

BEROTEC

Battery Guard

Benutzerhandbuch

User Guide

Manuel d'utilisation

Manuale d'uso

Manual del usuario



SAFETY INSTRUCTIONS

Basic safety instructions

This manual serves as a basis for the safe operation of the device and must be observed by all users. Please note possible restrictions due to applicable country-specific laws.

Use of the device requires work on the vehicle's on-board electronics. Basic knowledge of electrical installation is required for this. Improper installation or use can lead to malfunctions in the vehicle.

Intended use

The Battery Guard is designed for installation and operation on 12V vehicle electrical systems with lead-acid or lithium iron phosphate batteries. Correct functioning cannot be guaranteed for other applications; operation is at the user's own risk and any warranty is excluded. This applies in particular to operation outside the specified voltage ranges. Installation and operation must be carried out in accordance with these instructions and the intended use. In the event of improper use or non-compliance with these instructions, no liability is accepted for any damage that may occur.

Before installation

Work on the motorcycle's electrical system may only be carried out with the power supply disconnected (battery disconnected). If not all electrical plug connections are correctly connected when the power supply is restored, this can lead to an error message or malfunction on the motorcycle.

Operating instructions status: 03/2024

Contact us if you have any questions: info@berotec.de

DESIGN AND FUNCTION

Scope of delivery

- » The Battery Guard control unit
- » 2x WAGO terminals

Design

- » Control unit with ten-stage switch for setting the cut-off voltage
- » Connection cable with eyelet - for battery earth connection (black)
- » Connection cable with eyelet - for 12V battery connection (red)
- » Connection cable, open - for consumer earth connection (black)
- » Connection cable, open - for 12V consumer connection (red)
- » Fuse holder with 10A fuse



Functionality

The Battery Guard's control unit is connected directly to the battery terminals, the electrical loads are connected to the Battery Guard's output line. The control unit has an adjustable, ten-stage switch: each stage corresponds to a voltage value. This level, set by the driver, defines the remaining capacity of the battery, below which the Battery Guard interrupts the power supply to the electrical consumer. This ensures that there is sufficient capacity to start the vehicle.

The electrical consumers can be operated without hesitation at continuous plus and the annoying switch-off at a stop is avoided.

INSTALLATION

The first step is to connect the electrical consumer to the open cable ends of The Battery Guard. The WAGO terminals supplied can be used for a quick and easy connection. Alternatively, a plug-in or soldered connection can of course be made.

For further installation, the battery connections must be disconnected and the circuit interrupted.

The vehicle's ground cable, including the ground cable of the Battery Guard, is connected to the negative terminal of the battery. Finally, connect the 12V cable to the positive terminal.

The Battery Guard is now ready for operation.

OPERATION

The integrated 10A fuse prevents a possible overload. Electrical loads with a continuous output of up to 120 watts can be operated. A built-in overvoltage protection ensures the safe operation of all connected devices.

At 80µA, the self-consumption is so low that the device can remain permanently connected to the vehicle. (With an average motorcycle battery with a capacity of 10Ah, it would take 4 years to reach a residual capacity of 50% - regardless of self-discharge).

The following table can be used to select the appropriate setting on the Battery Guard:

Position	Cut-off voltage	Residual capacity lead battery	Residual capacity Lithium battery
[0]	13,6V	100%	100%
[1]	13,3V	100%	90%
[2]	13,1V	100%	60%
[3]	12,9V	100%	30%
[4]	12,7V	100%	20%
[5]	12,5V	90%	10%
[6]	12,3V	70%	10%
[7]	12,1V	50%	10%
[8]	11,9V	40%	0%
[9]	11,7V	20%	0%

TECHNICAL DATA

Operating voltage:	9-15 Volt
Max. Load current:	10 A
Own consumption:	0,08 mA
Undervoltage switch-off (cutoff):	13,6V bis 11,7V
Switch-on voltage:	cutoff + 0,3V
Overvoltage shutdown:	16V
Housing dimensions (W/H/D):	23 x 16 x 49 mm
Weight:	0,08 KG
Protection class:	IP67

DISPOSAL

Appliances that can no longer be used should not be dismantled as a whole unit, but rather in individual parts and recycled according to the type of material. Components that cannot be recycled must be disposed of properly.

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