

Fuses Made Simple™

BUSSMANN
SERIES



**The easiest and fastest way to
select and specify the right fuse**



EATON

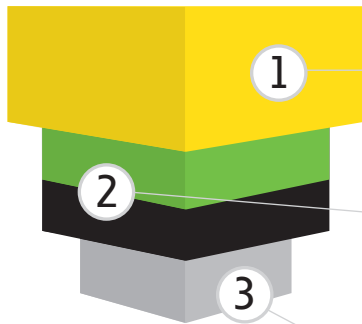
Powering Business Worldwide

A photograph of an industrial manufacturing environment. In the foreground, a large, yellow, cylindrical component is being processed, possibly by a lathe or similar machine. The component has a metallic band around its middle. In the background, there are various pieces of industrial machinery, including what appears to be a control panel or a small workstation. The overall scene is dimly lit, with a focus on the yellow component.

Fuse selection made simple

Fuses Made Simple™ with Bussmann™ series fuses

Three tiers of protection help speed up specification and selection



Each tier of protection offers distinct levels of performance benefits.

Ultimate protection – The best worry-free protection in virtually any application. Unique dual-element construction delivers a powerful combination of all performance options in one fuse - fast short-circuit protection, current limitation, and time-delay performance with up to 300 kA interrupting ratings.

Advanced protection – Application specific protection for sensitive devices and critical components or motors and transformers. Choose between fast short-circuit, current limiting performance or energy efficient, current limiting, time-delay performance based on the application. Featuring 200 kA interrupting ratings.

Basic protection – Basic single-element protection for service, feeder and branch circuit applications. Featuring up to 100 kA interrupting ratings.

Four fuse families make fuse selection and replacement easy

Each fuse family is categorized by key protection characteristic and performance benefits.

Ultimate protection

- Low-Peak™ (yellow) - 50% more protection than any other listed fuse*

Advanced protection

- Fusetron™ (green) - 23% more energy efficient*** and the best time-delay performance
- Limitron™ (black) - 10x better current limitation than basic circuit breakers or fuses**

Basic protection

- General purpose (gray) - Basic circuit protection



QuikShip™ Service - get the fuse you need, when you need it



- The Bussmann series QuikShip Everyday Service assures the most common part numbers are in stock and ship within 24 hours. In fact, 90% of our orders are shipped the same day.
- Emergency and after-hours orders are possible with Bussmann series QuikShip Emergency Service. Orders are taken 24 hours a day, 365 days a year and product can be placed on the next flight out.

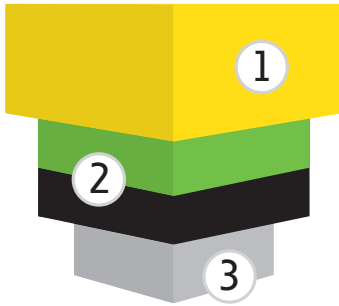
* 50% higher IR (300kA) than any other UL and CSA Listed Fuse. Includes Class J, L and R fuses.

** Does not include current limiting circuit breakers or current limiting fuses. Protection determined by comparing published values for let-through for Class CC, J, R, and T fuses versus a symmetrical RMS waveform at 200kA.

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

Three tiers of protection

Follow the **tiers of protection** to find the right level of protection for your application



The four **Fuses Made Simple** families are grouped into three tiers of protection to meet the needs of any application.

When you move up to the next level of protection, you can get enhanced performance compared to the fuses in the lower tier. For example, Fusetron fuses can replace your general purpose fuses in branch circuit applications and Low-Peak can be used in any application, giving you worry free, enhanced performance.

	LOW-PEAK™	FUSETRON™	LIMITRON™	GENERAL
1 Ultimate protection				
Industry's only UL® and CSA® listed fuse with up to 300 kA interrupting rating	✓			
Combines Limitron fast short-circuit protection and Fusetron dual-element time-delay for ultimate protection	✓			
Best in class Arc Flash Protection in all applications reduces hazard to personnel	✓			
Reduce inventory up to 33% by replacing General Purpose, Limitron, and Fusetron with Low-Peak fuses	✓			
Consistent 2:1 selective coordination ratios for all Low-Peak fuses	✓			
2 Advanced protection				
Dual-element time-delay allows for superior protection of motors and transformers	✓	✓		
23% more energy efficient than the next leading brand***	✓	✓		
Best time-delay performance	✓	✓		
200 kA interrupting rating allows for use in virtually any application	✓	✓	✓	
Fast short-circuit protection of critical devices or loads	✓		✓	
Arc flash protection in selected applications reduces hazard to personnel	✓		✓	
10x better current limitation on average compared to basic circuit breakers and fuses**	✓		✓	
3 Basic protection				
Meets basic requirements for service, feeder, and branch circuit protection	✓	✓	✓	✓

