

Automotive and hardware/home center
product catalog

BUSSMANN
SERIES

Circuit protection technology
for automotive, home, off-road and RVs.

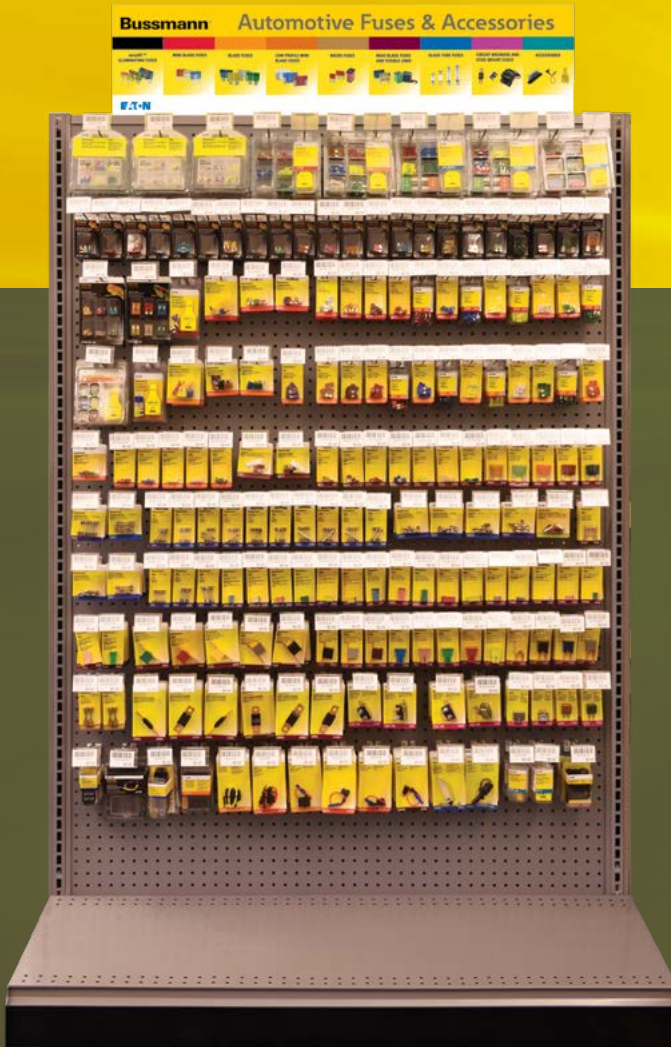


EATON

Powering Business Worldwide

Bussmann automotive planogram available

Bold look with more to offer.



Includes **14%**
more product

You can now meet the demands of the market by offering more circuit protection products on the same 4-foot inline planogram with our Automotive Aftermarket kit (4FTAUTO-KIT).

Each 4FTAUTO-KIT ships with one retail pack and one reorder backer tag card for each facing. The pegs may then be replenished with open stock.

Offer your customers more.
Order your 4FTAUTO-KIT today!



Order Catalog Number: 4FTAUTO-KIT
UPC Number: 051712-42208-6

Suggested planogram product layout available on page 33.

Package options

In addition to boxed product, Bussmann™ series products are also available in packaging that is designed for various retail environments and needs. These package options do not apply to every product. Check the Bussmann series price sheet for availability. Below are explanations of the various packaging you'll see listed in the product tables of this catalog. For more information, visit Eaton.com/BussmannConsumer.

Traditional packs — automotive

Tins

Examples: ATC-20, SFE-14

Blade fuses and glass tube fuses may be ordered in tins. A tin holds FIVE fuses with the exception of MAXI™ fuses which are packed ONE fuse per tin.



Polybags and boxes

Examples: CB123-20HB, FMX-20, HHM

Larger fuses like female MAXI, cartridge fuses and circuit breakers are packed ONE fuse per bag. High amp circuit breakers and fuse holders are packed in boxes.



Retail packs — automotive

Retail packs may be placed on a pegboard and come in blister packs and clamshells. They are generally ordered by adding the prefix "BP/" and suffix "-RP" or "-RPP" to the catalog number.

Single amp packs

Examples: BP/ATM-30-RP,
BP/ATC-20ID

These packs contain ONE to FIVE fuses of the same amp rating. Smaller parts are placed in blister packs while larger parts are placed in clamshells.



Multiple amp assortment packs

Examples: AGC-EK, ATC-ID-SK,
BP/ATM-A5-RP,
NO. 44

These packs house multiple fuses of varying amp ratings. Some packs come with a fuse puller. See pages 27 and 28 for details.



Additional packaging — automotive

Value packs

Examples: VP/ATC-30ID, VP/ATM-25-RP,
VP/FMX-A5-RP

Ideal for small shops, mobile technicians, and avid car enthusiasts, these re-sealable clamshells and blister packs house 10 *easyID*™ fuses or 25 standard blade fuses.



Bulk packs

Examples: BK/AGC-30, BK/ATM-10LP,
BK/MAX-20ID

Available on select products, bulk pack fuses are available in plastic bags or boxes. Ask your Bussmann series product sales rep or distributor for product availability.



Reload packs

Examples: ATM-2RLD, ATC-40RLD

Available on select products, reloads are bulk fuses packed in a clear polybag with product label and barcode. They are designed for re-loading product into installer assortments and tilt-bins like the NO.225.



Installer assortments

Examples: NO. 290, FUSE-CADDY2,
CDY10TRY-ATC

Contain a variety of circuit protection products for service technicians and repair shops.



Retail packs — electrical

Single amp assortment packs

Examples: BP/GMA-2A, BP/FRN-R-30ID,
BP/FRS-R-60

These packs contain ONE to FIVE fuses of the same amp rating. Glass fuses are placed in 1.77" W x 3.71" H cards.



Assortment packs

Examples: BP/ABC-A, NON-EK,
TL-EK

These packs contain multiple fuses of varying amp ratings. Some packs come with a fuse puller. See page 52 for details.



Automotive products and accessories		6
ATR, ATL, ATM, ATM-LP, ATC™ and MAXI™ blade fuses		
	ATR 2-leg micro blade fuses	7
	ATL 3-leg micro blade fuses	7
	ATM and low-profile ATM fuses	7
	ATC fuses	7
	MAXI fuses	7
easyID™ ATR, ATM, ATC, MAXI and FMX indicating fuses		
High amp fuses, cartridge fuses		
Multi-pole fuses	MPF, MPF2	9
Female MAXI™	FMX, low-profile FMX	9
	FMM micro fuses, FMS slotted micro fuses	9
Cartridge fuses	FL family: FLB, FLD, FLF, FLG, FLJ, FLM, FLN, FLS	10
Battery terminal fuses	BTF-1P, BTF-2P, BTF-3P, BTF-5P	11
Multi slow-blow fuses	MUSB	11
High-amp stud-mount fuses/blocks	AMG/HMEG, AMI/HMID	12
Fuse holders and taps		
ATR fuse holder	HH2	13
ATM-LP fuse holders	HHV	13
ATM fuse holders	HHL, HHM, HHU, ATM-FHID	13
ATC fuse holders	HHC, HHD, HHE, HHG, HHR, HHS, ATC-FHID	13
MAXI fuse holders	HHX, MAX-FHID	13
ATR, ATM and ATC fuse taps and add-a-circuit	BP/ATM-TAP-RP, BP/ATC-TAP-RP, BP/HHTR-RP, BP/HHLP_RP, BP/HHH-RP, BP/HHA-RP	14
Glass tube fuse holders	HFA, HFB, HHB, HHK, HHN, HLR, HMJ, HMK, HRH, HRI, HRJ, HRK	14
Glass tube panel-mount	HKP HKP-HH, HTB	14
Fuse panels, blocks, fusible link wire and limiters		
easyID ATC and ATM fuse panels	FP-ATC, FP-ATM	15
ATR, ATM and ATC blocks	BP/FB(poles)-ATR, BP/FB(poles)-ATM, BP/FB(poles)-ATC	15
ATM panels	RTMF	15
ATC panels	15600	16
FMX blocks	Fuse only: CBPFM, Fuse and relay: CBPRM	16
Glass tube blocks	S-8202-(poles), S8301-(poles)	17
Fusible link wire	BP/FL-14, BP/FL-16, BP/FLW-14	17
Current limiters/blocks	ANN, ANL, SFR	17
Automotive circuit breakers		
Low-profile ATM footprint	CB234	18
ATM footprint	CB211, CB212, CB222OS, CB233, CB223OS, MMB	18
ATM mini devices	CB22901-1.5, CB22902-68, CB22903-6	18
ATC footprint	ACB, CB221, CB222, CB223, CB227, CBB, CCB, FCB, UCB	19
MAXI footprint	CB1911, CB1921	20
Glass tube footprint	CBF	20
Heavy-duty	Stud-terminal: CB123, CBC, CBP	20-21
Splash proof covers	CB-CVR, BK/CB-CVR, BP/CB_HB-CVR	20, 36
Panel-mount	CB174	21
Quick-connect	CBT, CBU	21
High amp	CB181F, CB184F, CB185, CB185P, CB285F, CB251, CB187F, CB187P, CB255, CB285P	22-23
Junction blocks, terminal blocks and terminal strips		
Junction blocks	JB3816-2, JB3816-3	24
Terminal blocks and strips	TB200-(poles)B, TB300-(poles)B, C5237-(poles)BC	24

Not all products are listed in this catalog. If additional amperages are needed, contact your Bussmann series product representative. Some catalog numbers shown in this catalog are non-stock items and require longer lead times. Always check the latest price sheet for product status and availability.

Bussmann series 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. Eaton 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, Eaton takes no responsibility for errors or omissions contained in this catalog, or for misapplication of any Bussmann series product. Extensive product information is available in the Bussmann series product data sheets available online at Eaton.com/BussmannConsumer.

Toggle, rocker and battery disconnect switches		
Switches	Toggle, indicating toggle, "Duckbill" toggle, metal housing toggle and rocker	25
Battery switches	BMS-1, BMS-2, 15968-1	25
Automotive flashers, lighting control modules and LED flashers		26
Retail packaging, assortments and displays		
Automotive retail	Bonus assortment packs	27
	Preparedness assortment packs	28
	Emergency assortment packs	28
Automotive installer	Cartridge and blade fuse bulk assortments	29-30
	Fuse caddy installer assortments	30
	Five- and ten-cavity tray installer assortments	31
	Installer tilt-bin assortments	32
Automotive planogram	4FTAUTO-KIT, 4FTAUTO-TAGS	32
	Suggested planogram layout	33
Marine and RV products		34
High-amp circuit breakers	CB285F, CB187F, CB251, CB255, CB187P, CB285P	35
Assortments	NO.108BK, BP/AGC-AH10-RP, BP/MDL-1, MA-5, BP/AGC-SFE-A5-RP	35
Marine rated battery fuses/mounting bar	CBBF, CBBF-MBC mounting bar	36
Class T fuses	JJN 110 - 400 A	36
Splash proof covers	CB-CVR, BK/CB-CVR, BP/CB_HB-CVR	36
Battery separators	RB-BS-1314, RB-BS-1315	36
Battery isolators	RB-BI-70A, RB-BI-95A, RB-BI-120A, RB-BI-130A, RB-BI-240A	37
Battery isolator install kits	RB-BIK-1882, RB-GM-Kit	37
Hardware and home products		38
Glass and ceramic tube fuses		
Fuse overview and sizes		39
Fast-acting 1/4"	AGA, AGW, AGX, ABC, AGC, GBB, GBC, SFE	40-41
Fast-acting midget	AGU, AGU-GP	41
Time-delay 1/4"	MDA, MDL, MDQ	41
Fast-acting 5x20 mm	GDA, GDB, GMA	42
Time-delay 5x20 mm	GDC, GMC, GMD	42
Non-rejection inline fuse for HLR holder	GMF	42
Cartridge fuses		
Class K5 and H	NON, NOS	43
Class RK5	FRN-R, FRN-R-_ID, FRS-R, FRS-R-_ID	44-45
Canadian CSA Type D and P	CDN, PON	45
Fast-acting midget, Class CC	BAF, KTK, KTK-R	46
Time-delay midget, Class CC	FNM, FNQ, FNQ-R	47
Class G specialty fuses	SC	47
Plug fuses, adapters and circuit breakers		
UL® Edison base	Type T, TL	48
	BP/MB Edison base circuit breakers	
UL rejection base	Type S, SL	49
	Type SA rejection base adapters	
CSA® Edison base fuses	Type TC, P	49
	CP/MB Edison base circuit breakers	
Box cover units	SOU, SRU, SSN, SSU, SSY, SSY-RL, STY	50
Surge protective device	RB-SPP-240PN Type 1 SPD	50
Accessories		
Fuse pullers	FP-A3, FP-2, FP-3, FP-4, FP-6	51
Fuse testers/pullers	FT-2, FT-3	51
NON and FRN-R fuse reducers	NO.263, NO.263-R, NO.216-R, NO.2621-R	51
Hardware packaging and assortments		
Hardware packaging	Fuse assortments and emergency kits and holiday light fuse assortments	52
Hardware planogram	2FTHDWR-KIT, 2FTHDWR-TAGS	53
Circuit protection specifications		54-57
Catalog number index		58
Automotive fuse selection made easy chart		Inside back cover



Automotive products and accessories

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

ATR blade fuses

2-Leg micro fuses

These space-saving fuses are used on newer vehicles.



Color code	Amps	Trad'l pack*	Retail pack**	Bulk pack***
Tan	5	ATR-5	BP/ATR-5-RP	BK/ATR-5
Brown	7-1/2	ATR-7-1/2	BP/ATR-7-1/2-RP	BK/ATR-7-1/2
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, 20 packs per shelf carton.
 ** 5 Fuses per pack, 5 packs per shelf carton.
 *** 50 Fuses per pack.

ATM blade fuses

See page 8 for easyID™ indicating versions

ATM fuses feature an enclosed element for electrical isolation, corrosion resistance and longer service life.



Color code	Amps	Trad'l pack*	Reload**	Retail 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	7-1/2	ATM-7-1/2	ATM-7-1/2RLD	BP/ATM-7-1/2-RP	VP/ATM-7-1/2-RP	BK/ATM-7-1/2
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

* 5 Fuses per pack, 20 packs per shelf carton.
 ** 5 Fuses per pack.
 *** 5 Fuses per pack, 5 packs per shelf carton.
 † 25 Fuses per pack, 5 packs per shelf carton.
 ‡ 500 Fuses per pack.

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*	Retail pack**	Value pack***	Bulk pack†
Gray	2	ATM-2LP	—	—	—
Violet	3	ATM-3LP	—	—	—
Pink	4	ATM-4LP	—	—	—
Tan	5	ATM-5LP	BP/ATM-5LP-RP	—	BK/ATM-5LP
Brown	7-1/2	ATM-7-1/2LP	BP/ATM-7-1/2LP-RP	—	BK/ATM-7-1/2LP
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, 20 packs per shelf carton.
 ** 5 Fuses per pack, 5 packs per shelf carton.
 *** 25 Fuses per pack, 5 packs per shelf carton.
 † 500 Fuses per pack.

ATL blade fuses

3-Leg micro fuses

These space-saving fuses are used on newer vehicles. The ATL fuses combine protection for two circuits in one package.

Color code	Amps	Trad'l pack*	Bulk pack**
Tan	5	ATL-5	BK/ATL-5
Brown	7-1/2	ATL-7-1/2	BK/ATL-7-1/2
Red	10	ATL-10	BK/ATL-10
Blue	15	ATL-15	BK/ATL-15

* 5 Fuses per pack, 20 packs per shelf carton.
 ** 50 Fuses per pack.

ATC™ blade fuses

See page 8 for easyID indicating versions

ATC blade fuses use the industry standard color-coding to indicate amp rating. Bussmann series ATC fuses are UL Recognized and feature an enclosed element for electrical isolation, corrosion resistance and longer service life. BK/ATC-5 through 30 A also available with open body. Refer to data sheet No. 2009 for available options.



Color code	Amps	Trad'l pack*	Reload**	Retail 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	7-1/2	ATC-7-1/2	ATC-7-1/2RLD	BP/ATC-7-1/2-RP	VP/ATC-7-1/2-RP	BK/ATC-7-1/2
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

* 5 Fuses per pack, 20 packs per shelf carton.
 ** 25 Fuses per pack.
 *** 5 Fuses per pack, 5 packs per shelf carton.
 † 25 Fuses per pack, 5 packs per shelf carton.
 ‡ 500 Fuses per pack.

MAXI™ (MAX) blade fuses

See page 8 for easyID indicating 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*	Retail 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	—	BK/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, 20 packs per shelf carton.
 ** 1 Fuse per pack, 5 packs per shelf carton.
 *** 250 Fuses per pack.

Finding the open fuse is easy with Bussmann series easyID blade fuses and holders

These drop-in replacements are available for applications that can benefit from open fuse indication. The easyID indicating blade fuses and holders use LED technology that makes blown fuses easy to spot in fuse panels tucked up under dark dashboards.

In-line easyID fuse holders allow adding fused circuits with blown fuse indication using regular ATM, ATC and MAXI fuses.

Trilingual packaging in English, Spanish and French.

easyID ATR micro fuses

Color code	Amps	Retail pack*
Red	10	BP/ATR-101D
Blue	15	BP/ATR-151D
Yellow	20	BP/ATR-201D
Green	30	BP/ATR-301D



BP/ATR-AID fuse assortment (see page 28)

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

easyID ATM fuses

See page 13 for easyID fuse holder and page 15 for easyID fuse panels.



easyID ATC™ fuses

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

See page 13 for easyID fuse holder and page 15 for easyID fuse panels.



Color code	Amps	Retail pack*	Value pack**	Bulk pack***
Violet	3	BP/ATC-3ID	—	BK/ATC-3ID
Tan	5	BP/ATC-5ID	—	BK/ATC-5ID
Brown	7-1/2	BP/ATC-7-1/2ID	—	BK/ATC-7-1/2ID
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

* 2 Fuses per pack, 5 packs per shelf carton.
 ** 10 Fuses per pack, 5 packs per shelf carton.
 *** 50 Fuses per pack.

BP/ATC-AID fuse assortment (see page 28)

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

ATC-FP-AID fuse emergency kit (see page 28)

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

ATC-ID-SK fuse service kit (see page 27)

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

Color code	Amps	Retail pack*	Value pack**	Bulk pack***
Violet	3	BP/ATM-3ID	—	BK/ATM-3ID
Tan	5	BP/ATM-5ID	—	BK/ATM-5ID
Brown	7-1/2	BP/ATM-7-1/2ID	—	BK/ATM-7-1/2ID
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

* 2 Fuses per pack, 5 packs per shelf carton.
 ** 10 Fuses per pack, 5 packs per shelf carton.
 *** 50 Fuses per pack.

