

BEST BATTERY SELECTOR

ISOLATING 'STEERING' DIODE ASSEMBLY
FOR REDUNDANT DC POWER SYSTEMS



Looking for 'True System Redundancy'?

Using a steering diode assembly (Best Battery Selector) is an effective and low cost method of providing true battery system protection and redundancy. The Best Battery Selector works automatically with no mechanical switching, and requires no operator intervention.

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What is the 'Best Battery Selector' ?

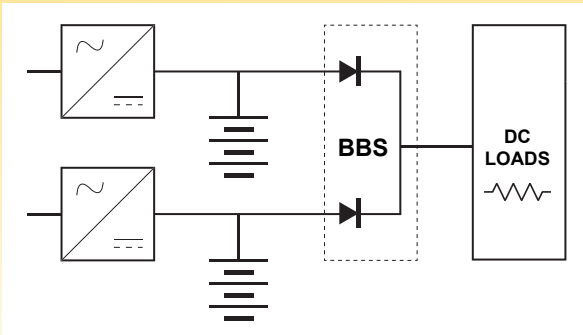
The Best Battery Selector (also referred to as 'steering diodes' or 'auctioneering diodes') is a dc power diode assembly that interconnects separate charger/battery circuits, ensuring that the dc bus does not rely on any single source. The Best Battery Selector is a passive device, which requires no user intervention or mechanical operation.

How does it solve my system's lack of 'true redundancy'?

The North American Electric Reliability Corporation (NERC) - Draft 840, Protection System Reliability, October 2004 discusses the use of redundancy as a method to ensure system reliability. When two (2) or more batteries are paralleled, electrical isolation is required so that system redundancy is not compromised.

An isolation method which uses a mechanical switch device for complete isolation, means either the automatic switch or the operator must decide which battery to use, and transfer the switch accordingly. In both cases, a decision must be made by either a person or a device to determine which battery circuit is viable. In contrast, the Best Battery Selector does not require the operator or switch to determine the viability of a battery. Therefore, neither device nor human error will be detrimental to proper operation.

How does the 'Best Battery Selector' function?



This schematic illustrates how the Best Battery Selector operates. Listed below are the applications where the Best Battery Selector is best suited for:

- Utility Switchgear
- Engine Starting
- Communications
- Lube Oil Pumps
- Turbine Controls



operating manual

STANDARD FEATURES:

- solid state design (diodes mounted on aluminum heat sinks for dissipation)
- complete diode assembly housed in top-vented NEMA Type-1 carbon steel enclosure
- ANSI 61 gray epoxy powder-coat finish
- convection cooled
- automatic operation
- no maintenance required
- 5-year warranty

OPTIONAL FEATURES:

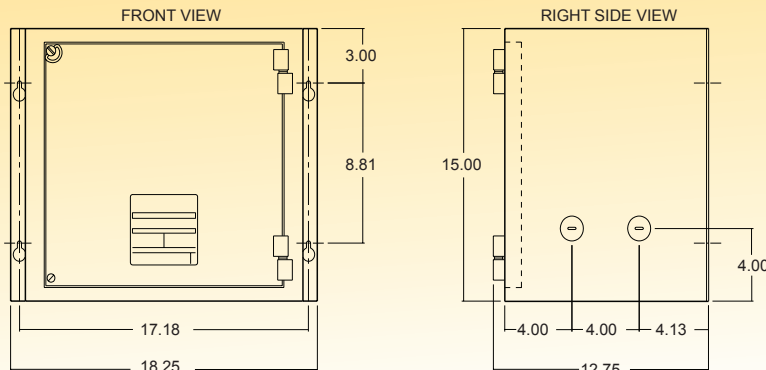
- Diode Open (Fail) Alarm
- DC Load Voltmeter(s)
- DC Load Ammeter(s)
- High / Low DC Voltage Alarm w/Indicator
- End of Discharge Alarm w/Indicator
- End of Discharge Alarm w/Disconnect & Ind
- DC Load Disconnect Circuit Breaker
- DC Input Switches / Circuit Breakers

BEST BATTERY SELECTOR SPECIFICATION CHART

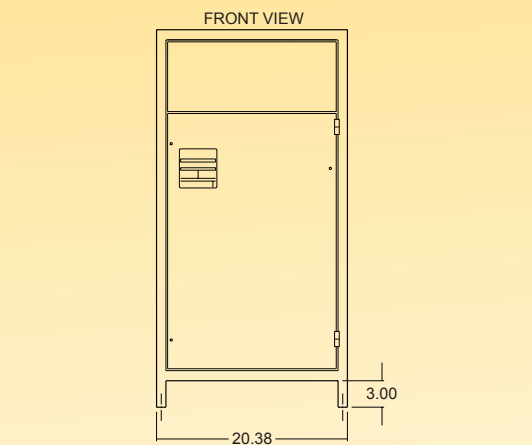
standard Best Battery Selector models

Ordering p/n	Voltage (max)	Current (continuous @50 °C)	Current (1 sec)	Current (30 sec 50 °C)	Charger / Battery Quantity	Enclosure Style	CU-AL Lug Connector
EJ5144-20	300	50	1000	450	2	586	#14-1/0 AWG
EJ5144-01	300	100	1000	450	2	5017	#6 AWG-350 MCM
EJ5144-02	300	200	1000	450	2	5017	#6 AWG-350 MCM
EJ5144-03	300	500	3500	2000	2	5017	#2 AWG-600 MCM
EJ5144-24	600	50	1000	450	2	586	#14-1/0 AWG
EJ5144-05	600	100	1000	450	2	5017	#6 AWG-350 MCM
EJ5144-06	600	200	1000	450	2	5017	#6 AWG-350 MCM
EJ5144-07	600	500	3500	2000	2	5017	#2 AWG-600 MCM
EJ5144-12	600	750	8700	6800	2	5018	(2) 300-800 MCM
EJ5144-09	300	100	1000	450	3	5017	#6 AWG-350 MCM
EJ5144-10	300	200	1000	450	3	5017	#6 AWG-350 MCM
EJ5144-11	300	500	3500	2000	3	5018	#2 AWG-600 MCM