Four fuse families

Low-Peak



Delivers 50% more protection than any other listed fuse*
Ultimate protection for any application

- Industry's only UL and CSA listed fuse with a 300 kA interrupting rating allows for simple, worry-free installation in virtually any application
- Fast short-circuit protection and dual element, time-delay performance for ultimate protection
- Consistent 2:1 coordination ratios for all Low-Peak fuses make selective coordination easy
- Broad fuse family including Class CC, J, L, and R

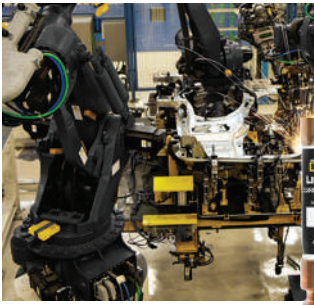
Fusetron



23% More Energy Efficient* and the Best Time-Delay Performance*****
Advanced protection and save more money

- FUSETRON fuses are on average 23% more energy efficient than the next leading brand**
- Dual-element feature provides the best time-delay performance
- Allows for closer sizing to load and better equipment protection
- Ideal for protection of motors and transformers
- Class RK5 fuses with 200 kA interrupting rating

Limitron



10x better current limitation than basic circuit breakers or fuses**
Advanced protection for sensitive devices and critical components

- Provides short circuit protection that is on average 10x faster than basic circuit breakers or fuses**
- Fast-acting fuses help prevent equipment damage caused by short-circuit events
- Ideal for critical components in industrial or commercial applications
- Class CC, J, L, R and T fuses with 200 kA interrupting rating

General purpose



Basic circuit protection
Basic overcurrent protection

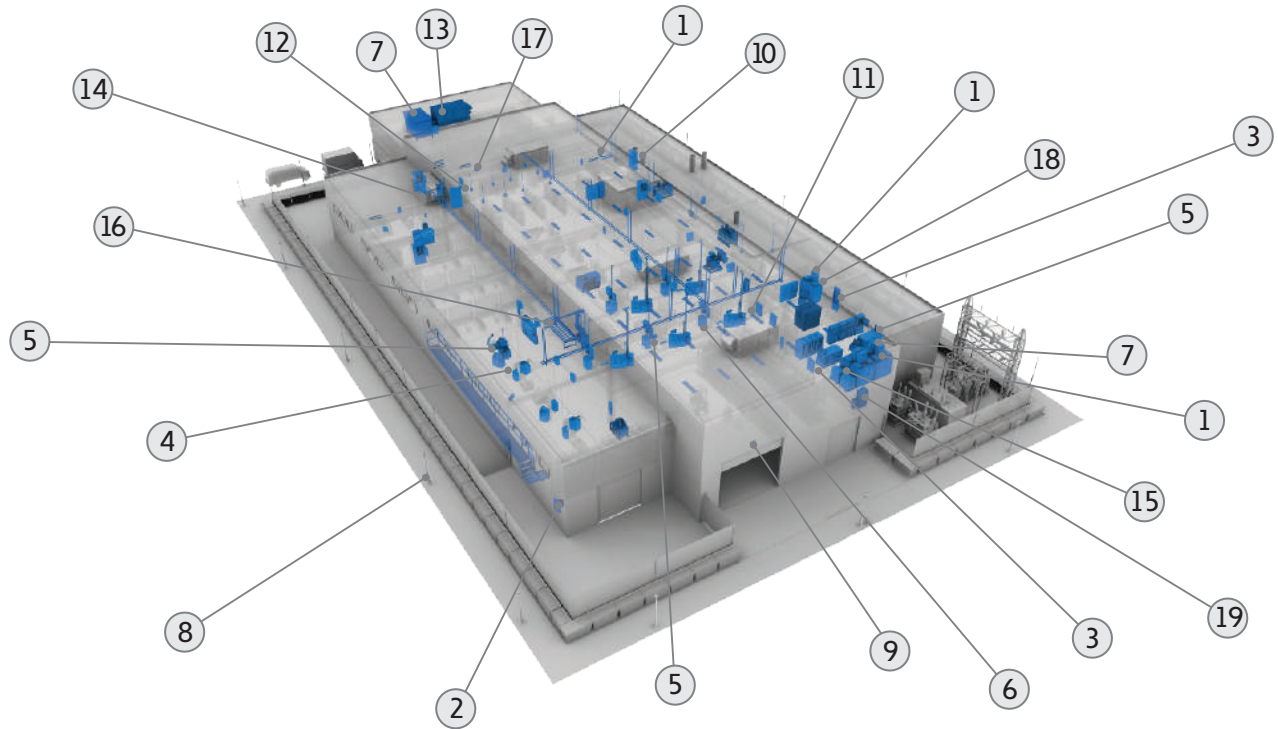
- Meets basic NEC®, CEC, UL and CSA requirements for service, feeder and branch circuit protection
- Class H/K and G fuses with up to 100 kA interrupting rating

