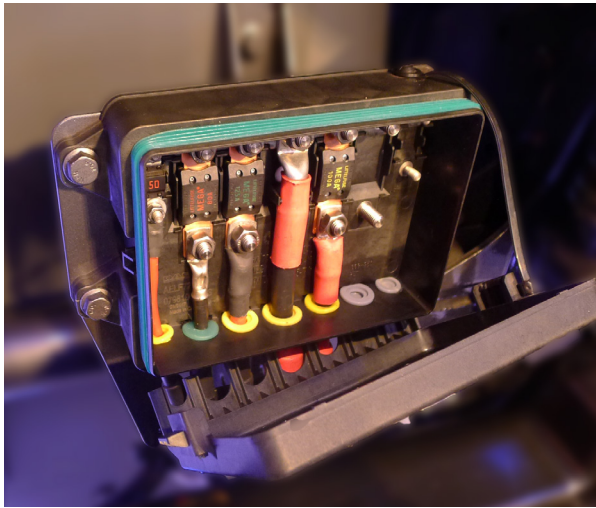
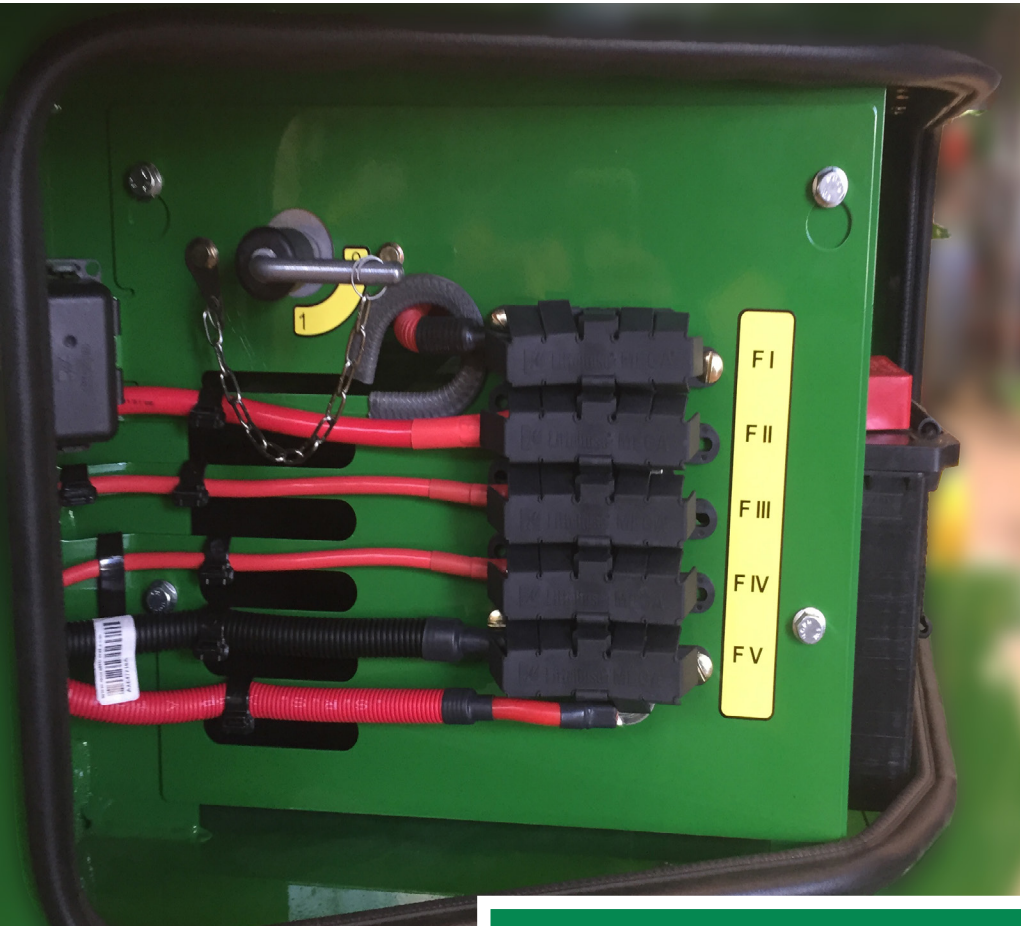
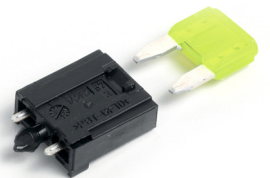
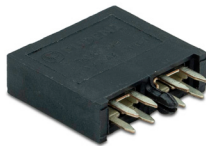
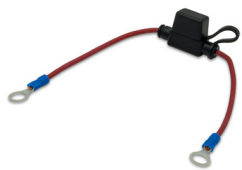




Expertise Applied | Answers Delivered



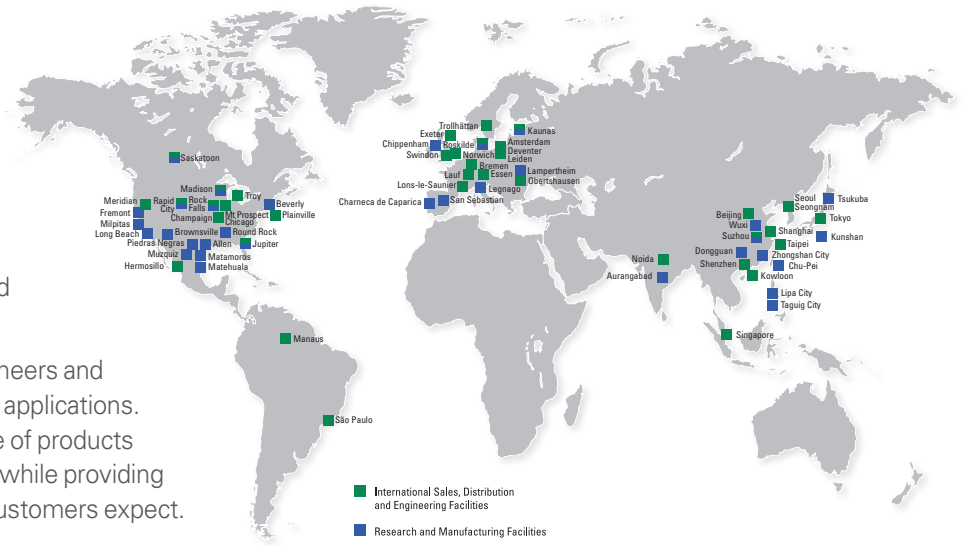
# AUTOMOTIVE AND COMMERCIAL VEHICLE FUSE HOLDERS



# Local Resources for a **GLOBAL** Market

Littelfuse products help protect, control and distribute vehicle electrical power in OEM and aftermarket applications for industries such as heavy-duty truck, construction and agriculture. We offer a broad and reliable selection of fuses, fuse blocks, power distribution modules, high-current switches, relays and solenoids to fit your requirements.

