



## MANUAL / SAFETY NOTES

**FOR YOUR E-BIKE VISION POWERPACK, COMPATIBLE TO  
PANASONIC\* NEXT GENERATION DRIVE SYSTEM WITH 36 V**

### Power information

16,8 Ah / 605 Wh Battery seattube version

19,2 Ah / 691 Wh Battery seattube version



140,0 x 99,4 x 283,7 mm

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# READ MANUAL CAREFULLY BEFORE USE!

**This manual is integral part of the product. It contains important information and safety notes. Keep it in range and give it away with the product to third party.**

## Introduction

We are glad, that you choose a Lithium-Ion battery of our PowerPack range.

Please take some time to read this manual carefully. It contains detailed information about handling of your battery, its functions and its care, as well as the usage of the E-Bike Vision fast charger.

For further questions, do not hesitate to contact your dealer or get in contact with us via our homepage.

Enjoy your new PowerPack and thank you for your confidence.

## Your Akku Vision Team

## Disclaimer

The Akku Vision GmbH assumes no responsibility for any loss, damages or costs arising from incorrect use and operation of the product, or related.

The obligation to pay any compensation, regardless of the legal reason, is limited to the directly involved E-Bike Vision products invoiced value, as far as this is permitted by law. This does not apply, if a liability according to binding legal rules due to intent or gross negligencem has to be respected. Furthermore, the Akku Vision GmbH assumes no responsibility for the completeness and accuracy of the documents that come with the battery, due to its different distribution channels.

## Guarantee

For our battery products, we accept the legally applicable guarantee beyond a 24 months warranty. To qualify for the 24 months guarantee, submission of the purchase receipt is required.

Please contact your dealer from whom you purchased the product, in guarantee cases.

Excluded from the guarantee are malfunctions caused by:

- improper operations, e.g. overheating, incorrect connection, short-circuit or reverse polarity, immersion in water, cleaning with high pressure or steam cleaners, deep discharge, wrong polarity or drop
- use of non-approved accessories by the Akku Vision GmbH
- accidental or deliberate damages
- defectives due to normal tear
- operation outside the technical specifications
- damages that will not appear directly on the device, for which we assume the guarantee
- grease the contacts with contact spray or similar
- changes / repairs / modifications / installations or upgrades that have not be performed by the Akku Vision service center → use only our service center for repairs
- optical damages that justify no functional damages or which can be remedied by cleaning
- the costs for rental batteries

**Removal of the performace label leads to loss of warranty claim.**

## CE declaration of conformity

The evaluation of the device was carried out by European harmonized directives. You therefore have a product that is related to its construction meets the safety objectives of the European Community to the safe operation of equipment. The detailed CE declaration of conformity can be obtained from our service center.



## Technical information

Li-Ionen battery	16,8 Ah / 605 Wh	19,2 Ah / 691 Wh
Nominal voltage	36 V	36 V
Nominal capacity	16,8 Ah	19,2 Ah
Energy	605 Wh	691 Wh
Operating temperature	-10 up to 60 °C	-10 up to 60 °C
Charge temperature	0 up to 45 °C	0 up to 45 °C
Storing temperature	< 17 °C	< 17 °C
Weight	approx. 3,5 kg	approx. 3,5 kg
Safety class	dust- and splash water approved	

## Care and storage

- Use only a soft cloth and a little water or a neutral detergent for cleaning
- Never clean with a high pressure or steam cleaner!
- Do not immerse in any liquids!
- Do not use any cleaning agents as gasoline, alcohol or other liquids.
- Abrasive cleaning agents can lead to detachment of the painting, discoloration, deformation, scratches or similar defects.
- Store your battery at room temperature (18° to 23° C).
- For longer periods, store it at temperatures around 17° C.
- Humidity should be in the range of 0 to 80 %.
- Ideal charging state in not use is about 70 % charged capacity. Check the state of charge by prolonged non-use regularly and charge your battery if necessary.

## Accessories

- E-Bike Vision fast charger for PowerPacks with 36 V and a charge current of 6A.
- E-Bike Vision charger for PowerPacks with 36 V and a charge current of 4A.

Both chargers are only useable with the following adaptor:

- Charge adaptor for PowerPack, compatible with Panasonic 36V Next Generation
- Charge adaptor for PowerPack, compatible with Panasonic 36V Flyer charger

## Common safety notes for PowerPacks

Please read this manual carefully! Please consider the safety notes!