BP/ATM-AID fuse assortment (see page 28)

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

ATM-FP-AID fuse emergency kit (see page 28)

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

ATM-ID-SK fuse service kit (see page 27)

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

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 packaging that's designed for easy selling.

easyID MAXI fuses

With ratings up to 100 amps, the Bussmann series easyID MAXI indicating fuse line is a sure seller with trilingual retail packaging that's designed for easy selling.

See page 13 for easyID fuse holder.



Color code	Amps	Retail pack*	Bulk pack**
Yellow	20	BP/MAX-20ID	—
Green	30	BP/MAX-30ID	BK/MAX-30ID
Orange	40	BP/MAX-40ID	BK/MAX-40ID
Red	50	BP/MAX-50ID	BK/MAX-50ID
Blue	60	BP/MAX-60ID	BK/MAX-60ID
Violet	100	BP/MAX-100ID	—

* 1 Fuse per pack, 5 packs per shelf carton.
 ** 250 Fuses per pack.

Color	Amps	Retail 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



* 1 Fuse per pack, 5 packs per shelf carton.

Multi-pole fuses

Bussmann series multi-pole fuses (MPFs) provide sales-making opportunities formerly only dealerships and online parts websites enjoyed.

Multi-pole fuses are OEM fuses that combine multiple circuits in to a single design to reduce the weight, space and cost of traditional fusing solutions. These fuses have been used since 2002 in popular models of Nissan®, Infiniti®, Toyota®, and Lexus models.

These fuses are easy to replace by service technicians and DIYers alike using the same female maxi-type fuse puller.



MPF

32 Vdc multi-pole fuses

Color code	Amps	Trad'l pack*	Bulk pack**	Retail pack	OEM no.	Vehicle make
Pink	40, 30, 30	MPF-433X	BK/MPF-433X	—	24370-C9902	Nissan, Infiniti
Green	40, 40, 40	MPF-444X	BK/MPF-444X	BP/MPF-444X	24370-C9900	Nissan, Infiniti
Red	50, 30, 30	MPF-533X	BK/MPF-533X	—	24370-C9906	Nissan, Infiniti
Blue	50, 30, 40	MPF-534X	BK/MPF-534X	—	24370-C9907	Nissan, Infiniti
Yellow	60, 30, 30	MPF-633X	BK/MPF-534X	—	24370-C9904	Nissan

* 1 Fuse per pack, 10 packs per shelf carton.
** 50 Fuses per pack.

MPF2

58 Vdc multi-pole fuses



Color code	Amps	Trad'l pack*	Bulk pack**	OEM no.	Vehicle make
Yellow	30, 20, 40	MPF2-324X	BK/MPF2-324X	24370-C991C	Nissan
Pink	40, 30, 30	MPF2-433X	BK/MPF2-433X	24370-C991A	Nissan
				90982-08308	Toyota, Lexus
Green	40, 40, 40	MPF2-444X	BK/MPF2-444X	24370-C991B	Nissan, Infiniti
				90982-08299	Toyota, Lexus
Red	50, 30, 30	MPF2-533X	BK/MPF2-533X	24370-C992A	Nissan, Infiniti
				90982-08300	Toyota, Lexus
Blue	50, 30, 40	MPF2-534X	BK/MPF2-534X	24370-C992B	Nissan, Infiniti
				90982-08301	Toyota, Lexus
Black	50, 30, 50	MPF2-535X	BK/MPF2-535X	24370-C992C	Nissan, Infiniti
				90982-08302	Toyota, Lexus
Maroon	50, 50, 50	MPF2-555X	BK/MPF2-555X	90982-08303	Lexus

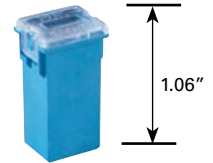
* 1 Fuse per pack, 10 packs per shelf carton.
** 50 Fuses per pack.

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 60 A.

See page 8 for *easyID* FMX female MAXI fuses.

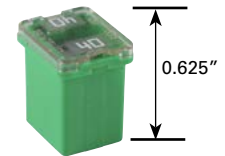
FMX Female MAXI fuses



Color code	Amps	Trad'l pack*	Retail 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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FMX-LP Low-profile female MAXI fuses



Color code	Amps	Trad'l pack*	Retail 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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

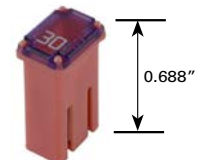
FMM Micro fuses



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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FMS Slotted micro fuses



Color code	Amps	Trad'l pack*	Retail pack**
Grey	15	FMS-15	BP/FMS-15-RP
Blue	20	FMS-20	BP/FMS-20-RP
White	25	FMS-25	BP/FMS-25-RP
Pink	30	FMS-30	BP/FMS-30-RP
Green	40	FMS-40	BP/FMS-40-RP
Red	50	FMS-50	BP/FMS-50-RP
Yellow	60	FMS-60	BP/FMS-60-RP

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

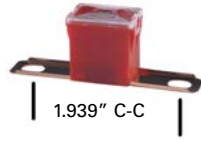
FL family of cartridge fuses

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

FLB

Bolt-mount fuses

Fits 13/16" bolt terminal fuse block.



Color code	Amps	Trad'l pack*	Retail 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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FLD

Bolt-mount fuses

Fits 9/16" bolt terminal fuse block.



Color code	Amps	Trad'l pack*	Retail 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
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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FLF

Female fuses



Color code	Amps	Trad'l pack*	Retail 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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FLG

Female fuses



Color code	Amps	Trad'l pack*
Red	50	FLG-50
Yellow	60	FLG-60
Black	80	FLG-80

* 1 Fuse per pack, 10 packs per shelf carton.

FLJ

Female fuses for Nissan vehicles



Color code	Amps	Trad'l pack*	OEM part no.	Vehicle make
Red	45	FLJ-45	24370-89960	Nissan, Infiniti
Black	65	FLJ-65	24370-89910	Nissan, Infiniti

* 1 Fuse per pack, 10 packs per shelf carton.

FLM

Male fuses



Color code	Amps	Trad'l pack*	Retail 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	BP/FLM-140-RP

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FLN

Female fuses with tab



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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

FLS

Miniature female fuses



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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

BTF

Battery terminal fuses



Bussmann series battery terminal fuses (BTFs) provide sales-making opportunities formerly only dealerships and online parts websites enjoyed.

These fuses have been used since 2001 in popular models of Chrysler®, Ford®, Lexus, Lincoln, Mercury, Mitsubishi, Nissan®, Scion, Subaru, Suzuki, and Toyota® models.

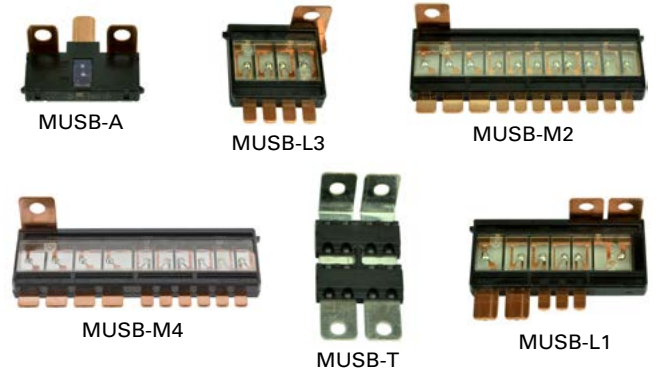
Bussmann series BTFs are OEM fuses that contain one or more circuits in a single design to reduce the weight, space and cost of traditional fusing solutions to protect the cables coming off the battery and other electrical components.

These fuses are easy to replace by service technicians and DIYers alike using common hand tools.

See page 25 for battery switches, and pages 36 and 37 for isolators and separators

MUSB

Multi slow-blow fuses



The new line of Bussmann series multi slow-blow fuses address the automotive manufacturers' move to design custom circuit protection technology for their vehicles.

Amps	Trad'l pack	OEM part no.	Vehicle make
100, 70	MUSB-A1	38231-SDA-A01	Honda, Acura
120, 70	MUSB-A2	38231-SFY-003	Honda, Acura
100, 40	MUSB-A3	38231-SEP-A01	Honda, Acura
120, 40	MUSB-A4	38231-SFE-J01	Honda, Acura
70, 30, 40, 20, 30, 100	MUSB-L1-2	38231-T0A-A01	Honda, Acura
70, 40, 20, 40, 30, 120	MUSB-L1-4	38231-TX4-A01	Honda, Acura
20, 20, 20, 20	MUSB-L3-1	38233-TR0-A01	Acura
30, 30, 30, 30	MUSB-L3-3	38233-T6A-J01	Honda, Acura
30, 40, 30, 40	MUSB-L3-5	38233-TX4-A01	Acura
50, 60, 60, 30, 30, 30, 30, 40, 30, 20, 20	MUSB-M2-1	38232-TRO-A01	Honda, Acura
50, 60, 60, 50, 30, 30, 40, 30, 30, 40	MUSB-M4-1	38234-TX4-A01	Acura
125, 100, 325, shunt	MUSB-T1	FUST-14A068-CC	Ford
125, 80, 300, shunt	MUSB-T4	GUST-14068-BA	Ford
Shunt, 285, 200, 125	MUSB-T5	HUST-14A068-BB	Ford

Amps	Trad'l pack	Retail pack	OEM part no.	Vehicle make
80	BTF-1P-80*	—	82211AG150 3673-950J00	Subaru Suzuki
100	BTF-1P-100*	—	MN164187, MR522172 3673-952J00	Mitsubishi Suzuki
120	BTF-1P-120*	—	MN164188 3673-966J00 MR551902	Mitsubishi Suzuki Chrysler, Dodge
140	BTF-1P-140*	—	82620-33040 24380-JA70A	Lexus, Scion, Toyota Nissan
180, 120	BTF-2P-180120*	—	68164797-AA BR3Z-14526-AA	Chrysler Ford
200, 100	BTF-2P-200100*	—	AE5Z-14526-BA	Ford, Lincoln, Mercury
250, 125	BTF-2P-250125*	BP/BTF-2P-250125	AL3Z-14526-AA	Ford
120, 60, 80	BTF-3P-1206080**	—	82620-52080A	Scion, Toyota
120, 80, 80	BTF-3P-1208080**	—	82620-52060A	Scion, Toyota
100, 100, 80, 60, 80	BTF-5P-1010868**	—	24380-79910	Nissan
120, 100, 80, 60, 80	BTF-5P-1210868**	—	24380-79912	Nissan
140, 100, 100, 100, 80	BTF-5P-141010108**	—	24380-7994A	Nissan
250, 100, 80, 80, 80	BTF-5P-25010888**	—	24380-79918	Nissan
225, 100, 60, 100, 80	BTF-5P-225106108**	—	24380-79919	Nissan

* 1 Fuse per pack, 5 packs per shelf carton.

** 1 Fuse per pack, 3 packs per shelf carton.

AMG

Stud-mount fuses

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



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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

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 catalog number **HMEG*** or bulk catalog number **FMG-211.****

* 1 fuse block per pack, 24 packs per master carton.
** 100 fuse blocks per pack.



AMI

Stud-mount fuses

Used in some late model vehicle systems for high power distribution. Use with HMID fuse holder — see below.



Color code	Amps	Trad'l pack*
Orange	30	AMI-30
Green	40	AMI-40
Red	50	AMI-50
Yellow	60	AMI-60
Brown	70	AMI-70
White	80	AMI-80
Blue	100	AMI-100
Pink	125	AMI-125
Grey	150	AMI-150B
Violet	200	AMI-200

* 1 Fuse per pack, 10 packs per shelf carton.

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 catalog number **HMID.***

* 1 Fuse block per pack, 10 packs per shelf carton.



We offer a complete line of Bussmann series fuse holders to install blade or glass tube fuses. Choose water resistant and/or splash-proof versions for extra protection in special applications. Five 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 catalog 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 catalog numbers ATC-FHID, ATM-FHID, MAX-FHID, HH2, HHC, HHD, HHF, HHG, HHL, HHM, HHN, HHR, HHU, HHV and HHX.
- **Crimp-on:** Strip the wire, insert into fuse holder and crimp tightly, and you're done. No additional hardware needed. See catalog 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 catalog number HHS.
- **Solder:** To install, simply solder the wire onto the holder's terminals. See catalog number HKP.
- **Quick-connect:** Attach fully insulated female terminal onto the 1/4" quick-connect terminals. See catalog numbers HKP-HH, HTB-26I, HTB-38I, HTB-68I and HTB-88I.

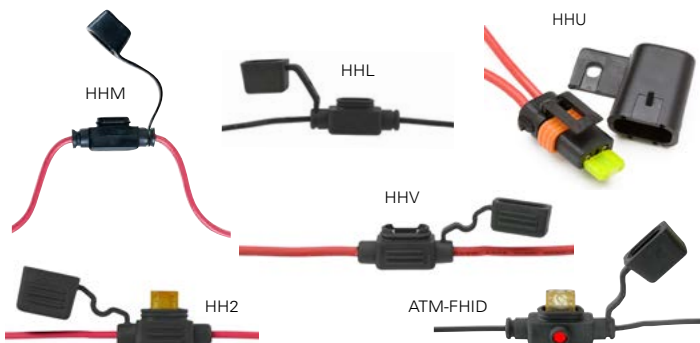
Select fuse holders by matching it to the wire size being fused. An undersized fuse holder will increase electrical resistance and reduce performance in the circuit.

NOTE: Never install a fuse with a larger amp rating than specified for the application, holder or wire size.

In-line ATR, ATM-LP and ATM fuse holders

Trad'l pack*	Retail pack**	Max volts/amps	Leadwire	Description
ATR				
HH2	—	32 V/15 A	2x4"/#16	Holder with cover
Low-profile ATM				
HHV	BP/HHV-RP	32 V/20 A	2x4"/#12	Holder with cover, red leadwires
ATM				
HHL	BP/HHL-RP	32 V/20 A	2x4"/#16	Holder with cover
HHM	BP/HHM-RP	32 V/30 A	2x4"/#12	Holder with cover
HHU	BP/HHU	32 V/30 A	2x4"/#12	Water-resistant holder
ATM-FHID	BP/ATM-FHID	32 V/20 A	2x4"/#16	easyID holder with protective cover and open fuse indicating LED

* 1 Fuse holder per pack, 10 packs per shelf carton.
** 1 Fuse holder per pack, 5 packs per shelf carton.



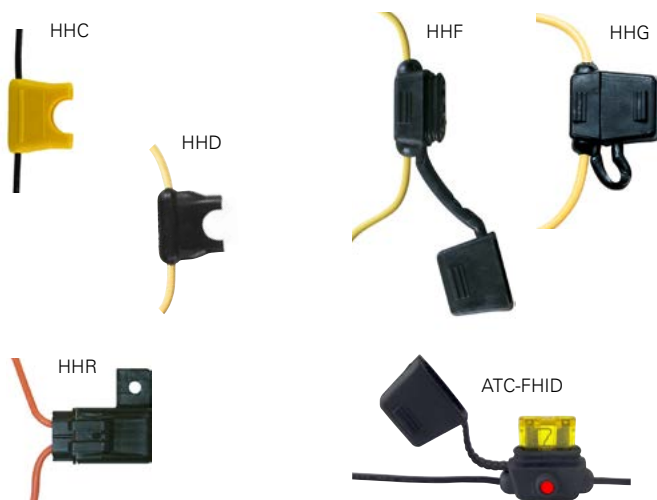
Fuses sold separately.

For product information and data sheets, visit Eaton.com/Bussmann

In-line ATC fuse holders

Trad'l pack*	Retail pack**	Max volts/amps	Leadwire	Description
HHC	BP/HHC-RP	32 V/20 A	2x4"/#16	Yellow fuse holder
HHD	BP/HHD-RP	32 V/30 A	2x4"/#12	Black fuse holder
—	BP/HHD-30-RP	32 V/30 A	2x4"/#12	Holder with ATC-30 A fuse
HHF	BP/HHF-RP	32 V/20 A	2x4"/#16	Holder with protective cover
HHG	BP/HHG-RP	32 V/30 A	2x4"/#12	Heavy-duty holder with cover / marine rated
HHR	BP/HHR	32 V/30 A	2x5"/#12	Heavy-duty water-resistant holder
ATC-FHID	BP/ATC-FHID	32 V/20 A	2x6"/#16	easyID holder with protective cover and open fuse indicating LED

* 1 Fuse holder per pack, 10 packs per shelf carton.
** 1 Fuse holder per pack, 5 packs per shelf carton.

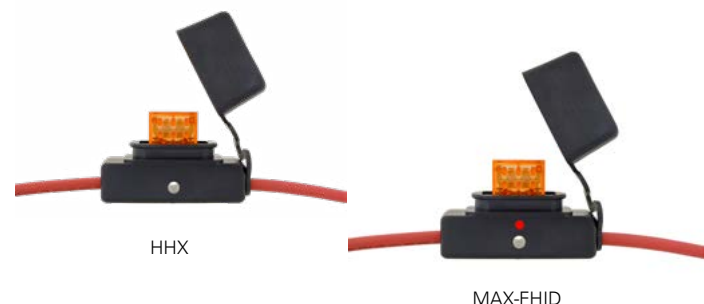


Fuses sold separately.

In-line MAXI fuse holders

Catalog no.*	Max volts /amps	Leadwire	Description
HHX	32 V/60 A	2x5"/#6	Fuse holder with cover
MAX-FHID	32 V/60 A	2x5"/#6	easyID fuse holder with protective cap and open fuse indicating LED

* 1 Fuse holder per pack, 20 packs per shelf carton.

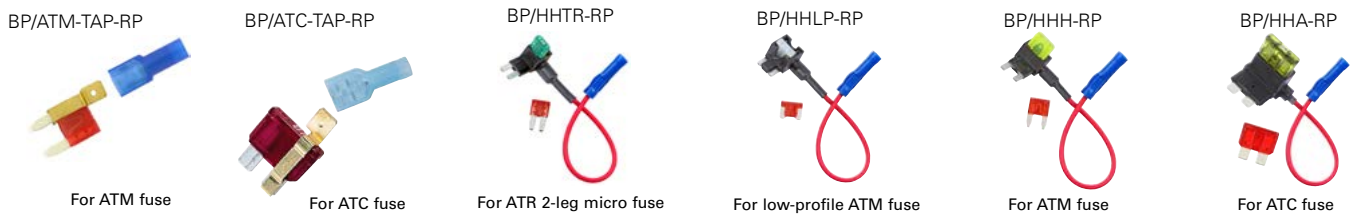


Fuses sold separately.

