

# DIODE BATTERY ISOLATORS SERIES

## 12-36 V Diode Battery Isolators



48051



48090



48122



48161



48162

### Description

Our 12-36 V Diode Battery Isolators are designed for vehicles with two batteries. These devices electrically isolate the batteries to prevent the battery with the higher charge from draining into the battery with the lower charge. In addition, both batteries can be charged simultaneously from one source.

This series offers three types of diode battery isolators: 3-stud, 4-stud, and models that use Schottky diodes.

#### 3-Stud Battery Isolators vs. 4-Stud Battery Isolators

The amperage rating of each item is the maximum alternator rating. Most alternators on new vehicles have an integral electronic voltage regulator that requires the use of the 4-stud battery isolator. The small 4th stud is for connection to a circuit controlled by the ignition switch. The newer alternators were first introduced by Delco and are therefore sometimes called "Delcotron-type alternators." A 4-stud battery isolator can be used with older pattern alternators (in this case the 4th stud will remain unconnected), but a 3-stud battery isolator cannot be used with the Delcotron-type alternator.

#### Schottky Diode Battery Isolators

Models are available with Schottky diodes which comply with the KKK-A-1822B ambulance specification. This allows them to be used to isolate medical equipment batteries from vehicle batteries.

#### Per Leg Ratings

Battery isolators have a "per leg" rating which indicates the maximum current it can deliver to either battery. All Littelfuse Cole Hersee brand battery isolators have a per leg rating equal to half the alternator rating. For example, models with a rating of 75 A have a per leg rating of 37.5 A per leg.

### Web Resources

Download 2D print, installation guide and technical resources at: [littelfuse.com/BatteryIsolators](https://littelfuse.com/BatteryIsolators)

### Specifications

|                                       |          |
|---------------------------------------|----------|
| <b>Max Continuous Voltage:</b>        | 12-36 V  |
| <b>Max Continuous Current Rating:</b> | 75-200 A |
| <b>Ingress Protection:</b>            | IP66     |
| <b>Housing:</b>                       | Aluminum |

### Applications

- Heavy Trucks
- Emergency Vehicles & Ambulances
- RVs & Campers

### Features and Benefits

- General-purpose battery isolators for 12-36 V DC negative ground systems
- Models are available with continuous current ratings ranging from 70 A to 250 A
- Electronic components are embedded to give excellent protection from adverse conditions, such as contamination and vibration
- All models withstand dust and water to an IP66 rating
- Integral heat sink provides efficient heat dissipation

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### Ordering Information

| PART NUMBER | DESCRIPTION                                           | MOUNTING HOLE DIMENSIONS IMPERIAL INCHES (INCH) | MOUNTING HOLE DIMENSIONS METRICAL MM (MM) | OUTPUT TERMINAL       | INPUT TERMINALS                       |
|-------------|-------------------------------------------------------|-------------------------------------------------|-------------------------------------------|-----------------------|---------------------------------------|
| 48051       | 12-36 V 75 A Schottky Diode Battery Isolator          | 0.281                                           | 7.13                                      | Steel 1/4-20          | Steel 1/4-20                          |
| 48051-BX    | 12-36 V 75 A Schottky Diode Battery Isolator - Boxed  | 0.281                                           | 7.13                                      | Steel 1/4-20          | Steel 1/4-20                          |
| 48070       | 12-36 V 70 A 3-Stud Diode Battery Isolator            | 0.281                                           | 7.13                                      | Steel Stud 1/4-20     | Steel Stud 1/4-20                     |
| 48070-BX    | 12-36 V 70 A 3-Stud Diode Battery Isolator - Boxed    | 0.281                                           | 7.13                                      | Steel Stud 1/4-20     | Steel Stud 1/4-20                     |
| 48090       | 12-36 V 90 A 3-Stud Diode Battery Isolator            | 0.281                                           | 7.13                                      | Steel Stud 1/4-20     | Steel Stud 1/4-20                     |
| 48090-BX    | 12-36 V 90 A 3-Stud Diode Battery Isolator - Boxed    | 0.281                                           | 7.13                                      | Steel Stud 1/4-20     | Steel Stud 1/4-20                     |
| 48120       | 12-36 V 140 A 3-Stud Diode Battery Isolator           | 0.281                                           | 7.13                                      | Steel 5/16-18         | Steel 5/16-18                         |
| 48120-BX    | 12-36 V 140 A 3-Stud Diode Battery Isolator - Boxed   | 0.281                                           | 7.13                                      | Steel 5/16-18         | Steel 5/16-18                         |
| 48122       | 12-36 V 140 A 4-Stud Diode Battery Isolator           | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Steel 5/16-18<br>1 Stud Steel 10-32 |
| 48122-BX    | 12-36 V 140 A 4-Stud Diode Battery Isolator - Boxed   | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Steel 5/16-18<br>1 Stud Steel 10-32 |
| 48160       | 12-36 V 200 A 3-Stud Diode Battery Isolator           | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Stud Steel 5/16-18                  |
| 48160-BX    | 12-36 V 200 A 3-Stud Diode Battery Isolator - Boxed   | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Stud Steel 5/16-18                  |
| 48161       | 12-36 V 250 A Schottky Diode Battery Isolator         | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Stud Steel 5/16-18                  |
| 48161-BX    | 12-36 V 250 A Schottky Diode Battery Isolator - Boxed | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Stud Steel 5/16-18                  |
| 48162       | 12-36 V 200 A 4-Stud Diode Battery Isolator           | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Steel 5/16-18<br>1 Stud Steel 10-32 |
| 48162-BX    | 12-36 V 200 A 4-Stud Diode Battery Isolator - Boxed   | 0.281                                           | 7.13                                      | 2 Studs Steel 5/16-18 | 1 Steel 5/16-18<br>1 Stud Steel 10-32 |