

# Class J High-Speed Drive Fuses



1 – 60 A



70 – 600 A

EDISON JHL Class J fuses combine the performance of high-speed semiconductor fuses and the convenience of Class J branch-circuit fuses in one small package, allowing maximum protection for AC and DC drives\* and controllers.

*\* Note: JHL fuses can be used with GS and DURApulse drives in non-UL applications. Fuse the drive according to NEC guidelines (NEC Article 430). For UL applications, GS and DURApulse drives require Class T fuses (refer to the drive's user manual for details).*

## Applications

- AC and DC drives
- Electronic motor controllers
- Power semiconductor devices that utilize diodes, GTOs, SCR's, or SSR's

## JHL Features

- Space saving Class J dimensions allow the use of readily available Class J fuse blocks, holders, and switches
- Allows the lowest I<sup>2</sup>t let-through energy of any branch-circuit overcurrent protective device
- Works with existing and new variable speed drives and electronic motor controllers
- Meets UL, CSA, and NEC requirements for branch circuit protection devices

## Specifications

Voltage Rating: 600 VAC; 450 VDC

Ampere Rating: 1 – 600 Amps

Interrupting Rating:  
200,000 RMS Symmetrical Amps;  
100,000 DC Amps

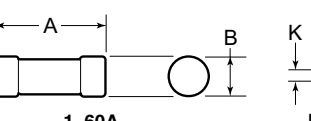
Current Limiting: Class J Fuse

## Agency Approvals

- UL, std 248-8, Class J, Guide JDDZ, File E162363
- CSA Certified, C22.2 # 248.8, Class 1422-02, File 700489
- RoHS compliant

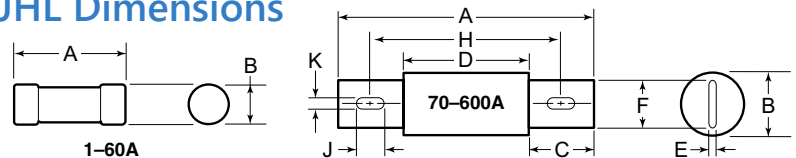
## CROSS REFERENCE

VOLTS	EDISON	COOPER / BUSSMANN	FERRAZ / Mersen	LITTELFUSE
600	JHL	DFJ	HSJ	-

JHL Series Class J High-Speed Drive Fuses										
Part Number	AMP Rating	Rated Voltage (max)	Pcs/ Pkg	Pkg Weight (lb[kg])	Price	Part Number	Pcs/ Pkg	Pkg Weight (lb[kg])	Price	
<a href="#">JHL1</a>	1	600 VAC 450 VDC	10	1.0 [0.45]	\$00ak0:	<a href="#">JHL1-1</a>	1	0.10 [0.05]	\$0ak4:	
<a href="#">JHL2</a>	2				\$,00akf:	<a href="#">JHL2-1</a>			\$-0akj:	
<a href="#">JHL3</a>	3				\$00akn:	<a href="#">JHL3-1</a>			\$0akq:	
<a href="#">JHL4</a>	4				\$00aku:	<a href="#">JHL4-1</a>			\$0aky:	
<a href="#">JHL5</a>	5				\$,00akj:	<a href="#">JHL5-1</a>			\$,0akl:	
<a href="#">JHL6</a>	6				\$00ak?:	<a href="#">JHL6-1</a>			\$-0al1:	
<a href="#">JHL8</a>	8				\$-00al3:	<a href="#">JHL8-1</a>			\$-0al5:	
<a href="#">JHL10</a>	10				\$00ak1:	<a href="#">JHL10-1</a>			\$0ak3:	
<a href="#">JHL12</a>	12				\$00ak6:	<a href="#">JHL12-1</a>			\$0ak7:	
<a href="#">JHL15</a>	15				\$00ak9:	<a href="#">JHL15-1</a>			\$0akb:	
<a href="#">JHL17P5</a>	17.5				\$00akd:	<a href="#">JHL17P5-1</a>			\$0ake:	
<a href="#">JHL20</a>	20				\$00akg:	<a href="#">JHL20-1</a>			\$-0aki:	
<a href="#">JHL25</a>	25				\$00akk:	<a href="#">JHL25-1</a>			\$-0akl:	
<a href="#">JHL30</a>	30				\$00ako:	<a href="#">JHL30-1</a>			\$0akp:	
<a href="#">JHL35</a>	35		1.5 [0.68]		\$00aks:	<a href="#">JHL35-1</a>		\$,0akt:		
<a href="#">JHL40</a>	40				\$00akv:	<a href="#">JHL40-1</a>		\$0akx:		
<a href="#">JHL45</a>	45				\$00akz:	<a href="#">JHL45-1</a>		\$,0akj:		
<a href="#">JHL50</a>	50				\$00ak_:	<a href="#">JHL50-1</a>		\$0ak#:		
<a href="#">JHL60</a>	60			\$,00ak,:	<a href="#">JHL60-1</a>	\$-0al0:				
<a href="#">JHL70</a>	70			1	0.30 [0.14]	\$-0al2:		<div>JHL Dimensions</div> 		
<a href="#">JHL80</a>	80		\$-0al4:							
<a href="#">JHL90</a>	90		\$-00al6:							
<a href="#">JHL100</a>	100		\$0ak2:							
<a href="#">JHL110</a>	110		0.70 [0.32]		\$00ak5:					
<a href="#">JHL125</a>	125		0.8 [0.36]		\$00ak8:					
<a href="#">JHL150</a>	150				\$00aka:					
<a href="#">JHL175</a>	175				\$00akc:					
<a href="#">JHL200</a>	200				\$00akh:					
<a href="#">JHL225</a>	225		1.6 [0.73]		\$-00al7:					
<a href="#">JHL250</a>	250				\$-00al8:					
<a href="#">JHL300</a>	300				\$-00al9:					
<a href="#">JHL350</a>	350				\$-00ala:					
<a href="#">JHL400</a>	400		2.6 [1.18]		\$-00aib:					
<a href="#">JHL450</a>	450				\$-00alc:					
<a href="#">JHL500</a>	500				\$-00ald:					
<a href="#">JHL600</a>	600				\$-00ale:					