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

Retail pack*	Description
BP/ATM-TAP-RP	Taps into existing ATM fuse for additional non-fused circuit, includes crimp-on connector - fuses not included
BP/ATC-TAP-RP	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 10 A 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 10 A 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 10 A 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 10 A max ATC fuse circuit by inserting into an existing ATC fuse block with 5 inch #16 leadwire and crimp connector - fuses not included

* 1 Part per pack, 5 packs per shelf carton.



Fuses sold separately.

In-line holders for 1/4" diameter glass tube fuses

Trad'l pack*	Retail pack**	Fuse/size	Max volts/amps	Leads/terminals	Description/feature
HFA-R	—	1/4" x 1-1/4"	250 V/20 A	Crimp #12 to 16 wire	Water-resistant - black body, marine rated
HFB-R	BP/HFB-RP	1/4" x 1-1/4"	32 V/30 A	Crimp #12 to 18 wire	Water-resistant - yellow body, marine rated
HHB-R	BP/HHB-RP	1/4" x 7/8" to 1-1/4"	32 V/30 A	Crimp #12 to 16 wire	Universal - yellow body, marine rated
HHK	BP/HHK-RP	1/4" x 5/8" to 1-1/4" and SFE-20	32 V/20 A	#14 leadwire/yellow	Universal nylon, twist lock, no fuse - black body
HHN†	BP/HHN-RP	1/4" x 1-1/4"	32 V/30 A	#12 leadwire/yellow	Nylon heavy-duty with AGC-30-R fuse - white body
HLR	—	For GMF fuse, see page 42	300 V/15 A	6" of #18 leadwire/red	Holder with installed lineside terminal wire for GMF fuses
HMJ	BP/HMJ-RP	For SFE-20 (included)	32 V/20 A	8" of #14 leadwire/black	With fuse and wire loop leads - black body
HMK	BP/HMK-RP	1/4" x 1-1/4" and SFE-20	32 V/30 A	#12 leadwire/black	No fuse, wire loop leads - black body, marine rated
HRH	—	For SFE-9 (included)	32 V/9 A	19" of #14 leadwire	With fuse and wire loop leads - black body
HRI	—	For SFE-14 (included)	32 V/14 A	19" of #14 leadwire/black	With fuse and wire loop leads - gray body
HRJ	—	For SFE-20 (included)	32 V/20 A	19" of #14 leadwire/black	With fuse and wire loop leads - black body
HRK-R	BP/HRK-RP	1/4" dia. x 7/8" to 1-1/4"	32 V/20 A	#14 leadwire/black	Universal with wire loop leads and springs for different fuse lengths - black body

* 1 Fuse holder per pack, 10 packs per shelf carton.

** 1 Fuse holder per pack, 5 packs per shelf carton.

† Traditional pack not sold with AGC-30 fuse.



Panel-mount holders for 1/4" x 1-1/4" fuses

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

* 1 Fuse holder per pack, 10 packs per shelf carton.

** 1 Fuse holder per pack, 5 packs per shelf carton.



easyID fuse panels with weatherproof cover

Finding the open fuse on a fuse panel just got a lot easier with the new Bussmann series easyID fuse panels. The LED indicators light up when a fuse opens. A clear, weather resistant hard shell cover helps protect the fuse panel from moisture, dirt and other contaminants. All fuse panels are rated 32 V, up to 25 amps (100 amps max per panel).



Fuse type	Fuse positions	Trad'l pack*	Retail pack**
ATC	4	FP-ATC-04ID	—
	6	FP-ATC-06ID	BP-FP-ATC-06ID
	10	FP-ATC-10ID	—
ATM	4	FP-ATM-04ID	—
	6	FP-ATM-06ID	BP-FP-ATM-06ID
	10	FP-ATM-10ID	—

* 1 per box
** 1 per pack, 4 packs per shelf carton



Splash-proof ATR, ATM and ATC fuse blocks

The Bussmann series FB fuse blocks are available in 4-, 6-, 8- and 10-pole versions for ATR micro, ATM and ATC fuses. The clear plastic cover allows viewing for installed fuse amp ratings and blown fuses when used with easyID™ ATM and ATC fuses. The cover's O-ring provides a splash-proof IPX4 rating and ensures a positive fit to reduce infiltration of dirt and other contaminants. The plastic back plate provides additional isolation from ground sources when mounted on any chassis surface. All blocks are rated 32 V and 20 amps per pole, with maximum total amps per block not to exceed the value shown in the catalog number table.



Mounting requires two customer-supplied #10 screws. Electrical connection is easily made with readily available, customer supplied 1/4" quick-connect terminals and 12 to 16 AWG* wire.

* Wire size dependent on circuit current and length of run.

Fuse type	Poles	Retail pack*	Max. total amps per block
ATR micro	4	BP/FB4-ATR	30
	6	BP/FB6-ATR	45
	8	BP/FB8-ATR	60
	10	BP/FB10-ATR	90
ATM	4	BP/FB4-ATM	30
	6	BP/FB6-ATM	45
	8	BP/FB8-ATM	60
ATC	10	BP/FB10-ATM	90
	4	BP/FB4-ATC	30
	6	BP/FB6-ATC	45
	8	BP/FB8-ATC	60
	10	BP/FB10-ATC	90

* 1 Per pack, 5 packs per shelf carton.

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

Catalog no.*	Description
RTMF-SC	20 position fuse block with shallow cover
RTMF-DC	20 position fuse block with deep cover

* 1 Per box, 10 boxes per shelf carton.

15600 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 fuse panel features 1/4" quick-connect terminals for easy installation. Recessed fuse contacts provide finger-safe protection.



Short base shown. Fuses and circuit breakers sold separately.

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

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

Fuse positions	Short base catalog no.*	Short base retail pack**	Long base catalog 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

* 1 Per pack.

** 1 Per pack, 5 boxes per shelf carton.

FMX

Power distribution relay and fuse module

The sealed power FMX 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 35 amp 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 Eaton, FMX fuses sold separately.



CBPFM Power fuse module



CBPRM Power relay module

Catalog no.*	Description
CBPFM	Power fuse module
CBPRM	Power relay module

* 1 Per box.

See our stock of OEM fuses for Nissan, Infiniti, Toyota and Lexus vehicles

Bussmann™ series multi-pole fuses (MPF) and more now available for the aftermarket.

See page 9.



S-8202

Glass tube fuse blocks 300 volt, 30 amp

S-8202 blocks with 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, 30 amps maximum.

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

* 1 Per pack, 10 packs per shelf carton.

** 1 Per pack, 5 packs per shelf carton.



S-8301

Glass tube fuse blocks 300 volt, 30 amp

S-8301 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-R
2	S-8301-2-R
3	S-8301-3-R
4	S-8301-4-R
5	S-8301-5-R
6	S-8301-6-R
8	S-8301-8-R
12	S-8301-12-R

* 1 Per pack, 10 packs per shelf carton.



Fusible link wire

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



Retail pack*	Description
BP/FL-14	9 inches of 14 gauge fusible link wire with 3/8" and 5/16" terminals and crimp connector
BP/FL-16	9 inches of 16 gauge fusible link wire with 1/4" and 5/16" terminals and crimp connector
BP/FLW-14	6 foot coil of 14 gauge fusible link wire

* 1 Fusible link per pack, 5 packs per shelf carton.

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 7/8" x 3-3/16" 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



Trad'l/pack catalog no.

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	—

* 1 Limiter per pack, 5 packs per shelf carton.

ANL

Fast-acting limiters



Trad'l/pack catalog no.

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	—

* 1 Limiter per pack, 5 packs per shelf carton.

SFR

Block for ANN and ANN limiters

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

Order catalog number **SFR**.*

* 1 Block per pack, 100 packs per master carton.



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

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.

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.

Low-profile ATM circuit breaker

CB234

Type III



Color code	Amps	Trad'l pack*
Tan	5	CB234-05
Brown	7-1/2	CB234-7-1/2
Red	10	CB234-10
Blue	15	CB234-15
Yellow	20	CB234-20
White	25	CB234-25
Green	30	CB234-30

* 1 Breaker per pack, 10 packs per shelf carton.

ATM footprint Transorb, Resistor and Diodes

CB229

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: 27 Vdc
- Power rating: 1500 W

• Resistor - Drops circuit voltage.

- Power rating: 5 W
- Resistance: 68 Ω

• Diode - Prevents reverse current flow.

- Amp rating: 6 A



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

* 1 Circuit breaker per pack, 10 packs per shelf carton.

ATM footprint circuit breakers

Type I, Type II and Type III 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



Amps	Trad'l pack*	Retail pack**
7-1/2	CB211-7-1/2	—
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

* 1 Breaker per pack, 10 packs per shelf carton.

** 1 Breaker per pack, 5 packs per shelf carton.

CB212

Type II



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

* 1 Breaker per pack, 10 packs per shelf carton.

CB233

Type III ATM circuit breaker



Color code	Amps	Trad'l pack*
Tan	5	CB233-05
Brown	7-1/2	CB233-7-1/2
Red	10	CB233-10
Blue	15	CB233-15
Yellow	20	CB233-20
White	25	CB233-25
Green	30	CB233-30

* 1 Breaker per pack, 10 packs per shelf carton.

CB222OS

Type II with offset terminals



Amps	Trad'l pack*
05	CB222OS-05
10	CB222OS-10
15	CB222OS-15
20	CB222OS-20
25	CB222OS-25
30	CB222OS-30

* 1 Breaker per pack, 10 packs per shelf carton.

CB223OS

Type III with offset terminals



Amps	Trad'l pack*
05	CB223OS-05
7-1/2	CB223OS-7-1/2
10	CB223OS-10
15	CB223OS-15
20	CB223OS-20
25	CB223OS-25
30	CB223OS-30

* 1 Breaker per pack, 10 packs per shelf carton.

MMB

Type I, GM vehicles



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

* 1 Breaker per pack, 10 packs per shelf carton.

ATC footprint circuit breakers

Type I, Type II and Type III 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. We also offer the Bussmann series ACB-20, CCB-25, and FCB-20 breakers as replacements for specific OEM applications.

ACB-20

Type I for GM vehicles



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

* 1 Breaker per pack
10 packs per shelf carton.

CB221

Type I



Amps	Trad'l pack*
7-1/2	CB221-7-1/2
10	CB221-10
15	CB221-15
20	CB221-20
25	CB221-25
30	CB221-30

* 1 Breaker per pack,
10 packs per shelf carton.

CB222

Type II



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

* 1 Breaker per pack
10 packs per shelf carton.

CB223

Type III



Amps	Trad'l pack*
7-1/2	CB223-7-1/2
10	CB223-10
15	CB223-15
20	CB223-20
25	CB223-25
30	CB223-30

* 1 Breaker per pack
10 packs per shelf carton.

CB227

Type III

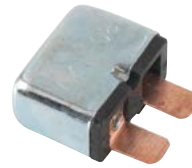


Color code	Amps	Trad'l pack*
Tan	5	CB227-05
Moss Green	6	CB227-06
Brown	7-1/2	CB227-7-1/2
Red	10	CB227-10
Blue	15	CB227-15
Yellow	20	CB227-20
White	25	CB227-25
Green	30	CB227-30

* 1 Breaker per pack
10 packs per shelf carton.

CBB-30

Type I



Amps	Trad'l pack*	Retail pack**
30	CBB-30	BP/CBB-30-RP

* 1 Breaker per pack, 10 packs per shelf carton.

CCB-25

Type I for Chrysler vehicles



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

* 1 Breaker per pack, 10 packs per shelf carton.

FCB-20

Type II for Ford vehicles



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

* 1 Fuse per pack, 10 packs per shelf carton.
** 1 Fuse per pack, 5 packs per shelf carton.

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*	Retail pack**	Bulk pack***
Plain	6	UCB-6	—	—
Brown	8	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

* 1 Circuit breaker per pack, 10 packs per shelf carton.
** 1 Circuit breaker per pack, 5 packs per shelf carton.
*** 100 Circuit breakers per pack.

MAXI footprint circuit breakers

Bussmann series MAXI circuit breakers are the first breakers on the market to match the MAXI fuse footprint and body dimensions.

CB1911

Type I MAXI circuit breakers



Amps	Trad'l pack*
10	CB1911-10
15	CB1911-15
20	CB1911-20
25	CB1911-25
30	CB1911-30
35	CB1911-35
40	CB1911-40
50	CB1911-50

* 1 Breaker per pack, 10 packs per shelf carton.

CB1921

Type II MAXI circuit breakers



Amps	Trad'l pack*
15	CB1921-15
20	CB1921-20
25	CB1921-25
30	CB1921-30

* 1 Breaker per pack, 10 packs per shelf carton.

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" x 1-1/4" fuses.



Amps	Trad'l pack*	Retail pack**
10	CBF-10	—
15	CBF-15	—
20	CBF-20	BP/CBF-20-RP
25	CBF-25	—
30	CBF-30	BP/CBF-30-RP
35	CBF-35	—
40	CBF-40	—

* 1 Breaker per pack, 10 packs per shelf carton.

** 1 Breaker per pack, 5 packs per shelf carton.

Splash proof covers

Catalog no.	Description	Pack qty.	Shelf qty.	Master qty.
CB-CVR	Cover for stud terminal circuit breaker	1	10	300
BK/CB-CVR	Cover for stud terminal circuit breaker-BULK	—	100	2000
BP/CB20HB-CVR*	CB123-20HB with cover-retail pack	1	5	120
BP/CB40HB-CVR*	CB123-40HB with cover-retail pack	1	5	120

* Packed with CB123-20HB and CB123-40HB.



Heavy-duty circuit breakers

Ideal for many heavy-duty and truck applications, Bussmann series 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. NEMA IP66 rated for protection from dust, oil, and other non-corrosive materials.



Amps	Trad'l pack*
10	CB123-10B
15	CB123-15B
20	CB123-20B
30	CB123-30B
40	CB123-40B
50	CB123-50B

* 1 Breaker per pack, 10 packs per shelf carton.

CB123-HB

Type III 10-32 stud-terminal circuit breakers with lengthwise bracket. NEMA IP66 rated for protection from dust, oil, and other corrosive materials.



Amps	Trad'l pack*
10	CB123-10HB
15	CB123-15HB
20	CB123-20HB
30	CB123-30HB
40	CB123-40HB
50	CB123-50HB

* 1 Breaker per pack, 10 packs per shelf carton.

CBC

Type I 10-32 stud-terminal circuit breakers



Amps	Trad'l pack*
8	CBC-8
10	CBC-10
15	CBC-15
20	CBC-20
25	CBC-25
30	CBC-30
35	CBC-35
40	CBC-40
50	CBC-50

* 1 Breaker per pack, 10 packs per shelf carton.

CBC-B

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



Amps	Trad'l pack*	Retail pack**
8	CBC-8B	—
10	CBC-10B	—
15	CBC-15B	—
20	CBC-20B	BP/CBC-20B-RP
25	CBC-25B	—
30	CBC-30B	BP/CBC-30B-RP
35	CBC-35B	—
40	CBC-40B	BP/CBC-40B-RP
50	CBC-50B	BP/CBC-50B-RP

* 1 Breaker per pack, 10 packs per shelf carton.

** 1 Breaker per pack, 5 packs per shelf carton.

CBC-BWP

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



Amps	Trad' pack*
20	CBC-20BWP
30	CBC-30BWP

* 1 Breaker per pack, 10 packs per shelf carton.

CBC-HB

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



Amps	Trad'l pack*	Retail pack**
10	CBC-10HB	—
15	CBC-15HB	—
20	CBC-20HB	BP/CBC-20HB-RP
25	CBC-25HB	—
30	CBC-30HB	BP/CBC-30HB-RP
40	CBC-40HB	BP/CBC-40HB-RP
50	CBC-50HB	BP/CBC-50HB-RP

* 1 Breaker per pack, 10 packs per shelf carton.

** 1 Breaker per pack, 5 packs per shelf carton.

CBP-B

Type I 10-32 stud-terminal circuit breakers with lengthwise bracket. NEMA IP66 rated for protection from dust, oil, and other non-corrosive materials.



Amps	Trad'l pack*	Retail pack**
15	CBP-15B	—
25	CBP-25B	—
30	CBP-30B	—

* 1 Breaker per pack, 10 packs per shelf carton.

** 1 Breaker per pack, 5 packs per shelf carton.

CBP-BA

Type I 10-32 stud-terminal circuit breakers with crosswise bracket. NEMA IP66 rated for protection from dust, oil, and other non-corrosive materials.



Amps	Trad'l pack*	Retail pack**
20	CBP-20BA	—
25	CBP-25BA	—
30	CBP-30BA	BP/CBP-30BA-RP
40	CBP-40BA	—
50	CBP-50BA	BP/CBP-50BA-RP

* 1 Breaker per pack, 10 packs per shelf carton.

** 1 Breaker per pack, 5 packs per shelf carton.

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



Amps	Trad'l pack*
10	CB174-10
15	CB174-15
20	CB174-20
30	CB174-30

* 1 Breaker per pack, 10 packs per shelf carton.

CBT-M

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



Amps	Trad'l pack*
10	CBT-10M
15	CBT-15M
20	CBT-20M
25	CBT-25M
30	CBT-30M

* 1 Breaker per pack, 10 packs per shelf carton.

CBT-N

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



Amps	Trad'l pack*
10	CBT-10N
15	CBT-15N
20	CBT-20N
25	CBT-25N
30	CBT-30N

* 1 Breaker per pack, 10 packs per shelf carton.

CBU-B

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



Amps	Trad'l pack*
30	CBU-30B

* 1 Breaker per pack, 10 packs per shelf carton.

High amp circuit breakers

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

All high amp circuit breakers comply with the SAE J1171 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.

Type I — automatic reset

CB181F

Flush mount, 30 Vdc
Waterproof, sealed housing
1/4-28 threaded studs
SEMS nuts installed



Amps	Catalog no.*
60	CB181F-60
70	CB181F-70
80	CB181F-80
90	CB181F-90
100	CB181F-100
120	CB181F-120
150	CB181F-150

* 1 Breaker per box, 20 boxes per master carton.

CB181P

Panel mount, 30 Vdc
Waterproof, sealed housing
1/4-28 threaded studs
SEMS nuts installed



Amps	Catalog no.*
60	CB181P-60
70	CB181P-70
80	CB181P-80
100	CB181P-100
135	CB181P-135
150	CB181P-150

CB251

Type I Panel mount, 32 Vdc
Weatherproof, marine rated
#10-32 threaded studs
Stainless steel hardware installed



Amps	Catalog no.
10	CB251-10
15	CB251-15
20	CB251-20
25	CB251-25
30	CB251-30
35	CB251-35
40	CB251-40
50	CB251-50

* 1 Breaker per box, 10 boxes per shelf carton.

