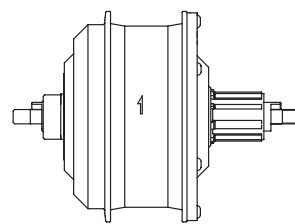




E-Bike components

User manual

Rear wheel motor



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## Safety information

### WARNING

There is an increased risk of injury – even fatal – if you do not follow instructions.

#### How safe riding is ensured

- ▶ While riding, do not focus your attention too much on the screen, as this can lead to accidents.
- ▶ Ensure that the wheels are securely attached to the bike before you begin your trip. If the wheels are not securely attached, the bike may fall over, causing severe damage.
- ▶ When riding a power-assisted bike, be sure that you are completely familiar with the starting characteristics of the bike before riding on multilane roads and footpaths. If the bike suddenly switches on, accidents can happen.
- ▶ If applicable, check that the bike lights are working before you ride at night.
- ▶ Remove the battery pack from the eBike before you start working on it (e.g., assembly work, maintenance, working on the chain, etc.), before transporting it by car or plane, or before storing it. There is a risk of injury in case of accidental activation of the eBike system.
- ▶ Be sure to remove the battery before you perform wiring or installation work on the bike. Otherwise there is a danger of electric shock.
- ▶ When you install this product, be sure to follow the instructions given in the user manual. We also recommend that you use only genuine SR SUNTOUR parts. If nuts and bolts are left loose or the product is damaged, the bike may fall over suddenly and cause serious injury.
- ▶ After you have carefully read the user manual, store it in a safe place for later reference.
- ▶ Ensure that unused connections are provided with caps.
- ▶ Contact a retailer for installation and adjustment of the product.
- ▶ To allow riding in wet weather, the product is designed to be completely waterproof. Nevertheless, do not expose the product intentionally to water.
- ▶ Do not expose the bike to high-pressure cleaning. If water should penetrate into one of the components, operating problems or rust may result.

#### Safe use of the product

- ▶ Examine the battery charger regularly for damage, especially the cable, plug and housing. If the battery charger is damaged, it must only be used after it has been repaired.
- ▶ This product must not be used by persons (including children) with reduced physical, sensory or mental capabilities, or who lack experience and knowledge, unless they are supervised by a person responsible for their safety, or instructed in the use of the product.
- ▶ Do not let children play near the product.

### WARNING

There is a danger of personal injury or property damage

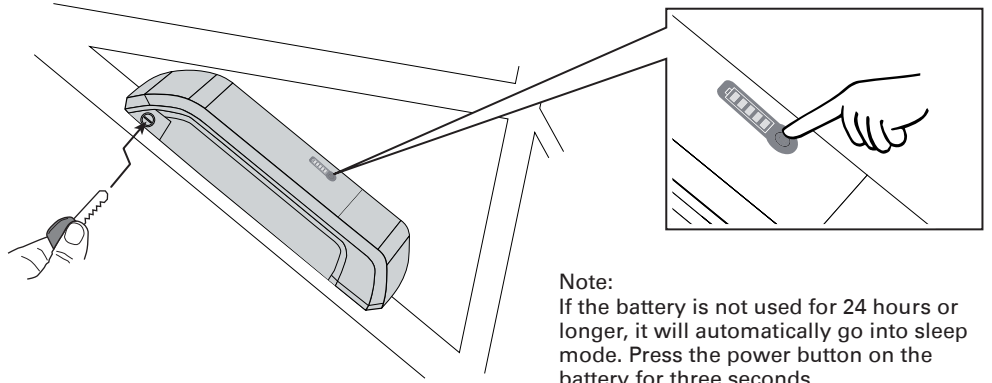
#### Managing the battery

- ▶ Use only batteries and chargers from SR Suntour with your bike. Use of other battery packs can cause injury and involve a risk of fire. If you use other battery packs, SR Suntour will assume no liability or warranties.
- ▶ Do not throw the battery pack into a fire.
- ▶ The battery must not be exposed to direct sunlight, or charged or stored in the vicinity of high temperatures.
- ▶ Do not use the battery for any other purpose.
- ▶ Avoid contact with metal objects (paper clips, coins, keys, nails, screws, or other small metal objects, as this may cause a short-circuit. Shorts caused in this way will invalidate any warranty claims.
- ▶ Do not open the battery pack. This could cause a short circuit. Opening of the battery package will invalidate any warranty claims.
- ▶ Do not connect, or disconnect the battery pack / charger with wet hands.
- ▶ Keep the battery / charger out of reach of children/animals.
- ▶ Do not subject the battery or the charger to physical shocks, e.g., by dropping. Rinse in the event of accidental contact with water. If fluid gets in your eyes, seek medical advice. Fluid that leaks from the battery pack may cause skin irritation or burns.
- ▶ If you detect a strange odour or smoke, pull the plug.
- ▶ Ensure that the power plug is fully inserted into the wall outlet.
- ▶ Pull on the plug instead of the cable to unplug the power cord from a wall outlet.
- ▶ Do not place anything on the cable. Do not lay anything on the cable.
- ▶ Do not bend the cable. The cable must not be rolled up while charging.
- ▶ It is dangerous to use a single outlet for multiple devices.
- ▶ If the cable or plug is damaged, replace the parts with new ones. Contact your authorized dealer.
- ▶ Always keep your charging set away from flammable gases when charging.
- ▶ The charger can be hot. Do not wrap the charger.
- ▶ The charger can be hot. Do not place the charger on floor coverings such as carpets, tatamis, etc.
- ▶ The charger can be hot. Avoid long skin contact with the charger.
- ▶ Do not immerse the battery or the charger. Do not use in rain.
- ▶ Do not charge the battery for more than 24 hours continuously.
- ▶ If the battery is not fully charged after six hours, disconnect it immediately from the output to stop the charging process and contact your place of purchase. This can lead to overheating, bursting, or ignition of the battery.
- ▶ The battery comes with a 40% charge. Discharge and charge the battery fully twice to reach an optimum range.
- ▶ Charge the battery before riding.
- ▶ The charger can be used with an input voltage in the range of 100V to 240VAC.
- ▶ After charging pull the cable from the battery and from the wall outlet.
- ▶ Keep the power plug clean and dust free. The charger should be cleaned regularly.
- ▶ Do not rotate the pedals while the battery is being charged and is on the battery holder.
- ▶ Provide ventilation/venting while the battery is charging in enclosed spaces.
- ▶ During storage keep the battery at a charge level of at least 40%.
- ▶ Charge the battery at room temperature between 5°C and 35°C (41°F and 95°F).

