

BATTERY SEPARATOR

MBR 12/24-100, MBR 12/24-160 & MBR 12/24-500

Description



The battery separators (MBR) are micro-processor controlled, powerful, mechanical contactors. A MBR can be used in a system consisting of two batteries (a start and an auxiliary battery), like for instance in boats or in camping-cars.

Possibilities

Connection according to the start battery voltage

(See Connection p. 2)

In some 12/24 V installations (like in a vehicle), it is preferable that the auxiliary battery or the appliances are powered only if the start battery voltage is sufficient. By connecting a MBR between the start battery and the auxiliary battery or the appliances, the latter will only be powered once the start battery voltage has reached 13.2/26.4 V during 60 seconds.

Connection of a charger to the auxiliary battery

(See Connection p. 2)

In a boat or in a camping-car it is usual to connect a battery charger to the auxiliary battery. By using a MBR, the start battery will also be charged if the voltage of the second battery is higher than 13.2/26.4 V during 5 seconds. In case your boat/vehicle would stay without running for a long time, your start battery will then remain 100% charged. From the stop of the charger, the contactor will open as soon as it detects a voltage threshold below 12.8/25.6 V during 60 seconds.

Contact for start assistance

(See Connection p. 2)

By connecting the terminal STATUS to the positive (+) pole of the auxiliary battery via the start contactor, the MBR will commute the second battery at the start of your boat/camping-car.

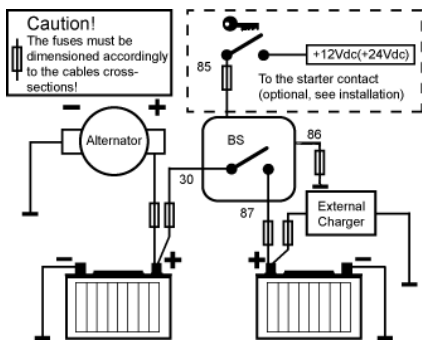
Security in case of overvoltage

(See Connection p. 2)

In case of a fault of the alternator voltage regulator, the system voltage can easily overcome the voltage limits allowed for the auxiliary battery and/or the appliances. This is why, in case of an overvoltage, the MBR will detect the fault and will disconnect the auxiliary battery and/or the appliances in order to protect them.

Connection for the MBR 12/24-100

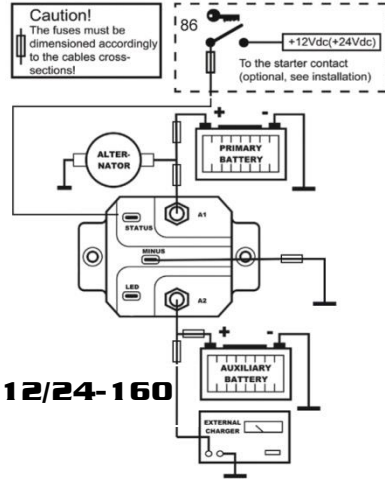
- 30** Positive pole (+) of the start battery
- 85** Ignition contact (only if « start assistance » is wished)
- 86** Negative pole (-) of the system
Caution: this connection must always be protected with a 3A fuse!
- 87** Connected to the positive pole (+) of the auxiliary battery (state of the variable relay as per the voltage)



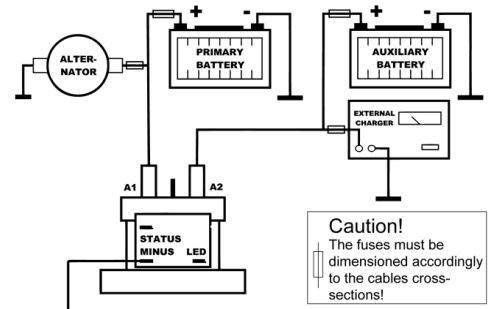
MBR 12/24-100

Connections for the MBR 12/24-160 and MBR 12/24-500

- A1** Positive pole (+) of the start battery.
- A2** Positive pole (+) of the auxiliary battery or of the appliances.
- STAT.** 3 modes
 - 1 Connected to the positive pole (+), relay closed.
 - 2 No voltage, state of the variable relay as per the voltage.
 - 3 Connected to the negative pole (-), relay open.
- LED** Not used.
- MIN.** Negative pole (-) of the system.
Caution, this pole must always be connected !



MBR 12/24-160



MBR 12/24-500

Warning ! The start and auxiliary batteries must always have the same nominal voltage !

Technical specifications

	MBR 12/24-100	MBR 12/24-160	MBR 12/24-500
Voltage	Automatic detection	Automatic detection	Automatic detection
Batteries connection	M6	M8	M8
Other connections	Male poles 6,3 mm	Male poles 6,3 mm	Male poles 6,3 mm
Recommended cable	Min. 25 mm ²	Min. 50 mm ²	Min. 50 mm ²
Nominal current	100 A	160 A	500 A
Peak current	480 A / 250 ms	480 A / 250 ms	2000 A / 250 ms
Start voltage	13,2 V@12 V / 26,4@24 V	13,2 V@12 V / 26,4@24 V	13,2 V@12 V / 26,4@24 V
Connection delays	5 s	5s	5 s
Disconnection delays	60 s	60 s	60 s
Fast disconnection	12,8 / 25.6 V	12,8 / 25.6 V	12,8 / 25.6 V
Fast disconnection delays	4 s	4 s	4 s
Stop in case of overvoltage	16 V@12 V / 32 V@24 V	16 V@12 V / 32 V@24 V	16 V@12 V / 32 V@24 V
IP code	IP54	IP54	IP54
Consumption relay open	1,5 mA@12 V / 1.5 mA@ 24 V	1,8 mA@12 V / 2 mA@ 24 V	1,8 mA@12 V / 2 mA@ 24 V
Consumption relay closed	360 mA@12 V / 160 mA@24 V	340 mA@12 V / 170 mA@24 V	160 mA@12 V / 100 mA@24 V
Start consumption (100 ms)	3 A@ 12 V / 1,5 A@24 V	3 A@ 12 V / 1,5 A@24 V	3 A@ 12 V / 1,5 A@24 V
Weight	110 g	470 g	420 g
Dimensions (L x w x h) [mm]	46 x 46 x 80	58 x 72 x 108	72 x 70 x 80