

**Read the owners manual carefully before mounting the BG!**

**Owners Manual BG10/18**

The new Battery Guard BG10/BG18 (hereafter called BG) is an intelligent, micro processor controlled, Battery Guard. The unit has four faston connections, 2 Input and 2 Output connections, to guarantee low losses. A yellow LED shows the status (ON/OFF). In program-mode it shows the program position. The BG has an 'Automatic Boardsystem Detection'; the BG detects which battery voltage (12 or 24V) is used. This does not need to be programmed manually. There is a choice out of 10 on/off threshold voltage programs, for both 12V and 24V, which can be programmed in a simple way. The BG uses very little current. During undervoltage the BG uses just 2mA or less.

**Installation**

The installation of the BG has to be done by qualified personnel. Mount the BG in a cool dry spot. Working on a battery voltage is not without danger. Use wires of sufficient diameter and connectors of good quality. All connections have to be done via a fuse of the right value. Attention! Live wires should never make contact with the case of the BG or the vehicle. Wrong connection could damage the electronic circuit. Wait with connecting the equipment until the BG is fully programmed. Use a wire of at least 1.5mm<sup>2</sup> for the connection.

**Programming**

To start the program mode the button should be pushed until the LED will start flashing. The number of flashes represents the program-position (see table) it is in. As soon as the desired program-position is reached the pushbutton should be released. To confirm the programmed position the LED will repeat the number of flashes. If it is not the right position, the previous steps have to be repeated. The programmed positions will be remembered, even if the battery connection has been removed. After completing the programming the equipment can be connected.

ATTENTION! First remove the battery-connection, connect the equipment to the Output+ and then reconnect the battery. Default program-position is position 1. See program table.

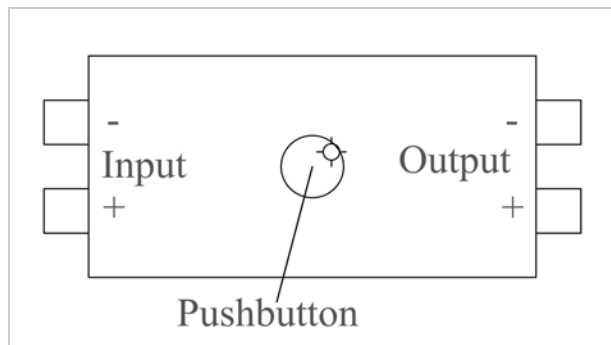
The BG10/18 will also protect your equipment for overvoltage. The BG10/18 will shut of at 16V or 32V.

**Wire diameter**

Use at least the 1,5mm<sup>2</sup> wire diameters for the connection. Place the unit as close as possible to the battery.

**Specifications:**

- . Autodetect 12 or 24V Battery voltage
  - . 8-20V -> 12V mode
  - . 20-35V -> 24V mode
- . 10 programmable voltage thresholds
- . .
- . Overvoltage shut down
  - . > 16V (12V mode)
  - . .
  - . > 32V (24V mode)
- . Current in use ~ 4mA
- . Current in OFF position or under- or over-voltage position ~ 2mA
- . Maximum Load (shut down current)
  - . BG10 : ~ 10A (15A)
  - . BG18 : ~ 18A (25A)
- . Peak current
  - . BG10 : 75A (at 12V)
  - . BG18 : 75A (at 12V)
- . Voltage tolerance ~2%



**Programming table**

12 Volt mode		
	Undervoltage Threshold	Uppervoltage Threshold
Position 1	10,5V	12 V
Position 2	10 V	11,5V
Position 3	9,5V	11,5V
Position 4	11,25 V	13,25 V
Position 5	11,5V	13,8 V
Position 6	10,5V	12,8 V
Position 7	11,5V	12,8 V
Position 8	11,8 V	12,8 V
Position 9	12 V	13 V
Position 10	10 V	13.2 V

24 Volt mode		
	Undervoltage Threshold	Uppervoltage Threshold
Position 1	21 V	24 V
Position 2	20 V	23 V
Position 3	19 V	23 V
Position 4	22,5 V	26,5 V
Position 5	23 V	27,6 V
Position 6	21 V	25,6 V
Position 7	23 V	25,6 V
Position 8	23,6 V	25,6 V
Position 9	24 V	26 V
Position 10	20 V	26.4 V

Position 1 Default position