# Riding the E-Bike

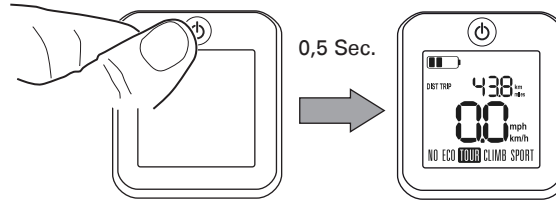
**1**

Fit the battery and push the battery ON/OFF button



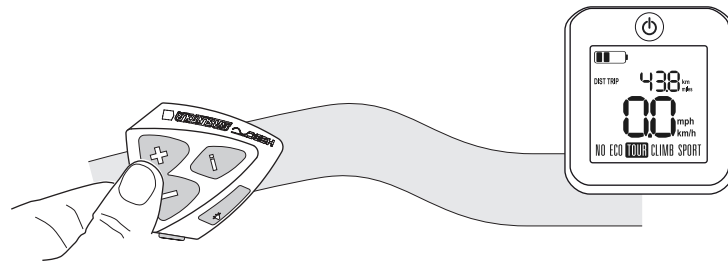
**2**

Switch on the bike



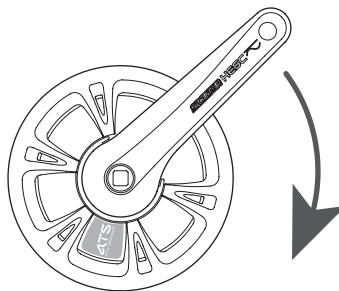
**3**

Select mode

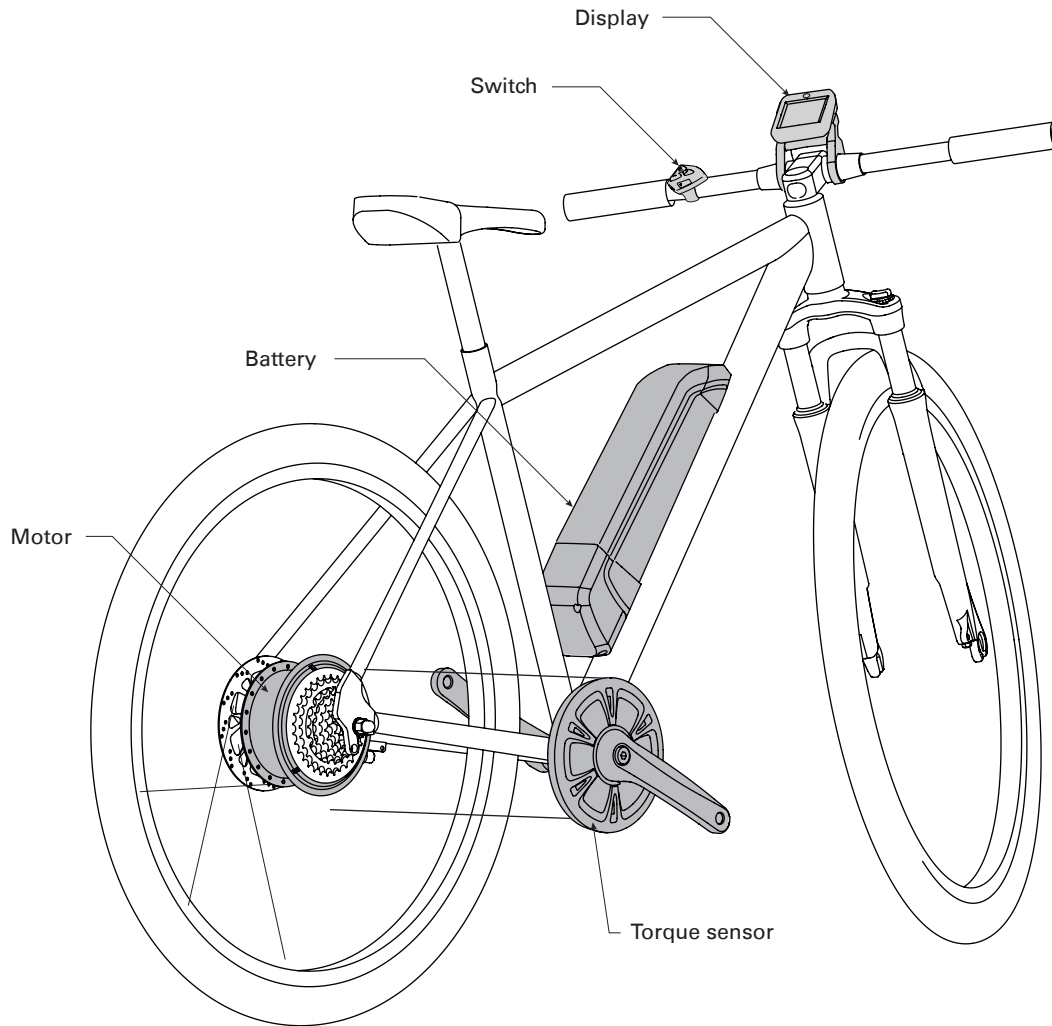


**4**

Start riding



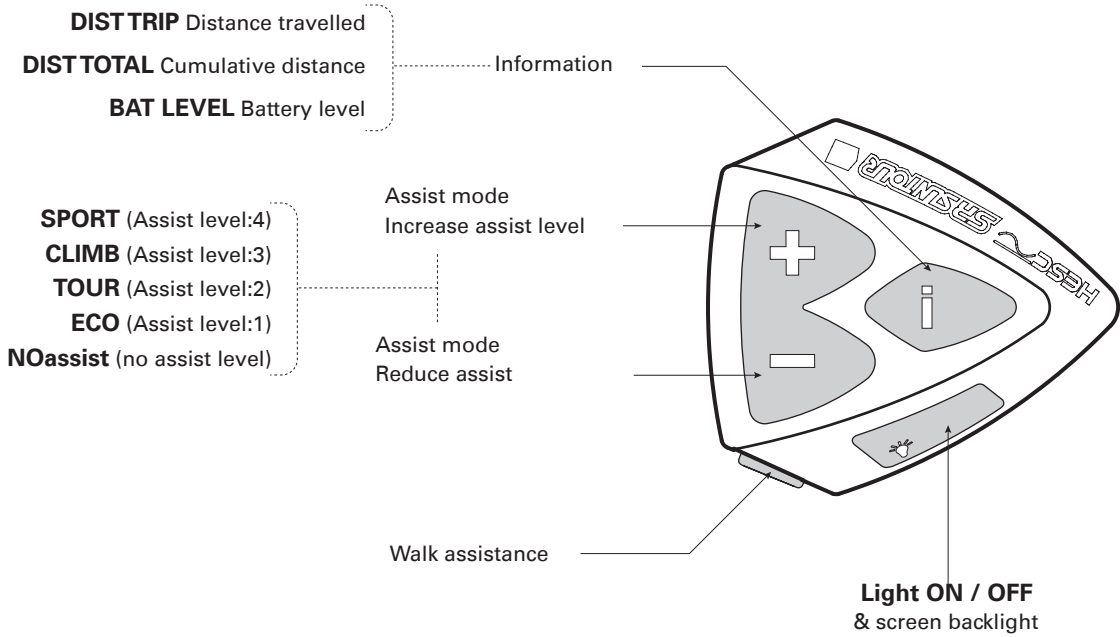
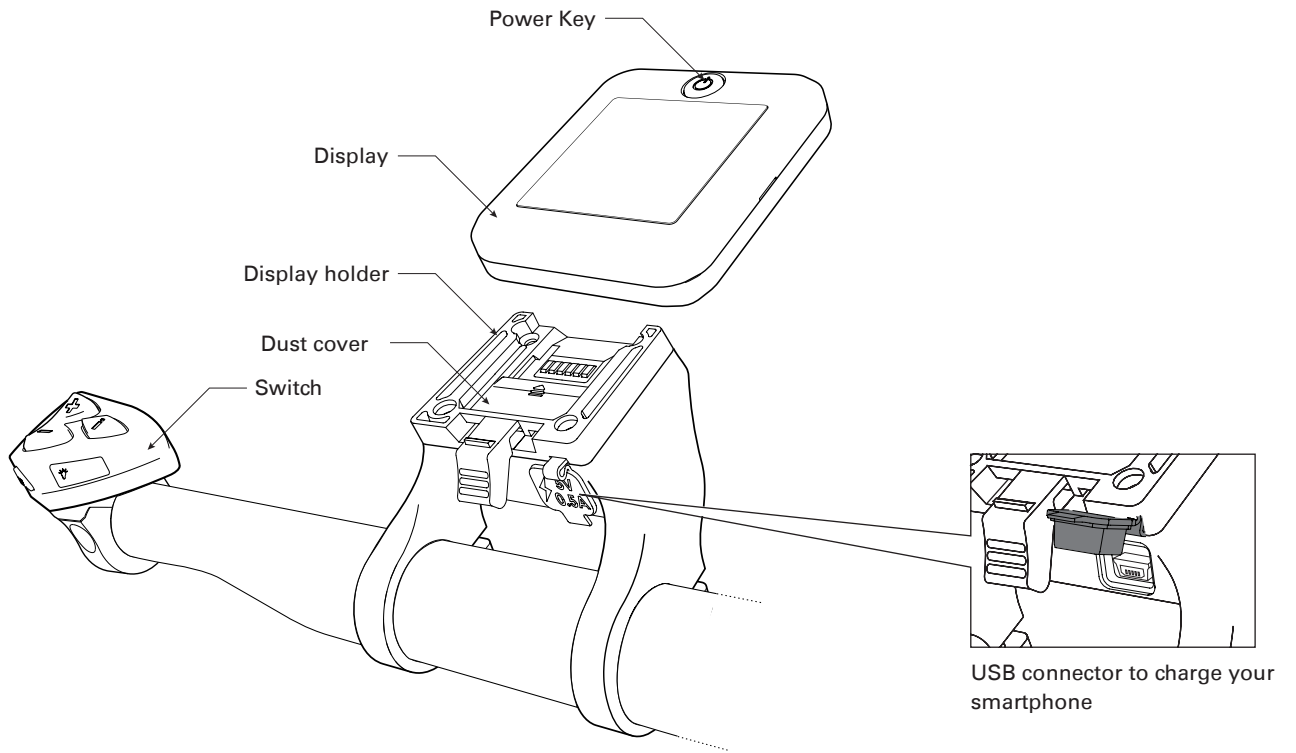
## Product characteristics