JHL Series Dimensions			
Range	A	B	C
1-30	2.25 [57.2]	0.81 [20.6]	-
35-60	2.38 [60.5]	1.06 [26.9]	-
70-100	4.63 [117.6]	1.13 [28.7]	1.00 [25.4]
110-200	5.75 [146.1]	1.63 [41.4]	1.38 [35.1]
225-400	7.13 [181.1]	2.11 [53.6]	1.88 [47.8]
450-600	8.00 [203.2]	2.50 [63.5]	2.13 [54.1]

## JHL Dimensions



## JHL Series Dimensions - Inches [mm]

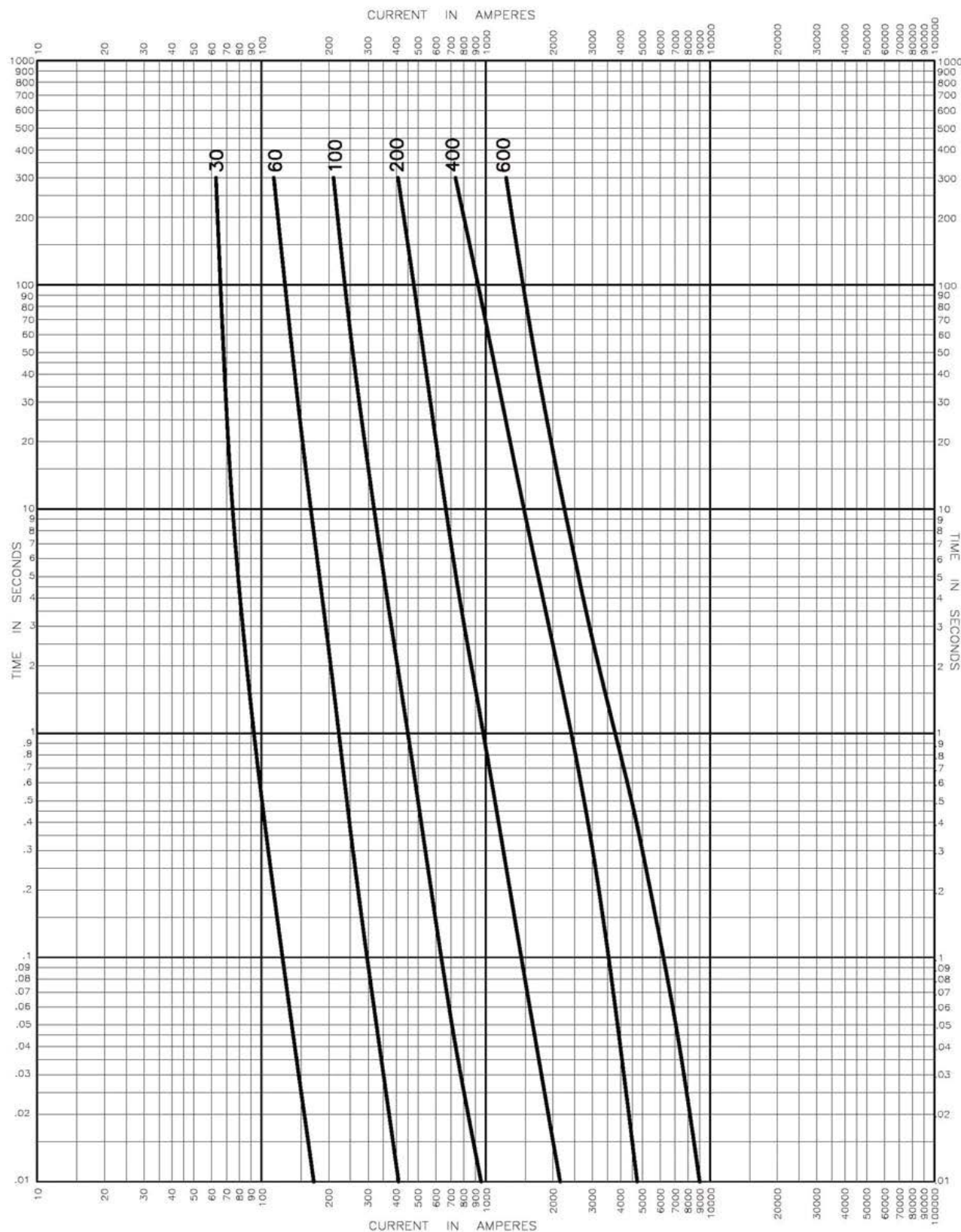
Range	A	B	C	D	E	F	H	J	K
1-30	2.25 [57.2]	0.81 [20.6]	-	-	-	-	-	-	-
35-60	2.38 [60.5]	1.06 [26.9]	-	-	-	-	-	-	-
70-100	4.63 [117.6]	1.13 [28.7]	1.00 [25.4]	2.63 [66.8]	0.13 [3.3]	0.75 [19.1]	3.63 [92.2]	0.43 [10.9]	0.28 [7.1]
110-200	5.75 [146.1]	1.63 [41.4]	1.38 [35.1]	3.00 [76.2]	0.19 [4.8]	1.13 [28.7]	4.38 [111.3]	0.43 [10.9]	0.28 [7.1]
225-400	7.13 [181.1]	2.11 [53.6]	1.88 [47.8]	3.38 [85.9]	0.25 [6.4]	1.63 [41.4]	5.25 [133.4]	0.58 [14.7]	0.41 [10.4]
450-600	8.00 [203.2]	2.50 [63.5]	2.13 [54.1]	3.75 [95.3]	0.38 [9.7]	2.00 [50.8]	6.00 [152.4]	0.74 [18.8]	0.53 [13.5]