- PowerPacks are no toys. Keep them away from children!
- Don't change anything on the battery. Especially, consider that you are not allowed to open the battery, or rather modify it, otherwise you lose your warranty claim.
- By mishandling (heating, e.g. solar irradiation or store on radiators, open fire, dipping into water, cleaning with pressure washer or steam cleaner, short circuit, over charging, deep discharging, inverse polarity or dropping) or situations, that lead to not-proper operation, that can hurt people or catch the battery fire.
- PowerPack batteries are products which may not release any substances under normal and reasonably foreseeable conditions of use.
- However, should any liquids or gas eject from the battery, avoid any contact with it and also do not breathe it. If contact occurs randomly, wash the affected skin with water.
- In case of burns or on contact of the eyes with one of these fluids or by respiratory irritation, please consult a doctor!
- In extreme cases, seal batteries airtight and add dry sand, chalk powder (CaCO<sub>3</sub>) or vermiculite.
- Do not use damaged batteries or chargers. In any doubt, contact your dealer.
- Do not use battery and/or charger for other purposes. You must use PowerPacks only in the designated eBikes.
- Use only the appropriate chargers.
- Contacts should not be treated with lubricants.
- The battery connectors at the eBike must be dry and clean before contacting!
- The covers of charge/discharge connectors must be replaced immediately on loss, otherwise warranty void.

→ That way, you do have the maximum safety!

## Safety notes for charging

Please pay particular attention to the following points when charging:

- Connect the charger only to a suitable mains supply.
- Do not charge NiCd, NiMh or primary cells!
- Use the charger only with the appropriate PowerPacks of Akku Vision!
- When not using for a longer period, disconnect the mains supply and also connected batteries.
- The charging time varies depending on the battery's capacity and charger type.
- Do not charge the battery below 0° and not above 45° C. The battery management system will not allow to start the charging process.
- Please charge your PowerPacks only under supervision and on a non-combustible surface (both battery and charger).
- The charger is designed for operation in ventilated, dry and dust-free environment. Never expose to rain or extreme heat. Allow adequate air circulation.
- Do not cover the charger, nor the battery.
- Ensure that that the plugs and sockets of the charger are not damp or contaminated.
- Do not touch plugs and sockets of the charger with wet hands.
- Do not try to convert or disassemble the charger.
- Before the charger is connected to the mains, please ensure that line voltage matches to the supply voltage of the charger. The charger's needed voltage is indicated on its nameplate on the backside.
- A charger with a damaged power supply cord or plug must not be connected to the electrical grid and must promptly replaced or repaired by the E-Bike service center.
- Penetration of water and moisture into the charger must be avoided in any case. Should this have happened, power off the charger (by turning off the fuse) immediately. Disconnect the charger from the mains and let it be checked by the Akku Vision service center.
- A sudden temperature change from cold to hot, there could be condensation water on and in the charger. In this case, wait for connecting to the mains until the charger is as warm as the room. Try to avoid this case by storing the charger where you use it.

For maximum life of your battery, charge it only within 10° and 30° C temperature range.

## The Charging

Your new battery can be charged with the original charger, which was included when you bought your ebike.

When using the **E-Bike Vision charger in combination with the additional available charging adaptor** or when using the **original charger**, you can **charge your battery inside or outside of the ebike**.

### Requirements for charging within the ebike

The drive system must be turned off. Open the cap of the charge plug.

### Requirements for charging outside the ebike

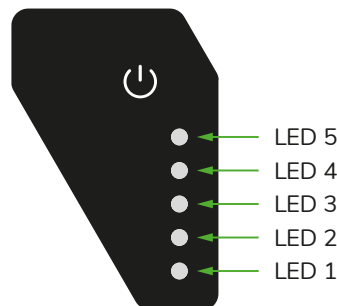
**Charging outside** the ebike is started by turning off the drive system.

Please wait until all LEDs turned off. Now you can take out the battery by opening the lock and taking out the battery and charge it inside your apartment or garage in your presence.

