

# Battery Isolators & Integrators



## Battery Isolators

These heavy duty isolators allow charging multiple batteries automatically from one or two alternators, and prevent discharge or "dumping" of one battery into another. Each battery is charged according to its need without overcharging. Rated for 12-48 volt negative ground DC systems. Feature conservatively rated diodes and a rustproof anodized aluminum heat sink case. Models are available for 70, 120 and 165 amp alternators.

Model	Alternator Sources	Battery Bank	Max Amperage Input	Weight		Dimensions		
				Lbs	Kg	L	W	H
1-2-70	1	2	70	2	.9	3.25	4.5	3.1 in
						8.3	11.4	7.9 cm
1-3-70	1	3	70	2	.9	3.25	4.5	3.1 in
						8.3	11.4	7.9 cm
2-3-70	2	3	70	4	1.8	6.5	4.5	3.1 in
						16.5	11.4	7.9 cm
1-2-120	1	2	120	3	1.4	6.5	4.5	3.1 in
						16.5	11.4	8.0 cm
1-3-120	1	3	120	3	1.4	6.5	4.5	3.1 in
						16.5	11.4	8.0 cm
2-3-120	2	3	120	5	2.3	12.5	4.5	3.1 in
						30.5	11.4	7.9 cm
1-3-165	1	3	165	5	2.3	9	4.5	3.1 in
						22.9	11.4	8.0 cm

Application Note: Battery Isolators may also be used to facilitate N+1 parallel/redundant operation of power supplies. Contact factory.

## Features:

- Heavy duty construction
- Rated for systems up to 48 volts DC, negative ground
- Rust-proof anodized aluminum case
- Stainless steel mounting hardware provided
- Protective covers provided for terminals

## Performance Specifications

**Operating temperature:** -40 to +80° C

**Duty cycle:** Continuous rating to 50° C

Derate linearly to 70% @ 80° C

**Temp. rise:** 95° C at full rated current (mount vertically for optimum cooling)

**Voltage drop:** 0.7V @ 50% load  
0.9V @ full load

*Note: These battery isolators are not compatible with self exciting alternators. Please consult the manufacturer of your alternator if you are unsure of your configuration.*



## Battery Integrator

Charging multiple battery banks without use of diode isolators dictates that the batteries be connected or "integrated" only

whenever a charge voltage is present so that they

may be charged simultaneously, then disconnected or "isolated" when in use to allow for selective discharge and avoid having the secondary or standby battery drain into the primary battery.

Battery Integrators perform this function automatically, acting as a "smart" switch to connect independent battery banks only when a charging voltage is present. Otherwise, they are isolated, and discharge between banks is prevented.

## Features

- Enables charging of two separate banks without voltage drop, yet maintains 100% isolation at all other times. For systems of three banks or more, an additional unit must be installed for each additional bank
- Heavy duty silver-plated contactor, continuous duty rated
- Voltage sense circuit, epoxy encapsulated and heavy duty continuous rated solenoid are all designed for use in marine environments
- 12 volt model has ignition protection rating
- Easy three-wire hook up for two bank systems (BATT +, BATT +, GROUND)
- Terminal for optional wiring of remote light indicating when battery banks are integrated
- Optional internal connection can be wired though key starter or manual over ride switch, tying battery banks together for extra boost during engine start

## Specifications

**Models:** BI-100; BI-200; BI-24-100

**Battery Integration Connect Point:**

13.2 VDC (approx.)

26.4 VDC (approx.)

**Battery Disconnect Point:**

12.8 VDC (approx.)

25.6 VDC (approx.)

**Maximum Continuous Current:**

100 amps (100 amp models)

200 amps (200 amp model)

**Peak Maximum Current:**

400 amps (100 amp models)

600 amps (200 amp model)

**Operating Temperature:**

Control: -40 to +85° C

Solenoid: -28 to +48° C

**Terminals:** Battery Connections:

5/16" copper alloy stud

**Dimensions (H x W x D):**

3" x 3.25" x 2.5"

**Weight:** 1 lb.



APS-70

## Automatic Power Selector

The Automatic Power Selector (APS) is a solid state device which enables installation of a seamless, redundant power system for critical electronic loads. It selects the higher voltage of two isolated DC power sources and routes power to the load. Should one source falter or fail, the other will automatically supply the load with no transfer delay, operation continues uninterrupted.

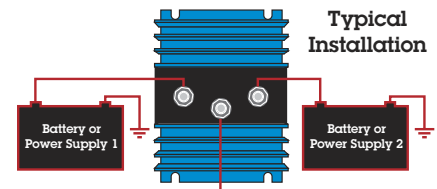
Easy installation, two independent power sources are wired to the APS and routed in a single output to the vital load. Rugged, rust-proof anodized aluminum case.

## Models:

**APS-70** Max. Load 70 amps, 3.25" x 4.5" x 3.1", 2 lbs..

**APS-160** Max. Load 160 amps, 9.0" x 4.5" x 3.1", 5 lbs.

**Voltage Rating:** 6-50 VDC, neg. ground



Critical Electronics