# Class J High-Speed Drive Fuses

## Time-Current Characteristic Curves



Time-Current Characteristic Curves – Average Melt – JHL Fuses

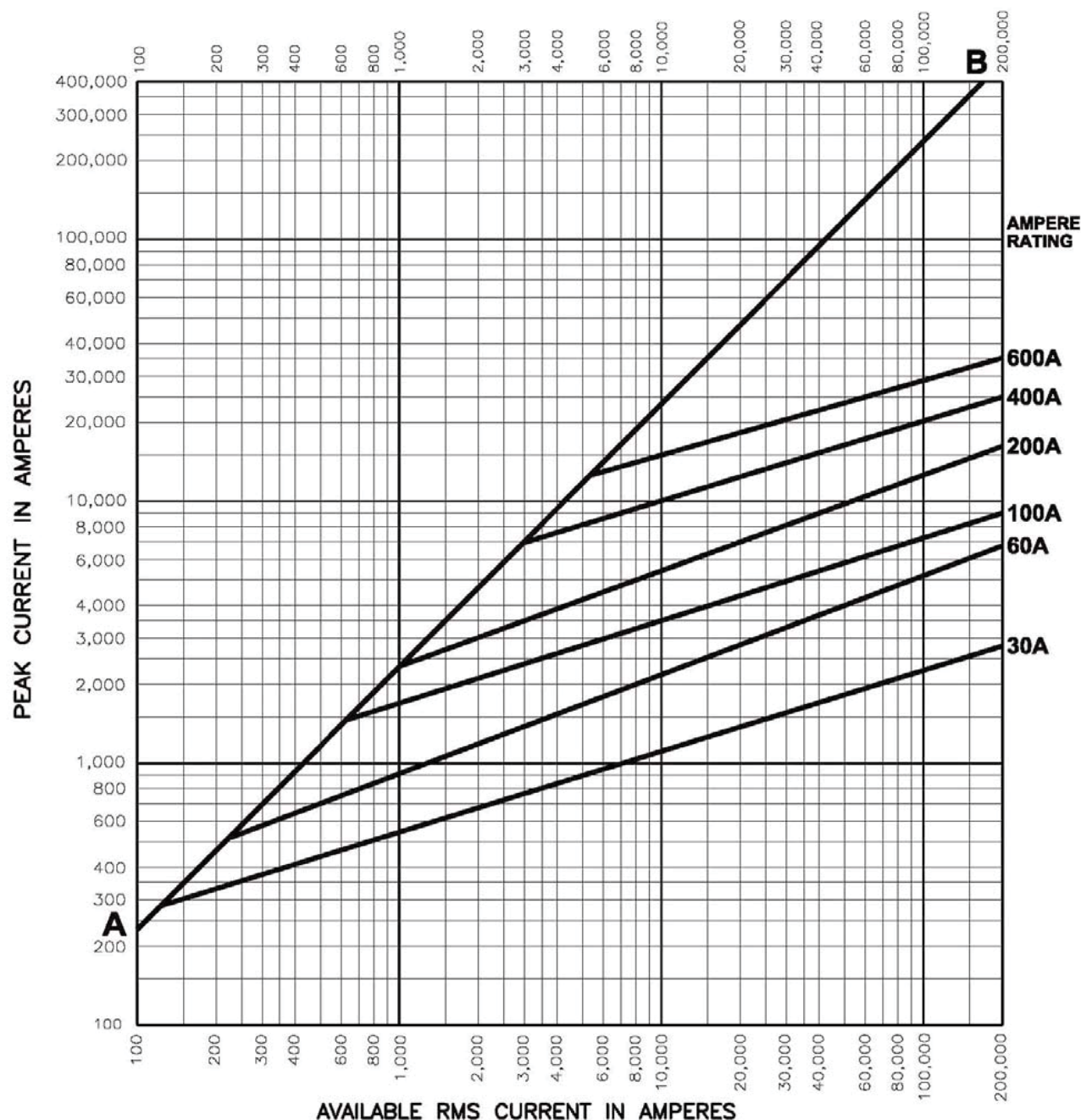


# Class J High-Speed Drive Fuses

## Current Limitation Curves



Current Limitation Curves – JHL Fuses





# Selection Guide

## Line Overview

The Edison family of fuses, fuse blocks and fuse holders is divided into two classes:

1. Current Limiting: Class CC, Class J, Class L, Class RK, Class T
2. General Purpose: Class M Midget and Small Dimension

The fuse selection guide below is a general summary of the

specifications included for each fuse type. This selection guide does not include the many variables that can exist for specific situations such as local codes, unusual temperature, or other operating conditions. When selecting fuses, be sure to comply with any applicable PUBLIC SAFETY standards that apply to Overcurrent Protection Devices (OPD).

Edison Fuses Selection Guide and General Specifications												
Description	Current Limiting											
	Class J		Class RK5		Class RK1		Class T		Class L	Class CC		
Fuse Type	Fast-Acting	Time-Delay	Time-Delay				Extremely Fast-Acting		Fast-Acting	Fast-Acting	Time-Delay	
Part Number	JHL	JDL	ECNR	ECSR	LENRK	LESRK	TJN	TJS	LCU	HCLR	HCTR	EDCC
