



Technical Description

InPower's ABS Series of Auxiliary Battery Switches are the ideal solution for charging and isolating an auxiliary battery from a vehicle's chassis battery and alternator. InPower's ABS Series is designed to replace outmoded battery isolators and unreliable mechanical battery separators.

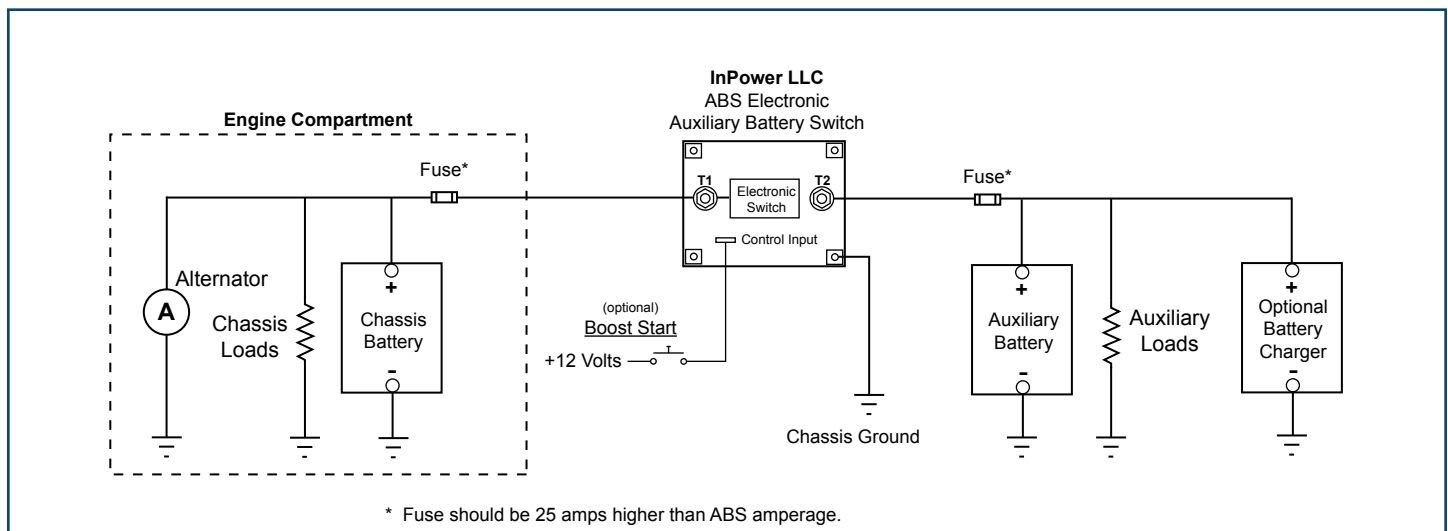
The ABS uses InPower's proven patented solid-state contactor technology, incorporating sophisticated microprocessor algorithms to monitor over-current and under-voltage sensing.

The auxiliary battery is charged from the chassis battery and alternator, while the chassis battery is protected from auxiliary battery load discharge. Since the ABS is bidirectional, a charging device (such as a battery charger or genset) connected to the auxiliary battery can also supply charging current to the chassis battery when needed. A "boost start" feature allows both the auxiliary and chassis batteries to supply current to aid engine starting.

InPower's ABS Auxiliary Battery Switches are available in 100, 150, 175 and 200 amp models. To properly size your ABS, first determine how much extra current is available from the chassis alternator. This is the maximum alternator output current less the minimum chassis load current. The difference is the maximum available auxiliary battery charging current. Select an ABS model with a capacity greater than this current.