For decades, we have helped OEMs, engineers and end-users select the right product for their applications. Today, Littelfuse offers the broadest range of products for protection, sensing, and control needs while providing exceptional service and support that our customers expect.



## Why Choose Littelfuse

Littelfuse is the global leader in circuit protection solutions with the broadest spectrum of electrical power technologies. Our Commercial Vehicle Products portfolio provides a total solution to protect, control and distribute vehicle electrical power.

### Single Source for Vehicle Electrical Products

Littelfuse offers an extensive commercial vehicle product line and if an off-the-shelf product does not fit your needs we can work with you to develop a customized solution that fits your application.

### Product Development and Testing Expertise

Our global team of engineers design innovative solutions, provide customer support and perform product testing to ensure you have the best solution that meets all requirements and regulations.

### Global Support Team

Littelfuse has a world-wide team of specialist prepared to support your application needs from conceptual development to continuous quality assurance for the lifetime of your program.

[Littelfuse.com/fuseholders](http://Littelfuse.com/fuseholders)





# Fuse Considerations

## Beware of Counterfeit Fuses

At first glance, it's hard to tell the difference between a genuine Littelfuse blade fuse and a counterfeit. The counterfeit may have the same physical dimensions, but using it can be dangerous because it fails to perform to the stringent performance and safety specifications developed by Littelfuse and the OEMs.

In many cases, the elements in counterfeit fuses do not correspond with the amperage specification stamped on the fuse. This will prevent the elements from opening at the rated or correct amperage, which could result in a fire causing serious damage to the vehicle, its contents and its passengers.

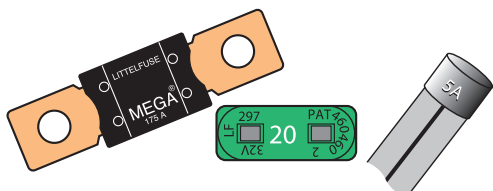
Responding to this growing problem, the United States International Trade Commission and then President Ronald Reagan issued and approved an exclusion order in 1983 prohibiting the importation of the look-alike blade fuses into the United States. This order was initiated because many of these fuses were proven to be totally unsafe. The photos shown here indicate why counterfeit fuses are potentially unsafe and present a fire risk.

To guarantee quality and safety, look for the Littelfuse name on fuses and fuse packaging.



## Current Rating – Amperage

The current rating, marked on every fuse, is the maximum current in amperes that the fuse can continuously carry under specified conditions.



**Tip:** When selecting a fuse, make sure the current rating of the fuse is the same amperage as the circuit. You can obtain the current rating of a circuit by looking in the owner's manual of the vehicle or checking to see if it is written on the fuse block.

## Overfusing and Underfusing

**Overfusing** is when the fuse has a current rating higher than the rating of the circuit. In this case, the fuse will not be able to protect the circuit properly because the circuit could reach overcurrent levels, causing damage and safety hazards, before the fuse would blow.

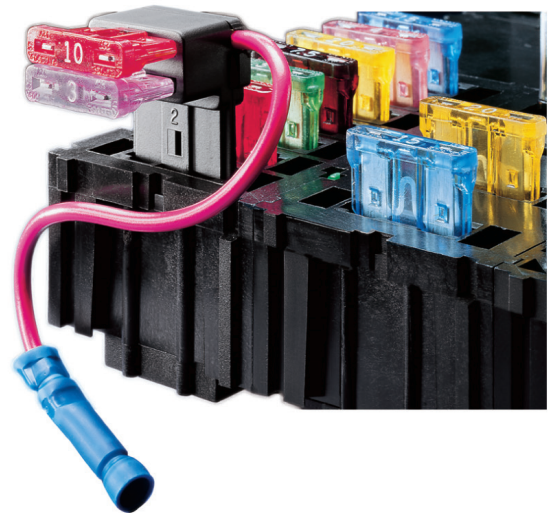
**Underfusing** is when the fuse is rated at a current too far below the rating of the circuit. In this case the fuse will blow, even though the circuit is functioning normally without an overcurrent. Underfusing almost guarantees that a fuse will blow repeatedly. This is referred to as a nuisance blow.

## Voltage Rating

The voltage rating, marked on every fuse, indicates the maximum voltage at which the fuse is designed to operate safely if an overcurrent occurs.

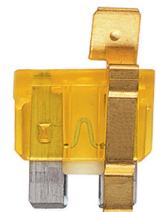
**Tip:** The fuse voltage rating must equal or exceed this circuit voltage where the fuse is installed. This is not a problem in fuse selection because automotive fuse applications are typically around 12 volts, while the voltage rating of the majority of Littelfuse automotive fuses including ATO Fuse, MINI Fuse, MAXI Fuse and MEGA Fuse is 32 volts.

## ADDING A CIRCUIT



Always use a circuit protection device with a fuse holder or fuse block whenever adding additional circuits to ensure optimal safety. The fastest, easiest option for installers who need to add a circuit for applications such as electronic components, is the Littelfuse Add-A-Circuit Fuse Holder. Add-A-Circuit, available in ATO® and MINI® blade fuse versions, is designed to facilitate installation of fuses for accessories of 10 amps or less. The Add-A-Circuit adapts the fuse block to the installer's needs, quickly turning one slot in the fuse block into two, providing a safe, economical alternative to splicing or fusetaps.

**Caution:** Fusetaps are not a recommended alternative for adding circuits because they can overstress the terminals in the fuse block. This situation can create a loose fitting fuse, which in turn produces excessive heat, which can cause nuisance blows, even melting of the fuse and fuse block and possibly an expensive repair in the future. When a fusetap is used, in many cases there is no fuse protecting the new circuit, a condition which can also present a hazard.