Voltage Rating	600VAC 450VDC	600VAC 300VDC*	250VAC 125 VDC* (1-200A) 250VDC* (201-600A)	600VAC 300VDC*	250VAC 125 VDC* (10-60A) 250VDC* (70-600A)	600VAC 300VDC*	300VAC 160 VDC (15-600A)	600VAC	600V	600VAC 300VDC (15-20A)	600VAC	600VAC 300VDC (0.5-2.25A) (20-30A)
Amp Rating	1 - 600		1 - 600	3 - 600	10 - 600	5 - 600	1 - 600		601 - 1200	0.5 - 30	0.25 - 30	0.5 - 30
Interrupting Rating	200,000 RMS Symmetrical Amps											
Current Limiting	Class J		Class RK5		Class RK1		Class T		Class L	Class CC		
Agency Approvals	UL Listed Class J Guide JDDZ File E162363 CSA Certified HRCI-J per C22.2, No. 248.8 File 700489 RoHS compliant	UL Listed Class J Guide JDDZ File E162363 CSA Certified HRCI-J per C22.2, No. 248.8 File 700489	UL Listed, Class RK, Guide JDDZ, File E162363 CSA Certified HRCI-R per C22.2, No. 248.12, File 700489 (LENRK CSA File 053787)				UL Listed, Class T, Guide JDDZ, File E162363 CSA Certified HRCI-T per C22.2, No. 248.12, File 53787, Class 1422-02 & 1422-82		UL Listed, Std. 248-10 CSA Certified, HRC-L C22.2 No. 248.10, Class 1422- 02, File 53787	UL Listed to 248.4, Class CC, Guide JDDZ, File E162363, CSA certified HRCI-MISC per C22.2 No. 248.4, File 700489		
Dimensions	See product specification pages.									ferrule (in): 13/32, length (in): 1-1/2		

