### **Section Overview**

Diverse application needs require a broad range of fuses. Littelfuse offers a full line of fuses for various applications. As the market leader in automotive and electronics fuses, we are able to deliver innovative circuit protection solutions to our customers. Visit **Littelfuse.com** for our full line of automotive and electronics solutions.







# 

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# HIGH DC VOLTAGE AND PC BOARD MOUNT FUSES

# 505 Series Lead-Free 3AB, Fast-Acting



AMPERE RATINGS						
10 16 25						
12	20	30				

### **Specifications**



A 500 Vac/Vdc rated ceramic fuse with remarkable interrupting rating in a compact 6.3 x 32 mm package, well suited for circuit protection in high energy applications.

**Voltage Rating** 

450 Vac (10 - 12 A) 250 Vdc (10 - 12 A) 500 Vac/dc (16 - 30 A)

Sample Part Axial Lead **Dimensions** 

0505010.MXP\* 505\_XEP Series L 31.75 mm (1.25") **D** 6.35 mm (.25")

littelfuse.com/505

\*Bulk configurations only

# **477 Series** 5 x 20 mm Slo-Blo® Fuse



AMPERE RATINGS						
.5	2	5	10			
.8	3.15	6.3	12			
1	4	8	16			

# **Specifications**



500 Vac/400 Vdc rated, 5 x 20 mm, time-lag, surge withstand ceramic body fuse.

**Voltage Rating** 500 Vac 400 Vdc

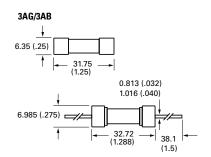
Sample Part 0477002.MXP\* **Axial Lead** 477 XEP Series **L** 20 mm (.79") **Dimensions** 

**D** 5.2 mm (.20")

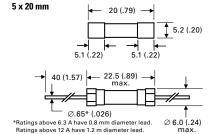
littelfuse.com/477

\*Bulk configurations only

### **Dimensions mm (inches)**



2AG	
4.5 (.177") 14.48	4.7 (.184") .635 (.025") .635 (.025") .635 (.025") .635 (.025") .635 (.025") .635 (.025") .635 (.025") .635



## 273 Series **Very Fast-Acting Microfuse** RoHS

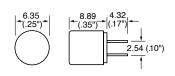


AMPERE RATINGS						
.002	.031	.125	.400	.750	2	
.005	.050	.200	.500	.800	3	
.010	.062	.250	.600	1	4	
.015	.100	.300	.700	1.5	5	

### **Specifications**

Similar to 272 and 278 series, except has transparent cap for visual indication of fuse status. \*See web for approvals by part.

Voltage Rating 125 Vac/dc Sample Part 0273002.V littelfuse.com/273



# 251 Series Fast-Acting Pico® II Fuse





AMPERE RATINGS						
.062	.500	1.25	3	7		
.125	.630	1.5	3.5	10		
.250	.750	2	4	12		
.375	1	2.5	5	15		

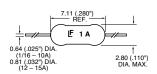
### **Specifications**

Subminiature fuse for soldered mounting on printed circuit boards. Available on tape and reel for automatic insertion. \*See web for approvals by part.

**Voltage Ratings** 125 Vac/dc 1/16 - 10 A 32 Vac/dc 12 - 15 A

Sample Part 0251001.NAT1L

littelfuse.com/251



# 451 Series NANO<sup>2®</sup> Very Fast-Acting





Add "L" suffix when ordering RoHS compliant 451 series

	AMPERE RATINGS						
0.062	0.25	0.630	1.5	3.15	7		
0.1	0.315	0.750	1.6	3.5	8		
0.125	0.375	0.800	2	4	10		
0.160	0.400	1	2.5	5	12		
0.2	0.5	1.25	3	6.3	15		

#### **Specifications**

The Nano<sup>2</sup> SMF Fuse is a very small, Wire-in-Air (WIA) square shape surface mount fuse which is very suitable for the secondary side circuit over-current protection applications and is designed for PCB using surface mount technology

\*See web for approvals by part.