- *Superb Auxiliary Battery Isolation*
- *Bidirectional Charging*
- *Boost start the vehicle from the auxiliary battery if the chassis battery voltage is low*
- *Solid state - no moving parts*
- *Extremely efficient - No need for a massive heat sink*
- *Over-current protection*

System Diagram



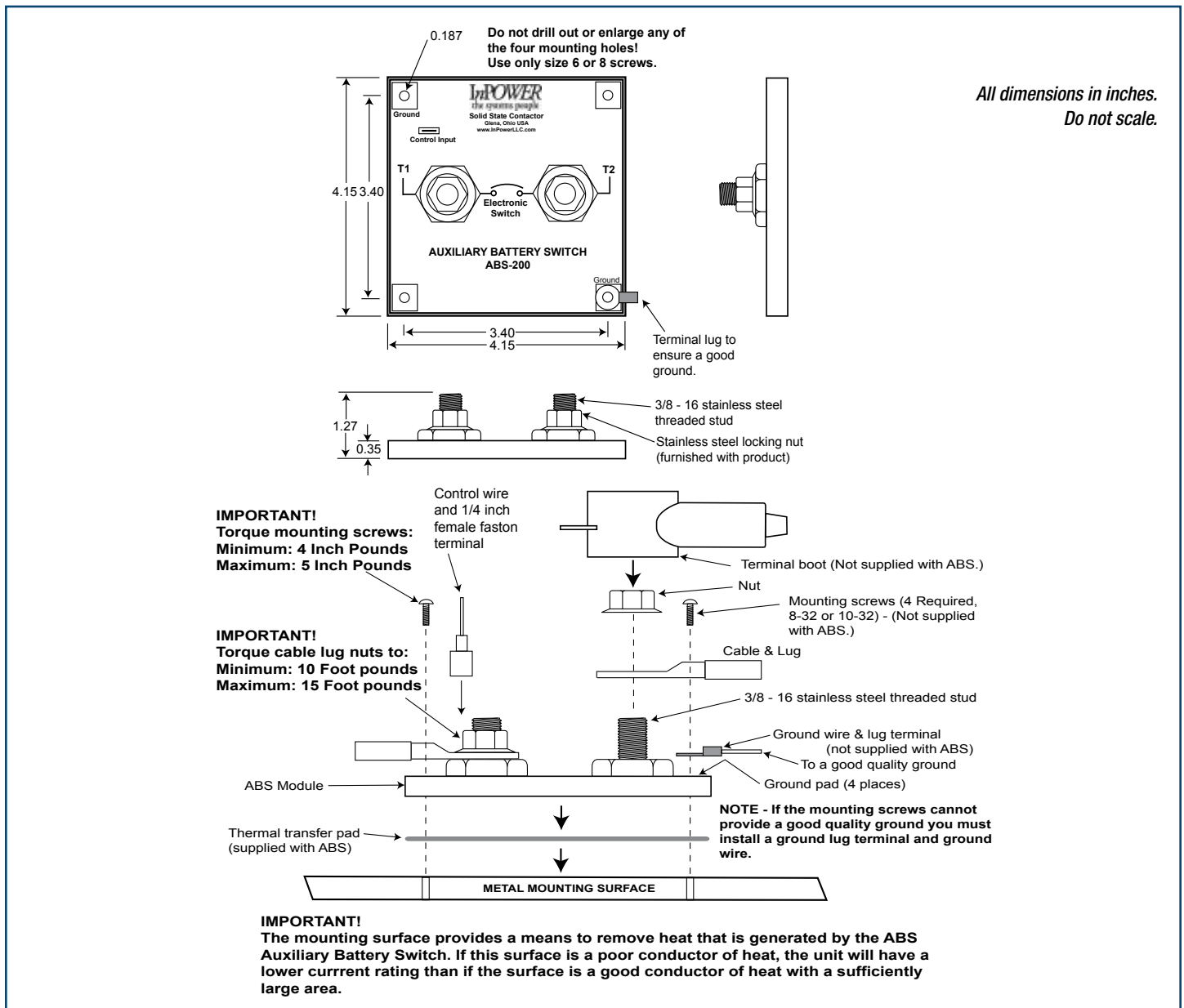
Specifications

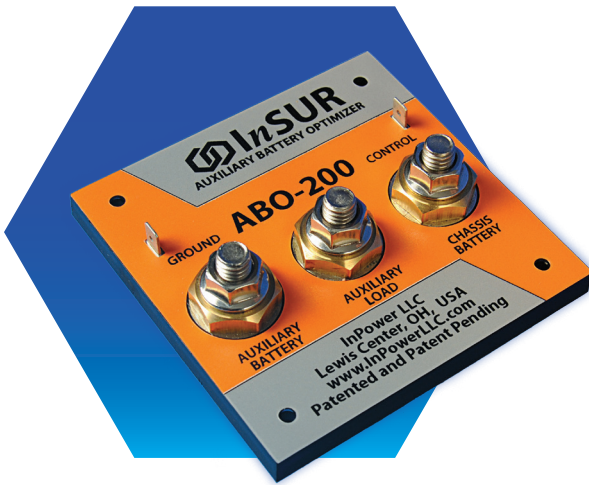
Maximum Current Rating:	ABS-100	ABS-150	ABS-175	ABS-200
	100 Amps	150 Amps	175 Amps	200 Amps
Logic Power Current:	5 milliamps			
Operating Voltage Range:	+3.0 to +18.0 Volts			
Over Current Trip:	100% to 110% for 500 Milliseconds			
Weight:	0.60 lbs			
Dimensions:	4.15 inches W x 4.15 inches L x 1.27 inches H			
Power Terminals:	3/8 - 16 stainless steel, with stainless steel locking nuts			
Ground Connection:	Ground pad at each of the four mounting holes			
Power Terminal Torque:	10 to 15 foot pounds			

Ordering Guide

Model	Description
ABS-100	Auxiliary Battery Switch, 100 amps
ABS-150	Auxiliary Battery Switch, 150 amps
ABS-175	Auxiliary Battery Switch, 175 amps
ABS-200	Auxiliary Battery Switch, 200 amps
TB28-2	Terminal Boot for 8 - 2 AWG cable
TB28-3	Terminal Boot for 2 - 2/0 AWG cable

Mechanical Drawing





Key Features

- Three terminal design, allowing protection of both chassis and auxiliary batteries
- Efficient design requiring no large heat sinks - only a supplied thermal transfer pad
- Allows auxiliary battery jump start
- Sealed construction against moisture and dust
- Brass contact pads provide low contact resistance
- Customized low voltage cut offs available
- Made in the USA

Technical Description

The Auxiliary Battery Optimizer (ABO) is a patented and patent-pending next-generation auxiliary battery control module, combining the features of an auxiliary battery switch (ABS) with those of an auxiliary battery low voltage disconnect (LVD).