\* Self-certified DC ratings

Edison Fuses Selection Guide and General Specifications												
Description	General Purpose – Midget				General Purpose – Small Dimension Electronic							
Fuse Type	Fast-Acting		Time-Delay		Fast-Acting Ceramic	Fast-Acting Glass		Medium Time-Delay Glass	Time-Delay Ceramic	Time-Delay Glass	Fast-Acting Glass	Time-Delay Glass
Part Number	MCL	MOL	MEQ	MEN	ABC	AGC	GMA	GMC	MDA	MDL	S500	S506
Voltage Rating	600 VAC	250 VAC	500 VAC	250 VAC	250 VAC (0.5 to 30A) 125VDC: (0.5 to 30A)	250VAC: (0.1 to 10A) 32VAC: (15 to 30A)	250VAC (0.063 - 3A) 125VAC (4 - 15A)	250VAC (0.5 - 3A) 125VAC (4 - 10A)	250VAC 125VDC (20A)	250VAC: (0.0625 to 8A) 32VAC: (10 to 20A)	250VAC	250VAC
Amp Rating	0.5 to 50	0.5 to 30	0.25 to 30	0.5 to 30	0.5 to 30	0.10 to 30	0.063 to 15	0.5 to 10	0.5 to 20	0.0625 to 20	0.032 to 10	0.25 to 6.3
Interrupting Rating	100,000 RMS Amps	10,000 RMS Amps			See specifications table on product pages							
Current Limiting	N/A				N/A							
Agency Approvals	UL Listed to 248.14, File E162443 CSA Cert. C22.2 Part 59.2, LR 700489				UL Listed standard 248-14 UL Listed Guide and File nos. (ABC 0.25-20 A): (AGC 1/100-10 A) JDYX and E19180 UL Recognition Guide and File nos. (ABC 20-30A):(AGC 11-30) JDYX2 and E19180 CSA Certification Record No: 053787 C 000 and Class No: 1422 01 and 1422 30		Designed to UL/CSA 248-14 UL Listed, Guide JDYX, File E19180 63mA-6A UL Recognition, Guide JDYX2, File E19180, 7A-15A CSA Certified, File 053787 C_000, 63mA-6A Class 1422-01		UL Listed standard 248-14 UL Listed Card: MDA 2/10-20A , MDL 1/16-8A (Guide JDYX, File E19180 UL Recognized Card: MDA 25-30A MDL 9-30A (Guide JDYX2, File E19180) CSA Certification Card: MDA 2/10-15A (Class No. 1422-01)		UL Recognized Guide JDYX2, File E19180 Semko Approval VDE Approval BSI Approval IMQ Approval RoHS compliant	
					RoHS							
Dimensions	ferrule (in): 13/32 length (in): 1-1/2				1/4" x 1-1/4", (6.3mm x 32mm)		0.197" x 0.788" (5mm x 20mm)		1/4" x 1-1/4", (6.3mm x 32mm)		0.197" x 0.788" (5mm x 20mm)	



# Modular Ferrule Fuse Blocks for Class J Fuses



## Description

JM Series for use with Class J fuses JHL & JDL

## Mounting

35mm DIN rail or panel mount

## Specifications

### Materials:

Base – Thermoplastic

Terminals – Tin-plated copper brass

Covers – Thermoplastic

Screws and pressure plates – Zinc-plated steel

**SCCR:** 200kA

### Flammability rating:

Blocks – UL 94V0, self-extinguishing

Covers – UL 94HB, self-extinguishing

### Operating and storage temp range:

Blocks – -40° to 120°C [-40° to 248°F]

Covers – indicating -20° to 90°C [-4° to 194°F]  
non-indicating -40° to 120°C [-40° to 248°F]

### Wire:

Cu – 75°/90°C [167°/194°F]

Al – 75°C [167°F]

Ring or Fork terminal to fit a #10-32 screw

## Agency Approvals

### Fuse Blocks

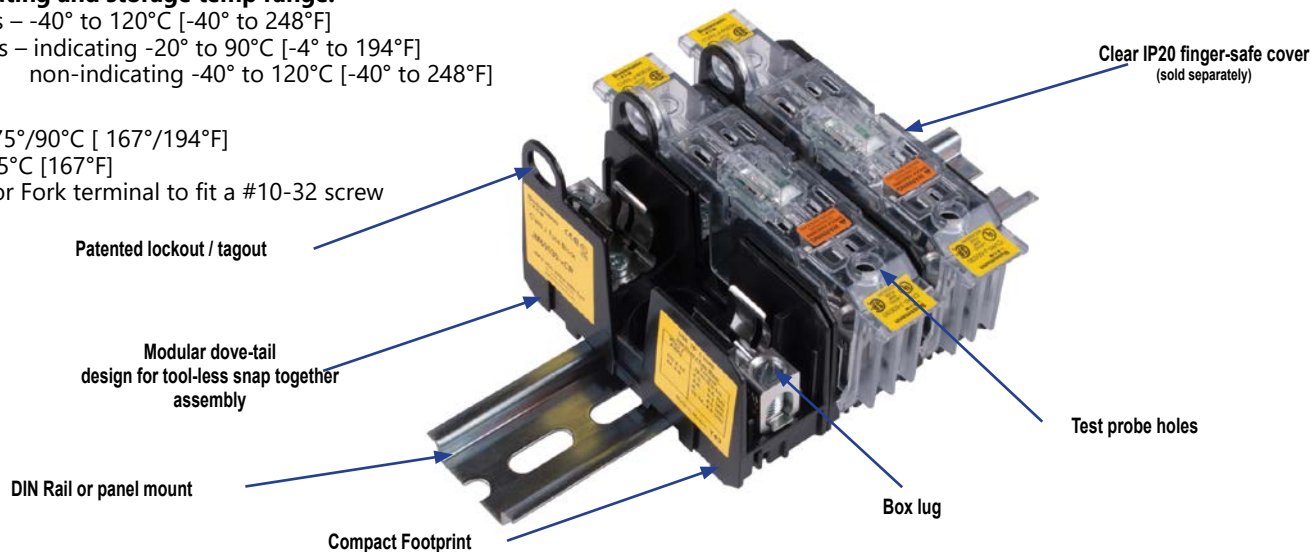
- UL® Listed E14853 - IZLT
- CSA® Certified 47235-6225-01
- CE
- RoHS Compliant
- Conflict mineral free
- REACH Compliant

### Covers

- Covers are included in the overall UL Listing/Recognition and CSA Certification
- IP20 finger-safe
- RoHS compliant
- REACH Compliant



To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.