Voltage Rating 65 - 125 V **Sample Part** 0451.125MP

littelfuse.com/451



# LEADED AND CARTRIDGE FUSES

# 312/318 Series **3AG Fast-Acting**





AMPERE RATINGS						
.062	.200	.750	1.8	5	15	
.100	.250	1	2	6	20	
.125	.300	1.25	2.25	7	25	
.15	.375	1.5	2.5	8	30	
.175	.500	1.6	3	10	35	
.187	.600	1.75	4	12	_	

### **Specifications**

Designed for fast-acting protection of electronic equipment and appliances. The "standard" fast-acting, glass tube fuse.

Voltage Ratings	250 Vac <sup>1</sup> / <sub>100</sub> – 10 A 32 Vac 12 – 35 A
Dimensions	<b>L</b> 31.75 mm (1.25")

**D** 6.35 mm (.25") Sample Part 0312005.VXP For fuses with axial leads, request 318 Series.

littelfuse.com/312

# 313/315 Series 3AG Slo-Blo®





		AMPE	RE RA	TINGS		
.010	.175	.500	1.25	2.8	7	30
.031	.187	.600	1.5	3	8	l —
.040	.200	.700	1.6	3.2	10	_
.062	.250	.750	1.8	4	12	_
.100	.300	.800	2	5	15	—
.125	.375	1	2.25	6.25	20	l —
.150	.400	1.2	2.5	6.3	25	_

### **Specifications**

313 and 315 series fuses have time-delay in the overload range, providing superior protection for inductive loads. ID feature available which discolors upon opening.

Voltage Ratings	250 Vac 1/100 - 8 A
	32 Vac 10 - 30 A
Dimensions	<b>L</b> 31.75 mm (1.25'
	<b>D</b> 6.35 mm (.25")

0313005.VXP Sample Part For fuses with axial leads, request 315 Series. For Fuses with ID, add "ID" suffix

littelfuse.com/313

# 314/324 Series **3AB Fast-Acting**





AMPERE RATINGS						
.375	2	6	12	30		
.500	3	7	15	40		
.750	4	8	20	_		
1	5	10	25	_		

### **Specifications**

Similar to 312 series, but ceramic tube permits higher interrupting ratings and voltage ratings: 250 volt ratings to 40 amps.

Voltage Rating	250 Vac 3/ <sub>8</sub> − 40 A
	125 Vdc 3/ <sub>0</sub> = 30 Δ

150 Vdc 40 A

**Dimensions** L 31.75 mm (1.25")

**D** 6.35 mm (.25") 03145005.VXP

For fuses with axial leads, request 324 Series.

littelfuse.com/314

Sample Part

### 326/325 Series 3AB Slo-Blo®





	AMPERE RATINGS						
.010	.187	.600	1.5	4	15		
.031	.200	.700	1.6	5	20		
.062	.250	.750	2	6.25	25		
.100	.300	.800	2.5	7	30		
.125	.375	1	2.8	8	_		
.150	.400	1.2	3	10	_		
.175	.500	1.25	3.2	12	_		

#### **Specifications**

The 326 series fuse has time-delay similar to the 313 series, but the ceramic body permits higher voltage ratings for the 8 – 30 ampere sizes and faster opening of short-circuits.

Voltage Ratings	250 Vac 1/100 - 30 A
	125 Vdc 1/4 - 3 A
	125 Vdc 12 - 30 A
Dimensions	L 31.75 mm (1.25")
	<b>D</b> 6.35 mm (.25")
Sample Part	0326 100VXP

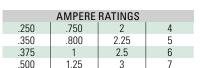
For fuses with axial leads, request 325 Series.

229/230 Series 2AG Slo-Blo®









3.5

#### **Specifications**

1.5

.600

2AG indicating fuses instantly identify themselves upon opening by showing a discoloration of their glass bodies, eliminating guesswork. This unique design offers the same quality performance characteristics as the standard 2AG fuse design.\*

Voltage Ratings	250 Vac 1/4 - 3 1/2 A
	125 Vac 4 – 7 A

Dimensions L 14.48 mm (.57") **D** 4.5 mm (.177")

Sample Part 02291 25VXP \*Must add "S" suffix when ordering indicating fuse

littelfuse.com/229

125 Vdc 1/4 - 7 A

For fuses with axial leads, request 230 Series.