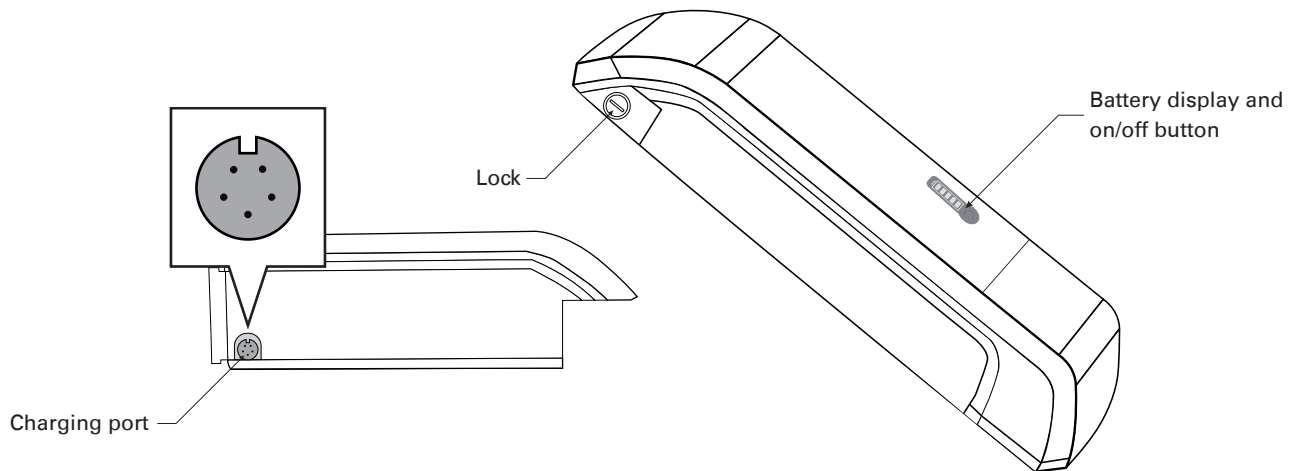
## Product specifications

<b>Operating temperature range during discharge</b>	-20°C to 60°C
<b>Operating temperature range during charge</b>	0°C to 45°C
<b>Storage temperature (battery)</b>	-20°C to 45°C
<b>Humidity (storage)</b>	up to 80%
<b>Charging voltage</b>	100V to 240VAC
<b>Charging time</b>	approx. 6 hours
<b>Battery type</b>	Lithium ion battery
<b>Capacity</b>	417Wh
<b>Nominal voltage</b>	36VDC
<b>Motor type</b>	Rear-wheel drive
<b>Motor type</b>	Brushless DC Motor
<b>Nominal motor power</b>	250W
<b>Maximum motor power</b>	400W
<b>Torque</b>	50Nm

**Display**



## Battery



For safety this high energy density lithium ion battery contains a sophisticated battery management system (BMS). The BMS ensures safe charging and discharge, continuously monitoring each of the cells in the battery individually. If the current drawn gets too high or the temperature of the battery is elevated, the BMS will shut the battery down for safety.

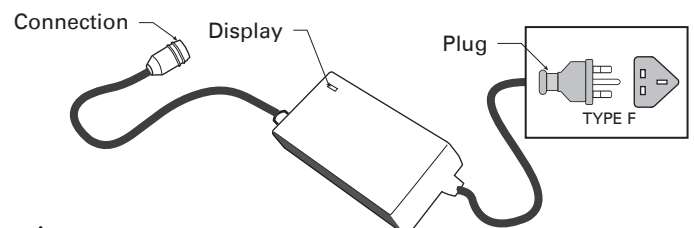
If the battery shuts down there are two levels of reset, it may come back on after a press of the power button on the battery. However if this does not reset you will have to take the battery right off the bike for a few seconds before refitting it.

- ▶ If the E-Bike not in use, remove the battery and store it at a temperature between 0°C and 40°C in a dry environment.
- ▶ Do not store the battery with low capacity for a longer period.
- ▶ For storage, the battery should have a capacity of at least 40%.
- ▶ It is recommended to always discharge the battery completely and then fully charge it.

