF-MBC.

## Battery separators manage batteries for reliable starts

- For vehicles and boats with main and auxiliary battery systems and alternator outputs up to 100 amps — or on systems incompatible with battery isolators.
- Battery separators from Sure Power actively manage multi-battery electrical systems to ensure greater reliability for main battery engine starting.
- Battery separators provide a solenoid priority system for multi-battery systems.
- When main battery is low, the separator will utilize auxiliary battery power to assist in vehicle starting.
- Separators disconnect main and auxiliary batteries from one another to protect them from excessive drain.
- Time-delay function prevents battery separator from reacting to temporary voltage fluctuations.

Catalog no.	Description
RB-BS-1314	Uni-directional 100A battery separator — model no. 1314A*
RB-BS-1315	Bi-directional 100A battery separator — model no. 1315A*

\* Use the catalog numbers to order these products.



Attractive retail packaging easily mounts on peg boards or stacks on shelves.

## Multi-battery systems

Many vehicles and boats have accessories and other electrical loads, such as lights, entertainment systems and communications equipment that draw power when the engine is off. When applied to a single battery electrical system, main batteries can become drained and present an engine "no-start" condition. Adding an auxiliary battery to operate these additional loads helps avoid this, but it needs more than simply being wired into the electrical system — the auxiliary battery needs to be separated.

## Priority charging

The battery separator waits until the main battery's active charging source reaches approximately 13.2 volts before it begins charging the auxiliary battery. The uni-directional battery separator RB-BS-1314 will only charge the auxiliary battery when the main battery reaches 13.2 volts. The bi-directional battery separator RB-BS-1315 will engage both main and auxiliary batteries and disconnect at approximately 12.8 volts.

## Charging system protection

Once the engine starts, the battery separator monitors the main battery and charging system voltage. When the charging system reaches 13.2 volts, the battery separator will engage, signaling a charged main battery. The auxiliary battery is then connected to the vehicle charging system. When the charging system reaches 12.8 volts, the battery separator will disconnect the auxiliary battery to protect the vehicle's charging system. This process of managing the battery charging is repeated until the engine is turned off.

## Simple installation

The battery separators work with any 12 volt DC, negative ground charging system up to 100 amps. They easily connect to the main battery, auxiliary battery and ground. No system modifications are necessary.

## Optional engine start assist

When the engine starter is engaged, the battery separator will compare the voltage in both main and auxiliary batteries. If the main battery is lower than the auxiliary battery, the battery separator will engage the auxiliary battery to aid in engine start. The start signal must reach 3 volts in order for the auxiliary to mail battery connection procedure to begin.

## Battery Isolators and Installation Kits

### Battery isolators ensure reliable engine starts

- Battery isolators prevent auxiliary batteries from draining main battery power in vehicle electrical systems.
- Suited for light truck, RV, select commercial and marine applications
- Solid-state technology isolates each battery circuit to extend battery life by allowing each to charge and discharge according to need
- Easily connects alternator to one main and one auxiliary battery
- Designed by Sure Power, the leader in battery isolators, for superior performance that exceeds original equipment manufacturer specifications
- Includes wiring and hardware for basic installation; an optional installation kit available for advanced installation

Catalog no.	Description
RB-BI-70A	70 amp battery isolator w/wiring kit — model no. 702*
RB-BI-95A	95 amp battery isolator w/wiring kit — model no. 9523A*
RB-BI-120A	120 amp battery isolator w/wiring kit — model no. 12023A*
RB-BI-130A	130 amp battery isolator w/wiring kit — model no. 13023A*
RB-BI-240A	240 amp battery isolator w/wiring kit — model no. 24023A*

\* Use the catalog numbers to order these products.

### Multi-battery systems

Many vehicles and boats have accessories and other electrical loads, such as lights, entertainment systems and communications equipment that draw power when the engine is off. When applied to a single battery electrical system, main batteries can become drained and present an engine "no-start" condition. Adding an auxiliary battery to operate these additional loads helps avoid this, but it needs more than simply being wired into the electrical system — the auxiliary battery needs to be isolated.

### Why batteries need isolating

Multiple batteries connected in an electrical system can become problematic when a partially discharged, or dead, battery is connected to a fully charged battery. The current in the fully charged battery will flow to the less charged battery until both are equally discharged, or even worse, completely discharged and may prevent the engine from starting.

### Battery isolators manage battery power

A battery isolator can eliminate the problem of battery drain by acting as a check valve between the batteries to prevent current flowing from a fully charged battery to a partially charged battery. A battery isolator enables each battery to act as an independent power source so that the main battery can conserve power even if the auxiliary battery is fully discharged. When charging, the isolator gives priority to the main battery so that there is always a full charge to start the engine.



Battery isolator models are available in 70A, 95A, 120A, 130A and 240A versions for alternators with outputs from 70 to 240 amps



Attractive 70 to 130 amp retail packaging easily mounts on peg boards or stacks on shelves. 240 amp isolator package for shelf display only.

### Battery isolator installation kit and Delco alternator connector kit

Enhance your battery isolator sales by offering the installation kit RB-BIK-1882 that contains the wire, connectors and hardware needed for an easier installation.

When customers are installing their isolator on a Delco/Delphi CS Series alternator system, also sell them the connector kit that's required for OEM connector modification.

Catalog no.	Description
RB-BIK-1882	Battery isolator installation kit — model no 1882*
RB-GM-KIT	GM Delco CS Series connector kit — model no. 144-CD*

\* Use the catalog numbers to order these products.



Installation kit and GM connector kit increases sales opportunities while easing installation for customers.

### Automotive assortments, emergency kits, diagnostic kits and bonus packs

Make your selling space work harder - with America's best-known name in fuses. You can now offer your customers more choice in circuit protection than ever before in convenient packaging specially designed for display on a peg-board.

Covering the in-demand applications, fuse offerings include traditional glass tube fuses and German automotive fuses, a wide selection of ATM, low-Profile ATM and ATC in indicating and non-indicating versions, and higher amp fusible links.

**Fuse assortments** provide customers a handy selection of fuses and fuse ratings for general replacement applications.

**Emergency kits** provide a range of fuses and fuse ratings, plus a fuse puller to make quick, emergency replacements easier.

**Diagnostic kits** provide the advantage of a fuse tester/puller along with an assortment of fuses and fuse ratings. The tester permits users to quickly determine whether a fuse is good or not.

**Bonus packs** increase the "total ring" on your fuse assortment sales with large-count fuse packages that are great for small shops, do-it-yourself mechanics - or for stocking commercial / service vehicles.

### Glass tube fuses

#### AGA

- BP/AGA-AH8-RP AGA high amp fuse assortment: -10 (2), (2), 20 (2) & 30 (2)A
- BP/AGA-AL8-RP AGA low amp fuse assortment: -1, 2, 3 (2), 5 (2) & 7½ (2)A

#### AGC

- BP/AGC-A5-RP AGC fuse assortment: 10, 15, 20, 25 & 30A
- BP/AGC-AH10-RP AGC high amp fuse assortment: 7½, 10 (2), 15 (2), 20 (2), 25 & 30 (2)A
- BP/AGC-AL10-RP AGC low amp fuse assortment: 1 (2), 2 (2), 3 (2), 4, 5 (2) & 6A
- AGC-EK AGC kit: (60 pieces/10 each) 5, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller

#### AGW

- BP/AGW-A8-RP AGW fuse assortment: 5, 7½, 15 (2), 20 (2) & 30 (2)A

#### AGX

- BP/AGX-A8-RP AGX fuse assortment: 5, 8, 20 (2), 25 (2) & 30 (2)A

#### SFE

- BP/SFE-AH6-RP SFE high amp fuse assortment: 14 (2), 20 (2) & 30 (2)A
- BP/SFE-AL6-RP SFE low amp fuse assortment: 4, 6, 7½ (2) & SFE-9 (2)A

#### Glass tube fuse assortments

- BP/AGC-SFE-A5-RP AGC/SFE fuse assortment: AGC- 10, 15, 30 & SFE-14, 20A

#### German automotive fuses

- BP/GBC-A8-RP GBC European fuse assortment: 5, 8 (2), 15, 16 (2) & 25 (2)A



*Bold, high-impact package graphics stand out on the shelf. Bussmann signature colors - bright yellow and black - catch the eye and generate impulse sales. Minimize handling costs - self-service instructions are printed on every card.*

## Blade fuses

### ATR

BP/ATR-A7-RPP ATR 2-leg micro fuse emergency kit: 5, 7½, 10, 15, 20, 25 & 30A and fuse puller

### ATL

BP/ATL-A4-RPP ATL 3-leg micro fuse emergency kit: 5, 7½, 10, 15A and fuse puller

### ATM

ATM-FP-AID easyID™ indicating ATM emergency kit: 10, 15, 20, 25 & 30A and FP-A3 fuse puller

BP/ATM-A5-RP ATM 5-count fuse assortment: 10, 15, 20, 25 & 30A

BP/ATM-A8-RP ATM 8-count fuse assortment: 2, 5, 7½, 10, 15, 20, 25 & 30A

BP/ATM-AH8-RPP ATM high amp fuse emergency kit: 10 (2), 15 (2), 20 (2), 25 & 30A and FP-A3 fuse puller

BP/ATM-AL8-RP ATM low amp assortment: 2, 3 (2), 4, 5 (2) & 7½ (2)A

DIA-2 ATM diagnostic kit: 2, 5, 7½, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller

NO.43 ATM kit: 7 each of 5, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller. Fuses are loose-packed for easy access in reclosable heavy-duty clamshell package.

### Low-profile ATM

ATM-LP-EK Low-profile ATM fuse emergency kit: (7 each) 5, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller

BP/ATM-A6LP-RP Low-profile ATM fuse assortment: 7½, 10, 15, 20, 25 & 30A

DIA-3 Low-profile ATM diagnostic kit: 2, 5, 7½, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller

### ATC

ATC-FP-AID easyID™ indicating ATC emergency kit: 10, 15, 20, 25 & 30A and FP-A3 fuse puller

BP/ATC-A5-RP ATC fuse assortment: 10, 15, 20, 25 & 30A

BP/ATC-AH8-RPP ATC fuse emergency kit: 10, 15 (2), 20 (2), 25, 30 & 40A and FP-A3 fuse puller

BP/ATC-AL8-RP ATC low amp fuse assortment: 1, 2, 3, 4, 5 (2) & 7½ (2)A

DIA-1 ATC diagnostic kit: 5, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller.

NO.44 ATC kit: 7 each of 5, 10, 15, 20, 25 & 30A and FT-3 fuse tester/puller. Fuses are loose-packed for easy access in reclosable heavy-duty clamshell package.

NO.80 ATC bulk assortment: (80 pieces/10 each) 3, 5, 7½, 10, 15, 20, 25 & 30A. Fuses are loose-packed for easy access. Reclosable, heavy-duty clamshell package stores easily in tool boxes.

### Multi-fuse family emergency/bonus kits

ATM-FMX-EK ATM and FMX emergency kit: 5 each of ATM-10, 15, 20, 25 & 30A, 1 each of FMX-20, 30, 40, & 50A, and FT-3 fuse tester/puller.

NO.24 Emergency fuse safety kit: one each of ATM-10, 15, 20, 25, 30, ATM-10LP, 15LP, 20LP, 25LP, 30LP, ATC-3, 5, 7½, 10, 15, 20, 25, 30, 40, MAX-30, 40, FMX-30, 40 and FT-3 fuse tester/puller.

NO.53 ATC and Maxi fuse kit: (45 pieces) ATC-10, 15, 20, & 30A; MAX-30, 40 & 50A and FT-3 fuse tester/puller.

NO.64 ATM and Maxi fuse kit: (64 pieces) ATM-2, 3, 4, 5, 7½, 10, 15, 20 & 30A; MAX 30, 40 & 50A and FT-3 fuse tester/puller

VP-FMX-A5-RP FMX female maxi fuse value pack assortment: (5 pieces) 20, 30, 40, 50 & 60A



*Bold, high-impact package graphics stand out on the shelf. Bussmann signature colors - bright yellow and black - catch the eye and generate impulse sales. Minimize handling costs - self-service instructions are printed on every card.*

## Marine Products and Assortments

**Bussmann**  
 by EATON

### Marine-rated circuit breakers

Specifically designed to meet the needs of marine applications, the CB187F and CB187P offer 5kA@12Vdc interrupting ratings and ignition protection per ABYC E-11. Usable as an ON/OFF switch, they have corrosion resistant plating on  $\frac{5}{16}$ -18 copper terminals.

CB251 and CB255 offer an interrupting rating of 2.5kA per ABYC E-11 and feature a "Push-to-Trip" option and a reset mechanism that provides visual indication of a tripped condition.

See page 49 for specifications.