ABS + LVD = ABO

Conventional Auxiliary Battery Switches and Isolators

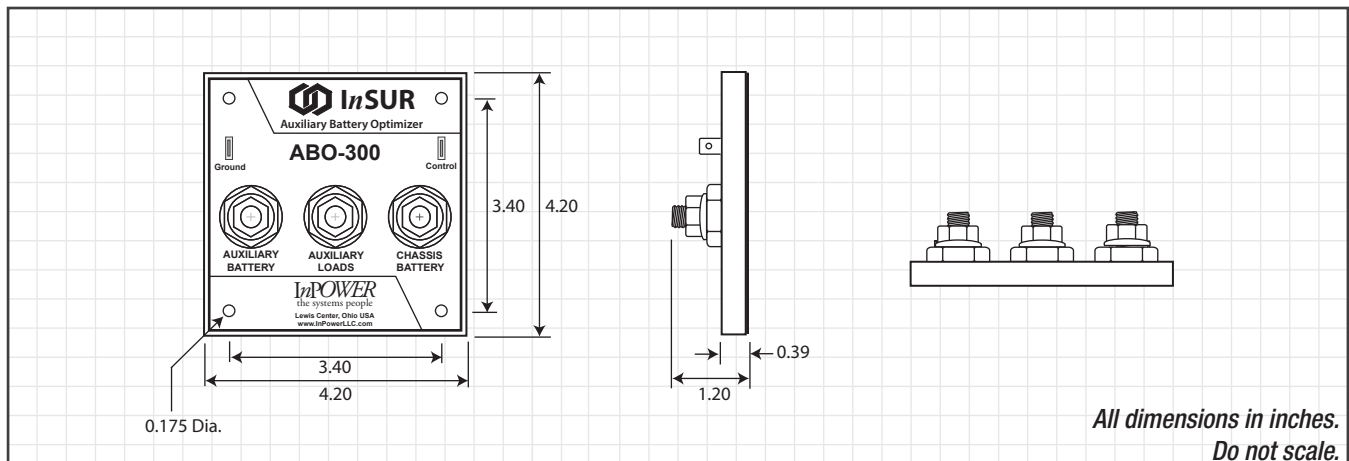
Traditionally, the auxiliary battery is connected to the vehicle's chassis battery through a two-terminal auxiliary battery switch, allowing the auxiliary battery to be charged by the vehicle, while preventing the auxiliary equipment from discharging the chassis battery. Since auxiliary loads are connected directly to the auxiliary battery, the auxiliary battery may be excessively discharged by the loads, reducing battery life.

Auxiliary Battery Optimizer (ABO)

The Auxiliary Battery Optimizer is a three terminal device where one terminal connects to the chassis battery, a second terminal connects to the auxiliary battery and a third, center terminal connects to the auxiliary loads. The ABO thus protects both the chassis and the auxiliary batteries from excessive discharge, extending the service life of both batteries.

The ABO is a highly efficient design, requiring no massive heatsinks. It is compact and sealed against moisture and debris. It also comes equipped with a manual override, allowing the auxiliary battery to be used to jump start the vehicle.