## Battery charger

### WARNING

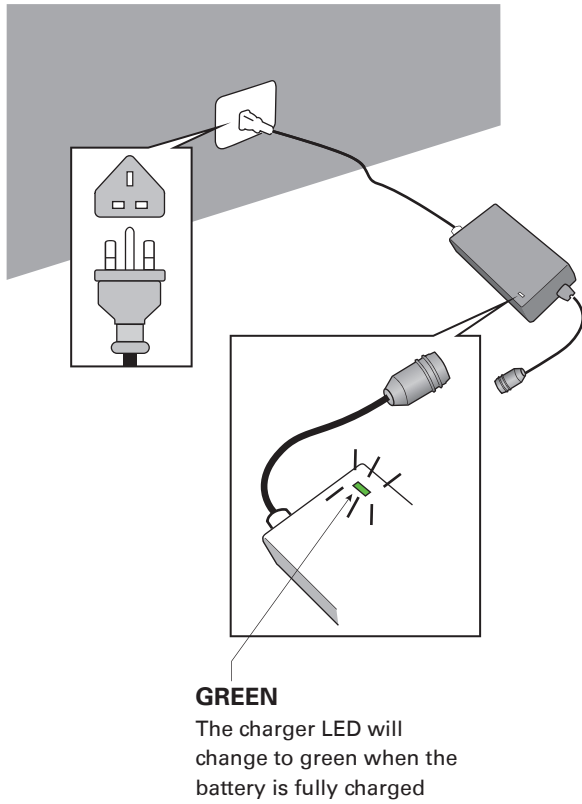
- ▶ Use only batteries and chargers from SR SUNTOUR with your bike. Use of other battery packs can cause injury and involve a risk of fire. If you use other battery packs, we will assume no liability or honour warranties.
- ▶ The battery must not be exposed to direct sunlight, or charged or stored in the vicinity of high temperatures.
- ▶ Avoid contact with metal objects (paper clips, coins, keys, nails, screws, or other small metal objects, as this may cause a short-circuit. Shorts caused in this way will invalidate any warranty claims.
- ▶ Do not open the battery pack. This could cause a short circuit. Opening of the battery package will invalidate any warranty claims.
- ▶ Do not connect, or disconnect the battery pack/charger with wet hands.
- ▶ Keep the battery/charger out of reach of children and animals.



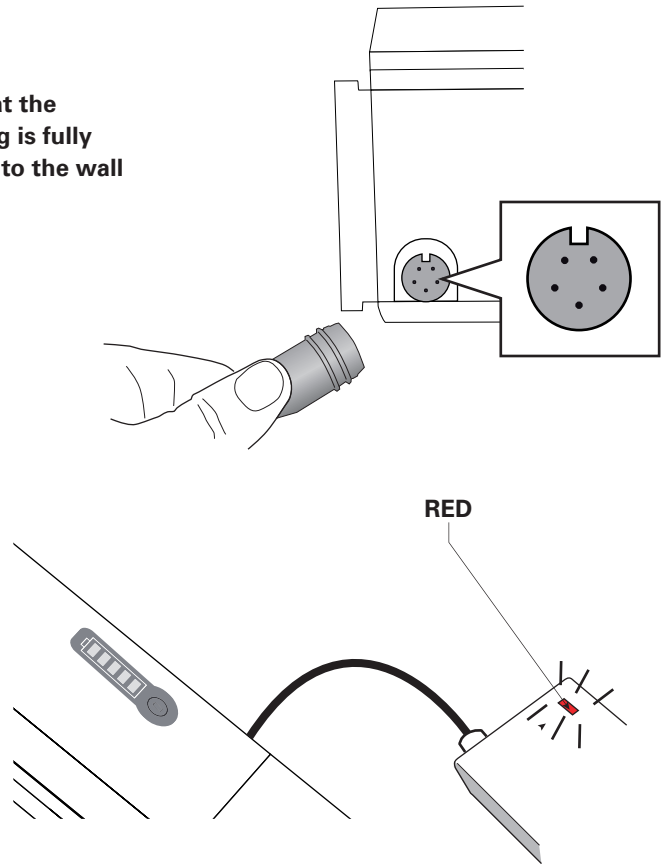
### WARNING

- ▶ Do not subject the battery or the charger to physical shocks, e.g., by dropping. Rinse in the event of accidental contact with water. If fluid gets in your eyes, seek medical advice. Fluid that leaks from the battery pack may cause skin irritation or burns.
- ▶ Do not bend the cable. The cable must not be rolled up while charging.
- ▶ The charger can be hot. Do not wrap the charger and place it on floor coverings such as carpets, etc.
- ▶ If the battery is not fully charged after six hours, disconnect it immediately from the output to stop the charging process and contact your place of purchase. This can lead to overheating, bursting, or ignition of the battery.

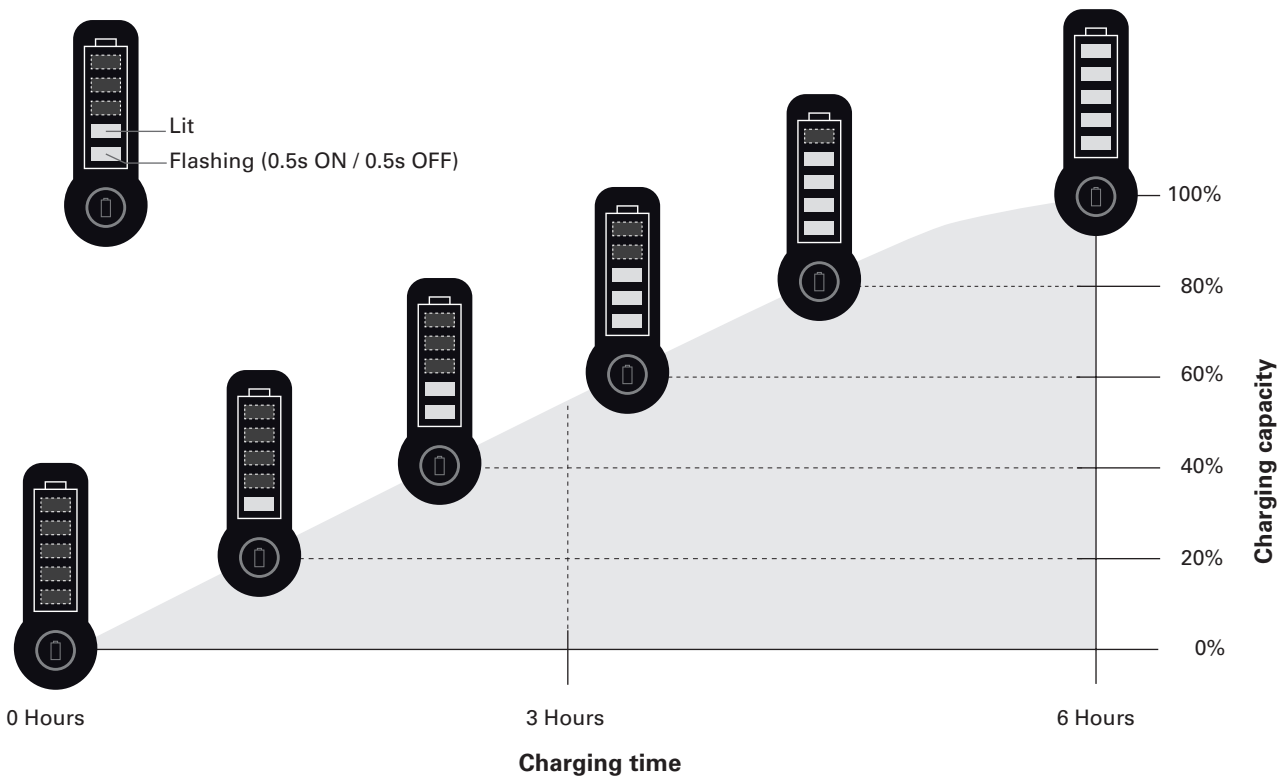
## Charging the battery



Ensure that the power plug is fully inserted into the wall outlet.