#### CB187F

Type III marine-rated flush-mount, manual reset circuit breakers with switch function and nuts/lock washers installed

Part no. (amps) boxed only	
CB187F-25	CB187F-80
CB187F-30	CB187F-100
CB187F-35	CB187F-110
CB187F-40	CB187F-120
CB187F-50	CB187F-135
CB187F-60	CB187F-150
CB187F-70	CB187F-200



#### CB187P

Type III marine-rated panel-mount manual reset circuit breakers with switch function and nuts/lock washers installed

Part no. (amps) boxed only	
CB187P-25	CB187P-80
CB187P-30	CB187P-90
CB187P-35	CB187P-100
CB187P-40	CB187P-110
CB187P-50	CB187P-120
CB187P-60	CB187P-135
CB187P-70	CB187P-150



#### CB251

Type I ignition protected, weatherproof panel-mount manual reset circuit breakers with SEMS nuts installed, 32Vdc

Part no. (amps) boxed only	
CB251-10	CB251-30
CB251-15	CB251-35
CB251-20	CB251-40
CB251-25	CB251-50



#### CB255

Type III ignition protected, weatherproof panel-mount manual reset circuit breakers with "Push-to-Trip" option and SEMS nuts installed, 32Vdc

Part no. (amps) boxed only	
CB255-10	CB255-30
CB255-15	CB255-35
CB255-20	CB255-40
CB255-25	CB255-50



### Marine assortments

#### NO.108BK

Marine circuit protection emergency kit in a sturdy, compact reclosable box for replacement of fuses and circuit breakers. A must for commercial or recreational marine applications. Contains:

**Fuses:** Five each of ABC-10, AGC-1½, GMA-2A, MDA-8, ten of AGC-3, 7½, 15, 25, fifteen of AGC-20, 30.

**Circuit breakers:** Three each of CBF-30.



#### BP/AGC-AH10-RP

AGC fuse assortment for marine accessories and bilge pumps. Includes AGC-7½, 10 (2), 15 (2), 20 (2), 25 & 30 (2A).



#### BP/MDL-1

Marine motor protection fuses. Blister pack with two fuses per card. See page 37 for blister pack availability in ratings from ½ to 15 amps.



#### MA-5

Marine accessory assortment, AGC-½, 1, 1½, 2 & 3A.



#### BP/AGC-SFE-A5-RP

AGC and SFE fuse assortment for marine applications:

- AGC-10, 15 & 30A
- SFE- 14 & 20A



## Traditional Automotive Installer Assortments



### NO.136

#### ATR, ATL & FMM micro fuse assortment

Selection of 135 ATR 2-leg and ATL 3-leg micro blade fuses, and FMM micro cartridge fuse plus a fuse puller. Fuses are loosely packed in 12-cavity, shatter-resistant plastic box. Contains ten each of ATR-5, 7½, 10, 15, 20, 25 and 30, ten each of ATL-5, 7½, 10, and 15, and five each of FMM-15, 20, 25, 30 and 40.



### NO.45

#### Cartridge fuse bulk assortment

The top 16 assorted cartridge fuses for wiring harness protection. Comes with selection guide on inside lid. Contains one each of FLD-80, FLF-20, 30, 40, 50, FLM-80, 100, 120, FLS-30, 40, FMX-20, 30, 40, 50, 60 and FMX-30LP



### NO.60LP

#### Low-profile ATM fuses

Assortment contains 60 fuses: ten each of ATM-7½LP, 10LP, 15LP, 20LP, 25LP and 30LP.



### NO.105

#### Late model automotive fuse assortment

Selection of low-profile and regular fuses loosely packed in 18-cavity, shatter-resistant plastic box. Contains: 10 each ATM-7½LP, 10LP, 25LP and 30LP; 15 each ATM-15LP and 20LP; 3 each FMX-20, 30 and 40; 2 each FMX-50 and 60; 3 each FMX-20LP, 30LP and 40LP; 2 each FMX-50LP and 60LP; 2 each MAX-30 and 40; 1 each MAX-20, 50 and 80.



### NO.95BK

#### ATC and ATM bulk assortment

Selection of 95 ATC and ATM blade fuses. Fuses are loosely packed in 12-cavity, shatter-resistant plastic box. Contains five each of ATC-5, 15, 25, ATM-5, 10, 15, 25, 30, ten of ATM-20, fifteen of ATC-10, 20, 30.



### NO.160BK

#### ATC bulk assortment

Selection of 160 ATC blade fuses loosely packed in 12-cavity, shatter-resistant plastic box. Contains ten fuses each of 3, 4, 7½, 40, fifteen of 5, 10, 15, 25, thirty of 20, 30.



NO.290

**PRO PAK professional technician's assortment**

Contains the circuit protection products every service technician needs. The compact case organizes 290 of the most common circuit protection products to restore power fast.

Comes with a free, high-power white LED spotlight made of high-grade polished aluminum with metal clip and magnetic base. Features a locking ON/OFF switch with an LED mounted on an insulated flexible shaft. Batteries included: 3 AG13 button cell.

**PRO PAK contents**

- Fuse assortments: AGA-AL (1, 2, 3, 5 & 7½A), AGA-AH (10, 15, 20 & 30A), AGW-A (5, 7½, 15, 20 & 30A) and AGX-A (5, 8, 20, 25 & 30A)
- AGC glass fuses. One tin each containing five fuses: AGC-1, 2, 3, 4, 5, 7½, 10, 15, 20, 25 & 30A.
- SFE size-rejecting ¼" glass fuses. One tin each containing five fuses: SFE-4, 7½, 9, 14, 20 & 30A.
- GBC German vehicle fuses. One tin each containing five fuses: GBC-8, 16 & 25A.
- ATM blade fuses. One tin of each rating containing five fuses: ATM-5, 7½, 10, 15, 20, 25 & 30A.
- Low-profile ATM blade fuses. One tin each containing five fuses: ATM-7½LP, 10LP, 15LP, 20LP, 25LP & 30LP.
- ATC blade fuses. One tin each containing five fuses: ATC-3, 4, 5, 7½, 10, 15, 20, 25, 30, 35 & 40A.
- Maxi blade fuses. MAX-20, (2)30, (2)40, 50, 60, 70 & 80A.
- FLB bolt-mount cartridge fuses. One each: FLB-40, 50, 60, 70 & 80A.
- FLD bolt-mount cartridge fuses. One FLD-80A.
- FLF female termination cartridge fuses. One each: FLF-20, 30, 40, 50 & 60A.
- FLM male termination cartridge fuses. One each: FLM-60, 80 & 100A.
- FLS female miniature termination cartridge fuses. One each: FLS-30 & 40A.
- FMX female Maxi fuses. One each: FMX-20, 30, 40, 50 & 60A.
- FMX\_LP low-profile female Maxi fuses. One each: FMX-20LP, 25LP, 30LP, 40LP, 50LP & 60LP.
- HHD 30A in-line ATC fuse holder
- HHM 30A in-line ATM fuse holder
- HHN in-line glass tube fuse holder with AGC-30A fuse
- HMK heavy-duty in-line glass tube fuse holder
- CBB-30 Type II 30A ATC blade-type circuit breaker
- CBC-30HB Type I stud-mount 30A circuit breaker with lengthwise bracket
- UCB-20 universal 20A ATC blade-type circuit breaker
- UCB-30 universal 30A ATC blade-type circuit breaker
- FT-3 fuse puller/tester, FP-A3 3-way fuse puller

**Fuse Caddies**



Bussmann fuse caddies offer a full array of fuses for automotive repair facilities to meet your automotive fuse replacement needs. Each caddy is specially stocked to cover the majority of cars, vans, light trucks, SUVs and RVs on the road today. Select from the five-tray caddy or the more comprehensive ten-tray caddy to offer your customers a convenient and secure means to store and transport their replacement fuse inventory.

**FUSE-CADDY1**

With convenient folding handle and security latch, this five-tray capacity caddy contains 275 fuses in popular ratings. Four, ten-cavity trays contain ATM, low-profile ATM, ATC and MAX fuses. One, five-cavity tray contains FMX fuses.



**Contains fuse tray catalog numbers**

- |                 |              |
|-----------------|--------------|
| CDY10TRY-ATM    | CDY10TRY-MAX |
| CDY10TRY-ATM-LP | CDY5TRY-FMX  |
| CDY10TRY-ATC    |              |

See fuse tray contents table for type, quantities and ratings for each tray catalog number.

Caddy measures 7.4" W x 4.5" D x 7.8" H (handle not extended)

**FUSE-CADDY2**



Caddy measures 14.8" W x 4.5" D x 7.8" H (handle not extended)

With convenient folding handle and security latches, this ten-tray capacity caddy contains 372 fuses in popular ratings. Seven, ten-cavity trays contain ATM, Low-profile ATM, ATC, MAX, FMM/ low-profile FMX, FLF/FLS, ATR/ATL micro fuses. Three, five-cavity trays contain FMX, FLB/FLD/FLM and AMG/AMI fuses. Together, all ten trays meet virtually any automotive blade and high amp fuse replacement need.

**Contains fuse tray catalog numbers**

- |                 |                |                |
|-----------------|----------------|----------------|
| CDY10TRY-ATM    | CDY10TRY-FLNK1 | CDY5TRY-BMOUNT |
| CDY10TRY-ATM-LP | CDY10TRY-FLNK2 | CDY5TRY-SMOUNT |
| CDY10TRY-ATC    | CDY10TRY-MICRO |                |
| CDY10TRY-MAX    | CDY5TRY-FMX    |                |

See fuse tray contents table for type, quantities and ratings for each tray catalog number.

## Automotive Fuse Tray Assortments

### Fuse tray assortments

New Bussmann fuse trays make it convenient to sell the popular fuse assortments repair facilities need to keep on hand for today's cars, vans, light trucks and SUVs.

Clear, compact trays that measure 3.5"D x 7"W x 1"H are easy to store and allow quick, visual identification of fuses without the hassle of opening the tray.

Four, five-cavity tray assortments and eight, ten-cavity tray assortments cover the more popular fuse applications including the new, ATR and ATL 2- and 3-blade micro fuses and FMM micro cartridge fuses. Offer your customers the convenience of the five-tray and ten-tray fuse caddies.

Trays are easily restocked from traditional or value fuse packs.

Order individually or offer customers the convenience of the FUSECADDY-1 (five-tray) or FUSECADDY-2 (ten-tray) fuse caddies.

### Fuse tray contents and quantities



Ten- and five-tray fuse caddies conveniently store multiple fuse trays to efficiently organize an entire replacement fuse inventory.



#### CDY10TRY-ATM

10 Cavity tray

80 ATM blade fuses

Fuse (Qty)

ATM-2 (5)	ATM-10 (15)
ATM-3 (5)	ATM-15 (15)
ATM-4 (5)	ATM-20 (15)
ATM-5 (5)	ATM-25 (5)
ATM-7-1/2 (5)	ATM-30 (5)

#### CDY10TRY-ATM-LP

10 Cavity tray

65 Low-profile ATM blade fuses

Fuse (Qty)

ATM-2LP (5)	ATM-10LP (10)
ATM-3LP (5)	ATM-15LP (10)
ATM-4LP (5)	ATM-20LP (10)
ATM-5LP (5)	ATM-25LP (5)
ATM-7-1/2LP (5)	ATM-30LP (5)

#### CDY10TRY-ATC\*

10 Cavity tray

100 ATC blade fuses

Fuse (Qty)

ATC-3 (5)	ATC-20 (15)
ATC-4 (5)	ATC-25 (10)
ATC-5 (5)	ATC-30 (15)
ATC-7-1/2 (5)	ATC-35 (10)
ATC-10 (10)	ATC-4 (10)
ATC-15 (10)	

#### CDY10TRY-MAX

10 Cavity tray

16 Maxi blade fuses

Fuse (Qty)

MAX-20 (1)	MAX-60 (3)
MAX-30 (1)	MAX-70 (2)
MAX-40 (3)	MAX-80 (2)
MAX-50 (3)	MAX-100ID (1)**

#### CDY10TRY-MICRO

10 Cavity tray

55 ATR/ATL micro blade fuses

Fuse (Qty)

ATR-5 (5)	ATR-30 (5)
ATR-7-1/2 (5)	ATL-5 (5)
ATR-10 (5)	ATL-7-1/2 (5)
ATR-15 (5)	ATL-10 (5)
ATR-20 (5)	ATL-15 (5)
ATR-25 (5)	

\*Replaces NO.100BK



#### CDY10TRY-FLNK1

10 Cavity tray

13 FMM/low-profile FMX fuses

Fuse (Qty)

FMM-15 (1)	FMX-25LP (1)
FMM-20 (1)	FMX-30LP (1)
FMM-25 (1)	FMX-40LP (1)
FMM-30 (1)	FMX-50LP (2)
FMM-40 (1)	FMX-60LP (2)
FMX-20LP (1)	

#### CDY10TRY-FLNK2

10 Cavity tray

7 FLF/FLS cartridge fuses

Fuse (Qty)

FLF-20 (1)	FLF-60 (1)
FLF-30 (1)	FLS-30 (1)
FLF-40 (1)	FLS-40 (1)
FLF-50 (1)	

#### CDY5TRY-FMX

5 Cavity tray

14 FMX high amp fuses

Fuse (Qty)

FMX-20 (2)	FMX-50 (3)
FMX-30 (3)	FMX-60 (3)
FMX-40 (3)	

#### CDY5TRY-BMOUNT

5 Cavity tray

10 FLB/FLD/FLM cartridge fuses

Fuse (Qty)

FLB-20 (1)	FLM-30 (1)
FLB-140 (1)	FLM-60 (1)
FLD-40 (1)	FLM-80 (1)
FLD-80 (1)	FLM-100 (1)
FLD-120 (1)	FLM-120 (1)

#### CDY5TRY-SMOUNT

5 Cavity tray

12 AMG/AMI high amp fuses

Fuse (Qty)

AMG-80 (1)	AMG-225 (1)
AMG-100 (1)	AMG-250 (1)
AMG-125 (1)	AMG-300 (1)
AMG-150 (1)	AMI-40 (1)
AMG-175 (1)	AMI-50 (1)
AMG-200 (1)	AMI-80 (1)

## Traditional Automotive Installer Tilt-Bin Assortments

**Bussmann**  
 by

### Tilt-bin assortments

Turn any pegboard or shelf into a profit-building professional fuse center with interlocking tilt-bin sets from Bussmann. Bin rows are stocked with assortments of the fastest-selling fuses, holders and accessories. Transparent, tilt-out bins make selection a snap, and let you check inventory at a glance.