Type III — manual reset

CB184F

Flush Mount, 42 Vdc
Waterproof, sealed housing
1/4-28 threaded studs
SEMS nuts installed



Amps	Catalog no.*
35	CB184F-35
50	CB184F-50
60	CB184F-60
70	CB184F-70
80	CB184F-80
100	CB184F-100
120	CB184F-120
150	CB184F-150

* 1 Breaker per box, 20 boxes per master carton.

Type III — manual reset (cont.)

CB185

Flush mount with push-to-trip button, 42 Vdc
Waterproof, sealed housing
1/4-28 threaded studs
SEMS nuts installed



Amps	Catalog no.*	Retail 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	BP/CB185-70
80	CB185-80	BP/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

* 1 Breaker per box, 20 boxes per master carton.

** 1 Circuit breaker per pack, 4 packs per shelf carton.

CB185P

Panel mount with push-to-trip button, 42 Vdc
Waterproof, sealed housing
1/4-28 threaded studs
SEMS nuts installed



Amps	Catalog no.*
30	CB185P-30
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

* 1 Breaker per box, 20 boxes per master carton.

CB187F

Flush mount with pull-to-trip lever, 48 Vdc
Weatherproof, marine rated
5/16-18 threaded studs
Stainless steel hardware installed



Amps	Catalog no.
25	CB187F-25
30	CB187F-30
35	CB187F-35
40	CB187F-40
50	CB187F-50
60	CB187F-60
70	CB187F-70
80	CB187F-80
90	CB187F-90
100	CB187F-100
110	CB187F-110
120	CB187F-120
135	CB187F-135
150	CB187F-150
200	CB187F-200

* 1 Breaker per box, 5 boxes per shelf carton.

See page 35 for marine-rated circuit breakers.

CB187P

Panel mount pull-to-trip lever,
48 Vdc
Weatherproof, **marine rated**
5/16-18 threaded studs
Stainless steel hardware
installed



Amps	Catalog no.
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
135	CB187P-135
150	CB187P-150

CB255

Panel mount push-to-trip button,
32 Vdc
Weatherproof, **marine rated**
#10-32 threaded studs
Stainless steel hardware installed



Amps	Catalog no.
10	CB255-10
15	CB255-15
20	CB255-20
25	CB255-25
30	CB255-30
35	CB255-35
40	CB255-40
50	CB255-50

* 1 Breaker per box, 10 boxes per shelf carton.

* 1 Breaker per box, 120 boxes per master carton.

CB285F

Flush mount with push-to-trip
button, 42 Vdc
Weatherproof, **marine rated**
M6 threaded studs
Stainless steel hardware
installed



Amps	Catalog no.*
25	CB285F-25
30	CB285F-30
40	CB285F-40
50	CB285F-50
60	CB285F-60
70	CB285F-70
80	CB285F-80
100	CB285F-100
120	CB285F-120
150	CB285F-150

* 1 Breaker per box, 20 boxes per master carton.

CB285P

Panel mount with push-to-trip
button, 42 Vdc
Weatherproof, **marine rated**
M6 threaded studs
Stainless steel hardware
installed

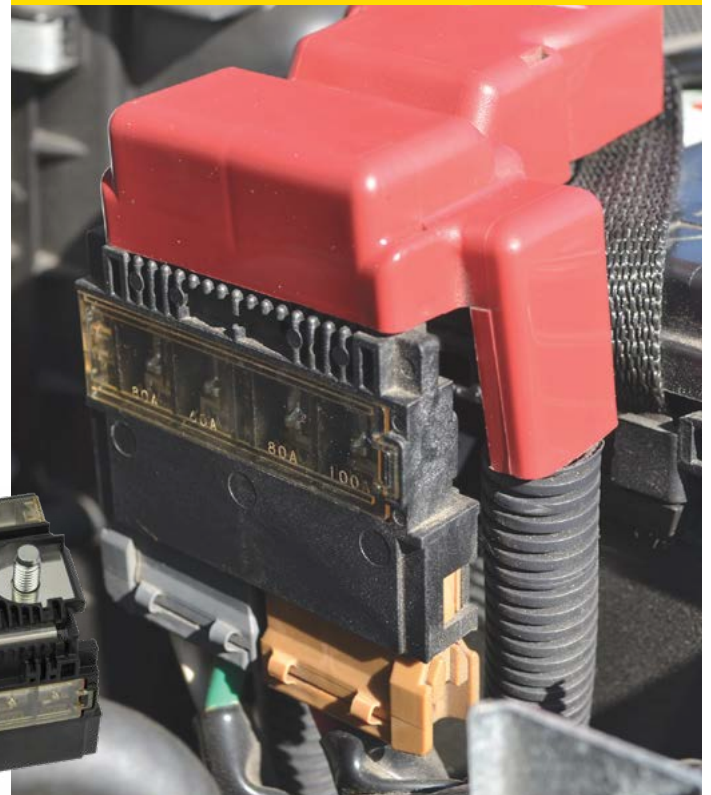


Amps	Catalog no.*
25	CB285P-25
30	CB285P-30
40	CB285P-40
50	CB285P-50
60	CB285P-60
70	CB285P-70
80	CB285P-80
90	CB285P-90
100	CB285P-100
120	CB285P-120
150	CB285P-150

* 1 Breaker per box, 20 boxes per master carton.

New Bussmann series
5-pole battery terminal fuse
now available to the aftermarket.

See page 11.



Junction blocks

NOTE: Voltage rating dependent upon installation.

JB3816-2 Non-feed through stud-type junction block 3/8-16 thread/stud size, 250 amps max.



Poles	Trad'l pack*	Retail pack**	Description/color	Stud thread
1	JB3816-2	BP/JB3816-2	Stud junction block - black	3/8-16
1	JB3816-3	—	Stud junction block - red	3/8-16

* 1 Junction block per pack, 50 per master pack.
** 1 Junction block per pack, 5 packs per shelf carton.

C1925-1 Feed through stud-type junction block 3/8-16 thread/stud size, 250 amps max.



Poles	Trad'l pack*	Description/color	Stud thread
1	C1925-1	Stud junction block - red	3/8-16
1	C1925-1B	Stud junction block - black	3/8-16

* 1 Junction block per pack, 50 per master pack.



C4044-1 Non-feed through stud-type junction block 3/8-16 thread/stud size, 250 amps max.

Poles	Trad'l pack*	Description/color	Stud thread
1	C4044-1	Stud junction block - black	3/8-16

* 1 Junction block per pack, 50 per master pack.



C1938 Feed through stud-type junction block 3/8-16 thread/stud size, 250 amps max.

Poles	Trad'l pack*	Description/color	Stud thread
1	C1938	Stud junction block - black	3/8-16

* 1 Junction block per pack, 50 per master pack.

Bussmann series double row barrier terminal blocks

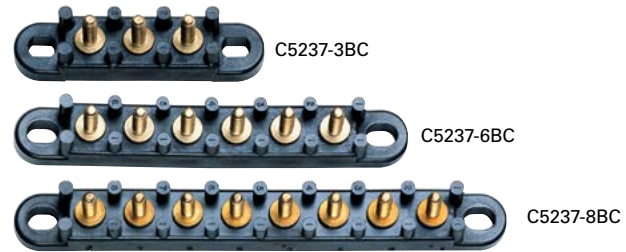


TB200 and TB300 double row barrier terminal blocks are nickel-plated brass with black thermoplastic construction.

Poles	Trad'l pack*	Retail pack**	Terminal screw	Volts/amps
4	TB200-04B	BP/TB200-04-RP	6-32	300 V/20 A
6	TB200-06B	—	6-32	300 V/20 A
8	TB200-08B	—	6-32	300 V/20 A
10	TB200-10B	—	6-32	300 V/20 A
15	TB200-15B	—	6-32	300 V/20 A
4	TB300-04B	—	8-32	600 V/30 A
6	TB300-06B	—	8-32	600 V/30 A
8	TB300-08B	—	8-32	600 V/30 A
10	TB300-10B	—	8-32	600 V/30 A
12	TB300-12B	—	8-32	600 V/30 A
20	TB300-20B	—	8-32	600 V/30 A

* 1 Junction block per pack, 50 per master pack.
** 1 Junction block per pack, 5 packs per shelf carton.

Stud junction terminal strips



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 30 A, 300 V (UL)/ 600 V (CSA).

Poles	Retail pack*	Stud	Volts/amps
3	BP/C5237-3BC	10-32	300 V/30 A
6	BP/C5237-6BC	10-32	300 V/30 A
8	BP/C5237-8BC	10-32	300 V/30 A

* 1 Terminal strip per pack, 5 packs per shelf carton.

New and exclusive line for the automotive aftermarket

Bussmann series multi slow-blow (MUSB) fuses
Meeting complex automotive circuit needs in Honda and Ford vehicles.

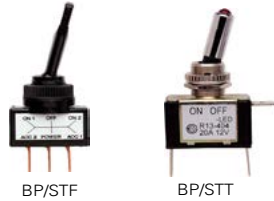
See page 11.



Toggle and rocker switches

We offer a line of Bussmann series single pole toggle switches, rocker switches and duck-bill toggle switches, in a variety of styles, colors and finishes for replacement applications or custom installations.

Toggle switches with quick connect terminals



Color	Retail pack*	Function	Rating	Feature
Black	BP/STF	ON/OFF/ON	12 V/20 A	—
Chrome	BP/STT	ON/OFF	12 V/20 A	Red LED

*1 Switch per pack, 5 packs per shelf carton.

Mounting panels for toggle and rocker switches



Catalog no.	Description
BP/MPR-1	Rectangular hole for mounting (1) switch
BP/MPT-1	1/2" round hole for mounting (1) switch
BP/MPT-2	1/2" round hole for mounting (2) switches

*1 Panel per pack, 5 packs per shelf carton.

Metal housing toggle switches with screw terminals



Color	Retail pack*	Function	Rating
Chrome	BP/STE	ON/OFF	12 V/15 A
Chrome	BP/STJ	ON/OFF	12 V/25 A
Chrome	BP/STK	ON/OFF/ON	12 V/15 A

*1 Switch per pack, 5 packs per shelf carton.

Battery disconnect switches

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.



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 50 Vdc maximum, 400 A continuous, it can withstand cranking or surge currents up to 2000 A for 5 seconds maximum.



Catalog no.	Description
BP/BMS-1*	Top post anti-theft master switch with HHM fuse holder, ATM-20 fuse, ring terminals and stainless steel bolt and wing nut
BP/BMS-2*	Side post anti-theft master switch with HHM fuse holder, ATM-20 fuse and ring terminals
15968-1**	Heavy-duty disconnect; 50 Vdc, 400 A maximum

* 1 Battery switch per pack, 5 packs per shelf carton.

** Non-stock part

We offer a complete line of Bussmann series 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 the number of blades to match the socket in the panel.

Thermal flashers



Heavy-duty electronic flashers



Super heavy-duty electronic flashers



LED flashers



Thermal and electronic 12 and 24 Vdc flashers

Trad'l pack*	Retail pack**	Flasher type	No. of 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	Alternating
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.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

* 1 Flasher per pack, 10 packs per shelf carton.
** 1 Flasher per pack, 5 packs per shelf carton.

LED flashers

Trad'l pack*	No. of terminals	Volts	Amps	Number of LED lamps
NO.727-LED	5	12.8	12.6	2-6
NO.758-LED	3	12.8	12.6	2-6
NO.759-LED	3	12.8	12.6	3-6
NO.760-LED	3	12.8	12.6	2-4
NO.762-LED	3	12.8	12.6	2-6

* 1 Flasher per pack, 10 packs per shelf carton.

Lighting control modules (LCM)

Trad'l pack*	No. of terminals	Volts	Amps	Rated load range	Rated voltage
NO.455	10	12.8	2.1	1 to 6 SAE #1156 lamps	11 to 15 Vdc
NO.468	9	12.8	2.1	1 to 6 SAE #1156 lamps	11 to 15 Vdc
NO.470	5	12.8	2.1	Fixed 2 for lamps 4 for hazards	11 to 15 Vdc
NO.487	8	12.8	2.1	1 to 6 SAE #1156 lamps	11 to 15 Vdc

* 1 LCM per pack, 10 packs per shelf carton.

Lighting control modules (LCM)



Bonus, preparedness, and emergency retail packs

Whether shoppers have an immediate need or want to be prepared for the unexpected, the Bussmann Series line of Bonus packs, Preparedness packs, and Emergency packs give you the opportunity to meet their need. Each of these solutions give you the opportunity to increase your basket ring by trading up shoppers from single amp packs to these assortment packs.

Bonus packs — offer adept shoppers who are frequently tinkering on their cars, trucks, bikes, RVs or ATVs the ability to keep a large assortment of fuses on hand.

Preparedness packs — satisfy on-the-go shoppers who want to store fuses in a convenient resealable case so they are prepared if a fuse opens.

Emergency packs — give shoppers the ability to satisfy an immediate need to replace multiple fuses.



AGC-EK



NO. 43



ATM-ID-SK

Bonus packs

Product family	Catalog no.	Number of fuses	Contents
Multi-fuse packs	ATM-FMX-EK	29	5 ea ATM-10, 15, 20, 25, 30; 1 ea FMX-20, 30, 40, 50 and FT-3 fuse tester/puller
	NO. 24	23	1 ea ATM-10, 15, 20, 25, 30, ATM-10LP, 15LP, 20LP, 25LP, 30LP, ATC-3, 5, 7-1/2, 10, 15, 20, 25, 30, 40, MAX-30, 40, FMX-30, 40 and FT-3 fuse tester/puller
	NO. 53	44	10 ea ATC-10, 15, 20, 30; 2 ea MAX-30; 1 ea MAX-40, 50, FT-3 fuse tester/puller;
	NO. 64	64	1 ea MAX-40, 50, FT-3 fuse tester/puller; 2 ea ATM-2, 3, 4, MAX-30; 3 ea ATM-7-1/2; 5 each ATM-5, 25; 10 ea ATM-10, 15, 20, 30
ATC packs	NO. 44	42	7 ea ATC-5, 10, 15, 20, 25 & 30A; 1 ea FT-3 fuse tester/puller
	NO. 80	80	10 ea ATC-3, 5, 7-1/2, 10, 15, 20, 25, 30
easyID ATC packs	ATC-ID-SK	42	7 ea ATC-ID-5, 10, 15, 20, 25, 30
ATM packs	NO. 43	42	7 ea ATM-5, 10, 15, 20, 25 & 30A and 1 ea FT-3 fuse tester/puller
easyID ATM packs	ATM-ID-SK	36	6 ea ATM-ID-5, 10, 15, 20, 25, 30
ATM low profile packs	ATM-LP-EK	42	7 ea ATM-LP-5, 10, 15, 20, 25 30; 1 ea FT-3 fuse diagnostic tester/puller
Glass tube packs	AGC-EK	60	10 ea AGC-5, 10, 15, 20, 25 & 30A and 1 ea FT-3 fuse tester/puller



BP/EFC-FORD



Each Preparedness pack comes with a re-sealable traveling case.

Preparedness packs

Product family	Catalog no.	Number of fuses	Contents
Multi-fuse packs	BP/EFC-FORD	29	1 ea ATC-10, 15, 25, ATM-5, 7-1/2; 2 ea ATC-20, 30, ATM-10, 15, 20, 25, 30, ATM-LP-5, 7-1/2, 10, 15, 20
	BP/EFC-GM	24	1 ea ATM-2, 5, 7-1/2, 10, 15, 25, 30, ATM-LP-2, 5, 7-1/2, 10, 30, ATR-10, 15, 20, 30; 2 ea ATM-20, ATM-LP-15, 20, 30
	BP/EFC-TOYOTA	23	1 ea ATM-7-1/2, ATM-LP-5, 7-1/2, 25, 30; 2 ea ATM-5, 10, 15, 20, 25, 30, ATM-LP-10, 15, 20
	BP/EFC-CHYSLR	23	2 ea ATM-5, 10, 15, 20, 25, 30; 1 ea ATC-15, ATM-7-1-2, ATM-5LP, 10LP, 15LP, 20LP, 25LP, ATR-5, 10, 15, 20, 30
ATC packs	BP/EFC-ATC	24	4 ea ATC-5, 10, 15, 20, 25, 30
ATM packs	BP/EFC-ATM	24	4 ea ATM-5, 10, 15, 20, 25, 30



DIA-1



BP/ATR-A7-RPP



BP/ATC-A5-RP



ATC-FP-AID

Emergency packs

Product family	Catalog no.	Number of fuses	Contents
ATR (Micro II) packs	BP/ATR-A7-RPP	7	1 ea ATR-5, 7-1/2, 10, 15, 20, 25, 30 and fuse puller
easyID ATR (Micro II) packs	BP/ATR-AID	5	1 ea 10,15,30; 2 ea 20
ATL (Micro III) packs	BP/ATL-A4-RPP	4	1 ea ATL-5, 7-1/2, 10, 15 and fuse puller
ATC packs	BP/ATC-A5-RP	5	1 ea ATC-10, 15, 20, 25, 30
	BP/ATC-AH8-RPP	8	2 ea ATC-15, 20; 1 ea ATC-10, 25, 30, 40 and FP-A3 fuse puller
	BP/ATC-AL8-RP	8	1 ea ATC-2, 3, 4; 2 ea ATC-5, 7-1/2
	DIA-1	6	1 ea ATC-5, 10, 15, 20, 25, 30, and FT-3 fuse diagnostic tester/puller
easy ID ATC packs	ATC-FP-AID	5	1 ea ATC-ID-10, 15,20, 25, 30 and FP-A3 fuse puller
	BP/ATC-AID	5	1 ea ATC-10, 15, 20, 25, 30
ATM packs	BP/ATM-A5-RP	5	1 ea ATM-10, 15, 20, 25, 30
	BP/ATM-A8-RP	8	1 ea ATM-2, 5, 7-1/2, 10, 15, 20, 25, 30
	BP/ATM-AH8-RPP	8	2 ea ATM-10, 15, 20; 1 ea ATM-25, 30 and FP-A3 fuse puller
	BP/ATM-AL8-RP	8	2 ea ATM-3, 5, 7-1/2; 1 ea ATM-2, 4
	DIA-2	8	1 ea ATM-2, 5, 7-1/2, 10, 15, 20, 25, 30 and FT-3 fuse diagnostic tester/puller
easyID ATM packs	ATM-FP-AID	5	1 ea ATM-ID-10, 15, 20, 25, 30 and FP-A3 fuse puller
	BP/ATM-AID	5	1 ea ATM-ID-10, 15, 20, 25, 30
ATM low profile packs	BP/ATM-A6LP-RP	8	1 ea ATM-LP-5, 10, 15, 20, 25, 30
	DIA-3	8	1 ea ATM-LP-2, 5, 7-1/2, 10, 15, 20, 25, 30 and FT-3 fuse diagnostic tester/puller
MAX pack	BP/MAX-A3-RP	3	1 ea MAX-30, 40, 50
FMX pack	BP/FMX-A3-RP	3	1 ea FMX-20, 30, 40
Glass tube fuse packs	BP/AGA-AH8-RP	8	2 ea AGA-10, 15, 20, 30
	BP/AGA-AL8-RP	8	1 ea AGA- 1, 2; 2 ea 3, 5, 7-1/2
	BP/AGC-A5-RP	5	1 ea AGC-10, 15, 20, 25 and 30 A
	BP/AGC-AH10-RP	10	1 ea AGC-7-1/2, 25; 2 ea 10, 15, 20, 30
	BP/AGC-AL10-RP	10	1 ea AGC-4, 6; 2 ea 1, 2, 3, 5
AGA, AGC, AGW AGX, SFE, GBC	MA-5	5	1 ea AGC-1/2, 1, 1-1/2, 2, 3
	BP/AGW-A8-RP	8	1 ea AGW-5, 7-1/2; 2 ea 15, 20, 30
	BP/AGX-A8-RP	8	1 ea AGX-5, 8; 2 ea 20, 25, 30
	BP/SFE-AH6-RP	6	2 ea SFE-14, 20, 30
	BP/SFE-AL6-RP	6	1 ea SFE-4, 6; 2 ea 7-1/2, 9
	BP/AGC-SFE-A5-RP	5	1 ea AGC- 10, 15, 30 and SFE-14, 20
	BP/GBC-A8-RP	8	1 ea GBC-5, 15; 2 ea 8, 16, 25