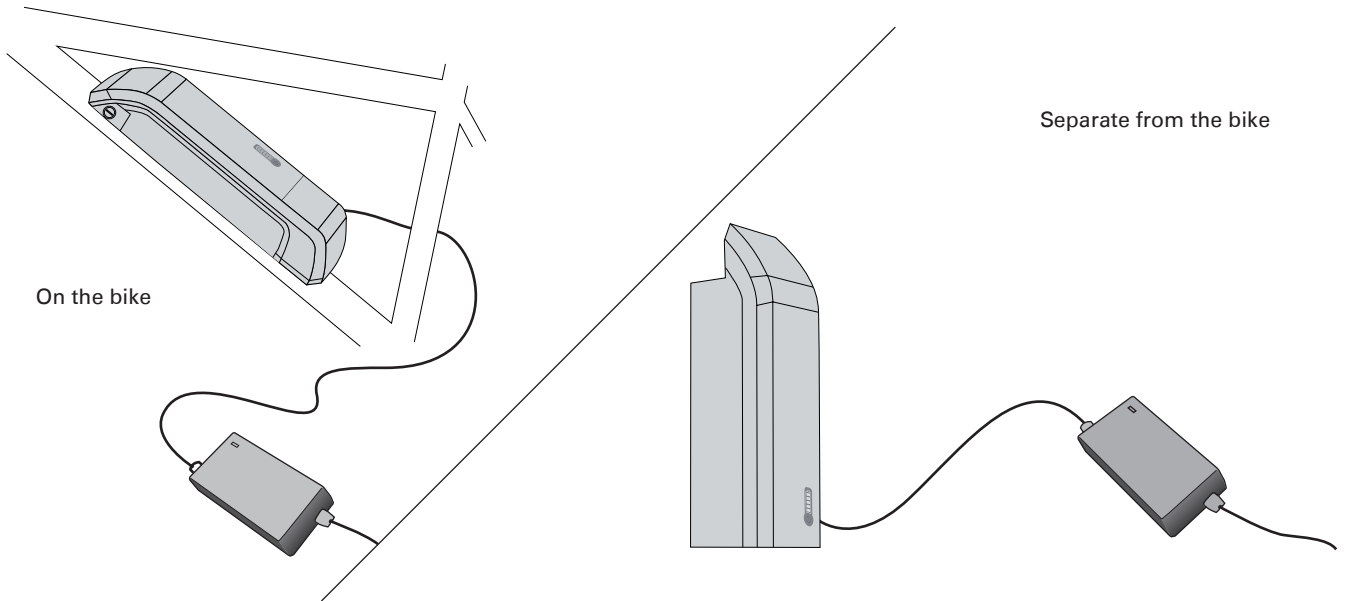
## Battery charging indicator



Every three months or after 40 sub-cycles, you should perform a complete discharge and recharge.



## Charging alternatives



## Battery faults

If the battery is not working properly press the 'Power' button on the battery pack briefly. If it displays any of the LED sequences shown below stop using the battery.

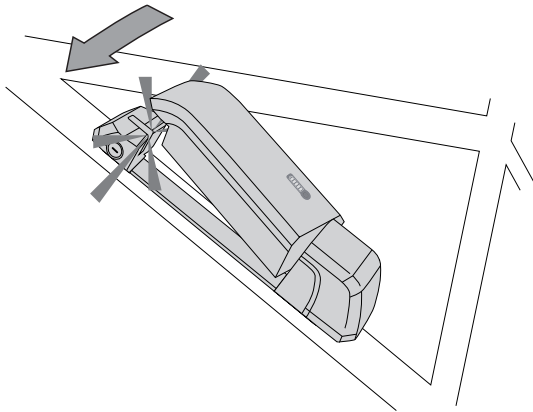
Flashing 0,5s ON / 0,5s OFF				
Fault	Over temperature	Over Voltage of cell	Bad cell	Charge MOSFET defective
Action	Stop using this battery pack	Stop using this battery pack	Stop using this battery pack	Stop using this battery pack

## Battery state of health (SOH)

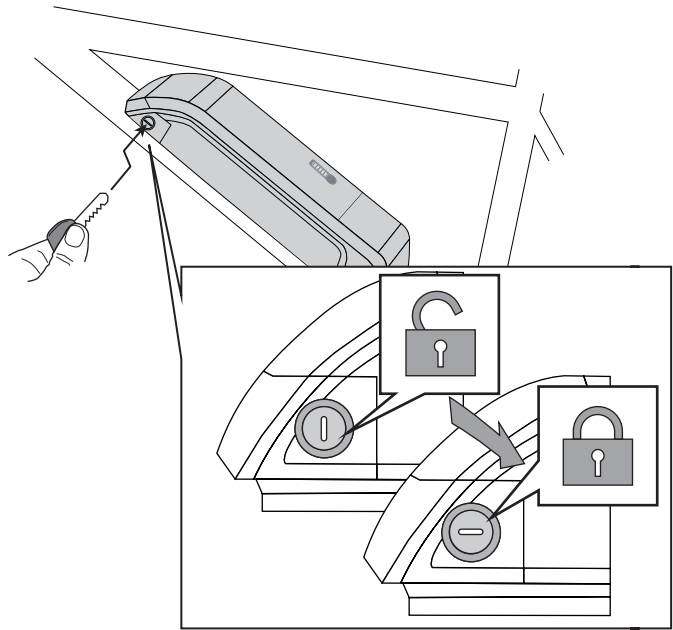
Press the battery power button for 10 seconds. One of the following patterns of the LEDs will be displayed showing the remaining capacity of the battery - Battery State Of Health (SOH).

Flashing for 10 seconds					
SOH remaining capacity	<60%	60-70%	70-80%	80-90%	>90%
Action	If <2 years old, battery replacement	N/A	N/A	N/A	N/A

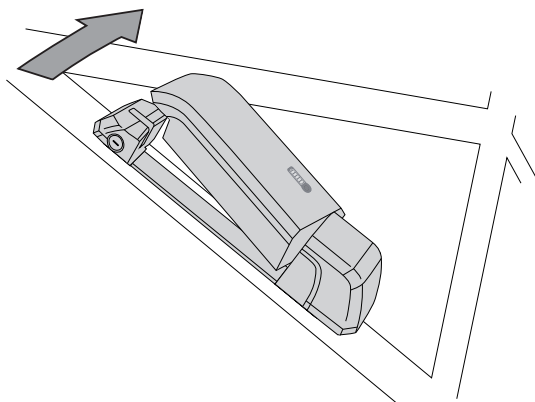
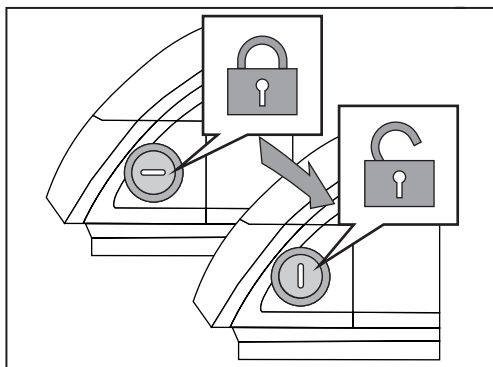
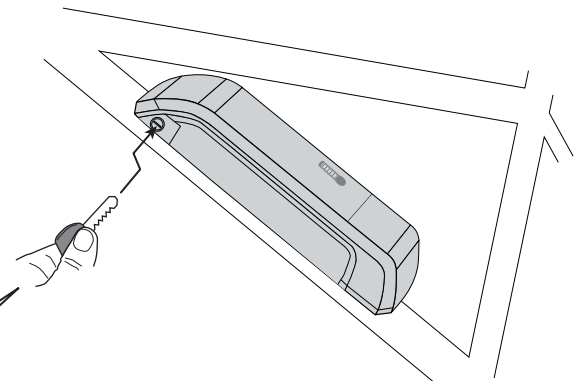
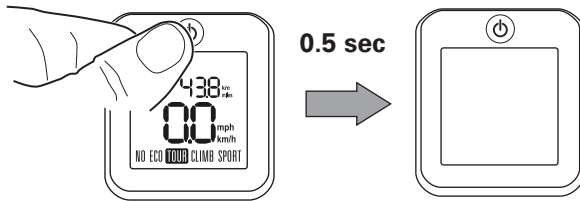
## Inserting the battery



The battery must latch on with an audible click.