Reload part numbers are available for AFC-225, NO.225 and NO.227. The reloads are packed in a polybag labeled with the part number and UPC code.

Bins can be stacked in any combination so you can modify your display to fit your customer's needs.



#### AFC-90

Two tilt-bin sets containing five each of MAX-20, 30, 40, 50 & 60A and FMX-20, 30 & 40A fuses, FLB-70, FLF-20, 30, 40 & 60A and FLM-60, 80 & 100A and FLS-30 & 40A cartridge fuses.



#### AFC-225

25 Each of glass tube fuses. AGC-5, 10, 15, 20, 25 & 30A and SFE-14, 20 & 30A.



#### NO.225

25 Each of ATC blade fuses. ATC-3, 4, 5, 7½, 10, 15, 20, 25 & 30A.



#### NO.227

Ten each of ATM blade fuses. ATM-2, 3, 5, 7½, 10, 15, 20, 25 & 30A.

### Available reload packaging

Reloads contain 25 fuses of the specified ampacity in a poly bag. See table below for available fuses and amp ratings.



All four units stacked together provide a complete fuse selection for the automotive repair technician or store display. Bins interlock and can be wall-mounted.

### Retail automotive Plan-O-Gram

Color-Coded packaging for fast, easy product selection.  
 Fits standard four-foot wide gondola.

#### Visual categorization

- New, color-coded Bussmann retail packaging
- Fast and easy product identification
- Provides increased shopability and faster merchandising

#### Merchandising ease

- Retail set is simple and straightforward
- Color-coding encourages return of product to correct peg
- Reduces need for assistance by store personnel

#### Consumer friendly

- Fuse center is easily located
- Point-of-sale identifies fuse types
- Package color codes identify product category



4FTAUTO-TAGS UPC reorder tags



4FTAUTO-KIT.

*Peg hooks and gondola not included.*

### Retail hardware Plan-O-Gram

Color-Coded packaging for fast, easy product selection.  
 Fits three-foot wide gondola.

#### Visual categorization

- New, color-coded Bussmann retail packaging
- Fast and easy product identification
- Provides increased shopability and faster merchandising

#### Merchandising ease

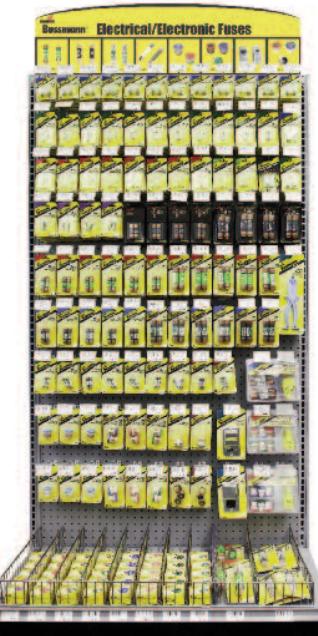
- Retail set is simple and straightforward
- Color-coding encourages return of product to correct gondola peg
- Reduces need for assistance by store personnel

#### Consumer friendly

- Fuse center is easily located
- Point-of-sale identifies fuse types
- Package color codes identify product category



3FTHDWR-TAGS UPC reorder tags



3FTHDWR-KIT.

*Peg hooks and gondola not included.*

For details on hardware Plan-O-Gram product SKUs, visit [www.cooperbussmann.com/POGs](http://www.cooperbussmann.com/POGs)

### Retail hardware fuse assortments

Popular fuse assortments and kits to meet the needs of residential circuit protection.

- BP/ABC-A** Microwave oven fuse assortment, ABC-10, (2)15 & (2)20A
- BP/FNM-AH** High amp FNM Cartridge fuse assortment: FNM-15 & 20A
- BP/FNM-AL** Low amp FNM Cartridge fuse assortment: FNM-5 & 10A
- BP/FRN-AH** High amp FRN-R Class RK5 fuse assortment: FRN-R-35 & 50A
- BP/FRN-AL** Low amp FRN-R Class RK5 fuse assortment: FRN-R-15 & 25A
- BP/GMA-AH** High amp GMA electronic glass tube fuse assortment: two each GMA-3, 5 & 6A
- BP/GMA-AL** Low amp GMA electronic glass tube fuse assortment: two each GMA-500MA, 1 & 2A
- BP/MDL-AL** Low amp MDL electronic glass tube fuse assortment: one each MDL-1/2, 1, 2, 3, 5
- BP/NON-AL** Low amp NON cartridge fuse assortment: NON-15 & 25A
- BP/SA-A** Fustat rejection base plug fuse adapter assortment: SA-15 & 20A
- BP/SC-A** SC Class G fuse assortment: SC-15 & 20A
- HEF-1** Mobile phone, electronic equipment and stereos assortment: (2)AGC-1, (1)2 & (2)3A.
- HEF-2** Computers and peripherals assortment: MDL-1/2, 1 & 2A; GDC-1 & 2A

### Retail hardware fuse emergency kits

- NON-EK** NON cartridge fuse kit: 20, (2)30, 40 & (2)60A and FT-2 fuse tester
- SL-EK** SL rejection base plug Fuse kit: (3)15, (2)20 & 30A and FT-3 fuse tester/puller
- TL-EK** TL Edison base plug fuse kit: 15, (2)20 & (3)30A and FT-3 fuse tester/puller



NON-EK



HEF-2



TL-EK



SL-EK

### Retail hardware holiday light fuses

Useful year-round, these fuses come in handy for keeping the lights on and the festivities going strong.

#### Year-round holiday and party light fuses

Five cards per shelf pack.

- BP/MAS-3A** MAS 3x10mm fast-acting 3 amp fuses. Five fuses per card.
- BP/GMA-5A** GMA 5x20mm fast-acting 5 amp fuses. Two fuses per card.
- BP/MAS-3A-CS** One carton of 10 BP/MAS-3A with clip strip included.

#### 20-card Christmas light counter displays with two clip strips

- BP/GMA-5XM** GMA 5x20mm fast-acting 5 amp fuses. Five fuses per card.
- BP/MAS-3X5** MAS 3x10mm fast-acting 3 amp fuses. Five fuses per card.
- BP/AGX-7X5** AGX 1/4" x 1 1/4" fast-acting 7 amp fuses. Five fuses per card.
- BP/XMAS-6F Assortment\*** GLH-7, AGX-7, (2)GMA-5 & MAS-3A Fuses. Total five fuses per card.

\* Product mix is new from previous version.



BP/GMA-5XM



BP/MAS-3X5



BP/AGX-7X5



BP/GMA-5A

## Automotive

Used in older-model cars, glass tube fuses today are found primarily in automotive accessory applications. The expansive Bussmann line of glass fuses includes many types and sizes in addition to those listed in this catalog. Call Bussmann for more product details if you have requirements which are not covered here.

## Appliances and consumer electronics

Glass and ceramic tube fuses are often used to protect appliances and consumer electronics. As electronic equipment becomes smaller, the circuits and components become more delicate and easily damaged. Fuses are the preferred method of protection due to their accuracy, small size and reliability. Fuses are available in a wide variety of amp ratings to provide precise protection. Generally, two sizes of user-replaceable fuses are found: the  $\frac{1}{4}$ " x  $1\frac{1}{4}$ " and 5x20mm. Each is available in a variety of volt and amp ratings.

## Fuse types

There are two basic types of fuses available for appliances and consumer electronics: fast-acting or time-delay. Any replacement fuse must match the one it's replacing. In general, fast-acting fuses are a single strand of wire or strip of metal. Time-delay fuses usually have a coiled wire, a thick element wrapped in wire, or a spring. Most electronic fuses will have the voltage and amp rating stamped on the end cap. The type of fuse can generally be visually identified. Also, owner's manuals will have the correct replacement fuse generically identified. For example: "Use a 2 amp, time-delay, 250 volt fuse."

## Glass and ceramic tube fuse sizes

Glass and ceramic tube fuses vary by diameter and length. The chart below provides a visual reference for the various sizes and fuse series available from Bussmann. Images are shown at actual size.

### Fuse selection criteria

- For electronic/electrical applications, fuse must be rated at 125V or better.
- Voltage must match or exceed the fuse being replaced (125V for household current; 12V for auto; 24V for heavy duty).
- Fuse must match required fuse characteristic – either fast-acting or time-delay.
- Amp rating must match that of the original fuse.

### A note on voltage rating

All fuses have a voltage rating. To maintain safety, this voltage rating should not be exceeded in application, although it is acceptable to use a higher rated fuse in a lower voltage application. For example: A fuse rated for 125 volts is appropriate in household (110V) or automotive (12V), while a fuse rated for 32 volts is appropriate for automotive (12V), but not for household (125V). Always replace a fuse with one of the same or higher voltage rating.

See page 48 for technical specifications.

## Glass and ceramic tube fuse sizes (actual size)

									
<b>5 x 20mm</b>	<b><math>\frac{1}{4}</math>" x <math>\frac{5}{8}</math>"</b>	<b><math>\frac{1}{4}</math>" x <math>\frac{3}{4}</math>"</b>	<b><math>\frac{1}{4}</math>" x <math>\frac{7}{8}</math>"</b>	<b><math>\frac{1}{4}</math>" x <math>3\frac{1}{2}</math>"</b>	<b><math>\frac{1}{4}</math>" x 1"</b>	<b><math>\frac{1}{4}</math>" x <math>1\frac{1}{16}</math>"</b>	<b><math>\frac{1}{4}</math>" x <math>1\frac{1}{4}</math>"</b>	<b><math>\frac{1}{4}</math>" x <math>30</math>mm</b>	<b><math>\frac{1}{4}</math>" x <math>1\frac{1}{16}</math>"</b>
GDA	AGA	SFE-6	AGW	GBC	AGX	SFE-14	ABC	SFE-30	AGU
GDB	SFE-4		SFE-7 1/2				AGC		AGU_GP
GDC			SFE-9				GBB		
GMA							SFE-20		
GMC							MDA		
GMD							MDL		
							MDQ		

## Glass & Ceramic Tube Fuses

**Bussmann**  
 by

### Fast-acting $\frac{1}{4}$ " diameter fuses

#### AGA

$\frac{1}{4}$ " x  $\frac{5}{8}$ " fast-acting glass tube fuses

See page 26 for available assortments.



Amps	Part no.*	Blister pack
$\frac{1}{4}$	AGA- $\frac{1}{4}$	—
1	AGA-1	—
$1\frac{1}{2}$	AGA- $1\frac{1}{2}$	—
2	AGA-2	—
$2\frac{1}{2}$	AGA- $2\frac{1}{2}$	—
3	AGA-3	—
5	AGA-5	—
6	AGA-6	—
$7\frac{1}{2}$	AGA- $7\frac{1}{2}$	—
10	AGA-10	—
15	AGA-15	—
20	AGA-20	BP/AGA-20-RP
30	AGA-30	—

\* See price sheet for all available ratings.

#### AGW

$\frac{1}{4}$ " x  $\frac{7}{8}$ " fast-acting glass tube fuses

See page 26 for available assortment.



Amps	Part no.*	Blister pack
1	AGW-1	—
$1\frac{1}{2}$	AGW- $1\frac{1}{2}$	—
$2\frac{1}{2}$	AGW- $2\frac{1}{2}$	—
3	AGW-3	—
4	AGW-4	—
5	AGW-5	—
6	AGW-6	—
$7\frac{1}{2}$	AGW- $7\frac{1}{2}$	—
10	AGW-10	—
15	AGW-15	BP/AGW-15-RP
20	AGW-20	—
30	AGW-30	—

\* See price sheet for all available ratings.

