

OPERATING MANUAL

AES 36 V / 16.5 Ah bicycle battery

AES 36 V / 19 Ah bicycle battery



You have chosen a bicycle battery from AES Akku Energie Systeme GmbH. We are delighted that you have chosen a long-life product that was manufactured to the highest industrial standards.

Your AES Team

COMPANY INFO

Operating manual

“AES 36 V / 16.5 Ah bicycle battery

AES 36 V / 19 Ah bicycle battery“

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Important notes on this manual

Please read these operating instructions carefully before installation or starting any work. These contain important information on the proper functioning of the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively.

This manual is intended for all users of the AES bicycle battery and the charger as well as qualified electricians, who are qualified for commissioning.

Safekeeping of manual

This manual should be kept in a safe place near the AES bicycle battery and the charger and must always be accessible to all users and to electricians responsible for commissioning and maintenance. In the event of a change of operator, the user manual must be transferred.

Limitation of liability

AES Akku Energie Systeme GmbH does not assume any liability for any personal injury, damage to property, damage to the product or consequential damage caused by non-observance of this manual, improper use of the product, repairs or other work carried out on the product by non-qualified electricians. Unauthorized modifications or changes to the product are hereby prohibited.

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1 Safety

1.1 Safety instructions for using the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively

- The bicycle battery AES 36 V / 16.5 Ah and AES 36 V / 19 Ah respectively may only be used for its intended purpose in accordance with these operating instructions.
- The AES bicycle battery may not be charged outdoors.
- Opening the AES bicycle battery will invalidate the warranty!
- The AES bicycle battery must not be opened under any circumstances! There is a risk due to potential high currents!
- There must not be any flammable materials within a radius of 1 m around the AES bicycle battery.
- Never touch the electrical contacts inside the connection socket of the AES bicycle battery.
- Manipulation or greasing of the electrical contacts is prohibited.
- Place the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively on a non-flammable surface out of the reach of children.
- Never cover the AES bicycle battery.
- No objects may be set down on the AES bicycle battery.
- The battery's electrical contacts must be clean and dry before pushing the AES bicycle battery into the holder on the e-bike.
- Ensure sufficient ventilation when charging the AES bicycle battery.
- Never charge or use a damaged AES bicycle battery.
- Do not charge the AES bicycle battery unattended.
- The charging location should be equipped with a functional Class D fire extinguisher (for metal fires).

1.2 Safety instructions for charging the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively

- The AES bicycle battery may only be charged using the AES charger (item no.: AES LGSC42V1A01 or LGST42V2A01) or the AES charging cabinet for bicycle batteries (item no.: AES LS0002).
- Make sure that the charger cables are not kinked and do not touch hot surfaces or sharp edges.
- Please examine the AES bicycle battery and the charger for damage each time before putting into operation. If any damage is found, the operation of the bicycle battery and the charger is forbidden. Please get the bicycle battery repaired by qualified service only.
- It is forbidden for the user to carry out unauthorized repairs on the AES bicycle battery.



ATTENTION: If you want to clean the AES bicycle battery, make sure it is not connected to the charger or an e-bike.

1.3 Fire protection instructions



IMPORTANT: Do not attempt to extinguish fires involving lithium batteries yourself. The course of such fires cannot be predicted and risk of personal injury cannot be excluded.

In the event of a fire involving the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively, comply with applicable regulations. Notify the fire service and draw the attention of fire service personnel to the following dangerous goods: UN3480, lithium-ion battery, Class 9.

2 Scope of delivery, illustration and general instructions for handling

2.1 Scope of delivery

1 bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively – compatible with ecc and STS systems.

2.2 Illustration

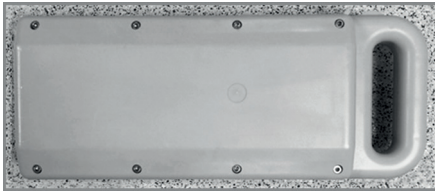
- **This AES 36 V / 16.5 Ah bicycle battery is shown in the views:**



rear (with socket),



front (handle with charge level display),



left side,



from above
(with „snapper“).