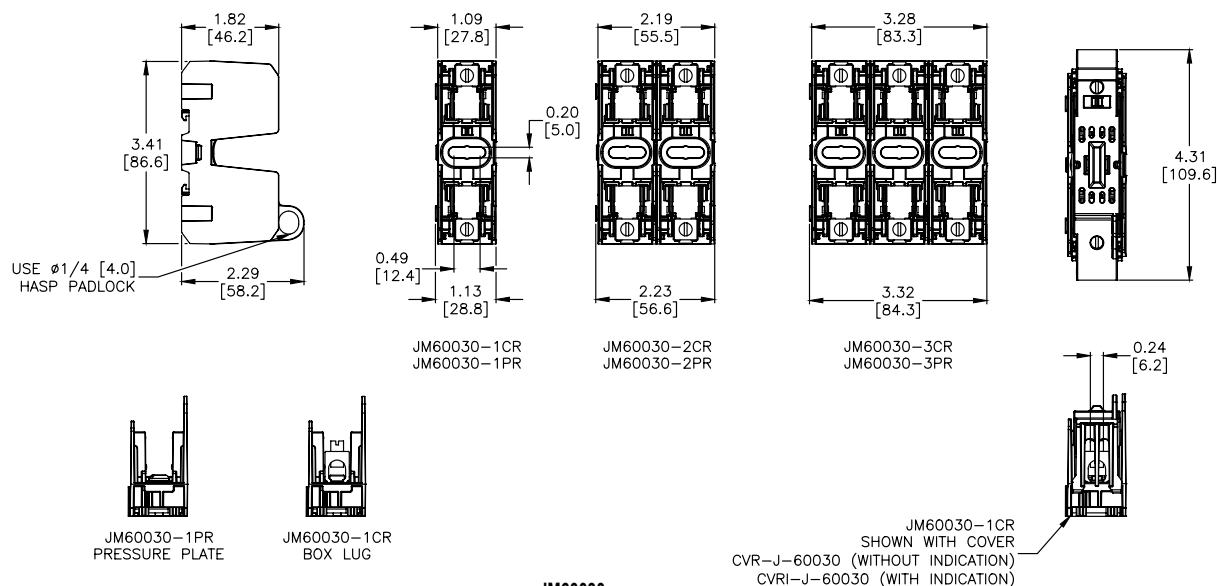
Modular Ferrule Fuse Blocks for Class J Fuses													
Type	Part Number	Pc/ pkg	Price	Volts	Amps	Poles	Wire Range		Torque lb-in [N·m]	Wt. lb [kg]	Covers (sold separately)		
							solid and stranded	fine stranded (Cu)			w/o Indication	w/ Indication <sup>1</sup>	Pc/ pkg
Box lug	<a href="#">JM60030-1CR</a>	1	\$12b1:	600V AC/DC	30	1	14-2 AWG (Cu) 8-2 AWG (Al)	3-2 AWG	50 [5.6]	0.15 [0.08]	<a href="#">CVR-J-60030</a> \$12bk:	<a href="#">CVRI-J-60030</a> \$-12bl:	1
	<a href="#">JM60030-2CR</a>	1	\$12b2:			2		6-4 AWG	45 [5.1]	0.25 [0.12]			
	<a href="#">JM60030-3CR</a>	1	\$012b3:			3		8AWG	40 [4.5]	0.40 [0.18]			
Pressure Plate	<a href="#">JM60030-1PR</a>	1	\$12b4:			1	18-10 AWG (Cu)	14-10 AWG	35 [4.0]	0.40 [0.18]			
	<a href="#">JM60030-2PR</a>	1	\$12b5:			2		18-10 AWG	20 [2.3]	0.15 [0.08]			
	<a href="#">JM60030-3PR</a>	1	\$012b6:			3				0.25 [0.12]			
Box lug	<a href="#">JM60060-1CR</a>	1	\$12b7:		60	1	14-2 AWG (Cu) 8-2 AWG (Al)	3-2 AWG	50 [5.6]	0.20 [0.10]	<a href="#">CVR-J-60060</a> \$12bn:	<a href="#">CVRI-J-60060</a> \$12bo:	1
	<a href="#">JM60060-2CR</a>	1	\$12b8:			2		6-4 AWG	45 [5.1]	0.35 [0.16]			
	<a href="#">JM60060-3CR</a>	1	\$012b9:			3		8AWG	40 [4.5]	0.55 [0.26]			
								14-10 AWG	35 [4.0]				

<sup>1</sup> Open fuse indication requires 90V minimum and closed circuit to operate.