* 50% higher IR (300kA) than any other UL and CSA Listed Fuse. Includes Class J, L and R fuses.

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*** 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).

Simplify fuse selection by application



Industrial and commercial applications		LOW-PEAK	FUSETRON	LIMITRON	GENERAL
1	Service, feeder and branch circuit protection	✓	✓	✓	✓
2	Interior lighting	✓	✓	✓	
3	Distribution panels	✓	✓	✓	
4	Disconnect switches	✓	✓	✓	
5	Motor/motor control center	✓	✓		
6	Capacitors	✓	✓		
7	Transformers	✓	✓		
8	Outdoor lighting	✓		✓	
9	Emergency lighting	✓		✓	
10	Electric heat	✓		✓	
11	Welding circuits	✓		✓	
12	Plant lighting	✓		✓	
13	HVAC chillers/blowers	✓			
14	Forklift battery charging station	✓			
15	Emergency generator	✓			
16	Conveyor system	✓			
17	UPS backup power supplies	✓			
18	Switchboards	✓			
19	Elevator control centers	✓			

Easy fuse selection by family

Ultimate protection

CLASS RK1



LPN-RK-SP LPN-RK LPS-RK-SP LPS-RK

CLASS J



LPJ LPJ

CLASS L



KRP-C

CLASS CC



LP-CC

LOW-PEAK

Advanced protection

CLASS RK5



FRN-R FRN-R FRS-R FRS-R

FUSETRON

Advanced protection

CLASS RK1



KTN-R KTN-R KTS-R KTS-R

CLASS J



JKS JKS

CLASS L



KTU KLU

CLASS T



JJN JJN JJS JJS

CLASS CC



FNQ-R KTK-R

LIMITRON

Basic protection

CLASS H/K



NON NON NOS NOS

CLASS G



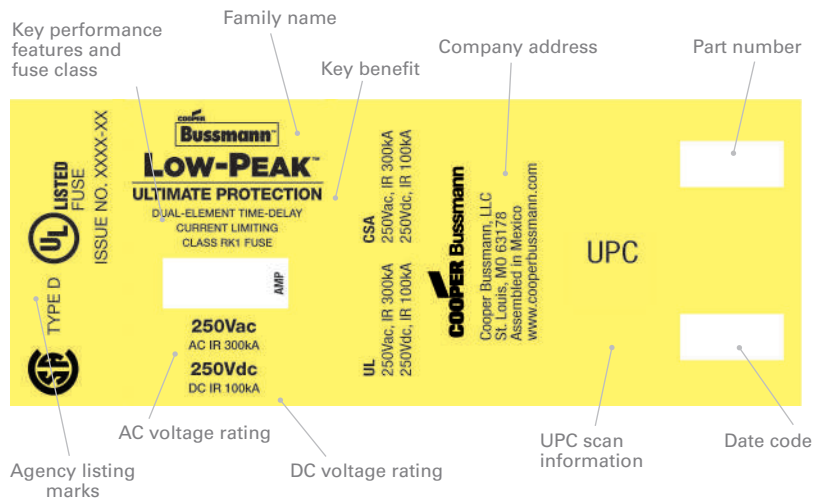
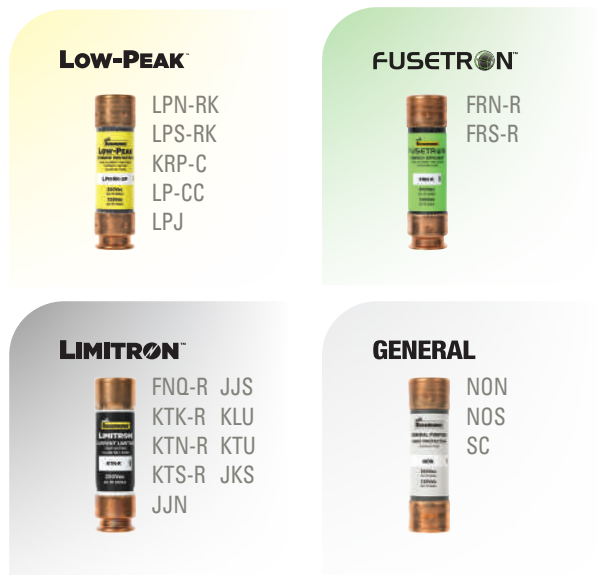
SC SC