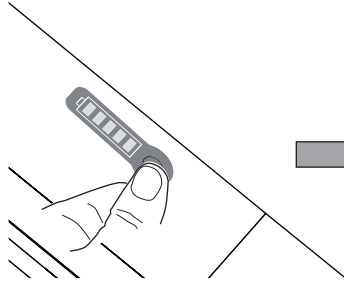
## Removing the battery



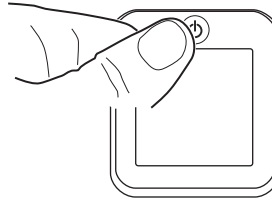
The bike is supplied with four battery keys. Replacement keys are not available and any further keys required will have to be cut. Please keep at least one of the keys in a safe place.

## Switching the bike ON/OFF

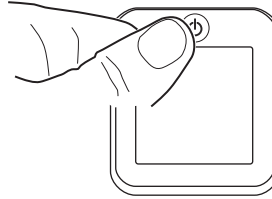
### SWITCHING ON



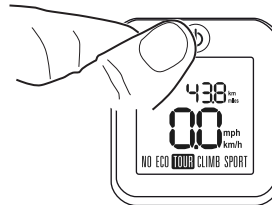
If the system has not been used for more than 24 hours, the battery will be completely switched off. The battery can be reactivated by pressing the ON button.



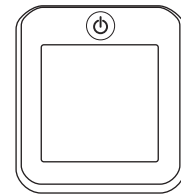
0.5 sec



0.5 sec



0.5 sec

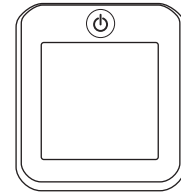


### SWITCHING OFF

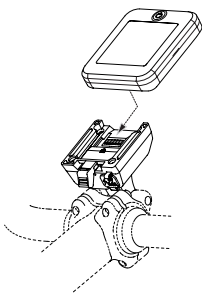
### Automatic SWITCHING OFF



10 min.

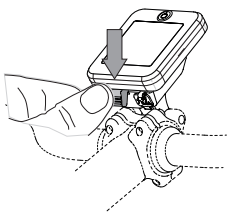


## Placing the display

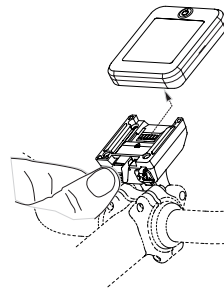


Slide the display into the mount on the holder, as shown. Ensure that the display is securely clipped into position.

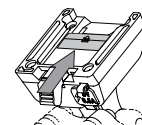
## Removal of the display



Press firmly on the lever of the display holder while you slide out the display.

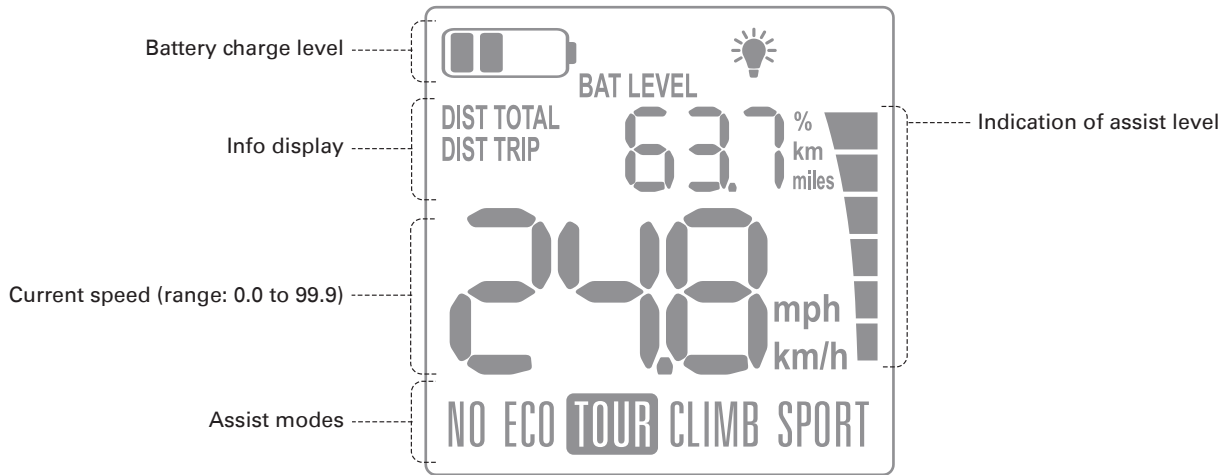


Slide up to cover the contacts and to prevent short circuits and malfunctions.



Always remove the display when leaving your bike in a public place, as without the display no one can switch on the electric drive system.