Another alternative to adding a circuit is the Littelfuse Battery Power Feed (BPF1). This device attaches directly to the battery terminal, allowing the addition of up to three circuits. Then use an in-line fuse holder to protect the circuit properly.



# Selecting The Right Fuse

Understanding how circuit protection works is a key to diagnosing automotive electrical problems. When a fuse blows, that means the fuse is doing its job — sending you a message that something needs to be fixed.

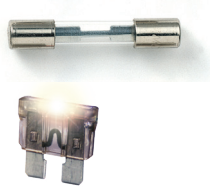
## WHAT IS THE PURPOSE OF A FUSE?

A fuse is a safety valve. It is designed to stop current from exceeding the rating of the wires or components. Without fuses, excessive current could cause damage to electrical systems, and even result in fires.

In general, a fuse has a simple construction. The key component is the “element” — a short piece of metal wire or strap.

## WHAT CAUSES A FUSE TO BLOW?

The element is designed to melt at a specific temperature, to protect wires and equipment from overcurrents. An overcurrent is any current that exceeds the amperage rating or wiring capacity of equipment or devices under normal conditions of use.



If an overcurrent causes the current in a circuit to rise above a specific level — often the circuit’s rating — the heat produced will melt the fuse’s element, causing the fuse to “blow.” This opens the circuit and immediately stops the flow of current. Fuses are designed to blow at temperatures far below those that would cause damage or hazards.

Once a fuse is blown, it can be replaced to allow the current to flow again. **But simply replacing a fuse may not be the solution to the problem.**

In fact, there is a chance the fuse will just blow again, because the fuse is signaling a problem in the system. Understanding the factors that cause a fuse to blow will help you diagnose automotive electrical problems.

There are two types of overcurrents that can cause a fuse to blow: overloads and short circuits.

### Overload

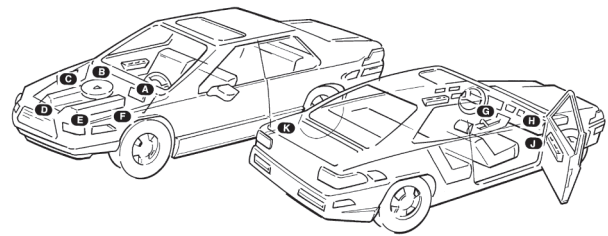
**What:** The current exceeds the amperage at which the wires or equipment are rated.

**Why:** Too many devices are connected to one circuit, or a device malfunctions and draws higher than its normal operating current. Sustained overloads cause overheating of circuit components and the fuse blows.

### Short Circuit

**What:** The current is out of its normal path.

**Why:** A malfunction creates an unintended path for electricity to flow from the battery or alternator to ground. This can be caused by the touching of any positive wire to a ground wire, e.g. due to frayed wire insulation, or tools laid across the positive and ground wires of a circuit. The uncontrolled current to ground then surpasses the normal resistance of the wire contained in the circuit, forcing higher and higher current to the point of the generating heat which blows the fuse.



**Bold letter indicates fuse block location.**

- |                          |  |
|--------------------------|--|
| <b>A</b> Left fire wall  | <b>G</b> Behind/under dash left                        |
| <b>B</b> Right fire wall | <b>H</b> Behind/in glove box                           |
| <b>C</b> Right fender    | <b>J</b> Behind/under dash right                       |
| <b>D</b> Right front     | <b>K</b> Rear compartment                              |
| <b>E</b> Left front      | <b>IL</b> In-line with device protected                |
| <b>F</b> Left fender     | (locations may vary from car to car, see your dealer.) |

## FINDING A FUSE

To be able to address fuse issues, you first must be able to locate the appropriate fuse within the vehicle. In today’s vehicles, each individual wire is protected by a circuit protection device.

Fuses are contained in fuse blocks located at various points throughout the vehicle. The diagram above illustrates typical fuse block locations.

## SELECTING THE RIGHT FUSE

Once you have found the fuse that has blown, and solved the problem in the vehicle, you must replace the blown fuse with an appropriate device.

When selecting the right fuse for replacement, you should consider the following:

### Physical Type

The replacement fuse must be of the same physical type as the blown fuse being replaced. It must be of the same style and have the same dimensions so that it can fit properly in the fuse block or fuse holder. Check your owner’s manual to determine the appropriate fuse type.

**Installation Tip:** Littelfuse holds patents for the designs on most automotive fuses. It is important to remember that the physical type of the fuse is important, but it is not the only factor affecting the fuse’s function. Although some fuses appear to be the same type and dimension as Littelfuse fuses, they do not necessarily have the same performance characteristics.

### Look for the Littelfuse OEM Label

To guarantee the same level of quality in circuit protection that the major automotive manufacturers require for their original equipment fuses, look for the OEM seal on Littelfuse aftermarket products. Only Littelfuse products can guarantee this level of quality.



# Why Should You Use a Fuse Holder?

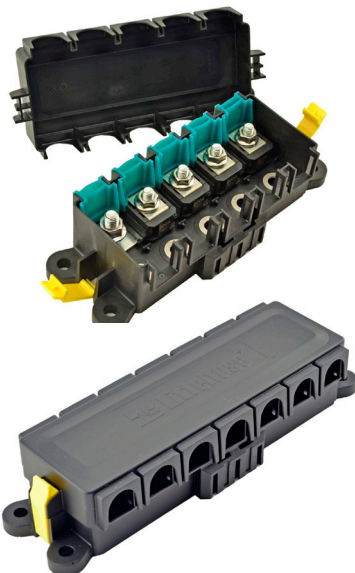
Every fuse requires a fuse holder for installation. That's because fuse holders perform two essential functions.

The first is to mount the fuse or fuses in a convenient or easily accessible location, whether it is for the sake of integration in assembly or for applications that require frequent serviceability.

The second job of a fuse holder is to shield the critical circuit protection elements in an application against environmental conditions, whether it's simply safeguarding against debris interfering with the connections or providing full waterproof and dust-tight protection.



ZCASE® FHZ bolt-down fuse holders shown below can be found on page 7.



## Application Considerations

Fuse holders are designed to work with specific fuses. However, your application requirements will dictate the type of fuse and fuse holder you need. When selecting a fuse and fuse holder, consider your application's electrical load requirements, number of circuits, and mounting location.