# 225/224 Series **2AG Fast-Acting**





AMPERE RATINGS						
.375	1	2.5	4	7		
.500	1.5	3	5	8		
.750	2	3.5	6	10		

#### **Specifications**

Fast-acting performance of the 312 series 3AG fuses in less than one-third the space. For protection of electronic equipment and appliances.

**Voltage Ratings** 250 Vac  $^{3}/_{8}$  - 3  $^{1}/_{2}$  A

125 Vac 4 - 10 A 125 Vdc 3/8 - 3 1/2 A

**Dimensions** L 14.48 mm (.57") **D** 4.5 mm (.177")

Sample Part 0225003.VXP For fuses with axial leads, request 224 Series.

littelfuse.com/225

Note: All fuses on this page are available in packaged and bulk configurations

2



# 5 x 20 mm IEC LEADED AND CARTRIDGE FUSES

### 215 Series 5 x 20 mm IEC Slo-Blo®

(S) (P) RoHS



AMPERE RATINGS						
.125	.315	.800	2	5	12	
.160	.400	1	2.5	6.3	15	
.200	.500	1.25	3.15	8	16	
250	630	16	4	10	20	

### **Specifications**

Time-delay protection of electronic equipment and appliances when fuses to International Standards are required. Replacement fuse for foreign equipment.

**Voltage Rating** 250 Vac L 20 mm (.79") **Dimensions D** 5.2 mm (.20") Sample Part 0215005.VXP

For fuses with axial leads, request 215\_XEP series.

littelfuse.com/215

# 216 Series 5 x 20 mm IEC Fast-Acting





AMPERE RATINGS						
.050	.125	.315	1	2.5	6.3	16
.063	.160	.500	1.25	3.15	8	_
.080	.200	.630	1.6	4	10	_
.100	.250	.800	2	5	12.5	_

### **Specifications**

Fast-acting protection of electronic equipment and appliances when fuses to International Standards are required. Replacement fuse for foreign equipment.

**Voltage Rating** 250 Vac

60 Vdc (1.25-3.15, 4-6.3 A only)

**Dimensions** L 20 mm (.79")

**D** 5.2 mm (.20") Sample Part 0216005.VXP

For fuses with axial leads, request 216\_XEP series.

littelfuse.com/216

### 217 Series 5 x 20 mm IEC Fast-Acting



AMPERE RATINGS							
.032	.100	.250	.630	1.6	4	10	
.050	.125	.315	.800	2	5	15	
.063	.160	.400	1	2.5	6.3	_	
.080	.200	.500	1.25	3.15	8	_	

#### **Specifications**

Fast-acting protection of electronic equipment and appliances when fuses to International Standards are required. Replacement fuse for foreign equipment.

**Voltage Rating** 250 Vac

75Vdc (2-3.15 A only)

60 Vdc (6.3, 2.-5 A only)

Dimensions L 20 mm (.79") **D** 5.2 mm (.20")

Sample Part 0217005.VXP

For fuses with axial leads, request 217\_XEP series.

littelfuse.com/217

### 218 Series 5 x 20 mm IEC Slo-Blo®



AMPERE RATINGS						
.032	.100	.315	1	3.15	10	
.040	.125	.400	1.25	4	12.5	
.050	.160	.500	1.6	5	15	
.063	.200	.630	2	6.3	16	
.080	.250	.800	2.5	8	_	

### **Specifications**

Time-delay protection of electronic equipment and appliances when fuses to International Standards are required. Replacement fuse for foreign equipment.