#### AGX

$\frac{1}{4}$ " x 1" fast-acting glass tube fuses

See page 26 for available assortment.



Amps	Part no.*
1	AGX-1
2	AGX-2
$2\frac{1}{2}$	AGX- $2\frac{1}{2}$
3	AGX-3
5	AGX-5
7	AGX-7
8	AGX-8
10	AGX-10
15	AGX-15
20	AGX-20
25	AGX-25
30	AGX-30

\* See price sheet for all available ratings.

#### GBB

$\frac{1}{4}$ " x  $1\frac{1}{4}$ " very fast-acting ceramic tube fuses



Amps	Part no.*
$\frac{1}{4}$	GBB- $\frac{1}{4}$ -R
10	GBB-10-R
15	GBB-15-R
30	GBB-30-R

\* See price sheet for all available ratings.

### ABC

$\frac{1}{4}$ " x  $1\frac{1}{4}$ " fast-acting ceramic tube fuses



Amps	Part no.*	Blister pack	Tri-Lingual Blister
$\frac{1}{4}$	ABC- $\frac{1}{4}$	—	—
$\frac{1}{2}$	ABC- $\frac{1}{2}$	—	—
1	ABC-1	—	—
2	ABC-2	—	—
$2\frac{1}{2}$	ABC- $2\frac{1}{2}$	—	—
3	ABC-3	—	—
4	ABC-4	—	—
5	ABC-5	—	—
6	ABC-6	—	—
7	ABC-7	—	—
8	ABC-8	—	—
10	ABC-10	BP/ABC-10	CP/ABC-10
12	ABC-12	—	—
15	ABC-15	BP/ABC-15	CP/ABC-15
20	ABC-20	BP/ABC-20	CP/ABC-20
25	ABC-25	—	—
30	ABC-30	—	—

\* See price sheet for all available ratings.

### AGC

$\frac{1}{4}$ " x  $1\frac{1}{4}$ " fast-acting glass tube fuses

See page 26 for available assortments.



Amps	Part no.*	Blister pack
$\frac{1}{8}$	AGC- $\frac{1}{8}$	—
$\frac{3}{10}$	AGC- $\frac{3}{10}$	—
$\frac{1}{4}$	AGC- $\frac{1}{4}$	—
$\frac{3}{8}$	AGC- $\frac{3}{8}$	—
$\frac{1}{2}$	AGC- $\frac{1}{2}$	BP/AGC- $\frac{1}{2}$ -RP
$\frac{3}{4}$	AGC- $\frac{3}{4}$	—
1	AGC-1	BP/AGC-1-RP
$1\frac{1}{4}$	AGC- $1\frac{1}{4}$	—
$1\frac{1}{2}$	AGC- $1\frac{1}{2}$	BP/AGC- $1\frac{1}{2}$ -RP
2	AGC-2	BP/AGC-2-RP
$2\frac{1}{2}$	AGC- $2\frac{1}{2}$	BP/AGC- $2\frac{1}{2}$ -RP
3	AGC-3	BP/AGC-3-RP
$3\frac{1}{10}$	AGC- $3\frac{1}{10}$	—
$3\frac{1}{2}$	AGC- $3\frac{1}{2}$	—
4	AGC-4	BP/AGC-4-RP
5	AGC-5	BP/AGC-5-RP
6	AGC-6	BP/AGC-6-RP
$6\frac{1}{4}$	AGC- $6\frac{1}{4}$	—
7	AGC-7	—
$7\frac{1}{2}$	AGC- $7\frac{1}{2}$	BP/AGC- $7\frac{1}{2}$ -RP
8	AGC-8	—
10	AGC-10	BP/AGC-10-RP
12	AGC-12	—
15	AGC-15	BP/AGC-15-RP
20	AGC-20	BP/AGC-20-RP
25	AGC-25	BP/AGC-25-RP
30	AGC-30	BP/AGC-30-RP
35	AGC-35	BP/AGC-35-RP
40	AGC-40	—
50	AGC-50	—

\* See price sheet for all available ratings.

## Glass & Ceramic Tube Fuses

### Fast-acting fuses

#### GBC

$\frac{1}{4}$ " x  $\frac{31}{32}$ " fast-acting German automotive fuses  
 See page 26 for available assortments.



Color Code	Amps	Part no.*	Blister pack
Yellow	5	GBC-5	—
White	8	GBC-8	BP/GBC-8-RP
Red	16	GBC-16	BP/GBC-16-RP
Blue	25	GBC-25	BP/GBC-25-RP

\* See price sheet for all available ratings.

#### SFE

$\frac{1}{4}$ " size-rejecting fast-acting automotive glass tube fuses  
 See page 26 for available assortments.



Amps	Fuse Length	Part no.*	Blister pack
4	$\frac{5}{16}$ "	SFE-4	—
6	$\frac{3}{8}$ "	SFE-6	—
7 $\frac{1}{2}$	$\frac{7}{16}$ "	SFE-7 $\frac{1}{2}$	—
9	$\frac{7}{8}$ "	SFE-9	—
14	$1\frac{1}{16}$ "	SFE-14	BP/SFE-14-RP
20	$1\frac{1}{8}$ "	SFE-20	BP/SFE-20-RP
30	$1\frac{1}{16}$ "	SFE-30	BP/SFE-30-RP

\* See price sheet for all available ratings.



#### AGU

$\frac{13}{32}$ " x  $1\frac{1}{2}$ " fast-acting glass tube fuses  
 Available with gold-plated end caps for high-end stereo and AV markets.



Amps	Part no.*	Blister pack
<b>Nickel-Plated</b>		
10	AGU-10	—
15	AGU-15	—
20	AGU-20	—
25	AGU-25	—
30	AGU-30	—
40	AGU-40	BP/AGU-40-RP
50	AGU-50	BP/AGU-50-RP
60	AGU-60	BP/AGU-60-RP
<b>Gold-Plated</b>		
10	AGU-10GP	—
15	AGU-15GP	—
20	AGU-20GP	—
25	AGU-25GP	—
30	AGU-30GP	—
35	AGU-35GP	—
40	AGU-40GP	BP/AGU-40GP-RP
50	AGU-50GP	BP/AGU-50GP-RP
60	AGU-60GP	BP/AGU-60GP-RP

\* See price sheet for all available ratings.

### Time-delay $\frac{1}{4}$ " diameter fuses

#### MDA

$\frac{1}{4}$ " x  $1\frac{1}{4}$ " time-delay ceramic tube fuses



Amps	Part no.*
1	MDA-1
1 $\frac{1}{2}$	MDA-1 $\frac{1}{2}$
2	MDA-2
2 $\frac{1}{2}$	MDA-2 $\frac{1}{2}$
3	MDA-3
4	MDA-4
5	MDA-5
6	MDA-6
7	MDA-7
8	MDA-8
10	MDA-10
12	MDA-12
15	MDA-15
20	MDA-20
25	MDA-25
30	MDA-30

\* See price sheet for all available ratings.

#### MDL

$\frac{1}{4}$ " x  $1\frac{1}{4}$ " time-delay glass tube fuses

See page 34 for available assortments.



Amps	Part no.*	Blister pack	Tri-Lingual Blister**
$\frac{1}{16}$	MDL- $\frac{1}{16}$	—	—
$\frac{1}{8}$	MDL- $\frac{1}{8}$	—	—
$\frac{1}{4}$	MDL- $\frac{1}{4}$	BP/MDL- $\frac{1}{4}$	—
$\frac{3}{8}$	MDL- $\frac{3}{8}$	—	—
$\frac{1}{2}$	MDL- $\frac{1}{2}$	BP/MDL- $\frac{1}{2}$	CP/MDL- $\frac{1}{2}$
$\frac{3}{4}$	MDL- $\frac{3}{4}$	—	—
1	MDL-1	BP/MDL-1	CP/MDL-1
$1\frac{1}{4}$	MDL- $1\frac{1}{4}$	BP/MDL- $1\frac{1}{4}$	—
$1\frac{1}{2}$	MDL- $1\frac{1}{2}$	BP/MDL- $1\frac{1}{2}$	CP/MDL- $1\frac{1}{2}$
2	MDL-2	BP/MDL-2	CP/MDL-2
$2\frac{1}{2}$	MDL- $2\frac{1}{2}$	BP/MDL- $2\frac{1}{2}$	—
3	MDL-3	BP/MDL-3	CP/MDL-3
$3\frac{1}{10}$	MDL- $3\frac{1}{10}$	—	—
$3\frac{1}{2}$	MDL- $3\frac{1}{2}$	—	—
4	MDL-4	BP/MDL-4	CP/MDL-4
5	MDL-5	BP/MDL-5	CP/MDL-5
6	MDL-6	BP/MDL-6	—
$6\frac{1}{4}$	MDL- $6\frac{1}{4}$	—	—
7	MDL-7	BP/MDL-7	—
$7\frac{1}{2}$	MDL- $7\frac{1}{2}$	—	—
8	MDL-8	BP/MDL-8	—
10	MDL-10	BP/MDL-10	—
12	MDL-12	—	—
15	MDL-15	BP/MDL-15	—
20	MDL-20	BP/MDL-20	—
25	MDL-25	BP/MDL-25	—
30	MDL-30	BP/MDL-30	—
40	MDL-40	—	—

\* See price sheet for all available ratings.

\*\* Canadian compliant packaging.

#### MDQ

$\frac{1}{4}$ " x  $1\frac{1}{4}$ " dual-element, time-delay glass tube fuses



Amps	Part no.*
2	MDQ-2
4	MDQ-4
5	MDQ-5
6	MDQ-6

\* See price sheet for all available ratings.

## Glass & Ceramic Tube Fuses

**Bussmann**  
 by EATON

### Fast-acting 5x20mm fuses

#### GDA

IEC 5x20mm high-break fast-acting ceramic tube fuses



Amps	Part no.*
500mA	GDA-500MA
630mA	GDA-630MA
1	GDA-1A
1.25	GDA-1.25A
1.6	GDA-1.6A
2	GDA-2A
2.5	GDA-2.5A
3.15	GDA-3.15A
4	GDA-4A
5	GDA-5A
6.3	GDA-6.3A

\* See price sheet for all available ratings.

#### GDB

IEC 5x20mm fast-acting glass tube fuses



Amps	Part no.*
160mA	GDB-160MA
2	GDB-2A
4	GDB-4A
6.3	GDB-6.3A
8	GDB-8A
10	GDB-10A

\* See price sheet for all available ratings.

#### GMA

UL 5x20mm fast-acting glass tube fuses

See page 34 for available assortments.



Amps	Part no.*	Blister pack	Tri-Lingual Blister**
63mA	GMA-63MA	—	—
100mA	GMA-100MA	—	—
125mA	GMA-125MA	—	—
200mA	GMA-200MA	BP/GMA-200MA	—
250mA	GMA-250MA	BP/GMA-250MA	—
300mA	GMA-300MA	—	—
315mA	GMA-315MA	—	—
500mA	GMA-500MA	BP/GMA-500MA	CP/GMA-500MA
600mA	GMA-600MA	—	—
750mA	GMA-750MA	BP/GMA-750MA	—
800mA	GMA-800MA	—	—
1	GMA-1A	BP/GMA-1A	CP/GMA-1A
1.25	GMA-1.25A	—	—
1.5	GMA-1.5A	—	—
1.6	GMA-1.6A	—	—
2	GMA-2A	BP/GMA-2A	CP/GMA-2A
2.5	GMA-2.5A	—	—
3	GMA-3A	BP/GMA-3A	CP/GMA-3A
3.15	GMA-3.15A	—	—
3.5	GMA-3.5A	—	—
4	GMA-4A	—	—
5	GMA-5A	BP/GMA-5A	CP/GMA-5A
6	GMA-6A	BP/GMA-6A	CP/GMA-6A
7	GMA-7A	BP/GMA-7A	—
8	GMA-8A	—	—
10	GMA-10A	BP/GMA-10A	—

\* See price sheet for all available ratings.

\*\* Canadian packaging compliant.

### Time-delay 5x20mm fuses

#### GDC

IEC 5x20mm time-delay glass tube fuses



2 Fuses

Amps	Part no.*	Blister pack
500mA	GDC-500MA	—
1	GDC-1A	—
1.6	GDC-1.6A	—
2	GDC-2A	—
2.5	GDC-2.5A	—
3.15	GDC-3.15A	—
4	GDC-4A	—
5	GDC-5A	BP/GDC-5A
6.3	GDC-6.3A	—

\* See price sheet for all available ratings.

#### GMC

UL 5x20mm medium time-delay glass tube fuses



2 Fuses

Amps	Part no.*	Blister pack
500mA	GMC-500MA	BP/GMC-500MA
630mA	GMC-630MA	—
1	GMC-1A	—
1.5	GMC-1.5A	—
1.6	GMC-1.6A	—
2	GMC-2A	—
3	GMC-3A	—
3.5	GMC-3.5A	—
4	GMC-4A	—
5	GMC-5A	BP/GMC-5
6	GMC-6A	—
7	GMC-7A	BP/GMC-7

\* See price sheet for all available ratings.