Do you need circuit protection for a low-amperage or high-amperage application? Are you trying to protect multiple circuits in a tight space? Will you need to mount the fuse holder in an exposed location?

Littelfuse offers a large portfolio of in-line and bolt-down fuse holders, and fuse blocks for high-current and low-current applications as well as options that are waterproof or splashproof or come with an ignition protection rating.

### In-Line Fuse Holders

In-line fuse holders offer a flexible, quick solution for placing fuses in cramped spaces or for adding overflow circuits or accessory circuits for low-current applications, such as electronics, panel displays, blower motors, air conditioners, and lighting.

In our portfolio, you'll find in-line fuse holders for ATO®, MINI®, MAXI®, JCASE®, MIDI®, and glass fuses. We offer in-line fuse holders with various wire lead sizes, colors, and lengths to accommodate different industry guidelines and applications. Plus, we have options with and without covers and with and without waterproof ratings.

### Bolt-Down Fuse Holders & Fuse Blocks

For high-current applications, such as battery and alternator connections and starter fusing, the electrical requirements dictate the use of larger fuses like MEGA®, MIDI®, and ZCASE®. Because of their larger size and placement requirements, these fuses typically need a bolt-down fuse holder or multi-fuse block to house and protect them from harsh conditions. For these applications, we offer battery-mount, stud-mount, bolt-down fuse holders with and without waterproof ratings and ignition protection ratings.

Littelfuse also offers fuse blocks and boxes for both high-amperage fuses, such as MEGA® and MIDI®, and low-amperage fuses, such as ATO® and MINI®, that are designed for efficient multi-fuse installation and power distribution.





### Circuit Protection & Electrical Ratings



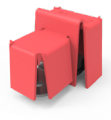



While the fuse is what we typically think of as providing the circuit protection because it is the weak link that breaks when there is a type of fault in the circuit, the fuse holder is an essential part of circuit protection that helps prevent injuries and damage to vehicles.




Though fuse holders are designed to work with specific fuse types, it is important to look for the electrical ratings, such as maximum voltage and maximum current, of the fuse holder to ensure the fuse holder can support the intended fuse.





# ZCASE® Fuse Holders

Battery-mount, stud-mount, and multi-fuse power distribution options for 32V ZCASE® fuses.

Series Name	ZCASE-BMZ		ZCASE-SMZ	
<b>Description</b>	The ZCASE® BMZ battery-mounted fuse holder lets you install high-current fusing on a post-style battery. Insulated bolts allow fuse assembly using standard M8 threaded hardware.		The space-saving ZCASE® SMZ stud-mount fuse holder features an insulated M8 stud on the busbar and enables direct installation of fuses on an alternator, battery switch, or electrical relay.	
<b>Part Numbers</b>	0FHZ00853-BX	0FHZ00854-BX	0FHZ0201Z	0FHZ0202Z
<b>Product Image</b>				
<b>Max Current Rating</b>	275A	275A	400A	400A
<b>Mounting Method</b>	M8 Stud Mount - Battery terminal	M8 Stud Mount - Battery terminal	M8	M8
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC	32V DC
<b>Notes</b>	3-Position	2-Position	With Fuse & Stud Cover	With Fuse Cover

Series Name	ZCASE-SMZ					
<b>Description</b>	The space-saving ZCASE® SMZ stud-mount fuse holder features an insulated M8 stud on the busbar and enables direct installation of fuses on an alternator, battery switch, or electrical relay.					
<b>Part Numbers</b>	0FHZ0211Z	0FHZ0212Z	0FHZ0231Z	0FHZ0232Z	0FHZ0233Z	0FHZ0241Z
<b>Product Image</b>						
<b>Max Current Rating</b>	400A	400A	400A	400A	400A	400A
<b>Mounting Method</b>	M10	M10	M6	M6	M6	M10
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC	32V DC	32V DC	80V DC
<b>Notes</b>	With Fuse & Stud Cover	With Fuse Cover	With Fuse & Stud Cover	With Fuse Cover	Without Cover	With Fuse Holder



Series Name	ZCASE-BMZB		
<b>Description</b>	The ZCASE® BMZB battery-mounted fuse holder is for up to 400A ZCASE® M6 fuses. It features an integrated busbar and eliminates the need for additional or complex wiring around a battery system.		
<b>Part Numbers</b>	FHZ210	FHZ310	FHZ410
<b>Product Image</b>			
<b>Max Current Rating</b>	400A	400A	400A
<b>Mounting Method</b>	Post-Style Battery Terminal	Post-Style Battery Terminal	Post-Style Battery Terminal
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	2-Position	3-Position	4-Position




Series Name	ZCASE-FHZ			
<b>Description</b>	The space-saving ZCASE® FHZ bolt-down fuse holder. This product works with ZCASE Fuse Rated 32V.			
<b>Part Numbers</b>	0FHZ0002Z	0FHZ0005Z	0FHZ0007Z	0FHZ0009Z
<b>Product Image</b>				
<b>Max Current Rating</b>	400A	400A	400A	400A
<b>Mounting Method</b>	Bolt-Down	Bolt-Down	Bolt-Down	Bolt-Down
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC	32V DC
<b>Notes</b>	5-Stud Assembly	5-Stud Assembly	7-Stud Assembly	7-Stud Assembly












# MEGA® Fuse Holders

Sealed, flexible, and splashproof options for high-current 32V MEGA® bolt-down fuses.