NO.136

ATR, ATL and FMM micro fuse assortment

Selection of 135 ATR 2-leg and ATL 3-leg micro blade fuses, and FMM micro cartridge fuses plus a fuse puller. Fuses are loosely packed in 12-cavity, shatter-resistant plastic box. Contains ten each of ATR-5, 7-1/2, 10, 15, 20, 25 and 30, ten each of ATL-5, 7-1/2, 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-7-1/2LP, 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-7-1/2LP, 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, 60 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.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 PACK contents

- Fuse assortments: AGA-AL (1, 2, 3, 5 and 7-1/2 A), AGA-AH (10, 15, 20 and 30 A), AGW-A (5, 7-1/2, 15, 20 and 30 A) and AGX-A (5, 8, 20, 25 and 30 A).
- AGC glass fuses. One tin each containing five fuses: AGC-1-R, 2-R, 3-R, 4-R, 5-R, 7-1/2-R, 10-R, 15-R, 20-R, 25-R and 30-R A.
- SFE size-rejecting 1/4" glass fuses. One tin each containing five fuses: SFE-4, 7-1/2, 9, 14, 20 and 30 A.
- GBC German vehicle fuses. One tin each containing five fuses: GBC-8, 16 and 25 A.
- ATM blade fuses. One tin of each rating containing five fuses: ATM-5, 7-1/2, 10, 15, 20, 25 and 30 A.
- Low-profile ATM blade fuses. One tin each containing five fuses: ATM-7-1/2LP, 10LP, 15LP, 20LP, 25LP and 30LP.
- ATC blade fuses. One tin each containing five fuses: ATC-3, 4, 5, 7-1/2, 10, 15, 20, 25, 30, 35 and 40 A.
- MAXI blade fuses. MAX-20, (2)30, (2)40, 50, 60, 70 and 80 A.
- FLB bolt-mount cartridge fuses. One each: FLB-40, 50, 60, 70 and 80 A.
- FLD bolt-mount cartridge fuses. One FLD-80 A.
- FLF female termination cartridge fuses. One each: FLF-20, 30, 40, 50 and 60 A.
- FLM male termination cartridge fuses. One each: FLM-60, 80 and 100 A.
- FLS female miniature termination cartridge fuses. One each: FLS-30 and 40 A.
- FMX female MAXI fuses. One each: FMX-20, 30, 40, 50 and 60 A.
- FMX_LP low-profile female MAXI fuses. One each: FMX-20LP, 25LP, 30LP, 40LP, 50LP and 60LP.
- HDD 30 A in-line ATC fuse holder
- HHM 30 A in-line ATM fuse holder
- HHN in-line glass tube fuse holder with AGC-30-R A fuse
- HMK heavy-duty in-line glass tube fuse holder
- CBB-30 Type II 30 A ATC blade-type circuit breaker
- CBC-30HB Type I stud-mount 30 A circuit breaker with lengthwise bracket
- UCB-20 universal 20 A ATC blade-type circuit breaker
- UCB-30 universal 30 A ATC blade-type circuit breaker
- FT-3 fuse puller/tester, FP-A3 3-way fuse puller

Fuse caddies



Bussmann series fuse caddies offer a full array of fuses for automotive repair facilities to meet your 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.



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

Contains fuse tray catalog numbers:

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

See fuse tray contents on page 31 for type, quantities and ratings for each tray catalog number.

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 on page 31 for type, quantities and ratings for each tray catalog number.

Fuse tray assortments

Bussmann series fuse trays make it convenient to sell popular fuse assortments that 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.

Three, five-cavity tray assortments and eight, ten-cavity tray assortments cover the most 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 these 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.



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

Fuse tray contents and quantities



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-40 (10)
ATC-15 (10)	

* Replaces NO.100BK



CDY10TRY-EZID
10 Cavity tray, 59 ATC/ATM/MAX blade fuses

Fuse (Qty)		
ATC-3ID (4)	ATM-3ID (4)	MAX-30ID (2)
ATC-5ID (2)	ATM-5ID (2)	MAX-40ID (2)
ATC-10ID (4)	ATM-10ID (4)	MAX-50ID (1)
ATC-15ID (4)	ATM-15ID (4)	MAX-60ID (1)
ATC-20ID (4)	ATM-20ID (4)	MAX-80ID (1)
ATC-25ID (4)	ATM-25ID (4)	
ATC-30ID (4)	ATM-30ID (4)	



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)**

** easyID indicating fuse.



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)	



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-80 (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)

Retail automotive planogram

Color-coded packaging for fast, easy product selection. Fits standard four-foot wide gondola. Product layout on page 33.

Visual categorization

- Color-coded Bussmann series 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.



4FTAUTO-KIT
Peg hooks and gondola not included.

Consumer friendly

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



4FTAUTO-TAGS
UPC Reorder tags.

AFC-225

Contains: 25 each of glass tube fuses. AGC-5-R, 10-R, 15-R, 20-R, 25-R and 30-R A and SFE-14, 20 and 30 A.



NO.225

Contains: 25 each of ATC blade fuses. ATC-3, 4, 5, 7-1/2, 10, 15, 20, 25 and 30 A.



NO.227

Contains: Ten each of ATM blade fuses. ATM-2, 3, 5, 7-1/2, 10, 15, 20, 25 and 30 A.



Available reload packs

Reloads contain 10 and 25 fuses of the specified ampacity in a poly bag. See table below for available fuses and amp ratings.

Catalog no.	Description
ATC-(amp)RLD	25 fuses in a poly bag, available amps: 10, 15, 20, 25, 30 A
ATM-(amp)RLD	10 fuses in a poly bag, available amps: 10, 15, 20, 25, 30 A

Catalog no.	Description
4FTAUTO-KIT	175 SKU auto prepack. Includes one of each retail pack, a complete set of reorder tags and a header card as pictured.
4FTAUTO-TAGS	Replacement set of UPC reorder tags for the 4FTAUTO-KIT. Order tags through your Bussmann series product rep.

For details on automotive Planogram SKUs, visit Eaton.com/BussmannConsumerPOG

Tilt-bin assortments

Turn any pegboard or shelf into a profit-building professional fuse center with interlocking tilt-bin sets. 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. Bins can be stacked in any combination so you can modify your display to fit your customer's needs.

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



AFC-90

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



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

Package color coding

	easyID	MINI BLADE FUSES	BLADE FUSES	LOW PROFILE MINI BLADE FUSES	MICRO FUSES	MAXI BLADE FUSES AND FUSIBLE LINKS	GLASSTUBE FUSES	CIRCUIT BREAKERS AND STUD-MOUNT FUSES	ACCESSORIES
ROW 1	Column 1	BP/EFC-FORD 051712694049							
	Column 2								
ROW 2	Column 3	BP/EFC-GM 051712694063							
	Column 4								
ROW 3	Column 5	BP/EFC-TOYOTA 051712694070							
	Column 6								
ROW 4	Column 7								
	Column 8								
ROW 5	Column 9								
	Column 10								
ROW 6	Column 11								
	Column 12								
ROW 7	Column 13								
	Column 14								
ROW 8	Column 15								
	Column 16								
ROW 9	Column 17								
	Column 18								
ROW 10	Column 19								
	Column 20								
ROW 11	Column 21								
	Column 22								



Marine and outdoor rec products

Marine-rated circuit breakers

Specifically designed to meet the needs of marine applications, the CB187F and CB187P offer 5 kA @ 12 Vdc interrupting ratings and ignition protection per ABYC E-11. Usable as an ON/OFF switch, they have corrosion resistant plating on 15/16-18 copper terminals.

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

Amps	Catalog no.
10	CB251-10
15	CB251-15
20	CB251-20
25	CB251-25
40	CB251-40
50	CB251-50

* 1 Breaker per box, 10 boxes per shelf carton.

**Type I-automatic reset
CB251**

Panel mount, 32 Vdc, weatherproof, marine rated, #10-32 threaded studs, stainless steel hardware installed



Amps	Catalog no.
10	CB255-10
15	CB255-15
20	CB255-20
25	CB255-25
30	CB255-30
35	CB255-35
40	CB255-40
50	CB255-50

* 1 Breaker per box, 10 boxes per shelf carton.

CB255

Panel mount push-to-trip button, 32 Vdc, weatherproof, marine rated, #10-32 stainless steel hardware installed



Type III-manual reset

CB285F

Flush mount with push-to-trip button, 42 Vdc, weatherproof, marine rated, M6 threaded studs, stainless steel hardware installed



Amps	Catalog no.*
25	CB285F-25
30	CB285F-30
40	CB285F-40
50	CB285F-50
60	CB285F-60
70	CB285F-70
80	CB285F-80
100	CB285F-100
120	CB285F-120
150	CB285F-150

* 1 Breaker per box, 20 boxes per master carton.

CB285P

Panel mount push-to-trip button, 42 Vdc weatherproof, marine rated, M6 threaded studs, stainless steel hardware installed



Amps	Catalog no.*
25	CB285P-25
30	CB285P-30
40	CB285P-40
50	CB285P-50
60	CB285P-60
70	CB285P-70
80	CB285P-80
90	CB285P-90
100	CB285P-100
120	CB285P-120
150	CB285P-150

* 1 Breaker per box, 20 boxes per master carton.

Amps	Catalog no.
25	CB187F-25
30	CB187F-30
35	CB187F-35
40	CB187F-40
50	CB187F-50
60	CB187F-60
70	CB187F-70
80	CB187F-80
90	CB187F-90
100	CB187F-100
110	CB187F-110
120	CB187F-120
135	CB187F-135
150	CB187F-150
200	CB187F-200

* 1 Breaker per box, 5 boxes per shelf carton.

CB187F

Flush mount with pull-to-trip lever, 48 Vdc, weatherproof, marine rated, 5/16-18 threaded studs, stainless steel hardware installed



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 recreation marine applications.

Fuses: Five each of ABC-10, AGC-1-1/2, GMA-2 A, MDA-8, ten of AGC-3, 7-1/2, 15, 25, fifteen of AGC-20, 30.

Circuit breakers: Three CBF-30.

BP/AGC-AL10-RP

Contains: (1) each AGC-4, 6 and (2) each 1, 2, 3, 5

BP/AGC-AH10-RP

AGC fuse assortments for marine accessories and bilge pumps. Includes: (1) each AGC-7-1/2, 25 and (2) each 10, 15, 20, 30

BP/MDL-1

Marine motor protection fuses. Retail pack with two fuses per card. See page 52 for retail pack availability in ratings from 1/2 to 15 amps

BP/AGC-SFE-A5-RP

AGC and SFE fuse assortment for marine applications. Contains: (1) each AGC-10, 15 and 30 A and SFE-14 and 20 A

CB187P

Panel mount pull-to-trip lever, 48 marine rated, 5/16-18 threaded studs, stainless steel hardware installed



Amps	Catalog no.
30	CB187P-30
35	CB187P-35
40	CB187P-40
50	CB187P-50
60	CB187P-60
80	CB187P-80
110	CB187P-110
120	CB187P-120
135	CB187P-135
150	CB187P-150

* 1 Breaker per box, 120 boxes per master carton.

JJN - Class T very fast-acting, current-limiting 300 Vac, 160 Vdc fuses



Amps	Catalog no.*
110	JJN-110
125	JJN-125
150	JJN-150
175	JJN-175
200	JJN-200
225	JJN-225
250	JJN-250
300	JJN-300
350	JJN-350
400	JJN-400

* 1 Fuse per pack, 5 packs per master carton.

Battery separators manage batteries for reliable starts



Uni-directional and bi-directional versions available.



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

- 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.

CBBF Marine rated battery fuses



Amps	Trad'l pack*
30	CBBF-30
40	CBBF-40
50	CBBF-50
60	CBBF-60
75	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

* 1 Fuse per pack, 10 packs per shelf carton.

These marine rated 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 J1171 for ignition protection. Use with CBBF-MBC mounting bar.

CBBF-MBC Mounting bar

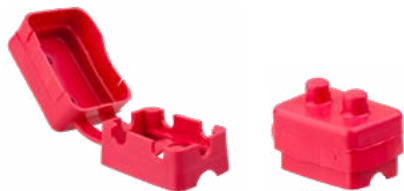
Mounting bar with 1/4-20 stud, nut and cover for the CBBF battery fuse.

Order catalog number CBBF-MBC*.

* 1 Bar per pack, 10 packs per shelf carton.



Splash proof covers



Catalog no.	Description	Pack qty.	Shelf qty.	Master qty.
CB-CVR	Cover for stud terminal circuit breaker	1	10	300
BK/CB-CVR	Cover for stud terminal circuit breaker-BULK	—	100	2000
BP/CB20HB-CVR*	CB123-20HB with cover-retail pack	1	5	120
BP/CB40HB-CVR*	CB123-40HB with cover-retail pack	1	5	120

* Packed with CB123-20HB and CB123-40HB.

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

* Use the catalog numbers to order these products.

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.



70 A and 95 A size



120 A and 130 A size



240 A size

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

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.



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.

Hardware and home products



Automotive

Used in older-model cars, glass tube fuses today are found primarily in automotive accessory applications. The expansive Bussmann series line of glass fuses includes many types and sizes in addition to those listed in this catalog. Call Eaton 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 1/4" x 1-1/4" and 5x20 mm. 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 fuse sizes

Both glass and ceramic tube fuses vary by diameter and length. The chart below provides a visual reference for the various sizes of the Bussmann series fuse families. Images are shown to scale.

Fuse selection criteria

- For electronic/electrical applications, fuses must be rated at 125 V or better.
- Voltage must match or exceed the fuse being replaced (125 V for household current; 12 V for auto; 24 V for heavy duty).
- Fuses 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 voltage rated fuse in a lower voltage application. For example: A fuse rated for 125 volts is appropriate in household (110 V) or automotive (12 V), while a fuse rated for 32 volts is appropriate for automotive (12 V), but not for household (125 V). Always replace a fuse with one of the same or higher voltage rating.

See page 54 for specifications.



* Mounts in HLR in-line holder, see page 14.

Fast-acting 1/4" diameter automotive fuses

AGA

1/4" x 5/8" fast-acting glass tube fuses

See page 28 for available assortments.



Amps	Catalog no.*	Retail pack**
1/4	AGA-1/4	—
1	AGA-1	—
1-1/2	AGA-1-1/2	—
2	AGA-2	—
2-1/2	AGA-2-1/2	—
3	AGA-3	—
5	AGA-5	—
6	AGA-6	—
7-1/2	AGA-7-1/2	—
10	AGA-10	—
15	AGA-15	—
20	AGA-20	BP/AGA-20-RP
30	AGA-30	—

* 5 Fuses per pack, 10 packs per shelf carton.
** 5 Fuses per pack, 5 packs per shelf carton.

AGW

1/4" x 7/8" fast-acting automotive glass tube fuses

See page 28 for available assortment.



Amps	Catalog no.*	Retail pack**
1	AGW-1	—
1-1/2	AGW-1-1/2	—
2-1/2	AGW-2-1/2	—
3	AGW-3	—
4	AGW-4	—
5	AGW-5	—
6	AGW-6	—
7-1/2	AGW-7-1/2	—
10	AGW-10	—
15	AGW-15	BP/AGW-15-RP
20	AGW-20	—
30	AGW-30	—

* 5 Fuses per pack, 10 packs per shelf carton.
** 5 Fuses per pack, 5 packs per shelf carton.

AGX

1/4" x 1" fast-acting automotive glass tube fuses

See page 28 and 52 for available assortments.



Amps	Catalog no.*
1	AGX-1
2	AGX-2
2-1/2	AGX-2-1/2
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

* 5 Fuses per pack, 10 packs per shelf carton.

GBB

1/4" x 1-1/4" very fast-acting ceramic tube fuses



Amps	Catalog no.*
1-1/4	GBB-1-1/4-R
10	GBB-10-R
15	GBB-15-R
30	GBB-30-R

* 5 Fuses per pack, 10 packs per shelf carton.

ABC

1/4" x 1-1/4" fast-acting ceramic tube fuses

See page 52 for available assortment.



Amps	Catalog no.*	Retail pack**
1/4	ABC-1/4-R	—
1/2	ABC-1/2-R	—
1	ABC-1-R	—
2	ABC-2-R	—
2-1/2	ABC-2-1/2-R	—
3	ABC-3-R	—
4	ABC-4-R	—
5	ABC-5-R	—
6	ABC-6-R	—
7	ABC-7-R	—
8	ABC-8-R	—
10	ABC-10-R	BP/ABC-10
12	ABC-12-R	—
15	ABC-15-R	BP/ABC-15
20	ABC-20-R	BP/ABC-20
25	ABC-25-R	—
30	ABC-30-R	—

* 5 Fuses per pack, 10 packs per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

AGC

1/4" x 1-1/4" fast-acting automotive glass tube fuses

See pages 27, 28, 32, 35 and 52 for available assortments.