#### GMD

UL 5x20mm medium time-delay glass tube fuses



Amps	Part no.*
500mA	GMD-500MA
1	GMD-1A
2	GMD-2A
3	GMD-3A

\* See price sheet for all available ratings.

## Cartridge Fuses

Cartridge fuses are used to protect motors and branch circuits where higher amps or volt ratings are required. They are available in a wide variety of sizes, amp and volt ratings up to 600Vac and 600 amps. Cartridge fuses are used extensively in commercial, industrial and agricultural applications as well as residential fuse panels, air conditioning, pumps, appliances and other equipment.

Cartridge fuses are available in two types. General Purpose fuses have no time-delay and protect fuse panels, appliances and branch circuits. Heavy-duty fuses have a time-delay feature, allowing momentary motor startups.

Both are available in 250Vac and 600Vac versions with catalog symbol and amp rating stamped on the knife blade or end cap.

### General purpose one-time NON and NOS

Used in lighting circuits, main panel protection and other circuits that don't contain large electric motors or inductive loads. One to 60 amp fuses UL Listed Class K5 (IR: 50kA). 70 to 600A fuses UL Class H (IR: 10kA).

### Cartridge fuse dimensions - in (mm)\*

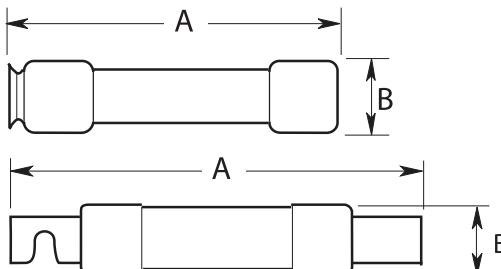
#### Ferrule styles

Amp range	250Vac		600Vac	
	A	B	A	B
1/10-30	2 (50.8)	0.56 (14.3)	5.0 (127.0)	0.81 (20.6)
35-60	3 (76.2)	0.81 (20.6)	5.5 (139.7)	1.06 (27.0)

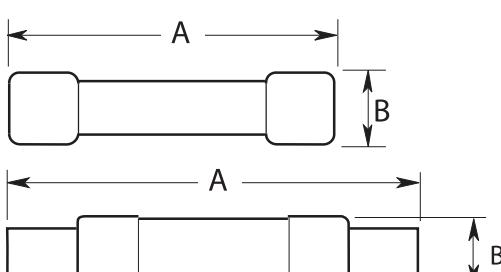
#### Blade styles

Amp range	250Vac		600Vac	
	A	B	A	B
70-100	5.88 (149.2)	1.06 (26.9)	7.88 (200.0)	1.34 (34.0)
110-200	7.13 (181.0)	1.56 (39.6)	9.63 (244.5)	1.84 (46.7)
225-400	8.63 (219.1)	2.06 (52.3)	11.63 (295.3)	2.59 (65.8)
450-600	10.38 (263.5)	2.59 (65.8)	13.38 (339.7)	3.13 (79.5)

\* NON and NOS one-time fuses do not have a rejection feature.



Class R fuses with rejection feature (FRN-R and FRS-R).



Class H fuses without rejection feature (NON/NOS and CDN/PON).

### NON

250Vac general purpose non current-limiting Class K5 and H fuses

See page 34 for available assortments.



Amps	Part no.*	Blister pack**
2	NON-2	—
3	NON-3	—
5	NON-5	—
6	NON-6	—
10	NON-10	—
15	NON-15	BP/NON-15
20	NON-20	BP/NON-20
25	NON-25	BP/NON-25
30	NON-30	BP/NON-30
35	NON-35	BP/NON-35
40	NON-40	BP/NON-40
45	NON-45	BP/NON-45
50	NON-50	BP/NON-50
60	NON-60	BP/NON-60
70	NON-70	BP/NON-70
80	NON-80	—
90	NON-90	—
100	NON-100	BP/NON-100
125	NON-125	—
150	NON-150	—
200	NON-200	—
250	NON-250	—
300	NON-300	—
400	NON-400	—

\* See price sheet for all available ratings.

\*\* 70 and 100 amp fuses 1 fuse per pack,  
 15 to 60 amps, 2 fuses per card.

### NOS

600Vac general purpose non current-limiting Class K5 and H fuses



Amps	Part no.*
6	NOS-6
10	NOS-10
15	NOS-15
20	NOS-20
25	NOS-25
30	NOS-30
35	NOS-35
40	NOS-40
50	NOS-50
60	NOS-60
100	NOS-100
200	NOS-200

\* See price sheet for all available ratings.

## Cartridge Fuses

### FUSETRON energy efficient FRN-R fuses

These cartridge fuses are 23% more energy efficient\* and offer the best time-delay performance. Their dual-element feature allows closer sizing to load for superior protection of motors and transformers. These Class RK5 fuses with a 200kA interrupting rating can be used in a broad range of applications.

Used in motor protection. When sized correctly, they help protect motors from burnout caused by overloads or single-phasing. The time-delay feature allows the initial startup current surge for typical motors to pass, but opens prior to motor burnout when longer, dangerous overloads are present. In addition, the dual-element design opens in as little as 0.004 second if the fuse experiences short-circuit conditions. All fuses UL Listed Class R (IR: 200kA). Groove in end cap or notch in knife blade permit the fuse to be used in only Class H, Class K or Class R fuse blocks.

### FRN-R

#### 250Vac non-indicating dual-element, time-delay Class RK5 fuses

See page 34 for available assortments.



Up to 60A



70A and Over

Amps	Part no.**	Blister pack
1	FRN-R-1	—
2	FRN-R-2	—
3	FRN-R-3	—
4	FRN-R-4	—
5	FRN-R-5	—
6	FRN-R-6	—
6½	FRN-R-6½	—
7	FRN-R-7	—
8	FRN-R-8	—
10	FRN-R-10	BP/FRN-R-10
12	FRN-R-12	—
15	FRN-R-15	BP/FRN-R-15
17½	FRN-R-17½	—
20	FRN-R-20	BP/FRN-R-20
25	FRN-R-25	BP/FRN-R-25
30	FRN-R-30	BP/FRN-R-30
35	FRN-R-35	BP/FRN-R-35
40	FRN-R-40	BP/FRN-R-40
45	FRN-R-45	BP/FRN-R-45
50	FRN-R-50	BP/FRN-R-50
60	FRN-R-60	BP/FRN-R-60
70	FRN-R-70	—
75	FRN-R-75	—
80	FRN-R-80	—
90	FRN-R-90	—
100	FRN-R-100	BP/FRN-R-100
150	FRN-R-150	—
200	FRN-R-200	—

\* Test results are based on weighted sales volume of FUSETRON and Ferraz Shawmut (Mersen) fuses by selected amp and volt rating combination. Next leading brand refers to Ferraz Shawmut based on third-party fuse market share data for a twenty-seven month period (July 2008 through September 2010).

\*\* See price sheet for all available ratings.



### FRN-R fuses with easyID™ blown fuse indication!

Featuring the same energy efficiency and electrical performance characteristics as their green label non-indicating versions, easyID FRN-R fuses offer consumers the additional advantage of blown fuse status that makes finding the open fuse easier and faster.

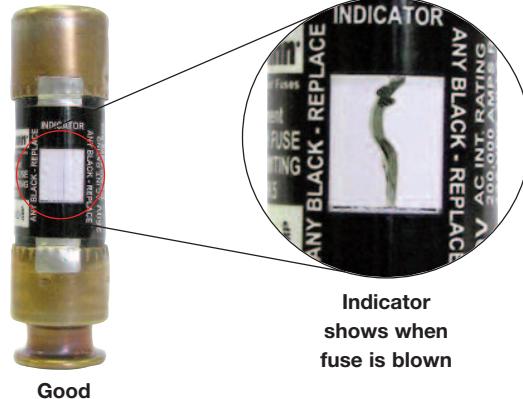
#### FRN-R

250Vac indicating dual-element, time-delay Class RK5 fuses

Amps	Part no.*	easyID™ blister pack
15	FRN-R-15ID	BP/FRN-R-15ID
20	FRN-R-20ID	BP/FRN-R-20ID
30	FRN-R-30ID	BP/FRN-R-30ID
40	FRN-R-40ID	BP/FRN-R-40ID
50	FRN-R-50ID	BP/FRN-R-50ID
60	FRN-R-60ID	BP/FRN-R-60ID

\* See price sheet for all available ratings.

### easyID blown fuse indication



Indicator shows when fuse is blown



## Cartridge Fuses

### FUSETRON energy efficient FRS-R fuses

These cartridge fuses are 23% more energy efficient\* and offer the best time-delay performance. Their dual-element feature allows closer sizing to load for superior protection of motors and transformers. These Class RK5 fuses with a 200kA interrupting rating can be used in a broad range of applications.

Used in motor protection. When sized correctly, they help protect motors from burnout caused by overloads or single-phasing. The time-delay feature allows the initial startup current surge for typical motors to pass, but opens prior to motor burnout when longer, dangerous overloads are present. In addition, the dual-element design opens in as little as 0.004 second if the fuse experiences short-circuit conditions. All fuses UL Listed Class R (IR: 200kA).

\* Test results are based on weighted sales volume of FUSETRON and Ferraz Shawmut (Mersen) fuses by selected amp and volt rating combination. Next leading brand refers to Ferraz Shawmut based on third-party fuse market share data for a twenty-seven month period (July 2008 through September 2010).

#### FRS-R

600Vac indicating and non-indicating dual-element, time-delay Class RK5 fuses



Up to 60A

65A and Over

Amps	Part no.*	With easyID Indication	Blister pack
2	FRS-R-2	—	—
3	FRS-R-3	—	—
3½	FRS-R-3½	—	—
4	FRS-R-4	—	—
5	FRS-R-5	—	—
6	FRS-R-6	FRS-R-6ID	—
6½	FRS-R-6½	FRS-R-6½ID	—
7	FRS-R-7	FRS-R-7ID	—
8	FRS-R-8	FRS-R-8ID	—
10	FRS-R-10	FRS-R-10ID	—
12	FRS-R-12	FRS-R-12ID	—
15	FRS-R-15	FRS-R-15ID	BP/FRS-R-15
17½	FRS-R-17½	FRS-R-17½ID	—
20	FRS-R-20	FRS-R-20ID	BP/FRS-R-20
25	FRS-R-25	FRS-R-25ID	—
30	FRS-R-30	FRS-R-30ID	BP/FRS-R-30
35	FRS-R-35	FRS-R-35ID	—
40	FRS-R-40	FRS-R-40ID	—
45	FRS-R-45	FRS-R-45ID	—
50	FRS-R-50	FRS-R-50ID	—
60	FRS-R-60	FRS-R-60ID	BP/FRS-R-60
70	FRS-R-70	—	—
80	FRS-R-80	—	—
90	FRS-R-90	—	—
100	FRS-R-100	—	—
125	FRS-R-125	—	—
150	FRS-R-150	—	—
175	FRS-R-175	—	—
200	FRS-R-200	—	—

\* See price sheet for all available ratings.



### CDN Type D and PON Type P CSA Certified standard code fuses

Economical fuses for a variety of applications where available short-circuit current is relatively low.

#### CDN

250Vac CSA Type D time-delay fuses



Amps	Part no.*	Tri-Lingual Blister**
10	CDN10	—
12	CDN12	—
15	CDN15	BP/CDN10
20	CDN20	BP/CDN20
25	CDN25	BP/CDN25
30	CDN30	BP/CDN30
35	CDN35	BP/CDN35
40	CDN40	BP/CDN40
45	CDN45	BP/CDN45
50	CDN50	BP/CDN50
60	CDN60	BP/CDN60
100	CDN100	—
110	CDN110	—
175	CDN175	—
200	CDN200	—

\* See price sheet for all available ratings.

\*\* Canadian compliant packaging.

#### PON

250Vac CSA Type P one-time fuses



Amps	Part no.*	Tri-Lingual Blister**
15	PON15	BP/PON15
20	PON20	BP/PON20
25	PON25	BP/PON25
30	PON30	BP/PON30
35	PON35	BP/PON35
40	PON40	BP/PON40
45	PON45	BP/PON45
50	PON50	BP/PON50
60	PON60	BP/PON60

\* See price sheet for all available ratings.

\*\* Canadian compliant packaging.

## Fast-Acting Cartridge Fuses

### Midget fuses

Midget fuses are  $13/32$ " x  $1\frac{1}{2}$ " cartridge fuses in a wide variety of volt and amp ratings to provide supplemental protection to industrial, commercial, agricultural, heating, ventilating and air conditioning equipment. Small size midget fuses often protect control circuit wiring, motor control transformers or small motors. The National Electrical Code® now requires more protection of these components creating an increased replacement demand for these fuses.