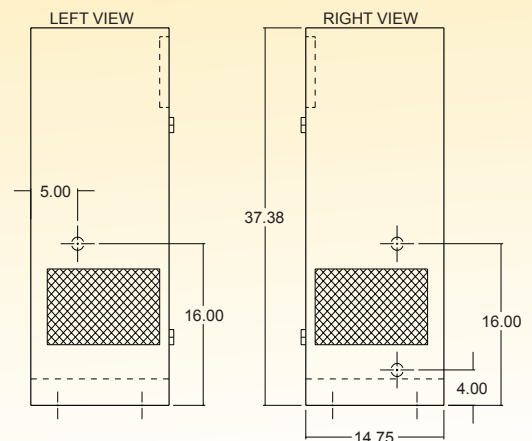
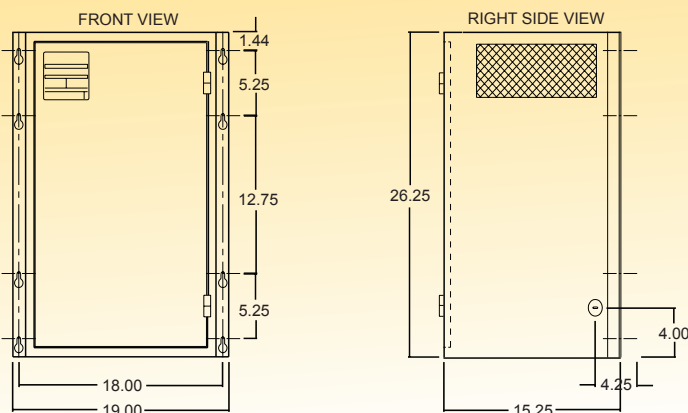
NEMA Type-1 **STYLE-586**



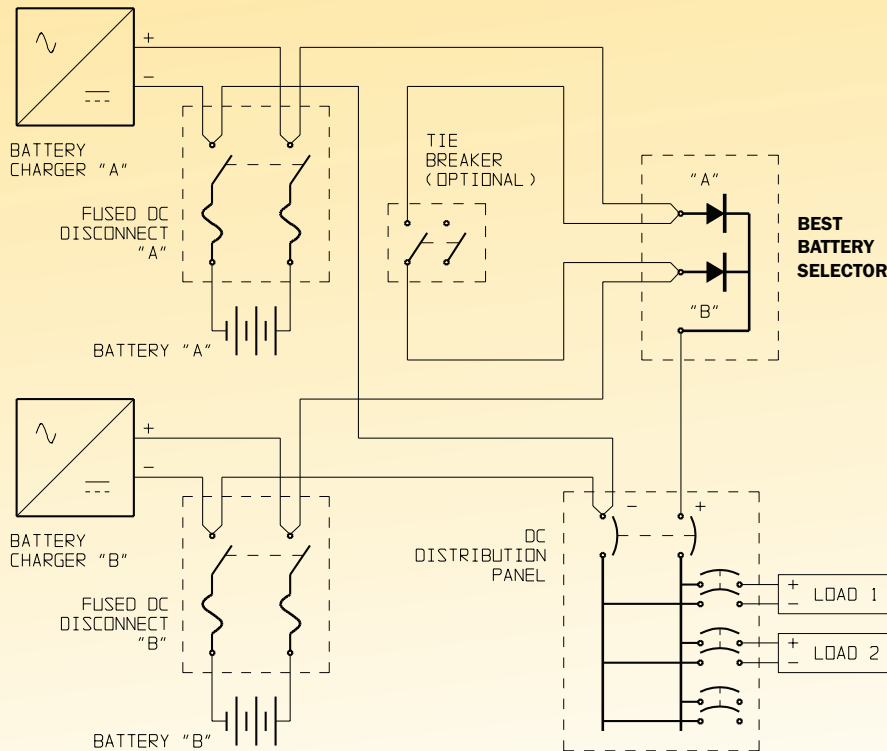
NEMA Type-1 **STYLE-5018**



NEMA Type-1 **STYLE-5017**



TYPICAL SCHEMATIC FOR 130Vdc REDUNDANT SYSTEM



Best Battery Selector

- Isolation ensures system integrity in the event of failure on either bus
- Uniform shared discharge of both battery banks
- Seamless transfer of supply from either bus

Fused DC Disconnect

- Allows battery to be removed from system for easy maintenance

Tie Breaker

- Allows Charger 'A' to service Battery 'B', or vice versa

Other Products Available from HindlePower:

AT10.1 Microprocessor Battery Charger	JF5006-00	SCR/SCRF Series Utility Battery Charger	JF5010-00
AT30 Microprocessor Battery Charger	JF5018-00	UMC Universal Maintenance Charger	JF5008-00
AT Series Options & Accessories	JF5020-00	Fused DC Disconnect	JF5034-00
AT Series Communications Module	JF5014-00	EPIC Console (NEMA-3R cabinet)	JF5043-00
DC Distribution Panel (NRTL-listed)	JF5055-00	Mobile DC Power System (trailer)	JF5041-00

This product distributed by:


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