Series Name	MEGA-298-Splashproof	
Description	The MEGA® 298 Splashproof Series fuse holder with M8 stud input and output terminals is ideal for battery and alternator connections. When mated, the nylon base and cover provide splashproof protection.	
Part Numbers	298907-030	298907-040
Product Image		
Max Current Rating	250A	-
Mounting Method	Plastic tab with M6 hole	Plastic tab with M3.8 hole (Mates with 298907-030 base)
Max Voltage Rating	70V DC	-
Notes	Base	Cover




Series Name	MEGA-Flex		
Description	The MEGA® Flex fuse holder has a flexible cover to accommodate large wire sizes and ring terminal stack up. A dovetail feature lets you use multiple fuse holders to create a power distribution block.		
Part Numbers	02981028HXFC-SS	02981028HXFC	02981028HXFC-RED
Product Image			
Max Current Rating	500A	500A	500A
Mounting Method	Bolt-Down, M6 Mounting hole and M6 Slot X 6MM Long	Bolt-Down, M6 Mounting hole and M6 Slot X 6MM Long	Bolt-Down, M6 Mounting hole and M6 Slot X 6MM Long
Max Voltage Rating	70V DC	70V DC	70V DC
Notes	Stainless Steel Hardware, Black Cover	Zinc-Plated Steel Hardware, Black Cover	Zinc-Plated Steel Hardware, Red Cover



Series Name	MEGA-298-Bolt-Down				
Description	The MEGA® 298 Bolt-Down Series fuse holder provides ultra-high-current protection. A dovetail feature lets you connect multiple fuse holders for multi-fuse applications.				
Part Numbers	02981039ZXT	02981001ZXT	02981003ZXT	02980900Z	02980900S
Product Image					
Max Current Rating	500A	500A	500A	500A	250A
Mounting Method	Bolt-Down, M6 Slots x 15mm Long	Bolt-Down, M6 Mounting Holes	Bolt-Down, M6 Mounting Holes	Bolt-Down, M6 Mounting Holes	Bolt-Down, M6 Mounting Holes
Max Voltage Rating	70V DC	70V DC	70V DC	70V DC	70V DC


Series Name	MEGA-SN			
Description	The MEGA® SN sealed, in-line fuse holder is for high-current, in-line main or branch circuit protection in harsh environments. AssureLatch™ technology ensures water resistance (IP66/P69K) and ignition protection (SAE J1171/ISO 8846).			
Part Numbers	880014150	880014175	880014	880014125
Product Image				
Max Current Rating	150A	175A	500A	125A
Mounting Method	Bolt-Down, M6 Mounting hole and M6 Slot x 6mm Long	Bolt-Down, M6 Mounting hole and M6 Slot x 6mm Long	Bolt-Down, M6 Mounting hole and M6 Slot x 6mm Long	Bolt-Down, M6 Mounting hole and M6 Slot x 6mm Long
Max Voltage Rating	70V DC	70V DC	70V DC	70V DC
Notes	With 150A Fuse	With 175A Fuse	Without Fuse	With 125A Fuse

# MINI® Fuse Holders

Sealed in-line, PCB-mount, and fuse block options for 32V MINI® fuses, plus Add-A-Circuit® options for 32V and 58V MINI® fuses.




Series Name	SD MINI		
<b>Description</b>	SD MINI® fuse blocks feature LED indicators that alert you to blown fuses, enabling quick maintenance and decreased equipment downtime. A snap-on, insulating cover is included.		
<b>Part Numbers</b>	880024	880025	880026
<b>Product Image</b>			
<b>Max Current Rating</b>	100A	100A	100A
<b>Mounting Method</b>	Bolt-Down; 4xM5	Bolt-Down; 4xM5	Bolt-Down; 4xM5
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	4 Cavities	6 Cavities	10 Cavities



Series Name	Add A Circuit MINI Carded	
<b>Description</b>	The MINI® Add-A-Circuit® fuse holder for MINI® or Low Profile MINI® fuses allows installation of additional circuits without cutting or splicing. The fuse tap turns 1 fuse slot into 2 to protect the new and existing circuits.	
<b>Part Numbers</b>	OFHM0200Z	FHLM0200Z
<b>Product Image</b>		
<b>Max Current Rating</b>	10A	100A
<b>Mounting Method</b>	In-Line Fuse Holder Blades / Butt Splice Connector	In-Line Fuse Holder Blades / Butt Splice Connector
<b>Max Voltage Rating</b>	32V DC	58V DC
<b>Notes</b>	MINI Fuse	Low Profile MINI Fuse



Series Name	MINI-FL1
<b>Description</b>	The MINI® FL1 fuse holder lets you add a MINI® fuse to a printed circuit board (PCB). A heat-resistant body with a UL 94 V-0 flammability rating makes it ideal for accessory, sensor, and vehicle control circuits. Fits a 7.62mm pitch.
<b>Part Numbers</b>	178.6764.0001
<b>Product Image</b>	
<b>Max Current Rating</b>	30A
<b>Mounting Method</b>	PCB Mount
<b>Max Voltage Rating</b>	32V DC
<b>Notes</b>	Stand-Alone Vertical Holder



# MINI<sup>®</sup> Fuse Holders (continued)




Series Name	MINI-153-PC		
Description	The MINI <sup>®</sup> 153-PC fuse holder features a circuit board locking anchor for secure installation of a MINI <sup>®</sup> blade-style fuse. Horizontal, stackable vertical, and single vertical (end unit) mounting options are available.		
Part Numbers	01530007Z	01530008Z	01530009Z
Product Image			
Max Current Rating	20A	20A	20A
Mounting Method	PC Horizontal Mount	PC Vertical Mount	PC Vertical Mount
Max Voltage Rating	32V DC	32V DC	32V DC
Notes	4 Cavities	End Unit (No Post)	With Interlocking Post




Series Name	MINI-FHM	
Description	The MINI <sup>®</sup> 153-PC fuse holder features a circuit board locking anchor for secure installation of a MINI <sup>®</sup> blade-style fuse. Horizontal, stackable vertical, and single vertical (end unit) mounting options are available.	
Part Numbers	0FHM0001SXJ	0FHM0002SXJ
Product Image		
Max Current Rating	20A	30A
Mounting Method	In-Line	In-Line
Max Voltage Rating	32V DC	32V DC
Notes	Black 14 AWG Wire	Orange 12 AWG Wire



Series Name	Sealed MINI Inline Fuse Holder	
Description	The MINI <sup>®</sup> 153-PC fuse holder features a circuit board locking anchor for secure installation of a MINI <sup>®</sup> blade-style fuse. Horizontal, stackable vertical, and single vertical (end unit) mounting options are available.	
Part Numbers	FHMS200	FHMS201
Product Image		
Max Current Rating	30A	20A
Mounting Method	In-Line	In-Line
Max Voltage Rating	32V DC	32V DC
Notes	Red 12 AWG GXL Wire	Red 14 AWG GXL Wire

# ATO® Fuse Holders




Add-A-Circuit®, fuse block, and sealed in-line options for 32V ATO® blade-style fuses, plus PCB-mount options for 32V and 58V ATO® fuses.




