Battery Combiner Schottky Diode to guarantee continuous DC power

"iesy" diode battery combiners are used to guarantee continuous DC power to mission critical equipment, such as an electronic engine control system. With a diode battery combiner two or more DC power sources can be used in parallel to supply the mission critical load. Failure of one source will not interrupt power to the critical load. The iesy battery combiners feature a low voltage drop thanks to the use of Schottky diodes:
at low current the voltage drop is approximately 0,3 V and at the rated output approximately 0,45V.

Application

With "Emergency" consumers who cannot without voltage or without a short voltage drop, for example at the start of the engine. So whenever sufficient voltage is needed on the consumers. This one does not need "the hand switch" between 2 or 3 batteries. The total battery capacity is the sum of all the batteries which are connected.
Examples consumers: VHF marine radio, navigation, on board computer, emergency equipment and an electronic engine control system.

Series iesy BCD
Battery Combining Diode

iesy BCD 703 (70A / 3 batteries)

BCD302

BCD702

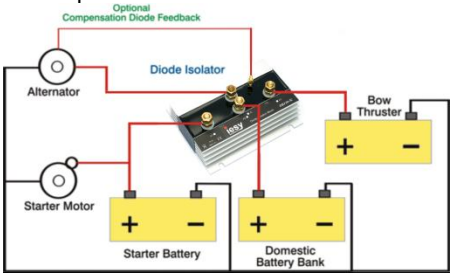
Type	Inp. (V)	Outp. (V)	Current (A) / Cons. OUT	Number of batteries IN	Weight Kg	Dim. LxWxH (mm)
BCD 302	12 / 24	12 / 24	30	2	0,6	120x80x60
BCD 702	12 / 24	12 / 24	70	2	0,6	120x80x60
BCD 703	12 / 24	12 / 24	70	3	0,8	120x80x60

Diode Battery Isolators (with compensation diode)

The iesy Diode battery isolators allow simultaneous charging of two or more batteries from one alternator, without connecting the batteries together.
The battery isolator can be used for example in boat's, recreation vehicle's, trucks etc. where beside a starter battery also one or two accessory batteries are present. Discharging the accessory battery for example will not result in also discharging the starter battery.
The iesy battery isolators feature a low voltage drop thanks to the use of high efficiency Schottky diodes: at low current the voltage drop is approximately 0,3 V and at the rated output approximately 0,45 V.
All models are fitted with a compensation diode that can be used to slightly increase the output voltage of the alternator; this compensates the voltage drop from the diodes inside the isolator at the output.

Series iesy DB
Diode Battery Isolators Diode Block

DB160-3C (Diode Block 160A / 3 batteries + comp. diode)



Schematic DB 120-3C

DB 120-2C

Note: Simply inserting the battery isolator in the cabling (current circuit) between the alternator and the batteries will slightly reduce charge voltage. The result can be that batteries are not charged to the full 100% and the age of batteries will be shorten.

iesy Diode Battery Isolator	DB70-2C	DB90-2C	DB90-3C	DB120-2C	DB120-3C	DB160-2C	DB160-3C
Maximum charge current (A)	50	70	70	100	100	130	130
Max. alternator current (A)	70	90	90	120	120	160	160
Number of batteries	2	2	3	2	3	2	3
Connection	M6 bolt	M8 bolt	M8 bolt	M8 bolt	M8 bolt	M8 bolt	M8 bolt
Connection compens.-Diode	M4	M4	M4	M4	M4	M4	M4
Weight kg (lbs)	0,6 (1.3)	0,8 (1.8)	1,2 (2.6)	0,8 (1.8)	1,2 (2.6)	1,2 (2.6)	1,5 (3.3)
Dimensions H x W x L in mm (H x W x L in inches)	60x120x80 (2.4x4.7x3.2)	60x120x100 (2.4x4.7x3.9)	60x120x150 (2.4x4.7x6.0)	60x120x100 (2.4x4.7x3.9)	60x120x150 (2.4x4.7x6.0)	60x120x150 (2.4x4.7x6.0)	60x120x200 (2.4x4.7x7.9)

Specials and/or private label on request / For more information see Manuals