InPOWER
the systems people

ABS Series

Auxiliary Battery Switch/ Electronic Battery Separator

InPower's ABS Series of Auxiliary Battery Switches are an 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.

Battery Isolators are simply high current diodes mounted to a large heat sink. Since all of the alternator's output current must pass through these diodes, as much as 8% of the alternator's energy is wasted to heat. With high current alternators, battery diode Isolators are just not practical.

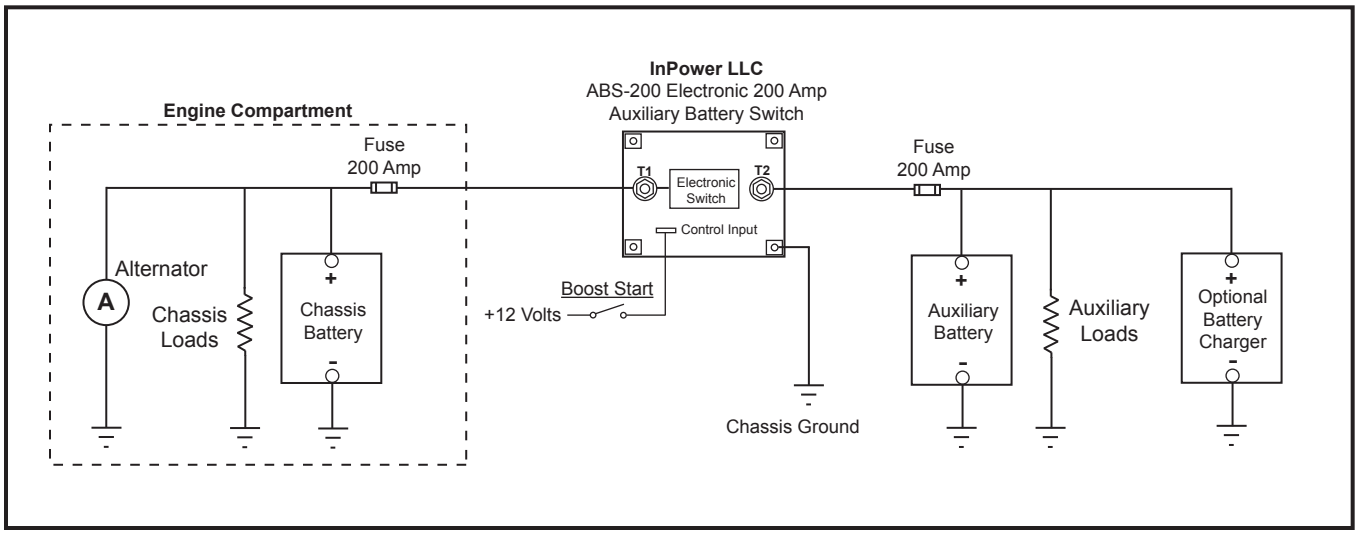
Battery Separators are high current solenoids that connect the chassis battery and alternator to the auxiliary battery. Typically, when the chassis battery voltage reaches 13.5 volts, the solenoid is closed. When this voltage drops to 12.8 volts, the solenoid is opened. Even with switching time delays, high Inrush currents and mechanical cycling combine to make mechanical solenoids an unreliable solution.

InPower's ABS Series Auxiliary Battery Switch is the next generation technology for charging and isolating an auxiliary battery from a vehicle's chassis battery and alternator. The ABS uses InPower's proven Patent Pending solid-state contactor technology incorporating sophisticated microprocessor algorithms that include over-current and under-voltage sensing.

The basic operating principles are simple. The auxiliary battery is charged from the chassis battery and alternator while the chassis battery is protected from auxiliary battery load discharge. As the ABS is bidirectional, a charging device such as a battery charger or genset connected to the auxiliary battery can supply charging current to the chassis battery. The ABS accomplishes this through the voltage and current monitoring capabilities of its microprocessor controller. The proper time to transfer power between the chassis battery and the auxiliary battery is based on a proprietary algorithm that utilizes both battery voltage and current measurements. A "boost start" feature is provided that will allow the auxiliary battery to supply current to the chassis battery to aid engine starting.

InPower's ABS Auxiliary Battery Switches are available in 100, 150, 175 and 200 amp models. Since the ABS includes over-current protection, as Identified by model number, the alternator's charging capacity must be considered. In order to properly size the ABS, determine how much extra current is available from the chassis electrical system. 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.

System Diagram



Product Data Sheet

PDS-119B

ABS Series Auxiliary Battery Switch/ Electronic Battery Separator

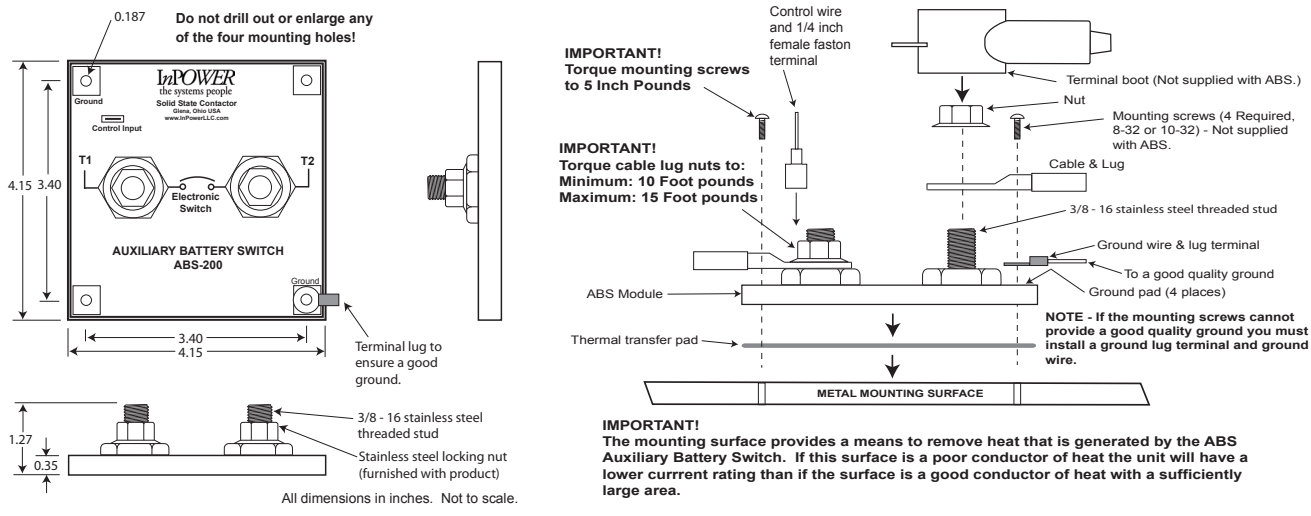
Specifications

	ABS-100	ABS-150	ABS-175	ABS-200
Current Rating:				
Maximum Current:	100 Amps	150 Amps	175 Amps	200 Amps
Logic Power Current Draw:	5 milliamps			
Operating Voltage Range:	+9.0 to 18.0 Volts			
Over Current Trip:	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			
Over Current Trip:	100% to 110% for 500 milliseconds			
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



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