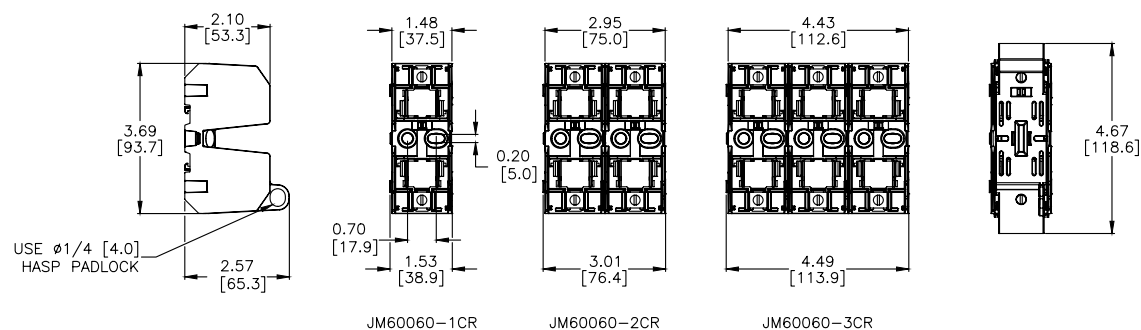
# Modular Ferrule Fuse Blocks for Class J Fuses

## Dimensions

in [mm]



JM60030



JM60060

Please see our website [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings. Dimensions are approximate. Not for construction purposes.

# Modular Fuse Holders for Class J Fuses



CH30J1



CH30J2I



CH30J3

## Description

- Choice of LED indicator or non-indicating fuse holder
- Comes in standard 1-, 2- and 3-Pole ganged assemblies where all fuses are extracted simultaneously
- Meets requirements of IEC 60529 for IP-20 finger safe rating
- 35mm DIN rail and chassis (6-32 UNC Pan Head recommended) mounting features
- Fuseholder wire ports dual wire rated from 18 to 3 AWG

## Specifications

**Construction:** Thermoplastic, with tin-plated copper clip  
**UL Flammability:** 94V-0

**Voltage Ratings:** 600 Volts AC/DC (or less)

**Ampere Ratings:** 1 - 60 Amps

**Interrupting Rating:** 200,000 RMS Symmetrical Amps

**Minimum Indicating Voltage (neon lamp):** 90 Volts

**Nominal Operating Current (neon lamp):** 34 mA (460 VAC)

## Agency Approvals

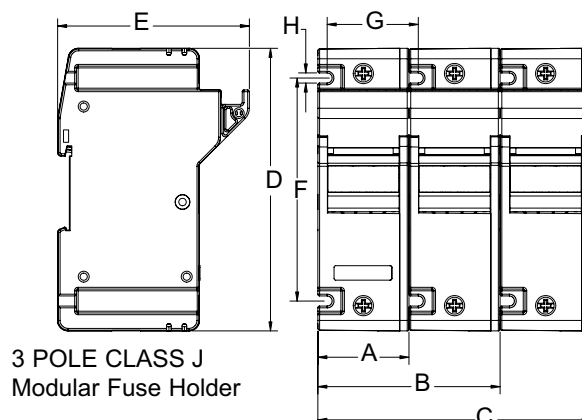
- Listed UL 512, Guide IZLT, File E14853
- CSA Certified per C22.2 Nos. 39 Class 6225-01, File LR47235
- CE compliance for the European Union Low Voltage Directive

## CH Series Modular Fuse Holders for Class J Fuses

Amp Rating	Part Number	Amps	Type	Poles	Maximum Wire Size	Pcs/Pkg	Weight (lbs.)	Price
30A	CH30J1	0.5 to 30	Easy ID window	1	18 -1 AWG Single 18 -3 AWG Dual 75°C	6	2.8	\$-00bgl:
	CH30J2		Easy ID window	2		3		\$00bgo:
	CH30J3		Easy ID window	3		2		\$00bgq:
	CH30J1I		Neon indicator	1		6		\$00bgn:
	CH30J2I		Neon indicator	2		3		\$00bgp:
	CH30J3I		Neon indicator	3		2		\$00bgs:
						6	3.4	\$;00bgt:
60A	CH60J1	31 to 60	Easy ID window	1		3		\$00bgv:
	CH60J2		Easy ID window	2		2		\$00bgy:
	CH60J3		Easy ID window	3		6		\$00bgu:
	CH60J1I		Neon indicator	1		3		\$00bgx:
	CH60J2I		Neon indicator	2		2		\$00bgz:
	CH60J3I		Neon indicator	3				