GENERAL

Speed up fuse replacement

Color-coded by family

Each fuse label has a unique identifying color representing the family it belongs to. When it's time to replace a fuse, Bussmann series products makes it easier to search for the replacement. When a "yellow fuse" needs replacing, now you can narrow your search by looking for only the "yellow fuses" in your crib.

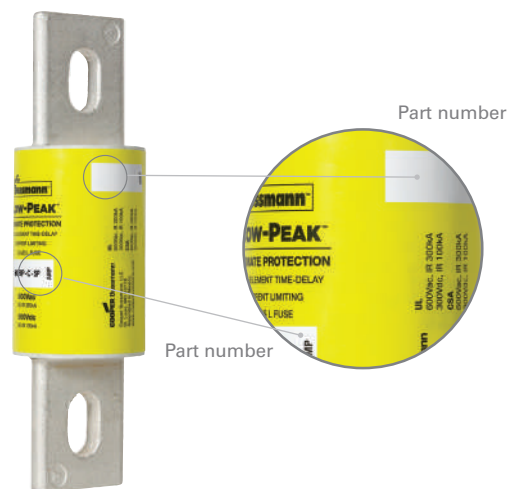


Consistent look for each label

Every fuse label now has a consistent look. Critical fuse information is presented in an easy-to-read format across the entire Bussmann UL low voltage portfolio to help speed replacement.

Easy to find part numbers

To ensure you can easily find the part number when you need to replace fuses, the new label design has the part number located in multiple places of large body size blade fuses. With this updated look, you can easily find the important information regardless of the angle in which the fuse is installed.



Enhance safety and reliability while reducing fuse inventory



Low-Peak Upgrade program

Eaton's Bussmann series Low-Peak Upgrade program leverages our ultimate protection fuses to deliver enhanced safety, improved system reliability and a simplified inventory.

With just three simple steps, it's easier than ever to improve your circuit protection while reducing your fuse inventory and cost. What's more, you'll save time and increase productivity - all by using Low-Peak fuses.

Let our team of experts walk you through the audit, analysis and implementation of a Low-Peak Upgrade and start realizing savings today.

Enhance safety

- Superior current-limitation helps reduce arc flash hazards.
- Interrupting ratings up to 300kA for high fault currents.
- Helps achieve code compliance with OSHA, NFPA® and IEEE®.

Improve system reliability

- Type 2 "no damage" motor starter protection reduces downtime.
- Optional fuse indication to speed troubleshooting.
- Easily meet selective coordination requirements with 2:1 amp ratio with any fuse in the Bussmann series Low-Peak family.

Simplify inventory

- One Bussmann series Low-Peak fuse can replace multiple fuses in a variety of applications.

In just three simple steps, our team of experts will guide you through the Low-Peak Upgrade program:

- 1 Audit**
- 2 Analyze**
- 3 Implement**

Throughout the Bussmann series Low-Peak Upgrade process, you'll have a dedicated team that includes a Bussmann series product authorized distributor and sales representative. Together, they will walk you through the three steps of the program, making it as easy and effortless for you as possible.



Complementary products

The broad portfolio of Bussmann series products include more than just UL low voltage fuses.

Fuse blocks, holders and PDBs



Modular knifeblade fuse blocks



Power distribution blocks



Compact modular fuse holders

Disconnect switches and safety switches



Fused rotary disconnect switches



Quik-Spec™ safety switches



Compact Circuit Protector

Additional fuse portfolio



High speed fuses



Medium voltage fuses



CUBEFuses™

Surge protection



Data signal surge



Type 1 SurgePOD™
surge protective devices



DIN-Rail surge
protective devices

Limitron™ advanced protection fuses



10X better current limitation than basic circuit breakers or fuses



Bussmann series Limitron fuses provide advanced fuse protection.

Product description:

Eaton's Bussmann™ series Limitron™ fuses provide short-circuit protection that is, on average, 10X faster than basic circuit breakers or fuses*.

These current-limiting UL® Listed and CSA® Certified fuses are available in Class CC, J, R, and T – all with a 200kA interrupting rating.