#### BAF

250Vac fast-acting  $13/32$ " x  $1\frac{1}{2}$ " midget fuses



Amps	Part no.*
1	BAF-1
3	BAF-3
5	BAF-5
6	BAF-6
10	BAF-10
15	BAF-15
20	BAF-20
25	BAF-25
30	BAF-30

\* See price sheet for all available ratings.

#### KTK

600Vac fast-acting  $13/32$ " x  $1\frac{1}{2}$ " midget fuses



Amps	Part no.*	Blister pack
1	KTK-1	BP/KTK-1
2	KTK-2	BP/KTK-2
3	KTK-3	BP/KTK-3
4	KTK-4	—
5	KTK-5	BP/KTK-5
6	KTK-6	—
10	KTK-10	BP/KTK-10
15	KTK-15	BP/KTK-15
20	KTK-20	BP/KTK-20
25	KTK-25	—
30	KTK-30	BP/KTK-30

\* See price sheet for all available ratings.



### Class CC fuses

The rejection Midget fuses are Class CC and are suitable for both branch circuit and supplemental protection.

#### KTK-R

600Vac fast-acting  $13/32$ " x  $1\frac{1}{2}$ " Class CC branch circuit fuses



Amps	Part no.*
$\frac{1}{2}$	KTK-R-1/2
1	KTK-R-1
2	KTK-R-2
3	KTK-R-3
4	KTK-R-4
5	KTK-R-5
6	KTK-R-6
8	KTK-R-8
10	KTK-R-10
12	KTK-R-12
15	KTK-R-15
20	KTK-R-20
25	KTK-R-25
30	KTK-R-30

\* See price sheet for all available ratings.

Time-Delay and Class G Cartridge Fuses

**FNM**

250Vac time-delay  $1\frac{3}{32}$ " x  $1\frac{1}{2}$ " midget fuses

See page 34 for available assortments.



Amps	Part no.*	Blister pack
$\frac{1}{2}$	FNM- $\frac{1}{2}$	—
$\frac{6}{10}$	FNM- $\frac{6}{10}$	—
1	FNM-1	—
2	FNM-2	BP/FNM-2
$2\frac{1}{2}$	FNM- $2\frac{1}{2}$	—
3	FNM-3	—
$3\frac{3}{10}$	FNM- $3\frac{3}{10}$	—
$3\frac{1}{2}$	FNM- $3\frac{1}{2}$	—
4	FNM-4	—
5	FNM-5	BP/FNM-5
6	FNM-6	—
$6\frac{1}{4}$	FNM- $6\frac{1}{4}$	—
7	FNM-7	—
8	FNM-8	—
9	FNM-9	—
10	FNM-10	BP/FNM-10
12	FNM-12	BP/FNM-12
15	FNM-15	BP/FNM-15
20	FNM-20	BP/FNM-20
25	FNM-25	—
30	FNM-30	BP/FNM-30

\* See price sheet for all available ratings.

**FNQ**

500Vac time-delay  $1\frac{3}{32}$ " x  $1\frac{1}{2}$ " midget fuses



Amps	Part no.*
$\frac{1}{2}$	FNQ- $\frac{1}{2}$
1	FNQ-1
$1\frac{1}{2}$	FNQ- $1\frac{1}{2}$
2	FNQ-2
$2\frac{1}{2}$	FNQ- $2\frac{1}{2}$
3	FNQ-3
4	FNQ-4
5	FNQ-5
6	FNQ-6
7	FNQ-7
8	FNQ-8
10	FNQ-10
12	FNQ-12
15	FNQ-15
20	FNQ-20
25	FNQ-25
30	FNQ-30

\* See price sheet for all available ratings.

**FNQ-R**

600Vac time-delay  $1\frac{3}{32}$ " x  $1\frac{1}{2}$ " Class CC branch circuit fuses



(Amps)*	Part no.
$\frac{1}{2}$	FNQ-R- $\frac{1}{2}$
1	FNQ-R-1
2	FNQ-R-2
3	FNQ-R-3
4	FNQ-R-4
5	FNQ-R-5
6	FNQ-R-6
$6\frac{1}{4}$	FNQ-R- $6\frac{1}{4}$
$7\frac{1}{2}$	FNQ-R- $7\frac{1}{2}$
8	FNQ-R-8
10	FNQ-R-10
12	FNQ-R-12
15	FNQ-R-15
20	FNQ-R-20
30	FNQ-R-30

\* See price sheet for all available ratings.

**SC**

**Specialty Class G rejection fuses**

- 600Vac fast-acting ( $\frac{1}{2}$ -6A)
- 600Vac time-delay (7-20A)
- 480Vac time-delay (25-60A)

These highly compact branch circuit fuses are used in residential, mobile home and industrial applications. They have a minimum 300 volt rating and are available up to 60A. All SC fuses are  $1\frac{3}{32}$ " in diameter with varying lengths to provide a rejection feature that prevents over fusing (installing a 30 amp fuse in a 20A circuit). One half to 6A SC fuses are fast-acting, while 7 to 60A SC fuses are time-delay to permit temporary overloads to pass without nuisance openings.

See page 34 for available assortment.

Amps	Fuse Length	Part no.*	Blister pack
2	1.31"	SC-2	—
3	1.31"	SC-3	—
5	1.31"	SC-5	—
6	1.31"	SC-6	—
8	1.31"	SC-8	—
10	1.31"	SC-10	—
15	1.31"	SC-15	BP/SC-15
20	1.41"	SC-20	BP/SC-20
25	1.62"	SC-25	BP/SC-25
30	1.62"	SC-30	BP/SC-30
40	2.25"	SC-40	—
60	2.25"	SC-60	—

\* See price sheet for all available ratings.



### Plug fuses

Plug fuses thread into receptacles. Two types of threaded fuses are available: Edison Base (brass) and Rejection Base (porcelain). *The two are not interchangeable.* TL and SL medium-duty fuses are regular duty fuses. T and S are heavy duty fuses for more demanding applications with high inrush currents. They feature a dual-element design that provides superior short-circuit and overload protection.

Plug fuses are often used in residential applications to protect furnace blower motors, pumps, power tools, garage door openers, etc. Edison base plug fuses for motor protection are often used in conjunction with branch circuit protection and located in a box cover unit (see page 46).

Plug fuses provide a compact and economical method to prevent electric motor damage, reduce downtime and lower maintenance costs by opening when an overload is present.

When used for residential branch circuit protection, fuses are typically located in the main fuse panel.

### Edison base plug fuses

The Edison base plug fuse uses the same thread as a light bulb base. All ampacities will fit the same fuse receptacle. To help prevent overfusing a circuit — installing a fuse with a greater amp rating than the circuit can handle — it is recommended to install the correctly sized SA rejection base fuse adapter and use a correctly rated S or SL fuse.

### BP/MB

#### 125Vac Edison base UL circuit breakers

For replacing Edison base plug fuses in residential fuse panels. Not for use in box cover units.

Amps	Part no.*
15	BP/MB-15
20	BP/MB-20

\* 1 Circuit breaker per card.



### T

#### 125Vac dual-element, time-delay, Edison base plug fuses

Heavy duty T fuses are used for air conditioners, furnace blower motors, swimming pool pumps, deep freezers or any circuit where motors frequently turn ON and OFF. The T plug fuse is an industrial strength product and provides superior protection that will resist nuisance openings under repeated motor startups. Available in a wide amp range to permit exact sizing to motor load.



Amps	Part no.*	Blister pack**
1 1/4	T-1 1/4	—
1 9/10	T-1 9/10	—
3 3/10	T-3 3/10	BP/T-3 3/10
4	T-4	—
5	T-5	—
6 1/4	T-6 1/4	BP/T-6 1/4
8	T-8	BP/T-8
10	T-10	BP/T-10
12	T-12	BP/T-12
15	T-15	BP/T-15
20	T-20	BP/T-20
25	T-25	BP/T-25
30	T-30	BP/T-30

\* See price sheet for all available ratings.

\*\* Less than 15 amps, 1 fuse per card, 15 to 30 amps, 2 fuses per card.

### TL

#### 125Vac time-delay Edison base plug fuses

Medium duty TL fuses are used for residential motor circuits in kitchens, workshops, garages and utility rooms.

See page 34 for available assortment.

Amps	Part no.	Four pack	Blister pack*
15	TL-15	TL-15PK4	BP/TL-15
20	TL-20	TL-20PK4	BP/TL-20
25	TL-25	TL-25PK4	BP/TL-25
30	TL-30	TL-30PK4	BP/TL-30

\* 3 fuses per card.



### Rejection base plug fuses

The rejection base threads prevent installing a larger amp fuse, e.g., a 30 amp fuse cannot be installed in a 20 amp receptacle.

#### S

##### 125Vac dual-element, time-delay, rejection base plug fuses

UL and CSA heavy-duty S fuses are for use in air conditioners, furnace blower motors, swimming pool pumps, deep freezers or where motors frequently turn ON and OFF. The S rejection base plug fuse is an industrial strength product and provides superior protection that will resist nuisance openings under repeated motor startups. Available in a wide amp range to permit exact sizing to motor load.



Amps	Part no.*	Blister pack**
1 1/4	S-1 1/4	BP/S-1 1/4
1 1/10	S-1 1/10	BP/S-1 1/10
2	S-2	—
2 1/2	S-2 1/2	—
3 3/10	S-3 3/10	BP/S-3 3/10
3 1/2	S-3 1/2	—
4	S-4	—
5	S-5	—
6 1/4	S-6 1/4	BP/S-6 1/4
7	S-7	—
8	S-8	BP/S-8
10	S-10	BP/S-10
12	S-12	BP/S-12
15	S-15	BP/S-15
20	S-20	BP/S-20
25	S-25	BP/S-25
30	S-30	BP/S-30

\* See price sheet for all available ratings.

\*\* Less than 15 amps, 1 fuse per card, 15 to 30 amps, 2 fuses per card.

#### SL

##### 125Vac time-delay, rejection base plug fuses

SL fuses for residential motor circuits in kitchens, workshops, garages and utility rooms.

See page 34 for available assortment.

Amps	Part no.	Four pack	Blister pack*
15	SL-15	SL-15PK4	BP/SL-15
20	SL-20	SL-20PK4	BP/SL-20
25	SL-25	SL-25PK4	BP/SL-25
30	SL-30	SL-30PK4	BP/SL-30

\* 3 Fuses per card.



#### SA

##### Fustat adapters for using S and SL rejection plug fuses in Edison base sockets

SA adapters convert Edison base receptacles to accept a rejection base fuse. SA adapters limit the fuse amp rating that can be installed to protect circuits from being overfused and are available in a variety of sizes to deliver the desired fuse rejection.

See page 34 for available assortment.

Amp Range	Part no.*	Blister pack**
1 or less	SA-1	—
1.25 or less	SA-1 1/4	—
1.6 or less	SA-1 1/10	—
3.5 to 6.25	SA-6 1/4	—
7 to 15	SA-15	BP/SA-15
20	SA-20	BP/SA-20
20 to 30	SA-30	BP/SA-30

\* See price sheet for all available ratings.

\*\* 3 SA Adapters per card.



### CSA Edison base plug fuses

The base is the same as a light bulb base. All sizes fit the same fuse receptacle.



#### TC

##### 125Vac CSA Type D dual-element time-delay Edison base plug fuses

Heavy duty TC fuses are used for residential motor circuits in kitchens, workshops, garages and utility rooms.



Amps	Four pack	Trilingual Blister*
15	TC-15PK4	BP/TC-15
20	TC-20PK4	BP/TC-20
25	TC-25PK4	BP/TC-25
30	TC-30PK4	BP/TC-30

\* 2 Fuses per card, Canadian compliant packaging.

#### P

##### 125Vac CSA Type P dual-element one-time Edison base plug fuses

Medium-duty P fuses are used for non-inductive loads such as lighting and heating circuits.



Amps	Four pack	Trilingual Blister*
15	P-15PK4	BP/P-15
20	P-20PK4	BP/P-20
25	P-25PK4	BP/P-25
30	P-30PK4	BP/P-30

\* 2 Fuses per card, Canadian compliant packaging.

#### CP/MB

##### 125Vac CSA Edison base circuit breakers

For replacing Edison base plug fuses in residential fuse panels. Not for use in box cover units.



Amps	Trilingual Blister*
15	CP/MB-15
20	CP/MB-20

\* 1 Circuit breaker per card, Canadian compliant packaging.