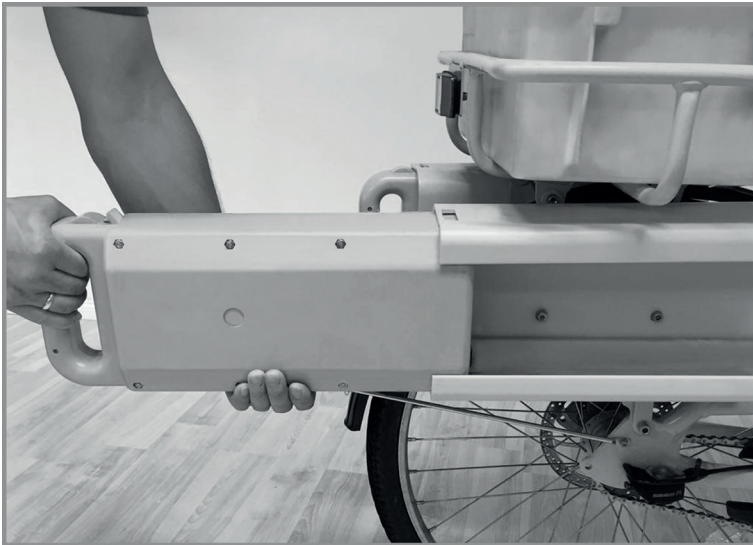
2.3 General instructions for handling

Always insert the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively into the holder on the e-bike with both hands and never with force.

Always push the AES bicycle battery into the respective holder on the e-bike with the so-called „snapper“ at the top.

3 Operation

Guide the AES bicycle battery with both hands on the grip side into the entry to the holder on the e-bike (see picture below).



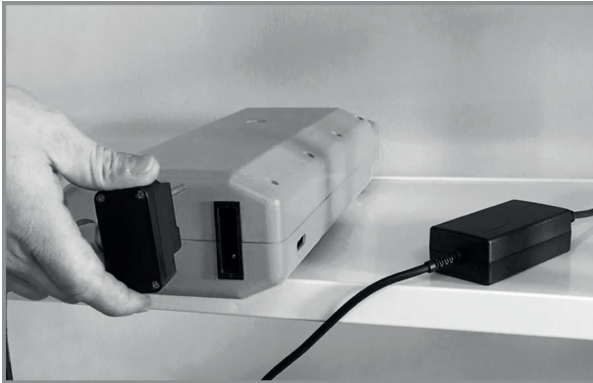
As soon as the back of the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively is inserted into the holder on the e-bike, press the snapper down with your thumb and push the battery carefully into the recess provided on the holder until the snapper engages. (see picture below).



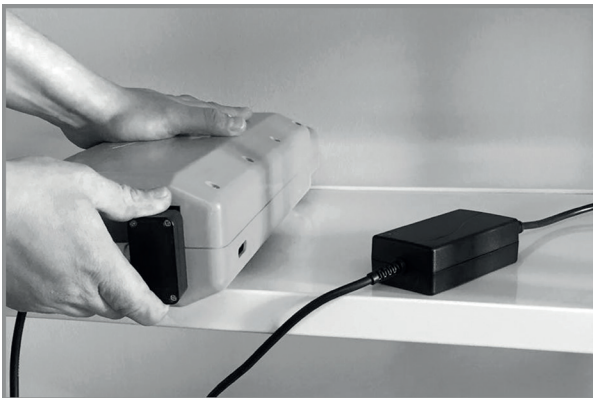
4 Charging process and charge level display

4.1 Charging process with charger

Place the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively on a non-flammable surface next to the charger. Do not cover the bicycle battery or the charger (see picture below).



If you use a single charger, please make sure you grasp the plug of the charger as shown in the picture below. Do not hold the plug tight by the cable when plugging in or unplugging.



The AES charger for bicycle batteries (item no.: AES LGSC42V1A01) is separately available.

4.2 Charging process with AES charging cabinet for bicycle batteries


Insert the bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively into the charger socket of an AES charging cabinet for bicycle batteries if available (see associated operating manual).

Charging an AES bicycle battery in an AES charging cabinet for bicycle batteries is the simplest and most reliable way of charging for you (see picture below).



The AES charging cabinet for bicycle batteries (item no.: AES LS0002) is separately available.