*Does not include current limiting circuit breakers or current limiting fuses. Protection determined by comparing published values for let-through for Class CC, J, R, and T fuses versus a symmetrical RMS waveform at 200kA.

Features and benefits:

- Advanced current limitation helps prevent equipment damage caused by short-circuits.
- Ideal for critical industrial or commercial applications that have specific current limitation requirements.
- Broad fuse portfolio includes Class CC, J, L, R, and T with 200kA interrupting ratings to provide circuit protection for many applications.
- Most common fuses are in stock and ready to ship within 24 hours with our QuikShip Everyday Service.



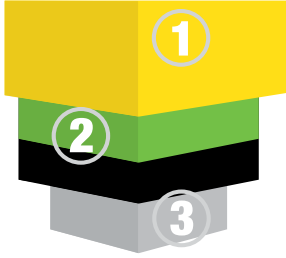
Fast-acting Limitron fuses are ideally suited for protecting sensitive devices and critical components.



Powering Business Worldwide

Fuses Made Simple™ is the easiest and fastest way to select and specify fuses

Four fuse families in three tiers of protection offer distinct levels of performance benefits to help speed up specification and selection:



Ultimate protection

The best worry-free protection in virtually any application. Low-Peak™ (yellow) fuses 50%* higher interrupting rating than any other similar fuse. Unique dual-element construction delivers a powerful combination of all performance options in one fuse - fast short-circuit protection, current limitation, and time-delay performance with up to 300kA interrupting ratings.

Advanced protection

Application specific protection for sensitive devices and critical components or motors and transformers. Limitron™ (black) fuses offer 10X better current limitation than basic circuit breakers or fuses**. Fusetron™ (green) fuses are 23% more energy efficient*** and the best time-delay performance.

Based on the application, you can choose between fast short-circuit, current limiting performance of Limitron fuses or energy efficient, current limiting, time-delay performance of Fusetron fuses and still get a 200kA interrupting rating.

Basic protection

General purpose (grey) delivers basic single-element fuse protection for service, feeder and branch circuit applications. Featuring up to 50kA interrupting ratings.



*50% higher IR (300kA) than any other UL and CSA Class J, L and R fuses.

**Does not include current limiting circuit breakers or current limiting fuses. Protection determined by comparing published let-through values for Class CC, J, R, and T fuses versus a RMS symmetrical waveform at 200kA.

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

600V FNQ-R Class CC time-delay fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 1/4 to 30A
- IR
 - 200kA AC
- Data sheet
 - No. 1014



600V KTK-R Class CC fast-acting fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 1/10 to 30A
- IR
 - 200kA AC
- Data sheet
 - No. 1015



600V JKS Class J fast-acting fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 1-600
- IR
 - 200kA AC
- Data sheet
 - No. 1026 (0-60A)
 - No. 1027 (70-600A)



600V KLU Class L time-delay fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 601 to 4000A
- IR
 - 200kA AC
- Data sheet
 - No. 1013



600V KTU Class L fast-acting fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 601 to 6000A
- IR
 - 200kA AC
- Data sheet
 - No. 1010



250V KTN-R Class RK1 fast-acting fuses

Ratings:

- Volts
 - 250Vac
- Amps
 - 1 to 600A
- IR
 - 200kA AC
- Data sheet
 - No. 1043



600V KTS-R Class RK1 fast-acting fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 1 to 600A
- IR
 - 200kA AC
- Data sheet
 - No. 1044



300V JJN Class T very fast-acting fuses

Ratings:

- Volts
 - 300Vac
- Amps
 - 1 to 1200A
- IR
 - 200kA AC
- Data sheet
 - No. 1025



600V JJS Class T very fast-acting fuses

Ratings:

- Volts
 - 600Vac
- Amps
 - 1 to 800A
- IR
 - 200kA AC
- Data sheet
 - No. 1029



JJN Limitron™ 300Vac, 1-1200A, fast-acting Class T fuses



Catalog Symbol:

- JJN-(amp)

Description:

Eaton's Bussmann™ series Limitron™ advanced protection Class T current-limiting, fast-acting fuses.

