

Best Battery Selector

BBS-800, BBS-1600 & BBS-4800

Cross-couples Two Batteries to Two Independent Loads for Highest DC System Reliability



- For dual battery, dual or single load configurations, negative ground system
- Delivers current to both loads from either one or both batteries
- Isolates one battery from the other
- All solid-state design, oversized heat sinks assure reliable operation
- IBC seismic certified

SENS Best Battery Selectors (BBS) deliver power from two different batteries to one or two loads, such as engine starter motors or electrical switchgear. In case one battery is weak or failed, power automatically flows to both starters or loads from the other battery.

Although the BBS can deliver battery power from either battery to either load, it prevents parallel connection of two batteries so that the failure of one battery does not take down the other.

All solid-state design uses large diodes mounted on generously sized heat sinks. There are no moving parts or need for control electronics.

Three units are available, all suitable for a wide range of loads in applications ranging from 12 volts to 120 volts DC nominal. The BBS-800 is rated for 1,250 peak amps (for engine starting) and 45 amps for continuous loads. The BBS-1600 is rated for 2500 peak amps (for engine starting) and 50 amps for continuous loads. The BBS-4800 is rated for 6400 peak amps and 150 amps for continuous loads.

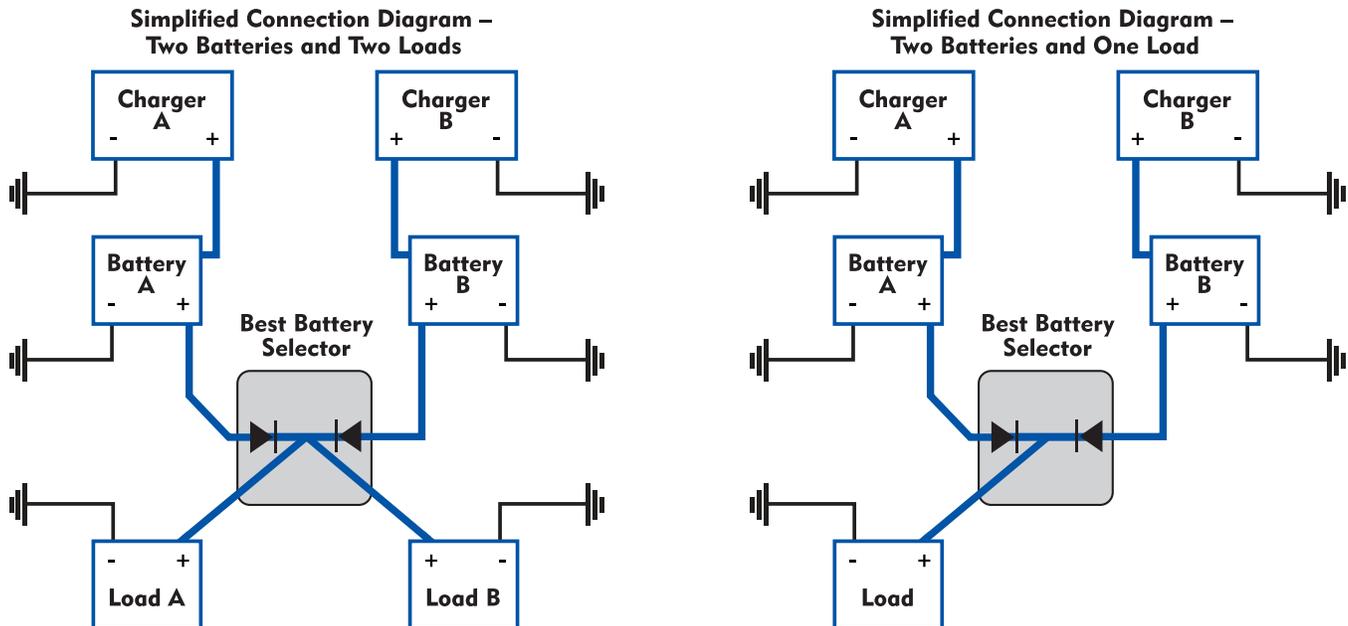


Specifications

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Specifications			
Model	BBS-800	BBS-1600	BBS-4800
Electrical configuration	Two diodes, common cathode, negative ground		
DC system nominal voltage	Up to 120 volts DC		
NFPA Cranking Break-Away	1,250 amps	2,500 amps	6,400 amps
BBS 30 sec. rated current	1,600 amps @ -18C 1,075 amps @ +50C	3,200 amps @ -18C 2,150 amps @ +50C	7,150 amps at -18C 4,950 amps at +50C
Recommended engine size (CID)	≤ 1500 CID	> 1500 & < 4200 CID	≥ 4200 CID
Engine start duty cycle	90 second continuous duty max		
BBS continuous rated current	45 amps @ +50C	50 amps @ +50C	150 amps @ +50C
Wire size	#6 AWG to 250 MCM	#6 AWG to 250 MCM	#6 AWG to 350 MCM
Dimensions	12.3"W x 8.6"D x 16.3"H	12.3"W x 8.6"D x 16.3"H	19.4"W x 13.0"D x 17.6"H
Weight	31 lbs / 14.1 kg	31 lbs / 14.1 kg	55 lbs / 24.9 kg
Transient protection	Large sized MOV		
Seismic Certification	IBC seismic certified to S _{ds} value of 2.28g		

Typical Connection Diagrams



During normal operation, current to either a single load or dual loads flows from both chargers and both batteries through the BBS. Should one battery fail (e.g. shorted cell or open circuit) the other battery will continue to power one or both loads automatically and without interruption. The Best Battery Selector (BBS) OR diodes fully isolate a bad battery from the rest of the system.

The BBS must be sized to carry the worst-case loads anticipated from one battery into one load.

For additional application information, see Application Note 16 on the Best Battery Selector product page at sens-usa.com (<http://sens-usa.com/product/best-battery-selector-bbs-1600-bbs-4800/>).



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