## Dimensions

Dimension	CH30J in (mm)	CH60J in (mm)
A	1.28 (32.5)	1.58 (40.0)
B	2.56 (65.0)	3.16 (80.0)
C	3.84 (97.5)	4.72 (120.0)
D	4.59 (116.6)	4.88 (124.0)
E	2.83 (71.8)	3.31 (84.1)
F	3.56 (90.4)	3.85 (97.9)
G	1.28 (32.5)	1.58 (40.0)
H	0.18 (4.44)	0.18 (4.44)



# Accessories



**FP-2**

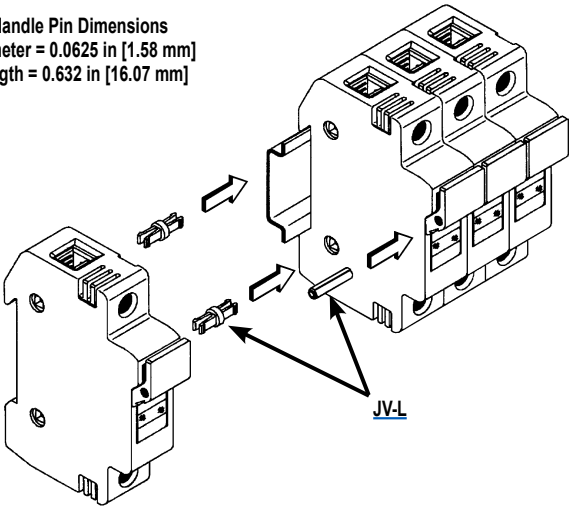


**JV-L**

Accessories			
Part Number	Description	Pcs/Pkg	Price
<b>FP-2</b>	Fuse puller for fuse dia. 13/32" - 13/16". Fuse type: 0-60A, 250V; 0-30A, 600V	1	\$0c1s:
<b>JV-L*</b> (Not Field Installable)	Multi-pole connection kit to connect new design multiple Class CC and Midget Class fuse holders together. Kit consists of 6 connectors and 3 handle pins to connect up to 4 fuse holders.		\$;0c1t:

*Note: Will not work with retired design fuse holders shipped before November 1, 2009.  
\*Roll pin punch or installation tool is required to install handle pins (Tool not sold by [AutomationDirect.com](http://AutomationDirect.com)).*

Handle Pin Dimensions  
Diameter = 0.0625 in [1.58 mm]  
Length = 0.632 in [16.07 mm]





# Cross Reference Guide



## CROSS REFERENCE GUIDE By manufacturers type reference or series number. Ampere ratings must be added for ordering purposes.

FUSE TYPE		VOLT	EDISON	BRUSH/ DORMAN	BUSSMANN	MERSEN / GOULD	GEC/CEFCO	LITTELFUSE
UL CLASS CURRENT LIMITING FUSES (CSA CLASS)								
CC (HRCI-CC)	Time-Delay	600	EDCC	–	LP-CC	ATDR	–	CCMR
	Time-Delay	600	HCTR	–	FNQ-R	ATQR	–	KLDR
	Fast-Acting	600	HCLR	HCLR	KTK-R	ATMR	CTK-R	KLKR
RK1	Time-Delay Dual Element	250	LENRK	–	LPN-RK-SP	A2DR	–	LLNRK
		600	LESRK	–	LPS-RK-SP	A6DR	–	LLSRK
RK5	Time-Delay Dual Element	250	ECNR	–	FRN-R	TR	–	FLNR
		600	ECSR	–	FRS-R	TRS	–	FLSR
J	Time-Delay Dual Element	600	JDL	–	LPJ	AJT	–	JTD
	High-Speed AC Drive	600	JHL	–	DFJ	HSJ	–	–
T	Extremely Fast- Acting	300	TJN	–	JJN	A3T	–	JLLN
		600	TJS	–	JJS	A6T	–	JLLS
UL CLASS GENERAL PURPOSE FUSES								
Midget	Fast-Acting	600	MCL	MCL	KTK	ATM	CTK	KLK
		250	MOL	MOL	BAF/BAN	OTM	–	BLF
	Time-Delay	500	MEQ	MEQ	FNQ	ATQ	–	FLQ
		250	MEN	MEN	FNM	TRM	–	FLM
1/4"x 1-1/4" Ceramic	Fast-Acting	250/125	ABC	ABC	ABC	GAB	–	314
1/4"x 1-1/4" Glass		250/32	AGC	AGC	AGC	GGC	–	312
1/4"x 1-1/4" Ceramic	Time-Delay	250	MDA	MDA	MDA	–	–	326
1/4"x 1-1/4" Glass		250/32	MDL	MDL	MDL	GDL	–	313
5x20 mm Glass	Fast-Acting	250/125	GMA	GMA	GMA	GGM	–	235
	Medium Time-Delay	250/125	GMC	GMC	GMC	GSC	–	–
5x20 mm Glass	Fast-Acting	250	S500	BDB	GDB	GSB	–	217
	Time-Delay	250	S506	BDC	GDC	GDG	–	218
Fuse Puller								
Fuse Puller FP-2			old - 38072 new - FP-2	–	FP-2	–	–	–