## Box Cover Units & Type 1 SPDs

**Bussmann**  
 by

### Box cover units

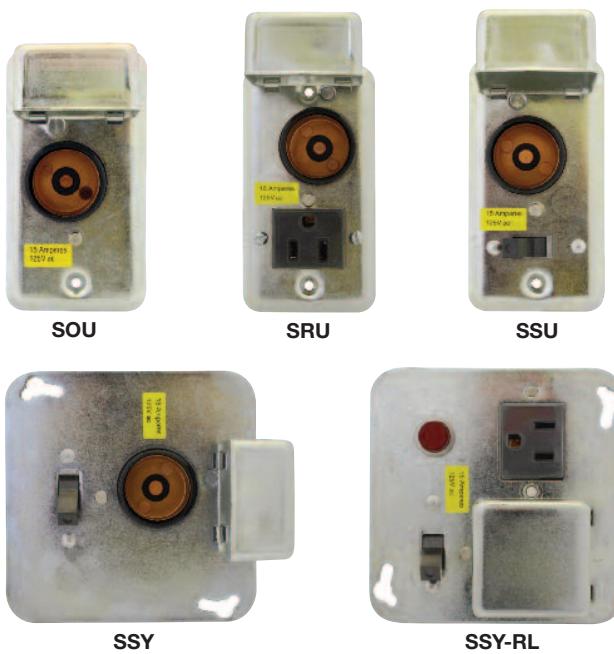
#### For supplemental circuit and small motor protection

Box cover units are available in a variety of styles that fit standard electrical boxes, and they provide an efficient and economical method to protect motors from overloads. Often, branch circuit protection cannot protect small motors, e.g., a 6 1/4 amp rated motor will likely burn up before a 30 amp breaker trips. A box cover unit permits using a fuse sized close to the motor's load so that it opens when the motor draws too much current.

Part no.*	Blister pack	Max Hp/volts/amps	Box type	Description
SOU	BP/SOU	3/4Hp/125Vac/15A	2 1/4" handy	Fuse holder only
SRU	BP/SRU	1/2Hp/125Vac/15A	2 1/4" handy	Fuse holder/three-prong receptacle
SSN	—	1/2Hp/125Vac/15A	Single gang	Weatherproof fuse holder/switch
SSU	BP/SSU	1/2Hp/125Vac/15A	2 1/4" handy	Fuse holder/switch
SSY	BP/SSY	1/2Hp/125Vac/15A	4" square	Fuse holder/switch
SSY-RL	—	1/2Hp/125Vac/15A	4" square	Fuse holder/switch, three-prong receptacle and switch light
STY**	—	1/2Hp/125Vac/15A	4" square	Twin fuse holders/double pole switch

\* See price sheet for all available versions.

\*\* Double pole switch opens both sides of the circuit. Can be used for two separate motors with common switch or a single motor (1/2Hp, 250Vac max.)



### SurgePOD™ PRO Type 1 power surge protective device

#### The value Type 1 SPD for sensitive residential applications

- Type 1 UL Listed 1449 3<sup>rd</sup> Edition SPD is easily installed on the loadside or lineside of the service entrance overcurrent protective device
- For 240Vac, split-phase electrical systems
- 200kA SCCR
- Compact UV resistant NEMA 4X enclosure for indoor or outdoor applications
- easyID™ LED status indicators provide surge protection status at a glance
- Voltage specific model protects electrical systems, equipment, appliances and consumer electronics better than "One-Size-Fits-All" economy SPDs
- Two-year warranty (see warranty statement 3A1502 for details)
- Thermal disconnect MOV technology eliminates the need for additional fusing

See Data Sheet # 10033 for technical specifications.

Part no.	System voltage	Description
RB-SPP-240PN	240Vac	Split-phase, 3 wire, 3 connection points



### Automotive blade and glass tube fuse pullers and testers

Remove automotive fuses quickly and easily with the FP-A3 fuse puller. The innovative tool design lets you remove or install both blade-type and glass fuses.

The FT-3 combination fuse tester/puller is designed for easy one-handed testing of glass and blade fuses. Light glows when fuse is good.

### Cartridge fuse pullers

Bussmann cartridge fuse pullers are heavy-duty tools for safely removing fuses from their blocks. Can be used with all cartridge fuses.

Part no.	Blister pack	Description
<b>Automotive fuse pullers</b>		
FP-A3	BP/FP-A3-RP	Fuse puller only
FT-2*	BP/FT-2	Fuse tester only
FT-3	BP/FT-3-RP	Fuse puller and tester
<b>Cartridge fuse pullers</b>		
FP-2	BP/FP-2	Puller - 1 to 60A (13/32" to 13/16" Dia.)
FP-3	BP/FP-3	Puller - 70 to 200A (1" to 11/4" Dia.)
FP-4	—	Puller - 225 to 600A (13/4" to 21/2" Dia.)
FP-6	—	Puller - 0 to 60A Class T fuses

\* Only available in blister pack.



### NON and FRN-R 250 volt fuse reducers

Fuse reducers allow a smaller size fuse to be installed in a fuse block intended for a larger fuse. For example: a 30 amp fuse is two inches long and will not fit into a 60 amp fuse block (which is three inches between clips). A NO.263 reducer installed on the fuse permits it to be installed in a 60 amp fuse block. Reducers are particularly useful when equipment is being converted. Proper protection can be maintained without the expense of replacing the fuse block. Catalog numbers with the “-R” suffix (NO.263-R) fit rejection Class R fuse blocks. Consult factory for 600 volt and Class J reducers.

Part no.*	Fuse block size (amps)	Fuse size (amps)
<b>NON 250Vac Class H reducers</b>		
NO.263	60	30
<b>FRN-R 250Vac Class R reducers</b>		
NO.263-R	60	30
NO.216-R	100	60
NO.2621-R	200	100

\*See price sheet for all available reducers.



## Automotive Circuit Protection Specifications

**Bussmann**  
 by EATON

Fuse type	Catalog symbol	Class	Construction/size	Volts	Amps	Interrupting rating	Type	Typical applications
Blade *easyID™ illuminating version	ATL	—	3-leg micro blade fuse	32Vdc	5-15A	1kA	Fast-acting	Automotive circuits
	ATM/ATM_ID*	—	Miniature blade fuse	32Vdc	1-30A	1kA	Fast-acting	Automotive circuits
	ATM_LP	—	Low-profile ATM fuse	32Vdc	2-30A	1kA	Fast-acting	Automotive circuits
	ATC/ATC_ID*	—	Blade fuse	32Vdc	1-40A	1kA	Fast-acting	Automotive circuits
	ATR	—	2-leg micro blade fuse	32Vdc	5-30A	1kA	Fast-acting	Automotive circuits
	MAX/MAX_ID*	—	Heavy-duty blade fuse	32Vdc	20-100A	1kA	Fast-acting	Automotive circuits
Glass tube	ABC	—	1/4" x 1 1/4" ceramic	250Vac	1/4-1A 1 1/2-3A 4-10A 12-15A 20A 25-30A	35A 100A 200A 750A 400A 200A	Fast-acting	Appliances and consumer electronics
	AGA	—	1/4" x 5/8"	125Vac 125Vac 32Vac	1-1 1/2A 2-5A 6-30A	10kA 200A 1kA	Fast-acting	Automotive circuits
	AGC	—	1/4" x 1 1/4"	250Vac 250Vac 250Vac 32Vac 32Vac 32Vac	1/20-1A 1 1/2-3A 4-10A 12-30A 35A 40-50A	35A 100A 200A 1kA 70A 80A	Fast-acting	Appliances and consumer electronics
	AGU AGU-(amp)GP	Midget	Glass tube ferrule 1 1/32" x 1 1/2"	250Vac 32Vac	1-3A 4-60A	10kA 10kA	Fast-acting	Appliances and consumer electronics
	AGW	—	1/4" x 5/8"	32Vac	1-30A	1kA	Fast-acting	Automotive circuits
	AGX	—	1/4" x 1"	250Vac 250Vac 125Vac 125Vac 32Vac	1/500-1A 1/2-2A 2 1/2-5A 6-7A 8-30A	35A 100A 10kA 1kA 1kA	Fast-acting	Automotive circuits
	GBB	—	1/4" x 1 1/4" ceramic	250Vac 125Vac	1-30A 1-15A	200A 10kA	Fast-acting	Appliances and consumer electronics
	GBC	—	1/4" x 3 1/32"	32V	5-25A	—	Fast-acting	German automobiles
	GDA	—	5 x 20mm ceramic	250Vac	50mA-6.3A	1.5kA	Fast-acting	Electronic circuits
	GDB	—	5 x 20mm	250Vac	32mA-16A	35A	Fast-acting	Electronic circuits
	GDC	—	5 x 20mm	250Vac	32mA-6.3A	35A	Time-delay	Electronic circuits
	GMA	—	5 x 20mm	250Vac 250Vac 125Vac 125Vac 125Vac	32mA-1A 1.2-3A 3.15-6A 7-10A 15A	35A 100A 1kA 200A 150A	Fast-acting	Appliances and consumer electronics
	GMC	—	5 x 20mm	250Vac 250Vac 125Vac 125Vac	63mA-1A 1.25-3.15A 3.5-6.3A 7-10A	35A 100A 10kA 200A	Time-delay	Appliances and consumer electronics
	GMD	—	5 x 20mm	250Vac 250Vac	125mA-3A 4A	100A 200A	Time-delay	Electronic circuits
	MDA	—	1/4" x 1 1/4" ceramic	250Vac 250Vac 250Vac 250Vac 125Vac	1/4-1A 1 1/2-2A 2 1/2-10A 12-15A 20-30A	35A 100A 200A 750A 1.5kA	Time-delay	Appliances and consumer electronics
	MDL	—	1/4" x 1 1/4"	250Vac 250Vac 250Vac 32Vac	1/4-1A 1 1/2-3A 4-8A 9-40A	35A 100A 200A 1kA	Time-delay	Appliances and consumer electronics
	MDQ	—	1/4" x 1 1/4"	250Vac 250Vac 250Vac 32Vac	1/4-1A 1 1/2-3A 4-7A 8-30A	35A 100A 200A 1kA	Time-delay	Electronic relay and controls
	SFE	—	1/4" x various length	32V	4-30A	—	Fast-acting	Size-rejecting for automotive circuits