Amps	Catalog no.*	Retail pack**
1/8	AGC-1/8-R	—
1/4	AGC-1/4-R	—
3/10	AGC-3/10-R	—
3/8	AGC-3/8-R	—
1/2	AGC-1/2-R	BP/AGC-1/2-RP
3/4	AGC-3/4-R	—
1	AGC-1-R	BP/AGC-1-RP
1-1/4	AGC-1-1/4-R	—
1-1/2	AGC-1-1/2-R	BP/AGC-1-1/2-RP
2	AGC-2-R	BP/AGC-2-RP
2-1/2	AGC-2-1/2-R	BP/AGC-2-1/2-RP
3	AGC-3-R	BP/AGC-3-RP
3-2/10	AGC-3-2/10-R	—
3-1/2	AGC-3-1/2-R	—
4	AGC-4-R	BP/AGC-4-RP
5	AGC-5-R	BP/AGC-5-RP
6	AGC-6-R	BP/AGC-6-RP
6-1/4	AGC-6-1/4-R	—
7	AGC-7-R	—
7-1/2	AGC-7-1/2-R	BP/AGC-7-1/2-RP
8	AGC-8-R	—
10	AGC-10-R	BP/AGC-10-RP
12	AGC-12-R	—
15	AGC-15-R	BP/AGC-15-RP
20	AGC-20-R	BP/AGC-20-RP
25	AGC-25-R	BP/AGC-25-RP
30	AGC-30-R	BP/AGC-30-RP
35	AGC-35-R	BP/AGC-35-RP
40	AGC-40-R	—
50	AGC-50	—

* 5 Fuses per pack, 10 packs per shelf carton.
** 5 Fuses per pack, 5 packs per shelf carton.

Fast-acting fuses

GBC

1/4" x 31/32" fast-acting German automotive fuses

See page 28 for available assortment.



Color code	Amps	Catalog no.*	Retail 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

* 5 Fuses per pack, 10 packs per shelf carton.
** 5 Fuses per pack, 5 packs per shelf carton.

SFE

1/4" size-rejecting fast-acting automotive glass tube fuses

See pages 28, 32 and 35 for available assortments.



Amps	Fuse length	Catalog no.*	Retail pack**
4	5/8"	SFE-4	—
6	3/4"	SFE-6	—
7-1/2	7/8"	SFE-7-1/2	—
9	7/8"	SFE-9	—
14	1-1/16"	SFE-14	BP/SFE-14-RP
20	1-1/4"	SFE-20	BP/SFE-20-RP
30	1-7/16"	SFE-30	BP/SFE-30-RP

* 5 Fuses per pack, 10 packs per shelf carton.
** 5 Fuses per pack, 5 packs per shelf carton.

AGU

13/32" x 1-1/2" fast-acting automotive glass tube fuses

Available with gold-plated end caps for high-end stereo and AV markets.



Amps	Catalog no.*	Retail pack**
Nickel-plated		
10	AGU-10	—
15	AGU-15	—
20	AGU-20	—
25	AGU-25	—
30	AGU-30	—
35	AGU-35	—
40	AGU-40	BP/AGU-40-RP
50	AGU-50	BP/AGU-50-RP
60	AGU-60	BP/AGU-60-RP
Gold-plated		
10	AGU-10GP	—
15	AGU-15GP	—
20	AGU-20GP	—
25	AGU-25GP	—
35	AGU-35GP	—
40	AGU-40GP	BP/AGU-40GP-RP
50	AGU-50GP	BP/AGU-50GP-RP
60	AGU-60GP	BP/AGU-60GP-RP

* 10 Fuses per pack, 10 packs per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

Time-delay 1/4" diameter fuses

MDA

1/4" x 1-1/4" time-delay ceramic tube fuses



Amps	Catalog no.*
1	MDA-1-R
1-1/2	MDA-1-1/2-R
2	MDA-2-R
2-1/2	MDA-2-1/2-R
3	MDA-3-R
4	MDA-4-R
5	MDA-5-R
6	MDA-6-R
7	MDA-7-R
8	MDA-8-R
10	MDA-10-R
12	MDA-12-R
15	MDA-15-R
20	MDA-20-R
25	MDA-25-R
30	MDA-30-R

* 5 Fuses per pack, 10 packs per shelf carton.

MDL

1/4" x 1-1/4" time-delay glass tube fuses

See page 52 for available assortment.



Amps	Catalog no.*	Retail pack**
1/16	MDL-1/16-R	—
1/8	MDL-1/8-R	—
1/4	MDL-1/4-R	BP/MDL-1/4
3/8	MDL-3/8-R	—
1/2	MDL-1/2-R	BP/MDL-1/2
3/4	MDL-3/4-R	—
1	MDL-1-R	BP/MDL-1
1-1/4	MDL-1-1/4-R	—
1-1/2	MDL-1-1/2-R	BP/MDL-1-1/2
2	MDL-2-R	BP/MDL-2
2-1/2	MDL-2-1/2-R	—
3	MDL-3-R	BP/MDL-3
3-2/10	MDL-3-2/10-R	—
3-1/2	MDL-3-1/2-R	—
4	MDL-4-R	BP/MDL-4
5	MDL-5-R	BP/MDL-5
6	MDL-6-R	BP/MDL-6
6-1/4	MDL-6-1/4-R	—
7	MDL-7-R	BP/MDL-7
7-1/2	MDL-7-1/2-R	—
8	MDL-8-R	BP/MDL-8
10	MDL-10-R	BP/MDL-10
12	MDL-12-R	—
15	MDL-15-R	BP/MDL-15
20	MDL-20-R	—
25	MDL-25	—
30	MDL-30	BP/MDL-30
35	MDL-35	—
40	MDL-40	—

* 5 Fuses per pack, 10 packs per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

MDQ

1/4" x 1-1/4" dual-element, time-delay glass tube fuses



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

* 5 Fuses per pack, 10 packs per shelf carton.

Fast-acting 5x20 mm fuses

GDA

IEC 5x20 mm high-breaking capacity fast-acting ceramic tube fuses



Amps	Catalog no.*
500 mA	GDA-500MA
630 mA	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

* 5 Fuses per pack, 10 packs per shelf carton.

Time-delay 5x20 mm fuses

GDC

IEC 5x20 mm time-delay glass tube fuses



Amps	Catalog no.*	Retail pack**
500 mA	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	—

* 5 Fuses per pack, 10 packs per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

GDB

IEC 5x20 mm fast-acting glass tube fuses



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

* 5 Fuses per pack, 10 packs per shelf carton.

GMC

UL 5x20 mm medium time-delay glass tube fuses



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

* 5 Fuses per pack, 10 packs per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

GMA

UL 5x20 mm fast-acting glass tube fuses

See page 52 for available assortments.



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

* 5 Fuses per pack, 10 packs per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

GMD

UL 5x20 mm medium time-delay glass tube fuses



Amps	Catalog no.*
500 mA	GMD-500-R
1	GMD-1-R
2	GMD-2-R
3	GMD-3-R

* 5 Fuses per pack, 10 packs per shelf carton.

GMF

Non-rejection time-delay in-line fuse with cap



Amps	Catalog no.*
2-1/2	GMF-2-1/2
2-8/10	GMF-2-8/10
3	GMF-3
3-2/10	GMF-3-2/10
4	GMF-4

* 5 Fuses per pack, 10 packs per shelf carton.

Use with HLR in-line fuse holder page 14.

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 600 Vac 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 250 Vac and 600 Vac 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. Up to 60 amp fuses UL Listed Class K5 (IR: 50 kA). 70 to 600 A fuses UL Class H (IR: 10 kA).

Cartridge fuse dimensions - in (mm)

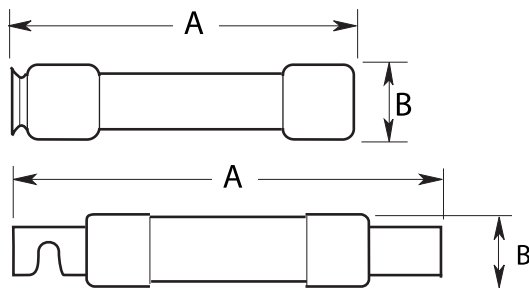
Ferrule styles*

Amp range	250 Vac		600 Vac	
	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)

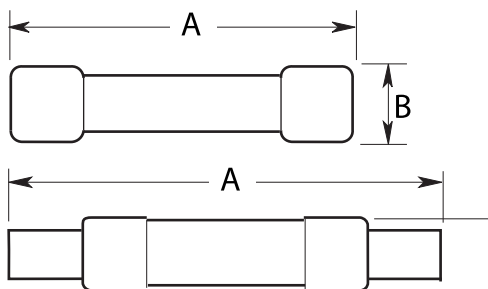
Blade styles*

Amp range	250 Vac		600 Vac	
	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

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

See page 52 for available assortment.



35 up to 60 A



70 A and over

Amps	Catalog no.*	Retail 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	—
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	—

* 2 - 60 A Fuses, 10 per shelf carton
70 - 100 A Fuses, 5 per shelf carton
125 - 200 A Fuses, 56 per master case
250 - 400 A Fuses, 30 per master carton
** 70 and 100 A Fuses 1 per pack,
15 - 60 A Fuses, 2 per pack,
5 packs per shelf carton.

NOS

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



Up to 60 A



70 A and over

Amps	Catalog 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

* 2 - 60 A Fuses, 10 per shelf pack
100 A Fuses, 80 per master pack
200 A Fuses, 35 per master pack

Fusetron™ energy efficient FRN-R fuses

Bussmann series Fusetron 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 200 kA interrupting rating can be used in a broad range of applications.

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 are UL Listed Class R (IR: 200 kA). 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.

* 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).

FRN-R

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

See page 52 for available assortments.

Amps	Catalog no.*	Retail 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	—
6-1/4	FRN-R-6-1/4	—
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
17-1/2	FRN-R-17-1/2	—
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	—

* 1 - 60 A Fuses, 10 per shelf carton
 70 - 100 A Fuses, 5 per shelf carton
 150 - 200 A Fuses, 40 per master case
 ** 10 - 60 A Fuses, 2 per pack
 100 A Fuse, 1 per pack, 5 packs per shelf carton.



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_ID

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

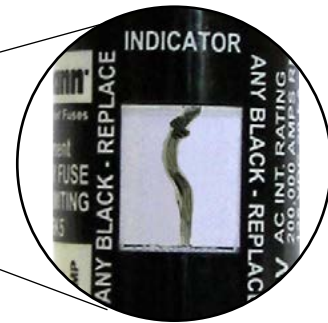
Amps	Catalog no.*	easyID retail pack**
15	FRN-R-15ID	BP/FRN-R-15ID
20	FRN-R-20ID	BP/FRN-R-20ID
30	FRN-R-30ID	BP/FRN-R-30ID
40	FRN-R-40ID	BP/FRN-R-40ID
50	FRN-R-50ID	BP/FRN-R-50ID
60	FRN-R-60ID	BP/FRN-R-60ID

* 10 Fuses per shelf carton.
 ** 2 Fuses per pack, 5 packs per shelf carton.

easyID blown fuse indication



Good



Indicator shows when fuse is blown

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 200 kA interrupting rating can be used in a broad range of applications.

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 are UL Listed Class R (IR: 200 kA).

* 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

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



Up to 60 A



65 A and over

Amps	Catalog no.*	With easyID indication	Retail pack**
2	FRS-R-2	—	—
3	FRS-R-3	—	—
3-1/2	FRS-R-3-1/2	—	—
4	FRS-R-4	—	—
5	FRS-R-5	—	—
6	FRS-R-6	FRS-R-6ID	—
6-1/4	FRS-R-6-1/4	FRS-R-6-1/4ID	—
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
17-1/2	FRS-R-17-1/2	FRS-R-17-1/2ID	—
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	—	—

* 2 - 60 A Fuses, 10 per shelf carton
 70 - 100 A Fuses, 5 per shelf carton
 125 - 200 A Fuses, 20 per master case
 ** 1 Fuse per pack, 5 packs per shelf carton.

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

250 Vac CSA Type D time-delay fuses



Amps	Catalog no.*	Retail pack**
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	—

* 10 - 60 A Fuses, 10 per shelf carton.
 100 - 200 A Fuses, 1 per shelf carton
 40 per master case

** 1 Fuse per pack, 5 packs per shelf carton.

PON

250 Vac CSA Type P one-time fuses



Amps	Catalog no.*	Retail pack**
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

* 10 Fuses per shelf carton.
 ** 1 Fuse per pack, 5 packs per shelf carton.

Midget fuses

Midget fuses are 13/32" x 1-1/2" 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® (NEC®) now requires more protection of these components creating an increased replacement demand for these fuses.

BAF

250 Vac fast-acting 13/32" x 1-1/2" midget fuses



Amps	Catalog 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

* 10 Fuses per shelf carton.

KTK

600 Vac fast-acting 13/32" x 1-1/2" midget fuses



Amps	Catalog no.*	Retail 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

* 10 Fuses per shelf carton.

** 1 Fuse per pack, 5 packs per shelf carton.

Class CC fuses

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

KTK-R

600 Vac fast-acting 13/32" x 1-1/2" Class CC branch circuit fuses



Amps	Catalog no.*
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

* 10 Fuses per shelf carton.

There's more to offer!

Talk to your Bussmann series product sales representative about other available amp ratings.



FNM

**250 Vac time-delay
13/32" x 1-1/2" midget
fuses**

See page 52 for available assortments.



Amps	Catalog no.*	Retail pack**
1/2	FNM-1/2	—
6/10	FNM-6/10	—
1	FNM-1	—
2	FNM-2	BP/FNM-2
2-1/2	FNM-2-1/2	—
3	FNM-3	—
3-2/10	FNM-32/10	—
3-1/2	FNM-3-1/2	—
4	FNM-4	—
5	FNM-5	BP/FNM-5
6	FNM-6	—
6-1/4	FNM-6-1/4	—
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

* 10 Fuses per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

FNQ-R

**600 Vac time-delay 13/32" x 1-1/2"
Class CC branch circuit fuses**



Amps	Catalog no.*
1/2	FNQ-R-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
6-1/4	FNQ-R-6-1/4
7-1/2	FNQ-R-7-1/2
8	FNQ-R-8
10	FNQ-R-10
12	FNQ-R-12
15	FNQ-R-15
20	FNQ-R-20
30	FNQ-R-30

* 10 Fuses per shelf carton.

FNQ

**500 Vac time-delay 13/32" x 1-1/2"
midget fuses**



Amps	Catalog no.*
1/2	FNQ-1/2
1	FNQ-1
1-1/2	FNQ-1-1/2
2	FNQ-2
2-1/2	FNQ-2-1/2
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

* 10 Fuses per shelf carton.

SC

Specialty Class G rejection fuses

- 600 Vac fast-acting (1/2-6 A)
- 600 Vac time-delay (7-20 A)
- 480 Vac time-delay (25-60 A)



Amps	Fuse length	Catalog no.*	Retail 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	—

* 10 Fuses per shelf carton.
** 2 Fuses per pack, 5 packs per shelf carton.

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 60 A. All SC fuses are 13/32" in diameter with varying lengths to provide a rejection feature that helps prevent over fusing (installing a 30 amp fuse in a 20 A circuit). One half to 6 A SC fuses are fast-acting, while 7 to 60 A SC fuses are time-delay to permit temporary overloads to pass without nuisance openings.

See page 52 for available assortment.

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 50).

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 and circuit breakers

The Edison base plug fuse uses the same thread as a light bulb base. All amp ratings 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



125 Vac Edison base UL circuit breakers

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

Amps	Retail pack*
15	BP/MB-15
20	BP/MB-20

* 1 Circuit breaker per pack, 5 packs per shelf carton.

Type T



125 Vac 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 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	Catalog no.*	Retail pack**
1-1/4	T-1-1/4	—
1-6/10	T-1-6/10	—
3-2/10	T-3-2/10	BP/T-3-2/10
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

* 4 fuses per box, 25 packs per shelf carton.

** Less than 15 A, 1 fuse per pack, 15 - 30 A, 2 fuses per pack, 5 packs per shelf carton.

Type TL

125 Vac 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 52 for available emergency kit.

Amps	Catalog no.*	Retail box*	Retail 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

* 4 Fuses per box.

** 3 Fuses per pack, 5 packs per shelf carton.

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 socket.

Type S



Amps	Catalog no.*	Retail pack**
1-1/4	S-1-1/4	BP/S-1-1/4
1-6/10	S-1-6/10	BP/S-1-6/10
3-2/10	S-3-2/10	BP/S-3-2/10
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

125 Vac 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.

* 4 Fuses per box.
** Less than 15 A, 1 per pack; 15 to 30 A, 2 per pack, 5 packs per shelf carton.

Type SL



Amps	Catalog no.*	Retail box*	Retail 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

* 4 Fuses per box.
** 3 Fuses per pack, 5 packs per shelf carton.

125 Vac time-delay, rejection base plug fuses

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

See page 52 for available emergency kit.

Type SA



Amp range	Catalog no.*	Retail pack**
1 or less	SA-1	—
1.25 or less	SA-1-1/4	—
1.6 or less	SA-1-6/10	—
7 to 15	SA-15	BP/SA-15
20	SA-20BS	BP/SA-20
20 to 30	SA-30	BP/SA-30

* 4 SA Adapters per box.
** 3 SA Adapters per pack, 5 packs per shelf carton.

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 52 for available assortment.

CSA Edison base plug fuses

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



Type TC Type T equivalent



Amps	Retail box*	Retail pack**
15	TC-15PK4	BP/TC-15
20	TC-20PK4	BP/TC-20
25	TC-25PK4	BP/TC-25
30	TC-30PK4	BP/TC-30

* 4 Fuses per box.
** 2 Fuses per pack, 5 packs per shelf carton.

125 Vac 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.

See page 52 for available emergency kit.

Type P Type TL equivalent



Amps	Retail box*	Retail pack**
15	P-15PK4	BP/P-15
20	P-20PK4	BP/P-20
25	P-25PK4	BP/P-25
30	P-30PK4	BP/P-30

* 4 Fuses per box.
** 2 Fuses per pack, 5 packs per shelf carton.

125 Vac 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.

See page 52 for available emergency kit.

CP/MB



Amps	Retail pack*
15	CP/MB-15
20	CP/MB-20

* 1 Circuit breaker per pack, 5 packs per shelf carton.