### Start of charging process with the original charger

1. Connect the charger to the mains.
2. Now plug in the charging connector of the charger to the battery.
3. Charging process start. The LEDs of the battery corresponding to its current state of charge begins to flash.
4. **If charging does not start immediately, please push the capacity indicator button of the battery and wait until LEDs are lighting.**

### Naming of LEDs



**During charging, the capacity is indicated by lighting and flashing of the battery's LEDs as follows:**

LED 1 flashing:	0 – 19 % charged capacity
LED 1 lighting and LED 2 flashing:	20 – 39 % charged capacity
LED 1,2 lighting and LED 3 flashing:	40 – 59 % charged capacity
LED 1,2,3 lighting and LED 4 flashing:	60 – 79 % charged capacity
LED 1,2,3,4 lighting and LED 5 flashing:	80 – 99 % charged capacity
LED 1,2,3,4 and 5 lighting:	100 % charged capacity

### Break up of charging process

To complete the charging, switch off the charger and unplug the charging plug of the battery or out of the charge plug of the frame. Pull the power plug of the charger from the wall socket.

**Charging with your original charger is completed (State of Charge 100%), as soon as all LEDs are turned off.**

## Charging time

The battery with a capacity of 16.8 Ah (605 Wh) requires about 5 hours with the original 4A charger to be fully charged and about 3 hours with the E-Bike Vision 6A fast charger.

The battery with a capacity of 19.2 Ah (691 Wh) requires about 5.5 hours with the original 4A charger to be fully charged and about 3.5 hours with the E-Bike Vision 6A fast charger.

## Battery usage

Please consider the safety instruction given earlier during usage of your E-Bike Vision PowerPack.

**Your PowerPack will enter automatically into sleep-mode (if it is not installed in the eBike) after 24 hours to prevent itself of self-discharging.**

**Also, it will shut down the drive system after 10 minutes of no use of the eBike. It is irrelevant whether the lights are enabled or not!**

**Take care, that the battery is in its correct position, before inserting. If not, you can damage the battery's housing.**

**Before each use of PowerPack, it must be activated by pushing the capacity indicator button.**

**Do not press the capacity indicator button several times in quick succession, this activates and deactivates the battery once again.**

You installed your new E-Bike Vision PowerPack correctly in your eBike and locked it (do not forget to remove the key)? Then turn on the drive system by the capacity indication button or via the ON /OFF switch of your HMI. The drive system now read the current capacity of the battery and will calculate the approximated range, based on your previous driving profile. The drive system is ready for use as soon as the speed is displayed.

**Capacity is indicated during use as follows:**

LED 1 flashing:	0 – 3 % charged capacity
LED 1 lighting:	4 – 19 % charged capacity
LED 1 and 2 lighting:	20 – 39 % charged capacity
LED 1,2 and 3 lighting:	40 – 59 % charged capacity
LED 1,2,3 and 4 lighting:	60 – 79 % charged capacity
LED 1,2,3,4 and 5 lighting:	80 – 100 % charged capacity

**Do not remove your battery off the eBike, as long as the drive system is on. Turn it off before!**

## Light support

Your new PowerPack owns the latest and most safely battery management system technology and protects itself from incorrect operation. Before the cells would be completely discharged, the battery switches off the motor. However, there will remain enough power within the battery, to drive safe home with activated lights, if you are powering the lights via the drive battery. Also electric switches will still work.



## Maintenance

The life span of your PowerPack depends mainly of your carefully usage.

Never use the complete capacity, but use it regular and store it at 17° C. That way, your battery will thank you will longer life span.

With increasing aging your battery will loose capacity, anyway.

Do not try to refresh or exchange the cells on your own!

Get in contact with our service department. They can also rate and exchange single components after the warranty time.

An essential shorte usage time after fully charged the battery indicates that the battery is dissipated, however. Replace it!

## Troubleshooting

If your drive system cannot be activated, please check the contacts of the discharge plug to make sure that they are clean, straight and undamaged and that there is a safe contact between battery and connector box.

If the drive system can still not be activated, please try to charge your battery.

If charging does not start, please check the polarity of the charge plug.

Please test the battery by pushing the capacity indicator button.

Is the power cord of the charger connected properly and performs the wallet socket?

If the battery is damaged, defective or exits any liquids or smell? Please do not use your PowerPack further and contact your dealer or our service center.

## Recycling

Do not dispose lithium batteries in the household waste! Return defective or used batteries to the battery dealers or to the municipal waste collection centers. Turn back the battery in discharged state. Also prevent short-circuits by covering the terminals. With the proper disposal of your battery, you make an important contribution to protect our environment.