**Automotive Circuit Protection Specifications**

Fuse type	Catalog symbol	Class	Construction/size	Volts	Amps	Interrupting rating	Type	Typical applications
<b>High amp</b> *easyID™ illuminating version	AMG	—	Bolt-in fuse	32Vdc	80-500A	1kA	—	Automotive circuits, uses HMEG fuse block
	AMI	—	Bolt-in fuse	32Vdc	30-200A	2kA	—	Automotive circuits, uses HMID fuse block
	CBBF	—	Bolt-in	58Vdc	30-300A	2kA	—	Heavy-Duty and Marine
	FMM	—	Micro FMX fuse	32Vdc	15-40A	1kA	Time-delay	Automotive circuits
	FMX, FMX_ID*	—	6mm blade on 5.5mm centers	32Vdc	20-60A	1kA	Time-delay	Automotive circuits
	FMX_LP	—	Low-profile, 6mm blade on 5.5mm centers	58Vdc	20-60A	1kA @ 32Vdc	Time-delay	Automotive circuits
<b>Current limiters</b>	ANN	—	Bolt-in fuse 2.44mm blade centers	125Vac/80Vdc	10 to 800A	2.5kA Vac 2.7kA Vdc	Very Fast-acting	Automotive circuits, fork lift trucks, marine, aviation
	ANL	—	Bolt-in fuse 2.44mm blade centers	32Vac/80Vdc	35 to 750A	6kA Vac 2.7kA Vdc	Non Time-delay	Automotive circuits, fork lift trucks, marine, aviation
<b>Automotive cartridge fuses</b>	FLB	—	Bolt-mount	32Vdc	30-140A	10kA	—	Automotive circuits
	FLD	—	Bolt-mount	32Vdc	30-140A	10kA	—	
	FLF	—	Female terminals	32Vdc	20-60A	10kA	—	
	FLG	—	Female terminals	32Vdc	50-80A	10kA	—	
	FLM	—	Male terminals	32Vdc	30-120A	10kA	—	
	FLN	—	Female terminals with lock tab	32Vdc	25-30A	10kA	—	
	FLS	—	Female mini terminals	32Vdc	30-40A	10kA	—	
Circuit breakers	Catalog symbol	SAE type	Construction/size	Volts	Amps	Interrupting rating	Reset type	Typical applications
<b>ATM footprint</b>	CB211	I	ATM footprint	14Vdc	7½-30A	150A	Automatic	Automotive/RV
	CB212	II	ATM footprint	14Vdc	10-30A	150A	Modified	Automotive/RV
	MMB	I	ATM footprint	12Vdc	15-20A	300A	Automatic	Automotive/RV
<b>ATC footprint</b>	ACB	I	ATC footprint	—	—	—	Automatic	Automotive/RV
	CB221	I	ATC footprint	14Vdc	7½-30A	150A	Automatic	Automotive/RV
	CB222	II	ATC footprint	12Vdc	10-30A	150A	Modified	Automotive/RV
	CB223	III	ATC footprint	28Vdc	7½-30A	150A	Manual	Automotive/RV
	CB227	III	ATC footprint/color coded	28Vdc	5-30A	2kA	Manual	Automotive/RV
	CCB-30	II	ATC footprint	24Vdc	30A	—	Modified	Automotive/RV
	CCB-25	I	ATC footprint	—	25A	—	Automatic	Automotive/RV
	FCB-20	II	ATC footprint	14.5Vdc	20A	—	Modified	Automotive/RV
	UCB	I	ATC footprint/color coded	12Vdc	6-30A	—	Automatic	Automotive/RV
	CB1911	I	MAX footprint	14Vdc	10-50A	150A*	Automatic	Automotive/RV/marine
<b>Glass tube</b>	CB1921	II	MAX footprint	12Vdc	10-30A	150A	Modified	Automotive/RV/marine
	CBF	II	¼" x 1¼"	12Vdc	6-40A	—	Modified	Automotive/RV/Marine
<b>Stud terminal</b>	CB123-(amp)B	III	10-32 studs 0.69" Centers	28Vdc	10-50A	1.5kA@12Vdc	Manual	RV/truck/marine
	CB123-(amp)HB	III	10-32 studs 0.69" Centers	28Vdc	10-50A	1.5kA@12Vdc	Manual	RV/truck/marine
	CBC	I	10-32 studs 0.69" Centers	14Vdc	8-50A	1.5kA	Automatic	RV/truck/marine
	CBC-(amp)B	I	10-32 studs 0.69" Centers	14Vdc	8-50A	1.5kA	Automatic	RV/truck/marine
	CBC-(amp)BWP	I	10-32 studs 0.69" Centers	12Vdc	20-30A	1.5kA	Automatic	RV/truck/marine
	CBC-(amp)HB	I	10-32 studs 0.69" Centers	14Vdc	10-50A	1.5kA	Automatic	RV/truck/marine
	CBP-(amp)BA	I	10-32 studs 0.69" Centers	14Vdc	20-50A	1.5kA	Automatic	RV/truck/marine
	CB174	III	¼" quick-connect terminals	250Vac/32Vdc	10-30A	200A	Manual	Automotive/truck
<b>Quick connect</b>	CBT-(amp)M	II	¼" quick-connect terminals	—	10-30A	—	Modified	RV/truck/marine
	CBT-(amp)N	II	¼" quick-connect terminals	—	10-30A	—	Modified	RV/truck/marine
	CBU-6	I	¼" quick-connect terminals	—	6A	—	Automatic	RV/truck/marine
	CBU-30B	I	¼" quick-connect terminals	—	30A	—	Automatic	RV/truck/marine
<b>High amp</b>	CB181F	I	Flush-mt. waterproof ¼-28 stud	30Vdc	60-150A	3kA	Automatic	RV/truck/marine
	CB184F	III	Flush-mt. waterproof ¼-28 stud	42Vdc	25-150A	3kA	Manual	RV/truck/marine
	CB185	III	Flush-mt. waterproof ¼-28 stud	42Vdc	25-150A	3kA	Manual	RV/truck/marine
	CB185P	III	Panel-mt. waterproof ¼-28 stud	42Vdc	25-150A	3kA	Manual	RV/truck/marine
	CB187F	III	Flush-mt. weatherproof ½-18 stud	48Vdc	25-200A	5kA@12Vdc	Manual	RV/truck/marine
	CB187P	III	Panel-mt. weatherproof ½-18 stud	48Vdc	25-150A	5kA@12Vdc	Manual	RV/truck/marine
	CB251	I	Panel-mt. weatherproof 10-32 stud	32Vdc	10-50A	2.5kA	Automatic	RV/truck/marine
	CB255	III	Panel-mt. weatherproof 10-32 stud	32Vdc	10-50A	2.5kA	Manual	RV/truck/marine
	CB285	III	Flush-mt. waterproof M6 stud	42Vdc	30-150A	2.5kA	Manual	RV/truck/marine

\* Interrupting rating varies with circuit breaker amp rating.

For product information and data sheets, visit [www.cooperbussmann.com/retail](http://www.cooperbussmann.com/retail)

Hardware Circuit Protection Specifications

**Bussmann**  
 by EATON

Fuse type	Catalog symbol	Class	Construction/size	Volts	Amps	Interrupting rating	Type	Typical applications
Plug	TL	—	Edison thread base	125Vac	15-30A	10kA	Time-delay	Panels, small motors and inductive loads
	T	—	Edison thread base	125Vac	½-30A	10kA	Heavy-duty time-delay	Panels, small motors and inductive loads
	TC	CSA Type D	Edison thread base	125Vac	15-30A	—	Dual-element time-delay	Canadian apps: panels small motors and inductive loads
	P	CSA Type P	Edison thread base	125Vac	15-30A	—	General purpose	Canadian apps; panels, small motors and inductive loads
	SL	—	Rejection thread base	125Vac	15-30A	10kA	Time-delay	Panels, small motors and inductive loads
	S	—	Rejection thread base	125Vac	½-30A	10kA	Heavy-duty time-delay	Panels, small motors and inductive loads
Cartridge	BAF	Midget	13/32" x 1½" ferrule	250Vac 250Vac 250Vac 250Vac 125Vac	½-1A 1½-2½A 3-9A 10-15A 20-30A	35A 100A 200A 750A 10kA	Fast-acting	125 and 250Vac non-inductive loads
	CDN	CSA Type D	Ferrule style Blade style	250Vac 250Vac	1-60A 70-600A	10kA 10kA	Gen. purpose time-delay	Canadian applications: light-duty circuits
	FNM	Midget	13/32" x 1½" ferrule	250Vac 250Vac 250Vac 125Vac	½-1A 1½-3½A 4-10A 12-30A	35A 100A 200A 10kA	Time-delay	General purpose and lighting circuits
	FNQ	Midget	13/32" x 1½" ferrule	500Vac	½-30A	10kA	Time-delay	480V control transformer circuits, lighting circuits
	FNQ-R	CC	13/32" x 1½" ferrule	600Vac	½-30A	200kA	Time-delay	Industrial and transformer and specialized circuits
	FRN-R FRN-R_ID**	RK5	Ferrule style Blade style	250Vac 250Vac	½-60A 70-600A	200kA 200kA	Time-delay	Panelboards, motor control centers, machinery disconnects and combination starters
	FRS-R FRS-R_ID**	RK5	Ferrule style (1-60A) Blade style (64-600A)	600Vac 600Vac	½-60A 65-600A	200kA 200kA	Time-delay	Panelboards, motor control centers, machinery disconnects and combination starters
	KTK	Midget	13/32" x 1½" ferrule	600Vac	½-30A	100kA	Fast-acting	Control and meter circuits
	KTK-R	CC	13/32" x 1½" ferrule	600Vac	½-30A	200kA	Fast-acting	Industrial control circuits
	NON	K5 H	Ferrule style Blade style	250Vac 250Vac	½-60A 65-600A	50kA 10kA	General purpose	Light-duty circuits
	NOS	K5 H	Ferrule style Blade style	600Vac 600Vac	1-60A 70-600A	50kA 10kA	General purpose	Light-duty circuits
	PON	CSA Type P	Ferrule style Blade style	250Vac 250Vac	1-60A 70-600A	10kA 10kA	General purpose	Canadian applications: light-duty circuits
	SC	G	13/32" x 1½" ferrule	600Vac	1-6A	100kA	Fast-acting	Size-rejecting fusible branch panelboards, HVAC
			13/32" x 1¾" ferrule	600Vac	7-15A	100kA		
			13/32" x 1¾" ferrule	600Vac	20A	100kA		
			13/32" x 1¾" ferrule	480Vac	25-30A	100kA		
			13/32" x 2½" ferrule	480Vac	35-60A	100kA		
Circuit breaker	Catalog symbol	Type	Construction/size	Volts	Amps	Interrupting rating	Reset type	Typical applications
Plug Fuse	BP/MB CP/MB	—	Edison base plug thread CSA version	125Vac 125Vac	15-20A 15-20A	— —	Manual Manual	Residential fuse panels Residential fuse panels

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BAF_-	42	BP/FLG_-RP	10	BP/SFE-ĀH6-RP	26	FLG_-	10	NO.105	29	SSY-RL	46
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BK/ATC-ID	8	BP/FLN_-RP	10	BP/SL_-	45	FLB_-	10	NO.136	29	T-	44
BK/ATL_-	6	BP/FLS_-RP	10	BP/SOU	46	FLD_-	10	NO.160BK	29	TB200_-B	21
BK/ATM_-	6	BP/FLW-14	11	BP/SRA	22	FLF_-	10	NO.216-R	47	TB300_-B	21
BK/ATM-ID	8	BP/FMM_-RP	10	BP/SRB	22	FLG_-	10	NO.225	32	TC-PK4	45
BK/ATM-LP	6	BP/FMX-ID	9	BP/SRG	22	FLM_-	10	NO.227	32	TL-	44
BK/ATR_-	6	BP/FMX-LP-RP	10	BP/SRN	22	FLN_-	10	NO.232	23	TL-PK4	44
BK/FMM_-	10	BP/FMX_-RP	10	BP/SRR	22	FLS_-	10	NO.233	23	TL-ĒK	34
BK/MAX_-	7	BP/FNM-	43	BP/SRU	46	FMM_-	10	NO.234	23	UCB-	13
BK/MAX-ID	9	BP/FNM-ĀH	34	BP/SSU	46	FMX_-	10	NO.24	27	VP/ATC-ID	8
BP/232-RP	23	BP/FNM-AL	34	BP/SSY	46	FMX-LP	10	NO.243	23	VP/ATC-RP	7
BP/233-RP	23	BP/FP-2	47	BP/STA	22	FNM_-	43	NO.244	23	VP/ATM-ID	8
BP/550-RP	23	BP/FP-3	47	BP/STB	22	FNO_-	43	NO.246	23	VP/ATM-LP-RP	6
BP/552-RP	23	BP/FP-A3-RP	47	BP/STC	22	FNQ-ĀR_-	43	NO.2621-R	47	VP/ATM-RP	6
BP/575-RP	23	BP/FRN-ĀH	34	BP/STE	22	FP-2	47	NO.263	47	VP-FMX-A5-RP	27
BP/577-RP	23	BP/FRN-AL	34	BP/STF	22	FP-3	47	NO.263-R	47		
BP/726-RP	23	BP/FRN-R_-	40	BP/STG	22	FP-4	47	NO.290	30		
BP/727-RP	23	BP/FRN-R-ID	40	BP/STJ	22	FP-6	47	NO.43	27		
BP/756-RP	23	BP/FRS-R_-	41	BP/STK	22	FP-A3	47	NO.44	27		
BP/757-RP	23	BP/FT-2	47	BP/STN	22	FRN-R_-	40	NO.45	29		
BP/758-RP	23	BP/FT-3-RP	47	BP/STR	22	FRN-R-ID	40	NO.53	27		
BP/759-RP	23	BP/GBC_-RP	37	BP/STT	22	FRS-R_-	41	NO.535	23		
BP/760-RP	23	BP/GBC-A8-RP	26	BP/TT	44	FRS-R-ID	41	NO.550	23		
BP/761-RP	23	BP/GDC-5A	38	BP/TC_-	45	FT-2	47	NO.552	23		
BP/762-RP	23	BP/GMA-A	38	BP/TL_-	44	FT-3	47	NO.575	23		
BP/ABC_-	36	BP/GMA-5A	34	BP/UCB_-RP	13	FUSE-CADDY1	30, 31	NO.577	23		
BP/ABC-A	34	BP/GMA-5XM	34	BP/XMAS-6F	34	FUSE-CADDY2	30, 31	NO.60LP	29		
BP/AGA_-RP	36	BP/GMA-AH	34	CB123-B	14	GBB-R	36	NO.64	27		

## Customer Assistance

### Customer Satisfaction Team

Available to answer questions regarding Bussmann products and services Monday-Friday, 7:00 a.m. – 6:00 p.m. Central Time. Contact:

- Phone: 636-527-1477
- Toll-free fax: 877-359-2675
- E-mail: [bussretail@eaton.com](mailto:bussretail@eaton.com)

### Emergency and After-Hours Orders

Next flight out or will call shipment for time-critical needs. Customers pay only standard product price, rush freight charges and modest emergency service fee. Place these orders through the Customer Satisfaction Team during regular business hours. For after-hours, contact:

- After hours 314-995-1342

### C<sup>3</sup> – the Enhanced, Online Cooper Customer Center

Provides real time product availability, net pricing, order status and shipment tracking for: B-Line, Bussmann, Crouse-Hinds, Lighting, Power Systems and Wiring Devices. Call 877-995-5955 for log-in assistance. Available at:

- [www.cooperc3.com](http://www.cooperc3.com)

### Application Engineering

Technical assistance is available to all customers. Application support is available Monday-Friday, 7:00 a.m. – 5:00 p.m. Central Time. Contact:

- Toll-free phone: 855-287-7626 (855-BUSSMANN)
- E-mail: [fusetech@eaton.com](mailto:fusetech@eaton.com)

### Online Resources

Visit [www.bussmann.com](http://www.bussmann.com) for the following resources:

- Product search and cross-reference
- Product and technical materials
- Solutions centers for information on topical issues including arc flash, selective coordination and short-circuit current ratings
- Technical tools, like our arc flash calculator
- Where to purchase Bussmann product

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