125 Vac CSA Edison base circuit breakers

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

Box cover units

For supplemental circuit and small motor protection

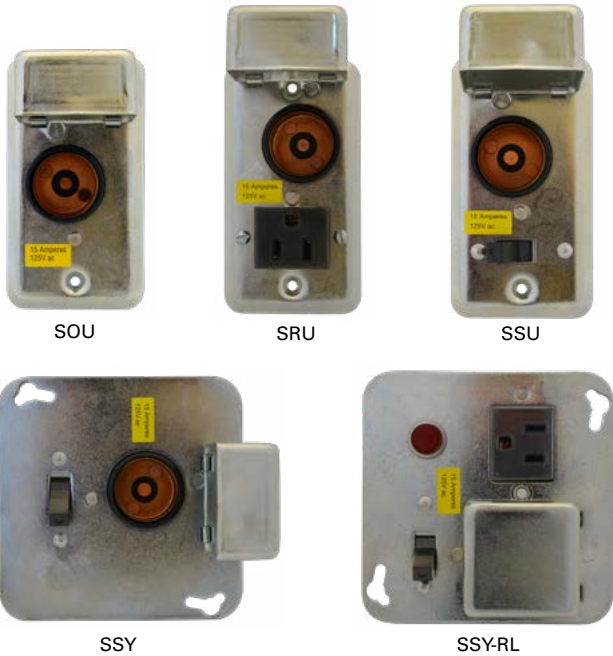
Box cover units are available in a variety of styles that fit standard electrical boxes, to provide an efficient and economical method to protect motors from overloads. Often, branch circuit protection cannot protect small motors, e.g., a 6-1/4 amp rated motor will likely burn up before a 30 amp breaker 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.

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

* 1 Box cover unit per pack, 10 packs per shelf carton.

** 1 Box cover unit per pack, 3 packs per shelf carton.

† 1 Box cover unit per pack, 2 packs per shelf carton.



* Double pole switch opens both sides of the circuit. Can be used for two separate motors with common switch or a single motor (3/4 Hp, 250 Vac max.)

SurgePOD™ PRO Type 1 power surge protective device, the value SPD for sensitive residential applications

- Type 1 UL and cULus Listed 1449 4th Edition SPD is easily installed on the loadside or lineside of the service entrance overcurrent protective device.
- For 240 Vac, split-phase electrical systems.
- 200 kA 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 No. 10033 for technical specifications.

Retail pack*	System voltage	Description
RB-SPP-240PN	240 Vac	Split-phase, 3 wire, 3 connection points

* 1 SurgePOD PRO per pack, 4 packs per master carton.



Automotive blade and glass tube fuse pullers and testers



FP-A3

FT-2

FT-3

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



FP-2

FP-3

FP-4

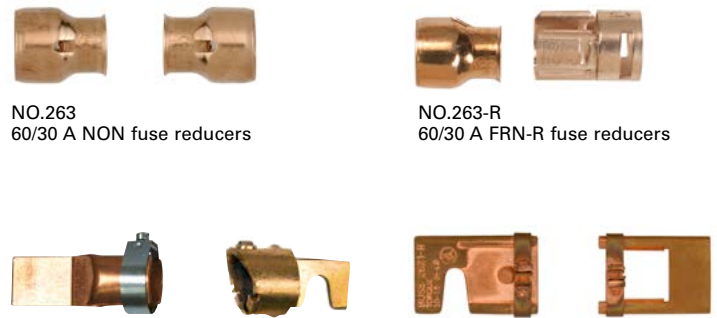
FP-6

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

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

* FP-A3 and FT-3, 1 fuse puller per pack, 10 packs per shelf carton.
 ** 1 Fuse puller per pack, 5 packs per shelf carton.
 † Replacement batteries: 364 (Energizer/Rayovac), D364 (Duracell), SR621SW (Maxell/Sony)

NON and FRN-R 250 volt fuse reducers



NO.263
60/30 A NON fuse reducers

NO.263-R
60/30 A FRN-R fuse reducers

NO.216-R
100/60 A FRN-R fuse reducers

NO.2621-R
200/100 A FRN-R 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 your Bussmann series sales rep or distributor for 600 volt and Class J reducers.

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

*10 Fuse reducers per shelf carton.

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

Retail hardware fuse assortments

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

Retail hardware fuse emergency kits

SL-EK	SL rejection base plug Fuse kit: (3)15, (2)20 and 30 A and FT-3 fuse tester/puller
TL-EK	TL Edison base plug fuse kit: 15, (2)20 and (3)30 A and FT-3 fuse tester/puller
TC-EK	CSA Type D Edison base plug fuse kit: (3)15, (1)20, (2)30 A and FT-3 fuse tester/puller
P-EK	CSA Type P Edison base plug fuse kit: (3)15, (1)20, (2)30 A and FT-3 fuse tester/puller

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

BP/MAS-3A*	MAS 3x10 mm fast-acting 3 amp fuses. Five fuses per pack.
BP/GMA-5A*	GMA 5x20 mm fast-acting 5 amp fuses. Two fuses per pack.
BP/MAS-3A-CS	One carton of 10 BP/MAS-3A with clip strip included.

*Five packs per shelf pack.

Christmas light counter displays with two clip strips*

BP/GMA-5XM	GMA 5x20 mm fast-acting 5 amp fuses. Five fuses per pack.
BP/MAS-3X5	MAS 3x10 mm fast-acting 3 amp fuses. Five fuses per pack.
BP/AGX-7X5	AGX 1/4" x 1-1/4" fast-acting 7 amp fuses. Five fuses per pack.
BP/XMAS-6F Assortment	AGC-7-R, AGX-7, (2)GMA-5-R and (2)MAS-3 A fuses. Total six fuses per pack.

*20 Packs per display.

20-pack counter display with clip strips



BP/AGX-7X5



BP/XMAS-6F



BP/MAS-3A



BP/GMA-5A

Retail hardware planogram

Color-coded packaging for fast, easy product selection.

Visual categorization

- Color-coded Bussmann series retail packaging.
- Fast and easy product identification.
- Provides increased shoppability 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.



2FTHDWR-TAGS
UPC reorder tags.



2FTHDWR-KIT
Peg hooks and gondola not included.

Catalog no.	Description
2FTHDWR-KIT	95 SKU hardware prepak. Includes one of each retail pack, a complete set of reorder tags and a header card as pictured.
2FTHDWR-TAGS	Replacement set of UPC reorder tags for the 2FTHDWR-KIT. Allows for creating a custom planogram. Order tags through your Bussmann series product rep.

For details on hardware planogram product SKUs, visit Eaton.com/BussmannConsumerPOG

2FTHDWR-KIT planogram layout

	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10	Column 11
ROW 1	BP/AGC-1-2-RP 051712388559	BP/AGC-1-RP 051712175166	BP/AGC-1-1/2-RP 051712388542	BP/AGC-2-RP 051712175654	BP/AGC-3-RP 051712175708	BP/AGC-4-RP 051712175739	BP/AGC-5-RP 051712175760	BP/AGC-10-RP 051712176682	BP/AGC-15-RP 051712176828	BP/AGC-20-RP 051712177221	BP/AGC-30-RP 051712178402
ROW 2	BP/MDL-1-2 051712813358	BP/MDL-1 051712813365	BP/MDL-2 051712813389	BP/MDL-3 051712813396	BP/MDL-4 051712813204	BP/MDL-5 051712813402	BP/MDL-6 051712813211	BP/MDL-7 051712813228	BP/MDL-8 051712813235	BP/MDL-10 051712814935	BP/MDL-15 051712814942
ROW 3	BP/GMA-250MA 051712614498	BP/GMA-500MA 051712614504	BP/GMA-750MA 051712539012	BP/GMA-1A 051712617635	BP/GMA-2A 051712617642	BP/GMA-3A 051712617659	BP/GMA-5A 051712617666	BP/GMA-6A 051712617673	BP/GMA-7A 051712623117	BP/GMC-5 051712735919	BP/GDC-5A 051712618199
ROW 4	BP/ATC-3-RP 051712173216	BP/ATC-5-RP 051712173223	BP/ATC-3ID 051712237796	BP/ATC-5ID 051712237819	BP/ABC-10 051712813419	BP/ABC-15 051712161046	BP/ABC-20 051712249508	BP/MAS-3A 051712637084	HEF-1 051712161015	HEF-2 051712161022	
ROW 5	BP/FNM-5 051712751674	BP/FNM-10 051712751681	BP/FNM-15 051712751704	BP/FNM-20 051712617598	BP/FNM-30 051712617604	BP/SC-15 051712617611	BP/SC-20 051712593120	BP/SC-30 051712593137			
ROW 6	BP/FRN-R-10 051712617628	BP/FRN-R-15 051712112017	BP/FRN-R-15ID 051712237178	BP/FRN-R-20ID 051712237116	BP/FRN-R-30ID 051712237123	BP/FRN-R-40ID 051712237130	BP/FRN-R-50ID 051712237147	BP/FRN-R-60ID 051712237154			
ROW 7	BP/FRN-R-20 051712112024	BP/FRN-R-25 051712112031	BP/FRN-R-30 051712112048	BP/FRN-R-35 051712112055	BP/FRN-R-40 051712112062	BP/FRN-R-45 051712112079	BP/FRN-R-50 051712112086	BP/FRN-R-60 051712112093			
ROW 8	BP/NON-15 051712111010	BP/NON-20 051712111027	BP/NON-25 051712111034	BP/NON-30 051712111041	BP/NON-35 051712111058	BP/NON-40 051712111065	BP/NON-50 051712111089	BP/NON-60 051712111096			
ROW 9	BP/TLA 051712697552	BP/T-10 051712103084	BP/T-15 051712102216	BP/T-20 051712102223	BP/T-25 051712102230	BP/T-30 051712102247	BP/MB-15 051712274753	BP/MB-20 051712274760			
ROW 10	BP/SLA 051712697569	BP/S-6-1/4 051712103206	BP/S-10 051712103220	BP/S-15 051712102414	BP/S-20 051712102421	BP/S-30 051712102445	BP/SSU 051712171021				
SITS ON SHELF	TLEK 051712501378			SLEK 051712502078		BP/NON-10 0051712762632		BP/FRN-R-100 051712100137	BP/FP-2 051712340014		

Fuse type	Catalog symbol	Class	Construction/size	Volts	Amps	IR	Type	Agency information				
								UL List	UL Rec	SAE	RoHS	CSA
Blade	ATL	—	3-leg micro	32 Vdc	5-15	1 kA	Fast-acting	—	—	—	X	—
	ATM/ATM-ID*	—	Mini fuse	32 Vdc	1-30	1 kA	Fast-acting	AU 169 2-30 A non- indicating ATM	—	—	X	—
	ATM_LP	—	Low profile	58 Vdc	2-30	1 kA	Fast-acting	—	—	—	X	—
	ATC/ATC-ID*	—	—	32 Vdc	1-40	1 kA	Fast-acting	—	E56412	J1284	X	—
	ATR/ATR-ID*	—	2-leg micro	32 Vdc	5-30	1 kA	Fast-acting	—	—	—	X	—
	MAX/MAX-ID*	—	—	32 Vdc	20-100	1 kA	Fast-acting	—	—	—	X	—
Glass tube	ABC	—	1/4" x 1-1/4" ceramic	250 Vac	1/4-1 1-1/2 to 3 4-10 12-15 20 25-30	35 A 100 A 200 A 750 A 400 A 200 A	Fast-acting	E19180, 1/4-15 A	E19180, 18-30 A	—	X	53787, 1/4-30 A
	AGA	—	1/4" x 5/8"	125 Vac 125 Vac 32 Vac	1 to 1-1/2 2-5 6-30	10 kA 200 kA 1 kA	Fast-acting	E19180, 0-3 1/2 A	JDYX2, 12-30 A	—	—	—
	AGC	—	1/4" x 1-1/4"	250 Vac 250 Vac 250 Vac 32 Vac 32 Vac 32 Vac	1/20-1 1-1/4 to 3 4-10 12-30 35 40-50	35 A 100 A 200 A 1 kA 70 A 80 A	Fast-acting	E19180, 0-10 A	E19180, 12-30 A	—	X	53787, 1/20-30 A
	AGU	Midget	Glass tube ferrule 13/32" x 1-1/2"	250 Vac	1-3	—	Fast-acting	—	—	—	—	—
	AGU-(amp)GP			32 Vac	4-60	—	—	—	—	—	—	—
	AGW	—	1/4" x 7/8"	32 Vac	1-30	1 kA	Fast-acting	—	—	—	—	—
	AGX	—	1/4" x 1-1/4"	250 Vac	1/500-1/2	35 A	Fast-acting	E19180, 0-10 A	E19180, 15-30 A	—	X	53787, 15-30 A
				250 Vac	3/4-2	100A						
				125 Vac	2-1/2 to 5	100 A						
	GBB	—	1/4" x 1-1/4" ceramic	250 Vac	1-30	200 kA	Fast-acting	—	E56412, 1-30 A, 125 Vdc/ 250 Vac	—	X	53787, 1-30 A, 125 Vdc/ 250 Vac
				125 Vac	1-15	10 kA						
	GBC	—	1/4" x 31/32"	32 V	5-25	—	Fast-acting	—	—	—	—	—
	GDA	—	5 x 20 mm ceramic	250 Vac	50mA-6.3	1.5 kA	Fast-acting	—	E19180	—	X	53787
	GDB	—	5x20 mm	250 Vac	32mA-16	35 A	Fast-acting	—	E19180	—	—	—
	GDC	—	5x20 mm	250 Vac	32mA-6.3	35 A	Fast-acting	—	E19180	—	—	—
	GMA	—	5x20 mm	250 Vac	32mA-1	35 A	Fast-acting	E19180, 0-6 A	E19180, 7-15 A	—	X	53787, 0-6 A
				250 Vac	1.2-3	100 A						
				125 Vac	3.15-6	1 kA						
GMC	—	5x20 mm	250 Vac	63mA-1	35 A	Time-delay	E19180, 0-6.3 A	E19180, 7-8 A	—	X	53787, 0-6.3 A	
			250 Vac	1.25-3.15	100 A							
			125 Vac	3.5-6.3	10 kA							
GMD	—	5x20 mm	250 Vac	125mA-3	100 A	Time-delay	E19180, 125mA-3 A	E19180, 4 A	—	X	53787, 0-4 A	
			250 Vac	4	200 A							
MDA	—	1/4" x 1-1/4" ceramic	250 Vac	1/4-1	35 A	Time-delay	E19180, 0-20 A	E19180, 25-30 A	—	X	1422-30, 25-30 A	
			250 Vac	1-1/2 to 2	100 A							
			250 Vac	2 1/2-10	200 A							
			250 Vac	12-15	750 A							
MDL	—	1/4" x 1-1/4"	250 Vac	20-30	1.5 kA	Time-delay	E19180, 1/16-8 A	E19180, 9-30 A	—	X	E19180, 1/16 to 8 A	
			32 Vac	1/16-1	35 A							
			32 Vac	9-40	1 kA							
MDQ	—	1/4" x 1-1/4"	250 Vac	1-1/4 to 3	100 A	Time-delay	E19180, 1/16-7 A	E19180, 7.1-30 A	—	—	47233, 1/16-7 A	
			250 Vac	4-7	200 A							
			32 Vac	8-30 A	1 kA							
SFE	—	1/4" x various length	32 V	4-30 A	—	Fast-acting	AU169	—	—	X	—	

*easyID indicating version

Fuse type	Catalog symbol	Construction/size	Volts	Amps	IR	Type	Agency information					
							UL List	UL Rec	SAE	RoHS	CSA	
High amp	AMG	Bolt-on	32 Vdc	80-500 A	1 kA	—	—	—	—	X	—	
	AMI		32 Vdc	30-200 A	2 kA	—	—	—	—	X	—	
	CBBF		58 Vdc	30-300 A	2 kA	—	—	—	—	—	—	
	FMM	Micro FMX fuse	32 Vdc	15-40 A	1 kA	Time-delay	—	—	—	X	—	
	FMX, FMX_ID* Female Maxi	6 mm blade on 5.5 mm centers	32 Vdc	20-60 A	1 kA	Time-delay	—	—	—	X	—	
	FMX_LP Low-profile FMX fuse	Low-profile 6 mm blade on 5.5 mm centers	58 Vdc	20-60 A	1 kA @32 Vdc	Time-delay	—	—	—	—	—	
	MPF MPF2	Multi-amp	32 Vdc 58 Vdc	30-60 A 20-50 A	1 kA	—	—	—	—	X	—	
Current limiters	ANN	Bolt-on fuse 2.44 mm blade centers	125 Vac 80 Vdc	10 to 800 A	2.5 kA Vac 2.7 kA Vdc	Very fast- acting	—	—	E56412	—	X	53787
	ANL		32 Vac/ 80 Vdc	35 to 750 A	6 kA Vac 2.7 kA Vdc	Non-time delay	—	—	E56412	—	X	53787
Auto cartridge fuses	FLB	Bolt-on	32 Vdc	30-140 A	10 kA	—	—	—	—	X	—	
	FLD			20-60 A		—	—	—	—	—	—	—
	FLF			Female		—	—	—	—	—	—	—
	FLG	Male		50-80 A		—	—	—	—	—	—	—
	FLM	Male		30-120 A		—	—	—	—	—	—	—
	FLN	Female w/ lock tab		25-30		—	—	—	—	—	—	—
	FLS	Female mini		30-40 A		—	—	—	—	—	—	—
Battery terminal fuses	BTF	Multi-amp	32 Vdc	80-250 A	1 kA	—	—	—	—	X	—	

Circuit breakers	Catalog symbol	SAE type	Construction/size	Volts	Amps	IR	Type	Agency information						
								UL List	UL Rec	SAE	RoHS	CSA		
ATM footprint	CB211	I	Standard	14 Vdc	7-1/2 to 30	150 A	Automatic	—	—	J553	—	—		
					15	225 A								
					20	300 A								
					25-30	450 A								
	CB212	II	Standard	14 Vdc	7-1/2 to 30	150 A	Modified	—	—	J553	—	—		
					15	225 A								
					20	300 A								
					25-30	450 A								
	CB222OS	II	Offset	14 Vdc	5-10	150 A	Modified	—	—	J553, J1171	—	—		
					15	225 A								
					20	300 A								
					25-30	450 A								
	CB223OS	III	Offset	28 Vdc	5-10	150 A	Manual	—	—	J553, J1171	—	—		
					15	225 A								
					20	300 A								
					25-30	450 A								
	CB233	III	Standard	28 Vdc	5-10	100 A	Manual	—	—	J553	—	—		
					15	150 A								
					20	200 A								
25-30					300 A									
MMB	I	Standard	12 Vdc	15-20 A	300 A	Automatic	—	—	J553	—	—			
ACB	I	Standard	14 Vdc	7-1/2-30	—	Automatic	—	—	J553, JH71	—	—			
CB221														
CB222	II											12 Vdc	10-30	150 A
CB223	III											28 Vdc	7-1/2-30	—
CB227	—	Std./color code	—	5-30	2 kA	—	—	—	—	—				
CBB-30	II	—	24 Vdc	30	—	Modified	—	—	—	—				
CCB-25	I	Standard	12 Vdc	25	—	Automatic	—	—	J553	—	—			
FCB-20	II	—	14.5 Vdc	20	—	Modified	—	—	—	—				
UCB	I	Std./color code	12 Vdc	6-30	—	Automatic	—	—	—	—				

