ULTIMATE POWER CO.
202 North West Street
Coudersport, PA 16915
Phone: 888 447-5920
Fax: 610 317-8513
E-Mail: info@upinverters.com

BSLT Series Solid State Battery Separator Users Manual

The **Ultimate Power's BSLT Series Solid State Battery Separator** is designed with solid state Mosfets switching circuit previously unheard of in this industry.

It alarms when battery voltage drops to 11Vdc and then automatically disconnects 12 volt loads from the battery after delay (configurable), thus preventing excessive battery discharge.

Designed with external alarm output function, an alarm voltage can also be set to output a separate signal to trigger a remote audio/visual warning device.

The BSLT is equipped with ground loss protection which not only enhances operation security but enables customer to easily shut off the separator by disconnecting ground.

Once the alternator stops working, the delay will be triggered.

Made of anodized aluminum with copper and tin-plated connectors and stainless steel locking nuts, our separator avoids the issues connected with past solenoids and isolators by being solid state.

Unlike a solenoid, it has no moving parts. Unlike a diode isolator, it has no diodes to increase the resistance of the circuit and to gather heat.

Key Features:

- **Prevents excessive battery discharge by automatically disconnecting loads.**
- **Alarm output for remote monitoring of voltage condition**
- **Weather Resistant, Compact size and low profile.**
- **Little Voltage Drop**
- **100% solid state design - No moving parts to cause arcing and electrical noise.**
- **Automatic shutdown protection for over temperature, short- circuit, over-current and loss of ground.**

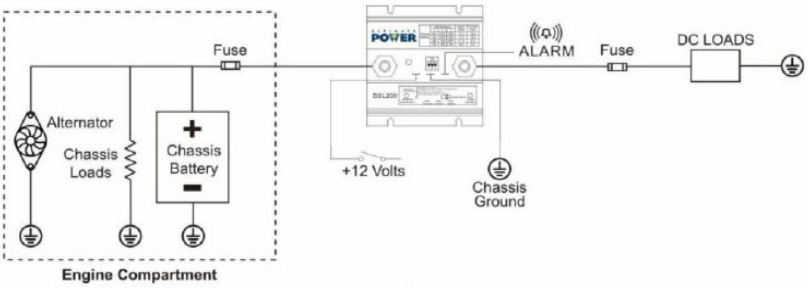

Figure 1

BSL Series Specification

Model NO.	BSLT150	BSLT200	BSLT250
Rated Current @ Mount A*	150 Amps	200 Amps	250Amps
Rated Current @ Mount B**	105Amps	140Amps	175Amps
Max Voltage Drop @ Mount A*	0.28V	0.20V	0.25V
Max Voltage Drop @ Mount B**	0.15V	0.15V	0.18V
Logic Power Current Draw	5 milliamps		

Operating Voltage Range	+7.5 to +16 Vdc
Alarm terminal activated voltage	11Vdc
Shut Off Voltage	8.0Vdc
Shut Off Recovery Voltage	8.25Vdc
Control Input Voltage	>8Vdc to activate, <4.0V dc to deactivate
Nominal Operating Temp	68℉ / 20℃
Over Current Trip	Over 110% for 500 milliseconds, resets every 20s
LED Indicator Status	1 Solid Green: Connect 2 Solid Red: Low voltage alarm (<11Vdc) 3 Flashing Red: Over voltage cut off(> 16Vdc), freq 1Hz 4 Flashing Green: Over current or over temp cut off, freq 1Hz 5 Dim: Cut off(<8.0Vdc)
High temperature protection	185℉ / 85℃
High temperature recover	140℉ / 60℃
Power Terminals	M10 copper stud with tin plating and stainless steel locking nuts
Power Terminal Torque	10 to 15 Ft-Lbs
Ground connection:	1/4 inch male faston blade terminal
Dimensions	4 1/4” x 4 1/2” x 2 1/4” 108x114x58 mm
Weight:	1.63 lbs/0.74Kg

Mount A*: Mounting surface such as aluminum plate 1.5*4.5*25.5 inch or larger
Mount B**: Mounting surface such as wood, plastic or free air

Operation Chart (for alarm voltage 11Vdc, shut off voltage 8.0Vdc)

Separator Status	Battery Voltage	LED Indicator	Operation
Connect 1	Voltage≥11.0V	Solid Green	Connect
Connect 2	11.0V>Voltag≥8.0V	Solid Red	Low voltage alarm, alarm terminal activated
Disconnect 1	8.0V>Voltage≥7.5V	Dim	Separator open
Disconnect 2	Voltage>16V	Flashing Red	Over voltage
Disconnect 3	Voltage<7.5V	Flashing Red	Low voltage
Disconnect 4	16V>Voltage≥8.0V	Flashing green	Over current or over temp protection

Configuration of Alarm and Cut Off delay

Time delay	SW1	SW2	SW3	SW4
0 Sec	0	0	0	0
1 Min	1	0	0	0
3 Min	1	0	0	1
5 Min	1	0	1	0
7 Min	1	1	0	0
10 Min	1	0	1	1
15 Min	1	1	0	1
30 Min	1	1	1	0
60 Min	1	1	1	1

(0=OFF, 1=ON)