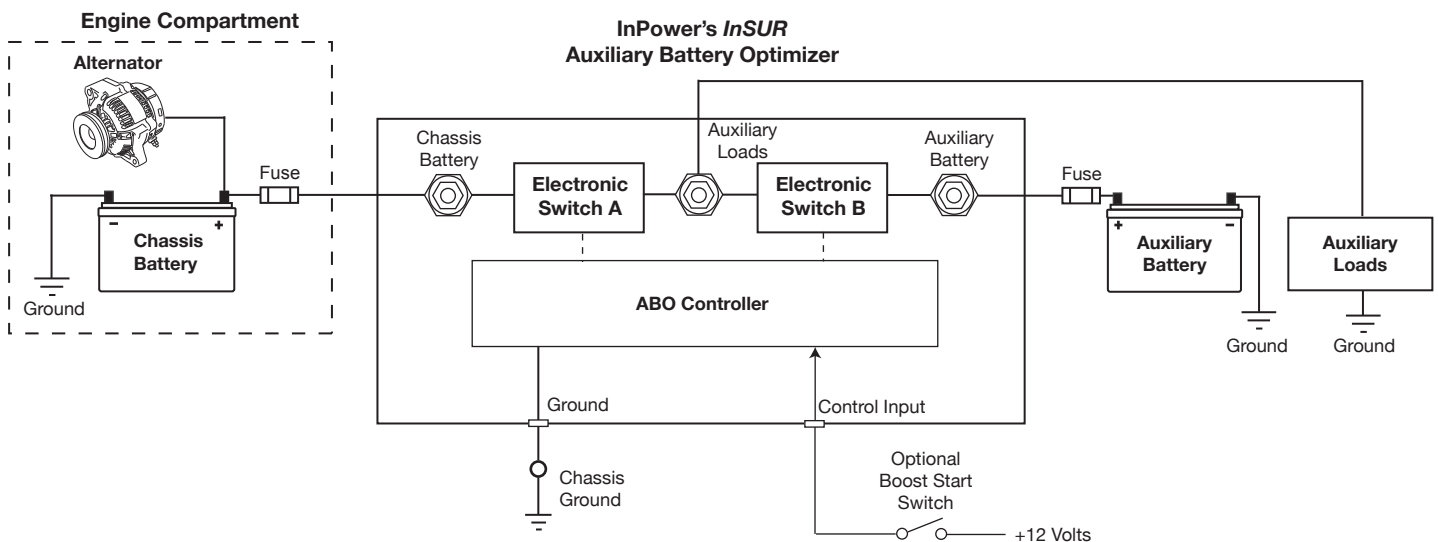
Mechanical Drawing

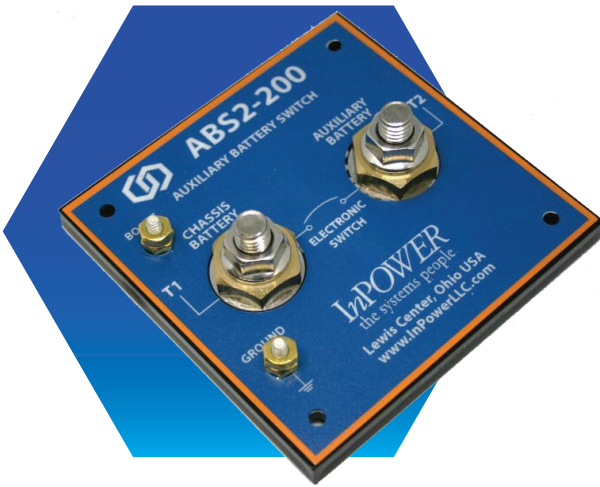


Specifications

Model:	<u>ABO-150</u>	<u>ABO-200</u>
Maximum Continuous Current:	150 amps	200 amps
Maximum Surge Current:	500 amps	1000 amps
Alternator Rating:	150-185 amps	185-250 amps
Over-current Trip:	100% to 110% of continuous current rating for 500 milliseconds	
Logic Power Current Draw:	<7 milliamps average	
Aux. Battery Low Voltage Disconnect:	<+11 volts	
Chassis Battery Low Voltage Disconnect:	On: >+12.9 volts; Off: <12.8 volts	
Power Terminals:	3 x 3/8-16 stainless steel with stainless steel locking nuts	
Power Terminal Torque:	10 to 15 lb-ft	
Ground Terminal:	1/4 inch male push-on terminal	
Control Terminal:	1/4 inch male push-on terminal	
Control Input:	On: >4.0 V; Off: <2 V; Override Input. Closes switch A and B when activated.	
Weight:	0.7 lbs	
Dimensions:	4.20 W x 4.20 L x 1.04 H (inches)	

System Drawing





Technical Description

InPower's ABS2 Series of Auxiliary Battery Switches are the ideal solution for charging and isolating an auxiliary battery from a vehicle's chassis battery and alternator. InPower's ABS2 Series is designed to replace outmoded battery isolators and unreliable mechanical battery separators.