*easyID indicating version

Circuit breakers	Catalog symbol	SAE type	Constuction/size	Volts	Amps	IR	Type	Agency information									
								UL List	UL Rec	SAE	RoHS	CSA					
MAXI footprint	CB1911	I	Standard	14 Vdc	10-50	150 A*	Automatic	—	—	J553	—	—					
	CB1921	II		12 Vdc	10-30	150 A	Modified	—	—	—	—	—					
Glass tube	CBF	II	1/4" x 1-1/4"	12 Vdc	6-40	—	Modified	—	—	—	—	—					
Stud terminal	CB123-(amp)B	III		28 Vdc	10-50	1.5 kA@12Vdc	Manual	—	—	J553, J1171	—	—					
	CB123-(amp)HB																
	CBC-	10-32, 0.69" ctrs						—	—								
	CBC-(amp)B																
	CBC-(amp)BWP												I	14 Vdc	20-30	1.5 kA	Automatic
	CBC-(amp)HB													10-50			
	CBP-(amp)BA		20-50														
Panel mount	CB174	III	1/4" QC terminals	250 Vac 50 Vdc	10-30	200 A	Manual	—	1077	—	X	—					
Quick connect	CBT-(amp)M	II	1/4" QC terminals	—	10-30	—	Modified	—	—	—	—	—					
	CBT-(amp)N																
	CBU-6	I			6	30	Automatic	—	—	—	—	—					
	CBU-30B																
Waterproof high amp stud	CB181F	I		30 Vdc	60-150	3 kA	Automatic	—	—	J553, J1171	—	—					
	CB184F			Flush-mt. 14-28	25-150		Manual						X				
	CB185			42 Vdc	25-200		—						—				
	CB185P	III		Panel-mt. 14-28	25-200		5 kA@12 Vdc						Manual	X			
	CB187F			Flush-mt. 14-28	48 Vdc		25-150						—	—			
	CB187P			Panel-mt. 14-28	25-200		—						—	X			
	CB251	I		Panel-mt. 14-28	32 Vdc		25-150						2.5 kA	Automatic	—		
	CB255			Panel-mt. 10-32	42 Vdc		30-150						—	—			
	CB285F	III		Flush-mt. M6	42 Vdc		30-150						Manual	—			
	CB285P			Panel-mt. M6	42 Vdc		25-150						—	—			

* Interrupting rating varies with circuit breaker amp rating.

Fuse type	Catalog symbol	Class	Constuction/size	Volts	Amps	IR	Type	Agency information				
								UL List	UL Rec	SAE	RoHS	CSA
Plug	TL	—	Edison base	125 Vac	15-30	10 kA	Time-delay	E12112	—	—	—	—
	T	—			3/10-30		Dual element time-delay	E56412, E12112	—	—	—	53787
	TC	CSA Type D			Dual element time-delay		—	—	—	—	53787	
	P	CSA Type P			General purpose		—	—	—	—	53787	
	SL	—			Time-delay		E12112	—	—	—	—	
	S	—			Rejection base		1/4-30	10 kA	Dual element time-delay	E56412, E12112	—	—

Fuse type	Catalog symbol	Class	Constuction/ size	Volts	Amps	IR	Type	Agency information					
								UL List	UL Rec	SAE	RoHS	CSA	
Cartridge	BAF	Midget	Ferrule	250 Vac	1/4-1	35 A	Fast-acting	E19180	—	—	X	53787	
					1-1/2 to 3	100 A							
					4-10	200 A							
					12-15	750 A							
					20-30	200 A							
					125 Vac	1/4-30	10 kA						
	CDN	CSA Type D	Ferrule	Blade	250 Vac	1-60	10 kA	Gen. purpose Time-delay	—	—	—	—	C22.2, No.59.1
						70-600							
	FNM	Midget	Ferrule	250 Vac	1/10-1	35 A	Time-delay	E19180	—	—	X	53787	
					1-1/8 to 3-1/2	100 A							
					4-10	200 A							
					125 Vac	1/10-30	10 kA						
	FNQ	Midget	Ferrule	500 Vac	1/10-30	10 kA	Time-delay	E19180	—	—	X	53787	
	FNQ-R	CC	Ferrule	600 Vac	1/4-30 A	200 kA	Time-delay	E4273	—	—	X	53787	
	FRN-R FRN-R_ID**	RK5	Ferrule	250 Vac	1/10-60	200 kA	Time-delay	E4273	—	—	—	53787	
			Blade		70-600								
	FRS-R FRS-R_ID**	RK5	Ferrule	600 Vac	1/16-60	200 kA	Time-delay	E4273	—	—	—	53787	
			Blade		70-600								
	JJN	T	Blade style	300 Vac	110-400	200 kA	Very fast-acting	E4273	—	—	X	53787	
	KTK	Midget	Ferrule	600 Vac	1/10-30	100 kA	Fast-acting	E19180	—	—	X	53787	
KTK-R	CC	Ferrule	600 Vac	1/10-30	200 kA	Fast-acting	E4273	—	—	X	53787		
NON	H(K)	Ferrule	250 Vac	1/8-60	50 kA	General purpose	E4273	—	—	—	53787		
		Blade		65-600	10 kA								
NOS	H(K)	Ferrule	600 Vac	1-60	50 kA	General purpose	E4273	—	—	—	53787		
		Blade		70-600	10 kA								
PON	CSA Type P	Ferrule	250 Vac	1-60	10 kA	General purpose	—	—	—	—	C22.2, No.59.1		
		Blade		70-600									
SC	G	13/32" x 15/16" ferrule	600 Vac	1-6	100 kA	Fast-acting	E4273	—	—	X	53787		
		13/32" x 1-13/32 ferrule		7-15									
		13/32" x 1-5/8" ferrule		20									
		13/32" x 2-1/4" ferrule	480 Vac	25-30		Time-delay							
				35-60									

*easyID indicating version

Circuit breakers	Catalog symbol	Constuction/ size	Volts	Amps	IR	Reset type	Agency information			
							UL List	UL Rec	RoHS	CSA
Plug fuse	BP/MB	Edison plug thread	125 Vac	15 and 20	—	Manual	E14942	—	—	
	CP/MB						—	—	—	013089

Catalog no.	Page	Catalog no.	Page	Catalog no.	Page	Catalog no.	Page	Catalog no.	Page
12023A	37	BP/ATC-TAP-RP	14	BP/MAX-A3-RP	28	FNO-__	47	NO.60LP	26
12040816	19	BP/ATL-A4-RPP	28	BP/MB-__	48	FNO-R-__	47	NO.64	27
12135072	18	BP/ATM-__ID	8	BP/MDL-__	35, 41	FP-2	51	NO.726	26
12135171	18	BP/ATM-__LP-RP	7	BP/MDL-AL	52	FP-3	51	NO.727	26
13023A	37	BP/ATM-__RP	7	BP/MPPR-1	25	FP-4	51	NO.727-LED	26
1314A	36	BP/ATM-A5-RP	28	BP/MPT-__	25	FP-6	51	NO.750-LED	26
1315A	36	BP/ATM-A6LP-RP	28	BP/NON-__	43	FP-A3	51	NO.757	26
15600-__20	16	BP/ATM-A8-RP	28	BP/NON-AL	52	FP-ATC-__ID	15	NO.758	26
15600-__21	16	BP/ATM-AH8-RPP	28	BP/P-__	49	FP-ATM-__ID	15	NO.758-LED	22
15968-1	25	BP/ATM-AID	8, 28	BP/PON-__	45	FRN-R-__	44	NO.759	26
24023A	37	BP/ATM-AL8-RP	28	BP/S-__	49	FRN-R-__ID	44	NO.760	26
2FTHDWR-KIT	53	BP/ATM-FHID	13	BP/S-__RP	17	FRS-R-__	45	NO.760-LED	26
2FTHDWR-TAGS	53	BP/ATM-TAP-RP	14	BP/SA-__	49	FRS-R-__ID	45	NO.761	26
4527053	19	BP/ATR-__RP	7	BP/SA-A	52	FT-2	51	NO.762	26
4FTAUTO-KIT	32	BP/ATR-A7-RPP	28	BP/SC-__	47	FT-3	51	NO.762-LED	26
4FTAUTO-TAGS	32	BP/ATR-__ID	8, 28	BP/SC-A	52	FUSE-CADDY1	30, 31	NO.763	26
702	37	BP/BMS-__	25	BP/SFE-__RP	41	FUSE-CADDY2	30, 31	NO.764	26
9523A	37	BP/C5237-__BC	24	BP/SFE-AH6-RP	28	GBB-__R	40	NO.80	27
ABC-__	40	BP/CB-__HB-CVR	20, 36	BP/SFE-AL6-RP	28	GBC-__	41	NO.850	26
ACB-20	19	BP/CB185-__	22	BP/SL-__	49	GDA-__A	42	NO.852	26
AFC-225	32	BP/CB1938	24	BP/SOU	50	GDB-__A	42	NO.95BK	29
AFC-90	32	BP/CB211-__RP	18	BP/SRU	50	GDC-__A	42	NON-__	43
AGA-__	40	BP/CB285F-__	35	BP/SSU	50	GMA-__A	42	NON-EK	52
AGC-__	40	BP/CBB-30-RP	19	BP/SSY	50	GMC-__A	42	NOS-__	43
AGC-EK	27	BP/CBC-__B-RP	20	BP/STE	25	GMD-__A	42	P-__PK4	49
AGU-__	41	BP/CBC-__HB-RP	21	BP/STF	25	HEF-1	52	P-EK	52
AGU-__GP	41	BP/CBF-__RP	20	BP/STJ	25	HEF-2	52	PON-__	45
AGW-__	40	BP/CBP-__BA-RP	21	BP/STK	25	HFA	14	RB-BI-120A	37
AGX-__	40	BP/CDN-__	45	BP/STT	25	HFB-R	14	RB-BI-130A	37
AMG-__	12	BP/EFC-__	28	BP/T-__	48	HH2	13	RB-BI-240A	37
AMI-__	12	BP/FB-__	15	BP/TB-__RP	24	HHB	14	RB-BI-70A	37
ANL-__	17	BP/FCB-20	19	BP/TC-__	49	HHC	13	RB-BI-95A	37
ANN-__	17	BP/FL-14	17	BP/TL-__	48	HHD	13	RB-BIK-1882	37
ATC-__	7	BP/FL-16	17	BP/UCB-__RP	19	HHF	13	RB-BS-1314	36
ATC-__RLD	7, 32	BP/FLB-__RP	10	BP/XMAS-6F	52	HHG	13	RB-BS-1315	36
ATC-FHID	13	BP/FLD-__RP	10	BTF-__P-__	11	HHK	14	RB-GM-KIT	37
ATC-FP-AID	8, 28	BP/FLF-__RP	10	CB-CVR	20, 36	HHL	13	RB-SPP-240PN	50
ATC-ID-SK	8, 27	BP/FLG-__RP	10	CB123-__B	20	HHM	13	RTMF	15
ATL-__	7	BP/FLM-__RP	10	CB123-__HB	20	HHN	14	RTMF-__	15
ATM-__	7	BP/FLN-__RP	10	CB174-__	21	HHR	13	S-__	49
ATM-__LP	7	BP/FLS-__RP	10	CB181F-__	22	HHU	13	S-8202-__	17
ATM-__RLD	7, 32	BP/FLW-14	17	CB184F-__	22	HXX	13	S-8301-__	17
ATM-FHID	13	BP/FMM-__RP	9	CB185-__	22	HYP	14	SA-__	49
ATM-FMX-EK	27	BP/FMS-__RP	9	CB185P-__	22	HKP-HH	14	SC-__	47
ATM-FP-AID	8, 28	BP/FMX-__ID	8	CB187F-__	35	HLR	14	SFE-__	41
ATM-ID-SK	8, 27	BP/FMX-__LP-RP	9	CB187P-__	35	HMEG	11	SFR	17
ATM-LPEK	27	BP/FMX-__RP	9	CB1911-__	20	HMID	11	SL-__	49
ATR-__	7	BP/FMX-A3-RP	28	CB1921-__	20	HMJ	14	SL-__PK4	49
BAF-__	46	BP/FNM-__	47	CB1938	24	HMK	14	SLEK	52
BK/ATC-__	7	BP/FNM-AH	52	CB211-__	18	HRH	14	SOU	50
BK/ATC-__ID	8	BP/FNM-AL	52	CB212-__	18	HRI	14	SRU	50
BK/ATL-__	7	BP/FP-2	51	CB221-__	19	HRJ	14	SSN	50
BK/ATM-__	7	BP/FP-3	51	CB222-__	19	HRK	14	SSU	50
BK/ATM-__ID	8	BP/FP-A3-RP	51	CB222OS-__	18	HTB-261	14	SSY	50
BK/ATM-__LP	7	BP/FP-ATC-06ID	15	CB227-__	18	HTB-381	14	SSY-RL	50
BK/CB-CVR	20, 36	BP/FP-ATM-06ID	15	CB223OS-__	18	HTB-681	14	STY	50
BK/FMM-__	9	BP/FRN-AH	52	CB227-__	19	HTB-881	14	T-__	48
BK/MAX-__	7	BP/FRN-AL	52	CB22901-1.5	18	JB3816-__	24	TB200-__B	24
BK/MAX-__ID	8	BP/FRN-R-__	44	CB22902-68	18	JJN-__	36	TB300-__B	24
BK/MPF2-__X	9	BP/FRN-R-__ID	44	CB22903-6	18	KTK-__	46	TC-__PK4	49
BK/MPF-__X	9	BP/FRS-R-__	45	CB22903-6V	18	KTK-R-__	46	TC-EK	52
BK/UCB-__	19	BP/FT-2	51	CB233-__	18	MA-5	28, 35	TL-__	48
BMS-__	25	BP/FT-3-RP	51	CB234-__	19	MAX-__	7	TL-__PK4	48
BP/15600-__	16	BP/GBC-__RP	41	CB251-__	35	MAX-FHID	13	TL-EK	52
BP/232-RP	26	BP/GBC-A8-RP	28	CB255-__	35	MDA-__	41	UCB-__	19
BP/233-RP	26	BP/GDC-5A	42	CB285F-__	23	MDL-__	41	VP/ATC-__ID	8
BP/234-RP	26	BP/GMA-__A	42	CBB-30	19	MDQ-__	41	VP/ATC-__RP	7
BP/550-RP	26	BP/GMA-5A	52	CBBF-__	36	MMB-__	18	VP/ATM-__ID	8
BP/552-RP	26	BP/GMA-5XM	52	CBBF-MCB	36	MPF2-__X	9	VP/ATM-__LP-RP	7
BP/575-RP	26	BP/GMA-AH	52	CBC-__	20	MPF-__X	9	VP/ATM-__RP	7
BP/577-RP	26	BP/GMA-AL	52	CBC-__B	20	MUSB-__	11		
BP/726-RP	26	BP/GMC-__	42	CBC-__BWP	21	MUSB-__	11		
BP/727-RP	26	BP/HFB-RP	13	CBC-__HB	21	NO.105	29		
BP/757-RP	26	BP/HHA-RP	14	CBF-__	20	NO.108BK	35		
BP/758-RP	26	BP/HHB-RP	14	CBP-__BA	21	NO.136	29		
BP/759-RP	26	BP/HHC-RP	13	CBPFM	16	NO.160BK	29		
BP/760-RP	26	BP/HHD-30-RP	13	CBPRM	16	NO.216-R	51		
BP/761-RP	26	BP/HHD-RP	13	CBT-__M	21	NO.225	32		
BP/762-RP	26	BP/HHF-RP	13	CBT-__N	21	NO.227	32		
BP/ABC-__	40	BP/HHG-RP	13	CBU-30B	21	NO.232	26		
BP/ABC-A	52	BP/HHH-RP	14	CCB-25	19	NO.233	26		
BP/AGA-__RP	40	BP/HHK-RP	14	CDN	45	NO.234	26		
BP/AGA-AH8-RP	28	BP/HHLP-RP	14	CDY10TRY-__	30, 31	NO.24	27		
BP/AGA-AL8-RP	28	BP/HHL-RP	13	CDY5TRY-__	30, 31	NO.243	26		
BP/AGC-__RP	40	BP/HHM-RP	13	CP/MB-__	49	NO.244	26		
BP/AGC-A5-RP	28	BP/HHN-RP	14	D9AB-14526-BA	19	NO.246	26		
BP/AGC-AH10-RP	28, 35	BP/HHR	13	DIA-1	28	NO.2621-R	51		
BP/AGC-AL10-RP	28, 35	BP/HHS-RP	13	DIA-2	28	NO.263	51		
BP/AGC-SFE-A5-RP	28, 35	BP/HHTR-RP	14	DIA-3	28	NO.263-R	51		
BP/AGU-__RP	41	BP/HHU	13	FCB-20	19	NO.290	30		
BP/AGU-__GP-RP	41	BP/HHV-RP	13	FLB-__	10	NO.43	27		
BP/AGW-__RP	40	BP/HKP-HH-RP	14	FLD-__	10	NO.44	27		
BP/AGW-A8-RP	28	BP/HMJ-RP	14	FLF-__	10	NO.45	29		
BP/AGX-7X5	52	BP/HMK-RP	14	FLG-__	10	NO.455	26		
BP/AGX-A8-RP	28	BP/HRK-RP	14	FLJ-__	10	NO.468	26		
BP/AMG-__RP	12	BP/HHS-RP	14	FLM-__	10	NO.470	26		
BP/ATC-__ID	8	BP/JB3816-2	24	FLN-__	10	NO.487	26		
BP/ATC-__RP	7	BP/KTK-__	46	FLS-__	10	NO.53	27		
BP/ATC-A5-RP	28	BP/MAS-3A	52	FMM-__	9	NO.535	26		
BP/ATC-AH8-RPP	28	BP/MAS-3A-CS	52	FMS	9	NO.550	26		
BP/ATC-AID	8, 28	BP/MAS-3X5	52	FMX-__	9	NO.552	26		
BP/ATC-AL8-RP	28	BP/MAX-__ID	8	FMX-__LP	9	NO.575	26		
BP/ATC-FHID	13	BP/MAX-__RP	7	FNM-__	47	NO.577	26		