Specifications:

Ratings

- Volts
 - 300 Vac (1-10 A)
 - 300 Vac, 160 Vdc (15-600 A)
 - 300 Vac, 170 Vdc (700-1200 A)
- Amps — 1-1200 A
- IR
 - 200kA Vac RMS Sym.
 - 20kA Vdc (15-600 A)
 - 100kA Vdc (700-1200 A)

Agency Information

- UL® Listed, Std. 248-15, Class T, Guide JDDZ, File E4273
- CSA® Certified, C22.2 No. 248.15, Class 1422-02, File 53787
- CE
- RoHS compliant

Catalog numbers (amps)

JJN-1	JJN-35	JJN-110	JJN-400
JJN-2	JJN-40	JJN-125	JJN-450
JJN-3	JJN-45	JJN-150	JJN-500
JJN-6	JJN-50	JJN-175	JJN-600
JJN-10	JJN-60	JJN-200	JJN-700
JJN-15	JJN-70	JJN-225	JJN-800
JJN-20	JJN-80	JJN-250	JJN-1000
JJN-25	JJN-90	JJN-300	JJN-1200
JJN-30	JJN-100	JJN-350	

Carton quantity:

Amp rating	Carton qty.
Up to 60	10
70-100	5
110-1200	1

Features:

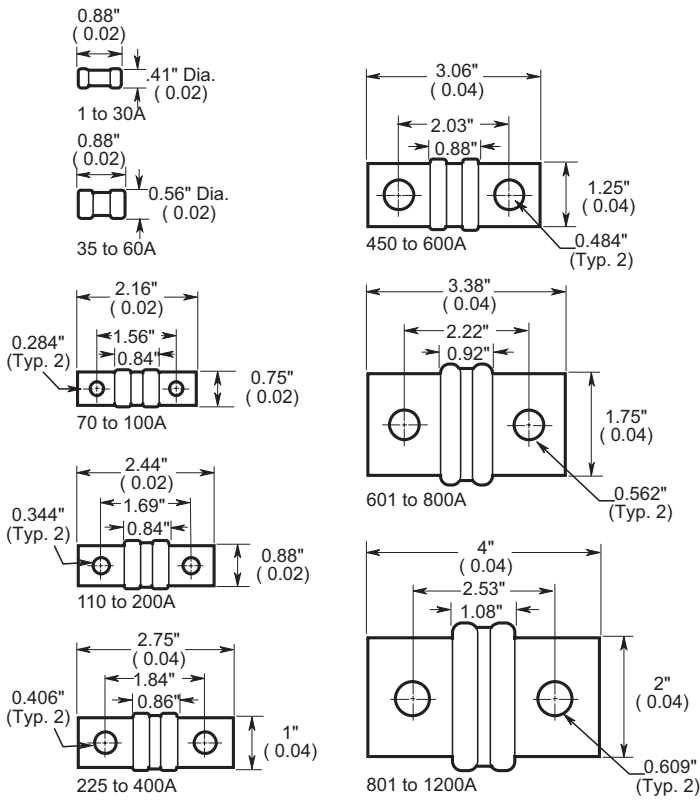
- Provides 10X better current limitation to help prevent equipment damage caused by short-circuit events.
- 200 kA interrupting rating complies with NEC® Section 110.9 for today's large capacity systems.
- Fast-acting fuse helps prevent equipment damage caused by short-circuit events.
- Small, space-saving fuses provide a high degree of current limitation on short-circuits for excellent component protection.
- Ideal for critical industrial or commercial applications that have specific current limitation requirements.

Recommended fuse blocks*

Fuse amps	1-pole	2-pole	3-pole	4-Pole
up to 30	—	T30030-2_	T30030-3_	T30030-4_
35-60	—	T30060-2_	T30060-3_	T30060-4_
70-100	—	T30100-1_	T30100-2_	T30100-3_
110-200	T30200-1_	—	—	—
200	1B0083	—	—	—
225-400	T30400-1_	—	—	—
450-600	T30600-1_	—	—	—

* For additional information, see data sheet no. 1115.