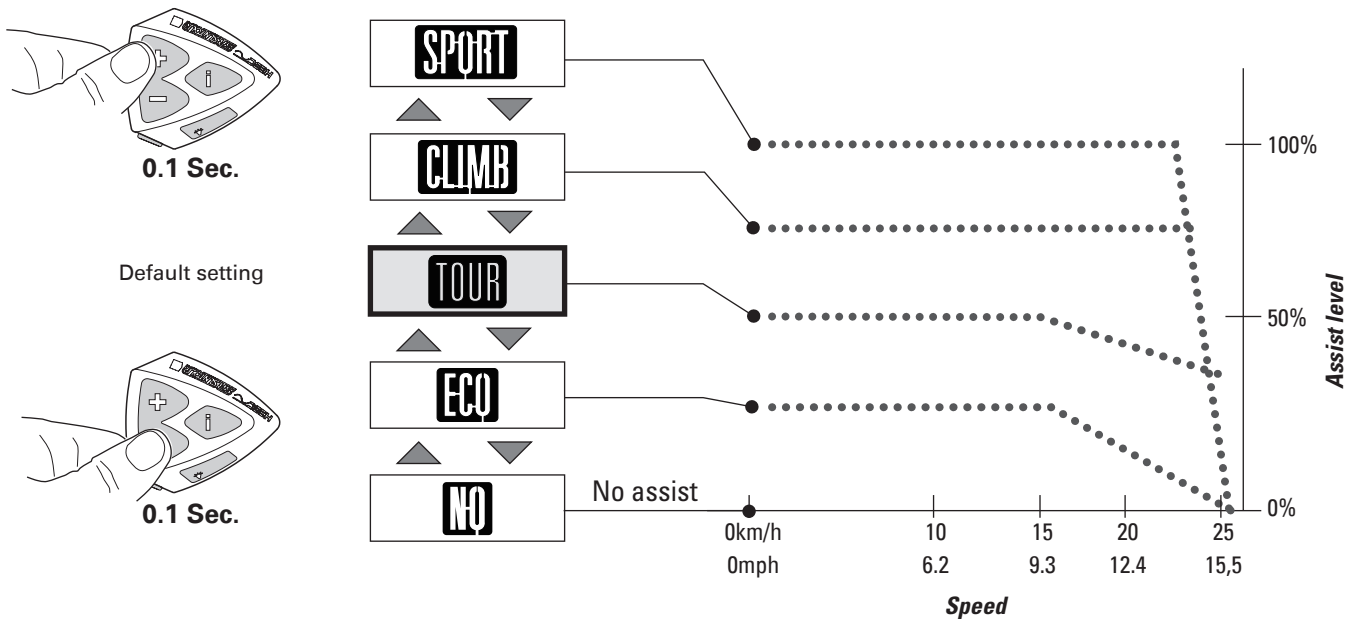
## Base screen display



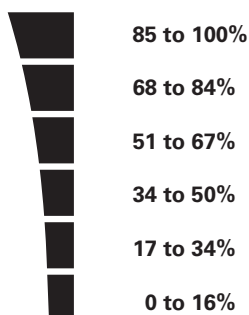
### 1. Km/h <-> mph setting:

When DIST TRIP or DIST TOTAL is displayed, you can choose between km/h & km or mph & miles. Press the "i" button for 5 seconds to perform the switch.

### 2. Display for changing assist mode

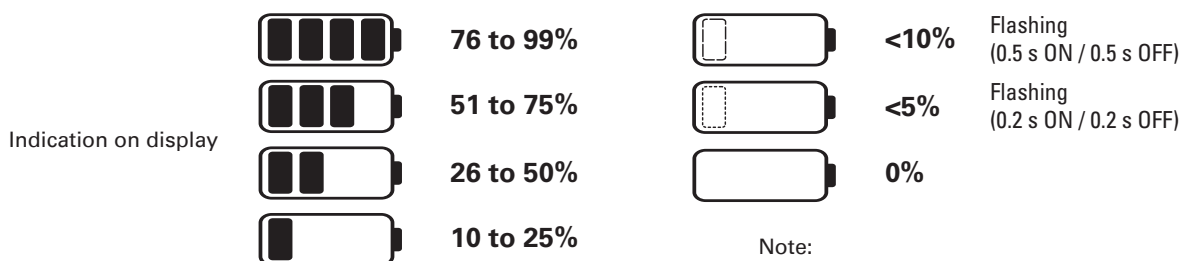
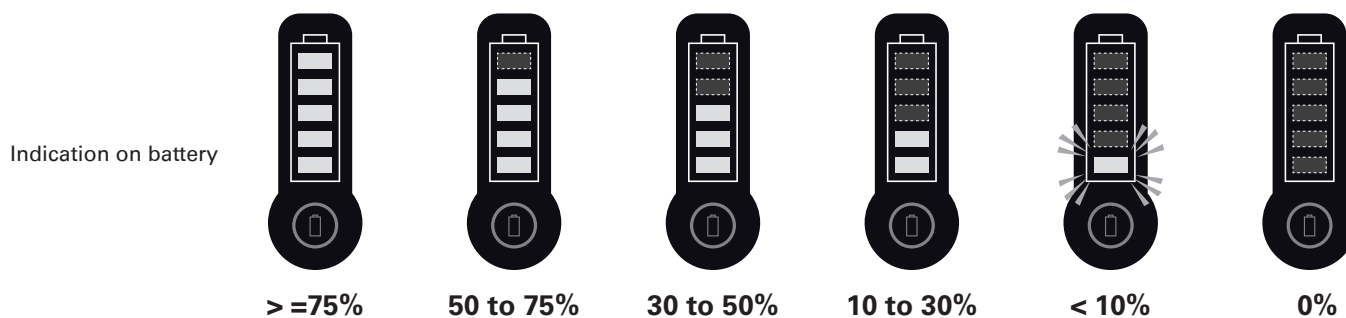


### 3. Assist level indicator



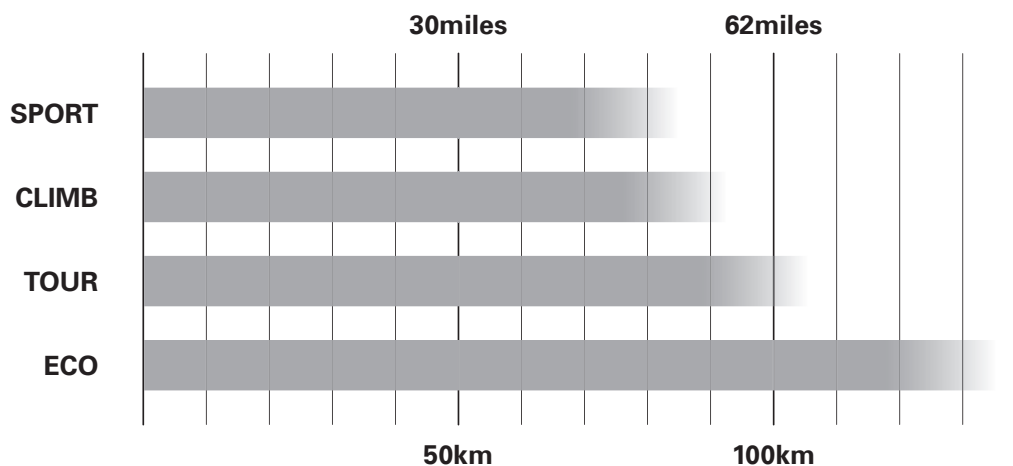
## 4. Battery State of charge (SOC)

Press the button briefly, one of the following patterns of the LEDs will be displayed.



Note:  
When the battery charge level has reached less than 5%, the output power will be reduced.

## 5. Range



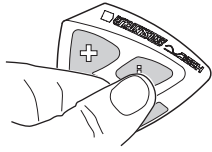
### Factors which affect the range

The above figures are based on a speed of 20 km/h on a level road at 15°C–20°C.  
The range is influenced by many factors:

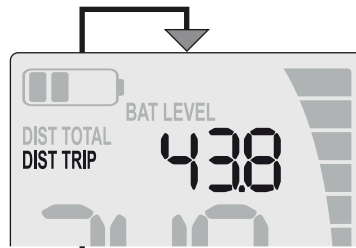
- ▶ Weight of the rider
- ▶ Weight of the luggage
- ▶ Selection of path
- ▶ Experience and concentration of the rider
- ▶ State of maintenance of the E-Bike
- ▶ Type, condition and air pressure in the tires
- ▶ Nature of the route
- ▶ Speed, average speed and changes in speed
- ▶ Traffic flow, for example, stop and go
- ▶ Wind direction and wind speed

For information on using the battery, see pages 3, 4 and 8. You'll also find information on how to maintain capacity and extend duration.

## 6. Changing trip information



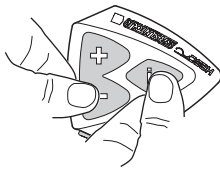
0.5 Sec.