**Voltage Rating** 250 Vac **Dimensions** L 20 mm (.79") **D** 5.2 mm (.20") Sample Part 0218005.VXP

For fuses with axial leads, request 218 XEP series. littelfuse.com/218

# 235 Series 5 x 20 mm UL/CSA Fast-Acting



AMPERE RATINGS						
.100	.300	.700	1.60	3.5	7	
.125	.400	.800	2	4	_	
.200	.500	1	2.5	5	_	
.250	.600	1.25	3	6	_	

### **Specifications**

5 x 20 mm fuses designed to UL and CSA standards. Fast-acting protection of electronic equipment and appliances.

250 Vac  $^{1}/_{10} - 3 ^{1}/_{2} A$ **Voltage Ratings** 125 Vac 4 - 7 A **Dimensions L** 20 mm (.79") **D** 5.2 mm (.20") Sample Part 0235005.VXP For fuses with axial leads, request 235\_XEP series.

littelfuse.com/235

# 239 Series 5 x 20 mm UL/CSA Slo-Blo®



AMPERE RATINGS							
.080	.200	.500	.800	2	3.20	7	
.100	.250	.600	1	2.5	3.50	_	
.125	.300	.700	1.25	3	4	_	
.150	.400	.750	1.60	3.15	5	_	

### **Specifications**

5 x 20 mm fuses designed to UL and CSA standards. Time-delay protection of electronic equipment and appliances.

250 Vac  $^2/_{10} - 3 \, ^1/_2 \, A$ **Voltage Ratings**  $125 \ Vac \ 4 - 7 \ A$ **Dimensions L** 20 mm (.79") **D** 5.2 mm (.20") Sample Part 0239005.VXP

For fuses with axial leads, request 239\_XEP series.

littelfuse.com/239

Note: All fuses on this page are available in packaged and bulk configurations



# **BLADE FUSES**

### MINI® Smart Glow



### **Specifications**

Smart Glow fuses are innovative automotive style fuses (ATO, MINI, and MAXI) that feature an indicator light that glows when the fuse is blown, saving time to troubleshoot an open circuit.

Voltage Rating Sample Part 14 Vdc 0MIN010.V

0MIN010.VPGL0

# MINI® Fast-Acting (I) ROHS (P)



### **Specifications**

The MINI® Fuse, with its miniature design patented by Littelfuse, meets the need for more circuits to be protected while utilizing less space.

NMINIO20 V

Voltage Rating Sample Part

littelfuse.com/mini

MINI Fuses are available in packaged and bulk configurations. See 297 series on web.

### Fuses Rated 58 V Low Profile MINI®





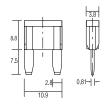
### **Specifications**

The low profile MINI has similar performance as the standard mini fuse. The lower overall height allows for more space and weight savings.

Voltage Rating 58 Vdc Sample Part LMIN010.V

littelfuse.com/lmin

#### MINI dimensions in mm



Low Profile MINI dimensions in mm (inches)





### \_\_\_\_

# ATO® Smart Glow



### **Specifications**

Smart Glow fuses are innovative automotive style fuses (ATO, MINI, and MAXI) that feature indicator light that glows when the fuse is blown, saving time to troubleshoot an open circuit.

Voltage Rating Sample Part 14 Vdc 0AT0010.VPGL0

# ATO® Fast-Acting





### **Specifications**

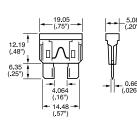
The ATO® Fuse was designed and patented by Littelfuse in 1976 and set the standard for automotive circuit protection. It features industry standard color coding to indicate amperage rating.

Voltage Rating 32 Vac/dc Sample Part 0AT0020.V

littelfuse.com/ato

ATO Fuses are available in packaged and bulk configurations. See 287 series on web.

# ATO dimensions in mm (inches)



# ATO® / MINI® Color Key

CURRENT RATING	HOUSING COLOR
1 A	
2 A	
3 A	
4 A	
5 A	
7.5 A	
10 A	
15 A	
20 A	
25 A	
30 A	
40 A	

Note: MINI not available in 1 A or 40 A.