4.3 Charge level display

In order to display the charge level, please press the button  to the right of the charge level display.



The battery status is indicated by 1 to 5 illuminated LEDs. Due to the cell chemistry used, the driving voltage drops only slightly until shortly before complete discharge. Although this is advantageous for driving, it prevents an exact prediction of the remaining running time. Therefore, the charge level display can only provide an approximate indication:

- 4 to 5 LEDs lit: approx. 100% capacity
- 3 LEDs lit: approx. 60% remaining capacity
- 2 LEDs lit: approx. 40% remaining capacity
- 1 LED lit: approx. 20% remaining capacity

4.4 Note on storing the bicycle battery

Outdoor temperatures below +41 °F can temporarily reduce the capacity of the AES bicycle battery by up to 10%. At low outside temperatures, the battery should therefore be stored at room temperatures and only installed in the electric vehicle shortly before use.

5 Technical features

Nominal voltage:	36 V DC		
Capacity:	AES 36 V / 16.5 Ah bicycle battery: 16.5 Ah +/- 3%		
	AES 36 V / 19 Ah bicycle battery: 19 Ah +/- 3%		
Energy:	AES 36 V / 16.5 Ah bicycle battery: 594 Wh +/- 3%		
	AES 36 V / 19 Ah bicycle battery: 684 Wh +/-3%		
Charge/discharge cycles:	> 1600 at 90% remaining capacity		
	> 2500 at 80% remaining capacity		
Type of cell:	AES 36V /16.5 Ah bicycle battery:		
	LiFePo4 26650 3.3 Ah		
	AES 36 V /19 Ah bicycle battery:		
	LiFePo4 26650 3.8 Ah		
Cell circuit:	11s5p		
Continuous load:	20 A		
Maximum load:	30 A (max. 5 seconds)		
Balancing:	active (as long as a charger is connected)		
Length:	440 mm ±1		
Width:	176 mm ±1		
Weight:	approx. 6.4 kg		
Charge temperature:	+32 °F to +113 °F		
Discharge temperature:	-5.8 °F to +140 °F		
	Automatic shutdown at a core temperature of +140 °F		
Charging time:	bicycle battery	charger 1.2 A	charger 2.0 A
	36 V / 16.5 Ah	approx. 14 h	approx. 8.5 h
	36 V / 19 Ah	approx. 16 h	approx. 9.5 h

6 Care instructions

An empty bicycle battery AES 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively must be fully charged within 24 hours!

Regardless of use, the AES bicycle battery must be fully charged after 4 weeks at latest!



If you want to clean the AES bicycle battery, make sure it is not connected to the charger or an e-bike.

If you want to clean the charger, first disconnect the power connection by pulling the mains plug out of the power socket!

The inside of the electrical connection socket of the AES bicycle battery should be cleaned exclusively by expert personnel or by the manufacturer AES Akku Energie Systeme GmbH.

Do not use aggressive cleaners or solvents such as acetone.
Please use a soft, clean and lint-free cloth.

7 Electrical tests

The electrical test of the AES bicycle battery 36 V / 16.5 Ah or AES 36 V / 19 Ah respectively takes place at the manufacturer AES Akku Energie Systeme GmbH where all relevant data such as capacity, end-of-charge voltage, rest voltage and the uniformity of the individual cell voltages are checked.

8 CE Declaration of Conformity

CE-Konformitätserklärung

CE-Declaration of Conformity

Die/The

AES Akku Energie Systeme GmbH
Biedenkamp 8
21509 Glinde

erklären in alleiniger Verantwortung, dass das Fahrradakku
declare in sole responsibility that the Batterypack

AES 36V/16,5Ah

AES 36V/19Ah

konform ist zu der
is compliant with the



IEC 62619:2017

EN 62133-2:2017

EN15194_2017 (clause 4.2.15.1 Emission)

UN Transporttest 3480

UN Prüfhandbuch Teil III, Abschnitt 38.3

Glinde, den 23.11.2020
Ort, Datum


L. Hillermann/M. Behlke
Geschäftsführer

Die entsprechenden Erklärungen und Unterlagen sind bei der AES Akku Energie Systeme GmbH hinterlegt.

The relevant statements and documents are deposited in the AES Akku Energie System GmbH.

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