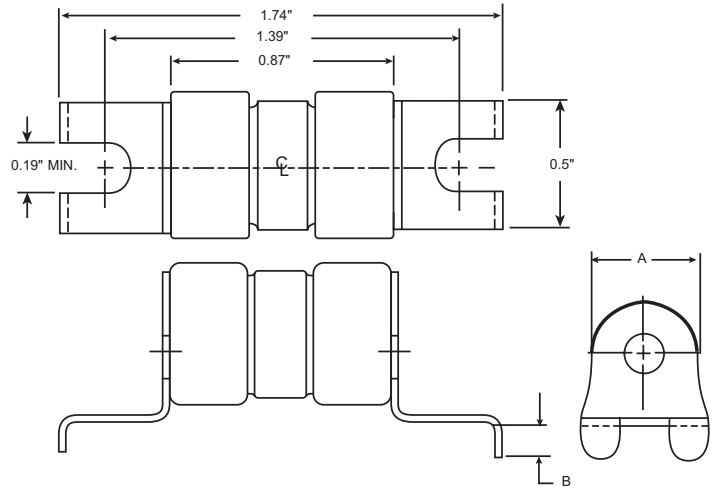
Dimensions – in



Custom designs

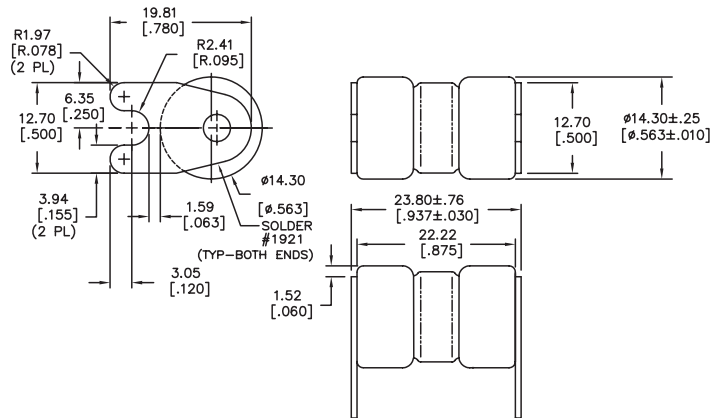
Printed circuit board versions available up to 60 amps. Consult your Bussmann series product representative details.

JJN-XXL Dimensions - in



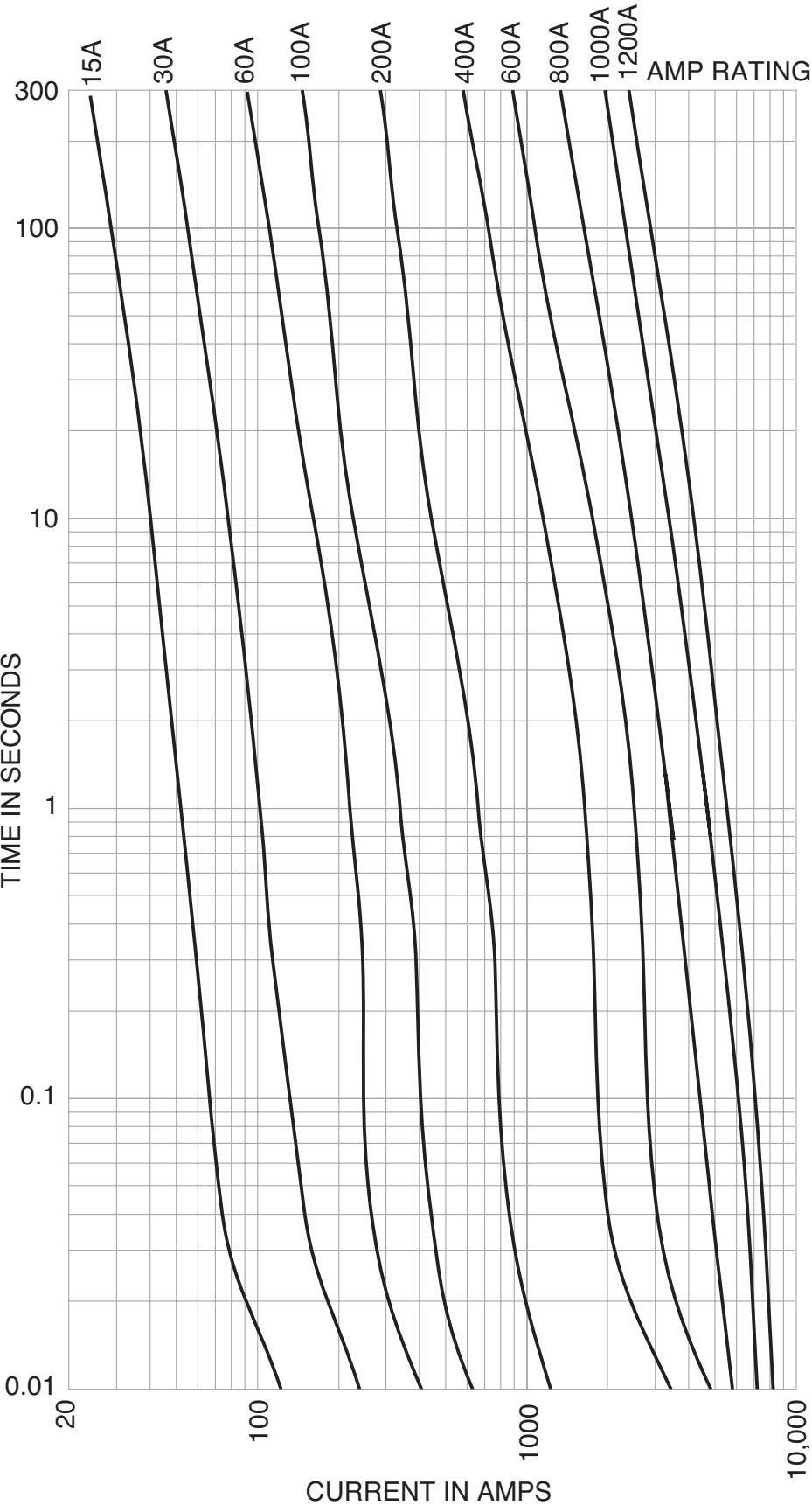
Fuse amps/catalog number	A	B
JJN-(1-30)L	0.406	0.125
JJN-(35-60)L	0.563	0.125
JJN-(35-60)L-01	0.563	0.165