Series Name	ZCASE-BMZ		Add A Circuit ATO
<b>Description</b>	The ATO® Sealed In-Line Series waterproof fuse holder makes it simple to install an ATO® blade-style fuse in a wet or dirty environment outside of the cab. IP67 rating. Red GXL wire leads.		The ATO® Add-A-Circuit® in-line fuse holder allows easy installation of an added circuit without cutting or splicing. The fuse tap turns a single fuse slot into two.
<b>Part Numbers</b>	FHAS100	FHAS101	0FHA0200Z
<b>Product Image</b>			
<b>Max Current Rating</b>	30A	20A	400A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	1 Cavity	1 Cavity	Includes a 16 AWG UL1015 Wire Lead



Series Name	SD ATO		
<b>Description</b>	SD ATO® fuse blocks feature LED indicators that alert you to blown fuses, enabling quick maintenance and decreased equipment downtime. A snap-on, insulating cover is included.		
<b>Part Numbers</b>	880021	880022	880023
<b>Product Image</b>			
<b>Max Current Rating</b>	100A	100A	100A
<b>Mounting Method</b>	Bolt-Down; 4xM5	Bolt-Down; 4xM5	Bolt-Down; 4xM5
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	4 Cavities	6 Cavities	10 Cavities

Series Name	ST ATO	
<b>Description</b>	ST ATO® fuse blocks centralize wiring into a single, convenient location and ensure the safe distribution of power. They feature an integrated negative busbar and include a sheet of circuit identification labels and a snap-on, insulating cover.	
<b>Part Numbers</b>	880027	880028
<b>Product Image</b>		
<b>Max Current Rating</b>	100A	100A
<b>Mounting Method</b>	Bolt-Down; 4xM5	Bolt-Down; 4xM5
<b>Max Voltage Rating</b>	32V DC	32V DC
<b>Notes</b>	6 Cavities	12 Cavities

# ATO® Fuse Holders (continued)




Series Name	ATO-155		ATO-AFH
<b>Description</b>	The ATO® 155 stackable, in-line, panel-mount fuse holder with looped wire leads makes it simple to install an ATO® or FKS blade-style automotive fuse.		ATO® FH2 stackable-block, panel-mount fuse holders can be attached in the x- and y-direction and feature a thermoplastic body with a UL 94 V-0 rating and a transparent cover.
<b>Part Numbers</b>	01550300Z	01550400Z	0AFH0001Z
<b>Product Image</b>			
<b>Max Current Rating</b>	20A	30A	20A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	Black 14 AWG Wire	Orange 10 AWG Wire	Without Fuse




Series Name	ATO-FHAC		
<b>Description</b>	The ATO® FHAC waterproof, in-line fuse holder features a built-in protective cover to provide an IP67-rated enclosure.		
<b>Part Numbers</b>	FHAC0001ZXJ	FHAC0002ZXJ	FHAC0001ZXJG
<b>Product Image</b>			
<b>Max Current Rating</b>	30A	30A	40A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32 VDC	32 VDC
<b>Notes</b>	Black 16 AWG Wire	Orange 12 AWG GXL Wire	Black 16 AWG Wire


Series Name	ATO-FHA	
<b>Description</b>	The ATO® FHA fuse holder has wire leads for easy in-line installation. It features a heat-resistant body and tin-plated copper alloy contacts.	
<b>Part Numbers</b>	0FHA0001SXJ	0FHA0002SXJ
<b>Product Image</b>		
<b>Max Current Rating</b>	20A	30A
<b>Mounting Method</b>	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32V DC
<b>Notes</b>	Black 16 AWG Wire	Orange 12 AWG Wire



# ATO® Fuse Holders (continued)



Series Name	ATO-FKH		277 In-Line
<b>Description</b>	Designed for 32V ATO® blade-style fuses up to 30A, the ATO® FKH in-line fuse holder is also compatible with FKS fuses at 80V DC.		The 277 In-Line fuse holder features a tethered cover that provides waterproof protection. Red PVC FLY HT105° ISO 6722 leads enable simple in-line installation.
<b>Part Numbers</b>	178.6152.0002	178.6152.0001	277.6306.0001
<b>Product Image</b>			
<b>Max Current Rating</b>	30A	30A	20A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	80V	80V	32V DC
<b>Notes</b>	DFK-2 Spring Leaf Terminals; Bulk Pack	DFK-2 Spring Leaf Terminals	Fuse Holder with Cover

Series Name	ATO-FBA5		
<b>Description</b>	The ATO® FBA5 5-Position terminal fuse block helps you protect up to 5 circuits using ATO® blade fuses. Panel-mount and PCB options are available. A clear cover provides protection while making it easy to identify blown fuses.		
<b>Part Numbers</b>	03500418Z	03500417Z	03500420Z
<b>Product Image</b>			
<b>Max Current Rating</b>	15A	15A	15A
<b>Mounting Method</b>	Vertical Contacts	Horizontal Contacts	PCB Contacts
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	Quick Connect Tin-Plated Brass Terminals on Bottom of Box; Includes Detachable Side-Mounting Brackets	Quick Connect Tin-Plated Brass Terminals on Side of Box	5 Cavities

Series Name	ATO-FLR
<b>Description</b>	ATO® FLR printed circuit board (PCB) fuse holders are for through-hole soldering. A locking feature secures the UL 94 V-0 thermoplastic housing to a PCB prior to welding.
<b>Part Numbers</b>	178.4265.0002
<b>Product Image</b>	
<b>Max Current Rating</b>	10A
<b>Mounting Method</b>	PCB Mount
<b>Max Voltage Rating</b>	58V DC
<b>Notes</b>	4 Mounting Pins

# MIDI® Fuse Holders




In-line, bolt-down, and flexible options for 32V MIDI® fuses.