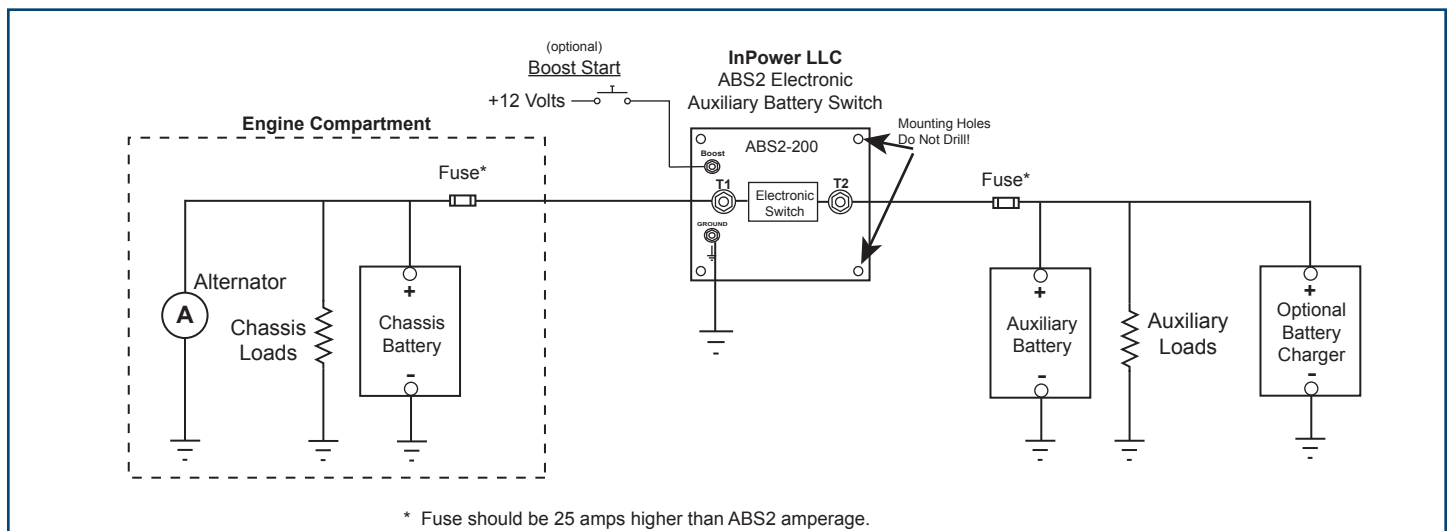
The ABS2 uses InPower's proven patented solid-state contactor technology, incorporating sophisticated microprocessor algorithms to monitor over-current and under-voltage sensing.

The auxiliary battery is charged from the chassis battery and alternator, while the chassis battery is protected from auxiliary battery load discharge. Since the ABS2 is bidirectional, a charging device (such as a battery charger or genset) connected to the auxiliary battery can also supply charging current to the chassis battery when needed. A "boost start" feature allows both the auxiliary and chassis batteries to supply current to aid engine starting.

InPower's ABS2 Auxiliary Battery Switches are available in 100, 150, 175 and 200 amp models. To properly size your ABS2, first determine how much extra current is available from the chassis alternator. This is the maximum alternator output current less the minimum chassis load current. The difference is the maximum available auxiliary battery charging current. Select an ABS2 model with a capacity greater than this current.

- *Superb Auxiliary Battery Isolation*
- *Bidirectional Charging*
- *Boost start the vehicle from the auxiliary battery if the chassis battery voltage is low*
- *Solid state - no moving parts*
- *Extremely efficient - No need for a massive heat sink*
- *Over-current protection*

ABS2 System Diagram



Specifications

Maximum Current Rating: ABS2-100 100 Amps ABS2-150 150 Amps ABS2-175 175 Amps ABS2-200 200 Amps

Logic Power Current: 5 milliamps

Operating Voltage Range: +3.0 to +18.0 Volts

Over Current Trip: 100% to 110% for 500 Milliseconds

Weight: 0.60 lbs

Dimensions: 4.15 inches W x 4.15 inches L x 1.27 inches H

Power Terminals: 3/8 - 16 stainless steel, with stainless steel locking nuts

Boost/Ground Terminals: Ground stud for connection

Ground Connection: Ground stud for connection

Power Terminal Torque: 10 to 15 foot pounds

Ordering Guide

Model	Description
ABS2-100	Auxiliary Battery Switch, 100 amps
ABS2-150	Auxiliary Battery Switch, 150 amps
ABS2-175	Auxiliary Battery Switch, 175 amps
ABS2-200	Auxiliary Battery Switch, 200 amps
TB28-2	Terminal Boot for 8 - 2 AWG cable
TB28-3	Terminal Boot for 2 - 2/0 AWG cable

Mechanical Drawing