### MAXI™ Smart Glow



#### **Specifications**

Smart Glow fuses are innovative automotive style fuses (ATO, MINI, and MAXI) that feature an indicator light that glows when the fuse is blown, saving time to troubleshoot an open circuit.

Voltage Rating Sample Part 14 Vdc 0MAX030.XPGL0

### MAXI™ Slo-Blo



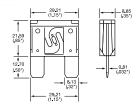
# **Specifications**

Designed and patented by Littelfuse, the MAXI™ Fuse is ideal for motor powered applications which have large inrush currents.

Voltage Rating 32 Vdc Sample Part 0MAX030.X

littelfuse.com/maxi

### MAXI dimensions in mm (inches)



# MAXI™ Color Key

CURRENT RATING	HOUSING COLOR
20 A	
25 A	
30 A	
35 A	
40 A	
50 A	
60 A	
70 A	
80 A	

MAXI Fuses are available in packaged and bulk configurations. See 299 series on web.

FUSE RATING

60 A



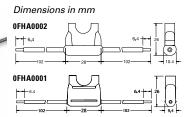
# **BLADE FUSES**

### FHA Blade Fuse Holders—In-Line Fuse Holder for ATO® Style Blade Fuse



Used with ATO Fuse 1 to 20 A or 25 A and 30 A. Supplied with two 4" (102mm) wire leads.

littelfuse.com/fha



PART NUMBER	DESCRIPTION	FUSE RATING
0FHA0001_	16AWG/1.3mm <sup>2</sup> STRANDED BLACK WIRE	20 A
0FHA0002_	12AWG/3.3mm <sup>2</sup> STRANDED ORANGE WIRE	30 A

Wire length, color and diameter can be customized upon request.

Wire length, color and diameter can be

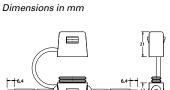
customized upon request.

### FHAC Blade Fuse Holders—In-Line Splash-Waterproof Fuse Holder for ATO® Style Blade Fuse



Used with ATO Fuse 1 to 20 A or 25 A and 30 A. Supplied with two 4" (102mm) wire leads. Includes protective cover for harsh environments.

littelfuse.com/fha



PART NUMBER	DESCRIPTION	FUSE RATING
FHAC0001_	16AWG/1.3mm <sup>2</sup> STRANDED BLACK WIRE	20 A
FHAC0002_	12AWG/3.3mm <sup>2</sup> STRANDED ORANGE WIRE	30 A

Wire length, color and diameter can be customized upon request.

### FHM Blade Fuse Holders-In-Line Splash-Waterproof Fuse Holder for MINI® Style Blade Fuse



Used with MINI Fuse 1 to 20 A or 25 A and 30 A. Supplied with two 4.78" (122 mm) wire leads. Includes protective cover for harsh environment.

littelfuse.com/fhm

# MAH Blade Fuse Holders-In-Line Fuse Holder for MAXI™ Style Blade Fuse



Supplied with two 6", 6-gauge wire leads for up to 60 A MAXI Fuse applications, this In-Line Fuse holder also provides a protective cover for harsh under-the-hood environments. Mounting hole permits easy bulkhead installation.

littelfuse.com/mah

# JCASE® Cartridge **Fuse Rated 32 V**



#### **Specifications**

The JCASE is a cartridge style fuse with female terminal design. JCASE provides both increased time delay and low voltage drop to protect high current circuits. JCASE has the ability to handle in-rush currents. The JCASE was designed and patented by Littelfuse.

littelfuse.com/jcase

### Low Profile JCASE® **Fuse Rated 58 V**

20 A

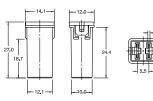
30 A



### **Specifications**

The Low Profile JCASE fuse has similar performance characteristics as the standard JCASE fuse. The lower overall height reduction allows for more space and weight savings and also allows for a shorter male blade terminal, saving additional weight and

#### JCASE® 32 V Dimensions in mm



#### Low Profile JCASE® 58 V Dimensions in mm



## JCASE<sup>®</sup> **Color Key**

HOUSING COLOR

Littelfuse.com

material savings in fuse box designs.