Series Name	MIDI-498-IL	MIDI-Flex
<b>Description</b>	The MIDI® 498-IL in-line fuse holder provides high-current main or branch circuit protection in harsh conditions. A curved cover enables the use of heat shrink tubing (not included) for added splash protection.	The MIDI® Flex fuse holder has a flexible cover to accommodate large wire sizes and ring terminal stack up. A dovetail feature lets you use multiple fuse holders to create a power distribution block.
<b>Part Numbers</b>	04980921GXM5	04981038HXFC
<b>Product Image</b>		
<b>Max Current Rating</b>	200A	200A
<b>Mounting Method</b>	In-Line	Bolt-Down
<b>Max Voltage Rating</b>	58V DC	58V DC
<b>Notes</b>	Base and Cover	Flexible Cover Included

Series Name	MIDI-498			
<b>Description</b>	Featuring interlocking pins, the MIDI® 498 fuse holder with M5 threaded studs can be used to install a single MIDI® fuse or combined with additional fuse holders to create a fuse block. Base styles are available with and without mounting brackets.			
<b>Part Numbers</b>	04980900ZXT	04980902ZXT	04980903ZXT	04980908ZXT
<b>Product Image</b>				
<b>Max Current Rating</b>	200A	200A	200A	200A
<b>Mounting Method</b>	Bolt-Down	Bolt-Down	Bolt-Down	Bolt-Down
<b>Max Voltage Rating</b>	58V DC	58V DC	58V DC	58V DC
<b>Notes</b>	With 150A Fuse	With 175A Fuse	Without Fuse	With 125A Fuse

# MAXI® Fuse Holders

Splashproof, screw-terminal, and bulkhead mounting options for 32V MAXI® blade-style fuses.

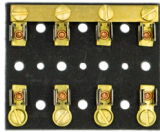
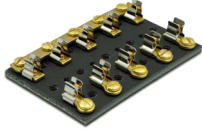
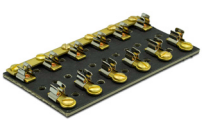
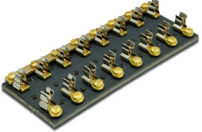

Series Name	MAXI-MAH		MAXI-MAB
<b>Description</b>	The MAXI® MAH in-line fuse holder has a tethered protective cover and a center hole in the body for easy bulkhead mounting.		The MAXI® MAB in-line, screw-terminal fuse holder safely and easily replaces hard-to-change fusible link wire, making it ideal for high-amp audio circuit protection. Interlocking feature for 2-pole installation.
<b>Part Numbers</b>	MAHC0001ZXJ	MAHC0001ZXJA	0MAB0001XP
<b>Product Image</b>			
<b>Max Current Rating</b>	60A	60A	60A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	Black 6 AWG Wire	Red 6 AWG Wire	Maxi FuseBlock without Fuse




Series Name	MAXI-152					
<b>Description</b>	The MAXI® 152 in-line, IP54 splashproof fuse holder protects fusing in harsh conditions. Available in 60A and 80A configurations with or without molded mounting tabs. Cable seals are available in various sizes.					
<b>Part Numbers</b>	01520003U	01520004Z	01520005Z	01520006Z	01520008Z	01520009Z
<b>Product Image</b>						
<b>Max Current Rating</b>	80 A	80 A	80 A	80 A	80 A	80 A
<b>Mounting Method</b>	In-Line	In-Line	In-Line	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC	32V DC	32V DC	32V DC
<b>Notes</b>	Without Mounting Tabs; Interlocking Post	With Open Mounting Tabs	With Closed Mounting Tabs	Without Mounting Tabs	With Closed Mounting Tabs	Without Mounting Tabs



# Glass® Fuse Holders




Bolt-down, multi-fuse, and in-line options for 32V glass fuses.

Series Name	Glass-FBG				
<b>Description</b>	The Glass FBG multi-pole bolt-down fuse block is compatible with SFE and AGC (3AG) glass fuses and comes in a variety of configurations, including 4-pole, 5-pole, 6-pole, and 8-pole versions.				
<b>Part Numbers</b>	M-414-01	M-415-01	M-641-01	M-643-01	M-674
<b>Product Image</b>					
<b>Max Current Rating</b>	20A	20A	20A	20A	20A
<b>Mounting Method</b>	Bolt-Down	Bolt-Down	Bolt-Down	Bolt-Down	Bolt-Down
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC	32V DC	32V DC
<b>Notes</b>	4 Positions	5 Positions	6 Positions	8 Positions	Term Block 4 Positions

Series Name	Glass-FNY	Glass-FHP	Glass-3031
<b>Description</b>	The Glass FNY in-line fuse holder accepts SFE, AGA, AGW, and AGX glass fuses. A spring-loaded, twist-lock body ensures easy fuse installation.	The Glass FHP in-line, bayonet knob fuse holder comes with 3 springs to allow use with glass SFE (7.5, 9, 14, and 20) and AGC (3AG) up to 20 amps. The red 15" looped 14 AWG wire makes in-line installation easy.	The Glass 3031 fuse holder accommodates SFE glass fuses and AGC (3AG) glass fuses. The in-line fuse holder features an 8" looped 14 AWG GPT lead, large brass contacts, and a positive twist-lock seal.
<b>Part Numbers</b>	0FNY0001ZXJ	0FHP0001Z	3031-0
<b>Product Image</b>			
<b>Max Current Rating</b>	20A	100A	5A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	32V DC	32V DC	32V DC
<b>Notes</b>	Black 14 AWG Wire	Red 14 AWG Wire	Fuse Connector

# JCASE® Fuse Holders

In-line options for 58V JCASE® and Low-Profile JCASE® fuses rated for 40A and 60A.

Series Name	JCASE-FHJ		
<b>Description</b>	The JCASE® FHJ in-line fuse holder comes with 10 AWG or 8 AWG leads for compatibility with up to 40A or 60A JCASE® or Low-Profile JCASE® fuses. Versions with a splashproof cover and/or integrated mounting bracket are available.		
<b>Part Numbers</b>	FHJC1001G	FHJC1002G	FHJC2002G
<b>Product Image</b>			
<b>Max Current Rating</b>	40A	20A	20A
<b>Mounting Method</b>	In-Line	In-Line	In-Line
<b>Max Voltage Rating</b>	58V DC	58V DC	58V DC
<b>Notes</b>	Red 10 AWG GXL Wire	Red 8 AWG GXL Wire	Red 8 AWG GXL Wire

# Multi-Fuse Power Distribution Fuse Holders

Multi-fuse power distribution boxes for 32V and 70V MIDI® & MEGA® fuses.