JJN-XXLS Dimensions - in

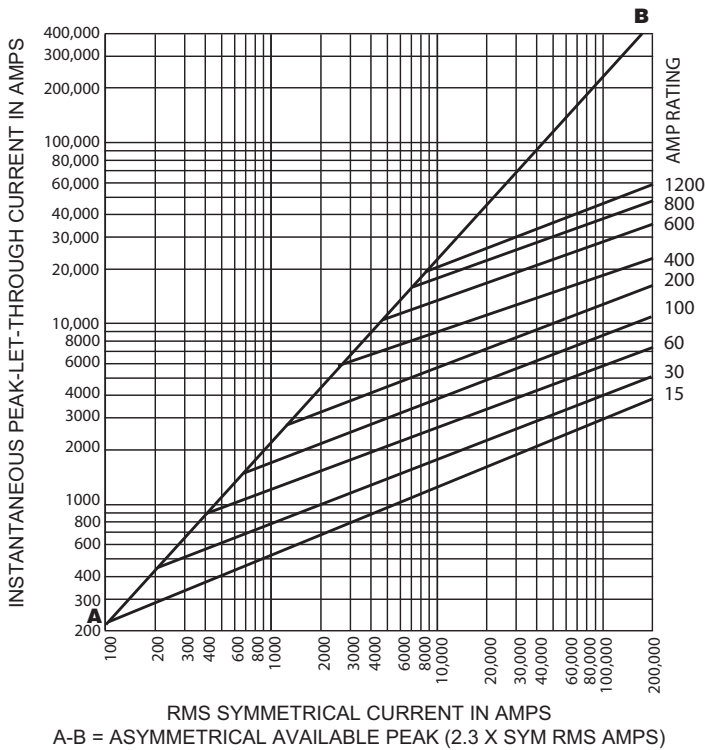


The JJN-XXL and JJN-XXLS products are UL Component Recognized under Guide JFHR2, File E56412. Contact your Bussmann series product representative for RoHS status.

Time-current curves - average melt



Current-limitation curves



Current-limiting effects

Prospect	S.C.C. Let-through current (apparent RMS Sym. vs. fuse rating)									
	15 A	30 A	60 A	100 A	200 A	400 A	600 A	800 A	1200 A	
500	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
5000	1000	1000	1000	1000	2000	3000	5000	5000	5000	5000
10,000	1000	1000	1000	2000	2000	4000	6000	7000	9000	
15,000	1000	1000	1000	2000	3000	4000	6000	9000	10,000	
20,000	1000	1000	1000	2000	3000	5000	7000	10,000	11,000	
25,000	1000	1000	2000	2000	3000	5000	7000	10,000	12,000	
30,000	1000	1000	2000	2000	3000	5000	8000	11,000	13,000	
35,000	1000	1000	2000	3000	4000	6000	8000	11,000	13,000	
40,000	1000	1000	2000	3000	4000	6000	9000	11,000	13,000	
50,000	1000	1000	2000	3000	4000	7000	9000	12,000	15,000	
60,000	1000	1000	2000	3000	4000	7000	10,000	13,000	16,000	
70,000	1000	1000	2000	3000	5000	7000	10,000	14,000	17,000	
80,000	1000	2000	2000	3000	5000	8000	11,000	15,000	17,000	
90,000	1000	2000	2000	3000	6000	8000	11,000	15,000	18,000	
100,000	1000	2000	2000	4000	6000	8000	12,000	16,000	19,000	
150,000	1000	2000	3000	4000	6000	9000	13,000	17,000	22,000	
200,000	2000	2000	3000	4000	7000	9000	15,000	19,000	23,000	

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