Series Name	MDB5			
<b>Description</b>	The MDB5 sealed, high-current power distribution box is IP67/69K rated, features a high continuous current capacity of 400A, and holds 2 MEGA® and 3 MIDI® bolt-down fuses. Configurations are available for standard 32V and 70V (48V applications) fuses.			
<b>Part Numbers</b>	07985001ZXS	07985003ZXS	07985002ZXS	07985004ZXS
<b>Product Image</b>				
<b>Fuse Type</b>	2 - MEGA® 3 - MIDI®	2 - MEGA® 3 - MIDI®	2 - MEGA® 3 - MIDI®	2 - MEGA® 3 - MIDI®
<b>Max Current Rating</b>	One 50mm² Input Wire: 200A Two 50mm² Input Wires: 400A	One 50mm² Input Wire: 200A Two 50mm² Input Wires: 400A	One 50mm² Input Wire: 200A Two 50mm² Input Wires: 400A	One 50mm² Input Wire: 200A Two 50mm² Input Wires: 400A
<b>Mounting Method</b>	Bolt-Down	Bolt-Down	Bolt-Down	Bolt-Down
<b>Max Voltage Rating</b>	32V DC	32V DC	70V DC	70V DC
<b>Notes</b>	Covered Mating Terminals	Covered Mating Terminals	Sealed Mating Terminals	Sealed Mating Terminals



# Hard-Wired Power Distribution Fuse Holders

Sealed, hard-wired power distribution boxes for MINI® fuses and ISO 280-style relays and components.



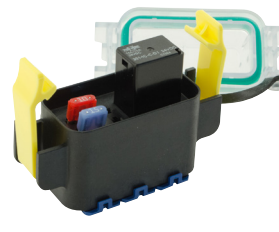
PDM31001ZXM



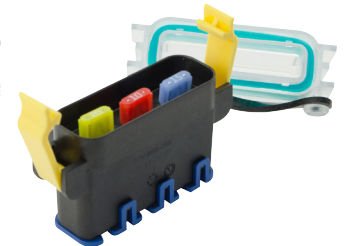
PDM71001ZXM



PDM21001LXM



PDM33001ZXM



PDM32001ZXM

## HARD WIRED BOXES

PART NUMBER	SERIES	MAX FUSE RATING (PER CIRCUIT)	MAX CONTINUOUS CURRENT	FUSE TYPE	ACCEPTS ISO 280 STYLE RELAYS	NUMBER OF CAVITIES	INGRESS PROTECTION RATING	MATING TERMINALS & SEALS	COVER		ASSURELATCH™		GASKET	GRID	MOUNTING BRACKET		TPAS INCLUDED
									BLACK	CLEAR	FINGER	TOOL			90°	30°	
PDM32001ZXM	HWB6	30A	68A	MINI		6	IP67/IP69K	Tyco MCP		•	•	•					•
PDM32002ZXM		30A	68A	MINI		6	IP67/IP69K	Tyco MCP	•		•	•					•
PDM32003ZXM		30A	68A	MINI		6	IP67/IP69K	Tyco MCP		•	•	•		•			•
PDM32004ZXM		30A	68A	MINI		6	IP67/IP69K	Tyco MCP	•		•	•	•	•			•
PDM33001ZXM	HWB12	30A	130A	MINI	•	12	IP67/IP69K	Tyco MCP		•	•	•					•
PDM33002ZXM		30A	130A	MINI	•	12	IP67/IP69K	Tyco MCP	•		•	•	•				•
PDM33003ZXM		30A	130A	MINI	•	12	IP67/IP69K	Tyco MCP		•	•	•	•	•			•
PDM33004ZXM		30A	130A	MINI	•	12	IP67/IP69K	Tyco MCP	•		•	•	•	•	•		•
PDM31001ZXM	HWB18	30A	100A	MINI	•	18	IP67/IP69K	Delphi Metri-Pack 280	•			•				•	•
PDM31002ZXM		30A	100A	MINI	•	18	IP67/IP69K	Delphi Metri-Pack 280	•			•					•
PDM31003ZXM		30A	100A	MINI	•	18	IP67/IP69K	Delphi Metri-Pack 280	•			•					•
PDM71001ZXM	HWB60-AL	30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•			•	•				•
PDM71003ZXM		30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•		•	•	•				•
PDM71004ZXM		30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•			•	•	•			•
PDM71006ZXM		30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•			•	•	•			•
PDM71008ZXM		30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•		•	•	•	•			•
PDM71009ZXM		30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•			•	•	•	•		•
PDM21001LXM	HWB60	30A	250A	MINI	•	60	IP67/IP69K	Delphi Metri-Pack 280	•			•	•				•

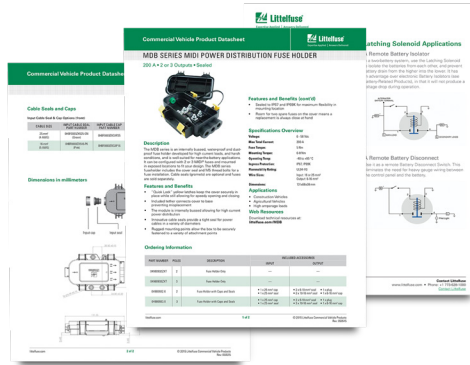


# PRODUCT INFORMATION & RESOURCES available at: [littelfuse.com/CVP](http://littelfuse.com/CVP)

Littelfuse publishes technical documents to help in the design and selection of products for your electrical systems. To learn more about a specific product or application, visit our online library at:

[Littelfuse.com/Commercial-Vehicle-Technical-Center](http://Littelfuse.com/Commercial-Vehicle-Technical-Center)

- Extended Datasheets
- Application Notes
- CAD Drawings
- 2D Outlines
- 3D Models
- Glossary
- FAQ



## Littelfuse.com/Catalogs

Littelfuse offers digital and printed catalogs and other product brochures. To request a copy, please contact Littelfuse or download the digital version on our website.

Our product catalogs feature circuit protection, power control and sensing products for OEM and aftermarket applications.

## Littelfuse.com/ContactUs

Contact Littelfuse support or find a local representative or distributor.



Expertise Applied | Answers Delivered



Littelfuse, Inc.  
Chicago, Illinois USA

©2023 Littelfuse, Inc.

Specifications, descriptions and illustrative material in this catalog are subject to change without notice. Visit [littelfuse.com](http://littelfuse.com) for the most up-to-date technical information.