### DIST TRIP:

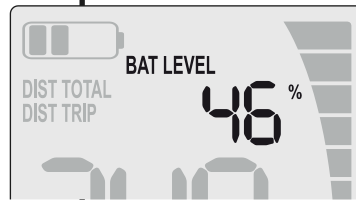
Distance travelled  
Unit: 0.1 km / miles  
Measurement range: 0.0 to 999.9 km / miles  
(default setting)

RESETTING  
TRIP DISTANCE



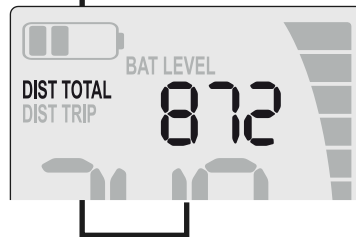
0.5 Sec.

(- & i) key



### BAT LEVEL:

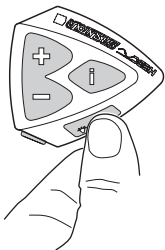
Battery charge level  
Unit: %  
Measurement range: 0% to 99%



### DIST TOTAL:

Cumulative distance  
Unit: km / miles  
Measurement range: 0 to 9999 km / miles

## 7. Changing background lighting



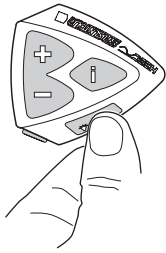
**Daytime** (default)  
100% illumination



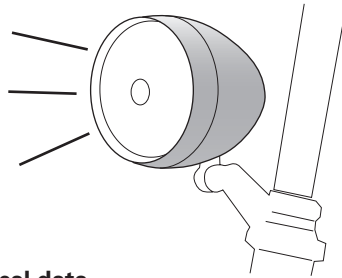
**Nighttime**  
50% illumination

**Headlight and taillight (if applicable)**

Power on/off



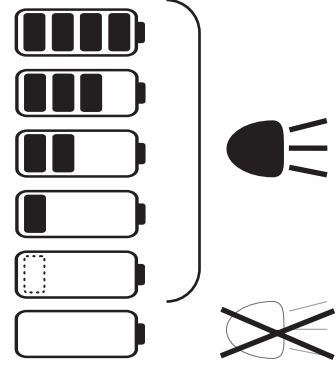
2 sec



**Technical data**

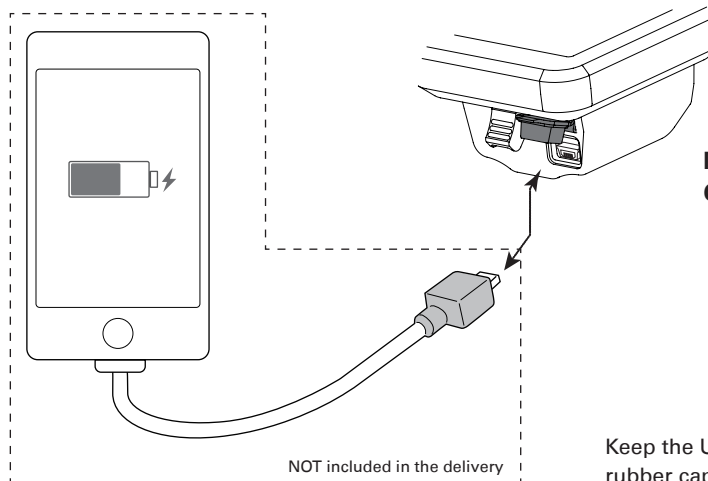
Nominal voltage 6V

Output power: 3.0 W



**Charging support function**

Power supply for external devices via USB port. The USB connector allows you to charge most devices with a mini-USB port.



Mini-USB port  
Output: 5VDC 0.5A

**WARNING**

Keep the USB socket covered with the rubber cap, when not in use. This will prevent water ingress.

**Overheating warning**



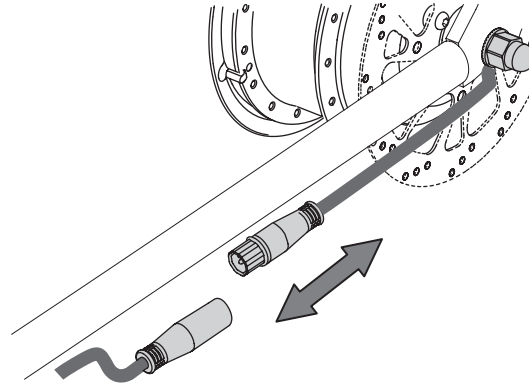
Long and sharp gradients may cause heating of the motor. Flashing of the "CLIMB" mode indicates this.

If the motor really overheats, the system will switch itself off in advance to protect the components.

## Removing the rear wheel (to repair a puncture)

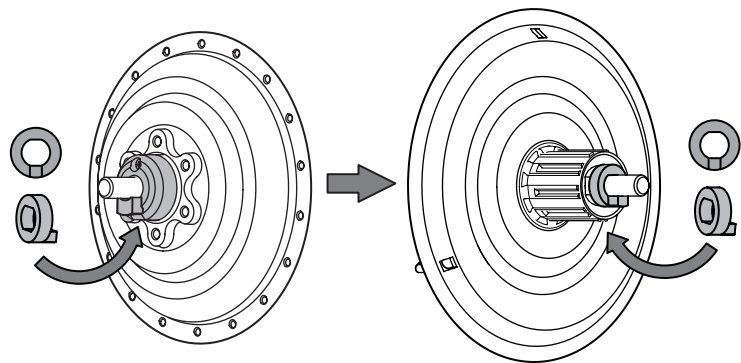
1. Cut the cable ties holding the waterproof motor cable connector under the non-drive side chain stay.

Separate the two halves of the connector this requires some 'wiggling' of the connector to overcome the sealing.

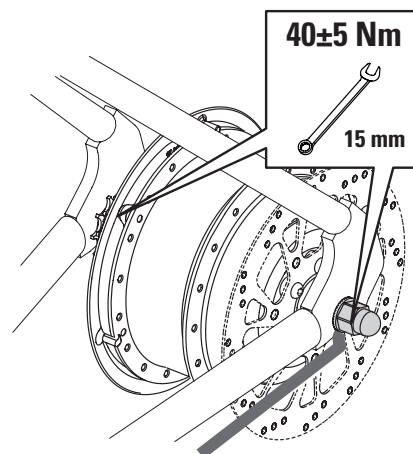


2. Loosen the wheel nuts using a 15 mm spanner and remove the wheel.

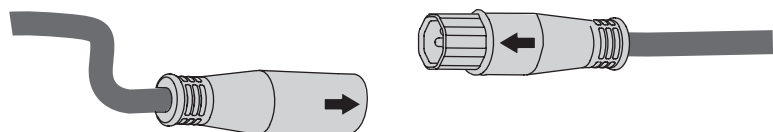
3. When refitting the wheel, ensure that the anti-rotation washers fitted to the motor axle are aligned and slide up within the rear drop outs.



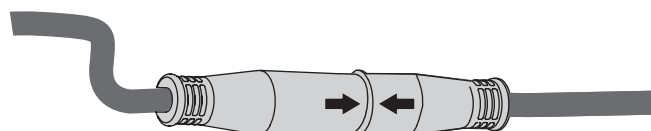
4. Tighten both wheel nuts to 40 Nm.



5. Reconnect the two halves of the motor connector making sure that the arrows are aligned, before pushing them firmly together.

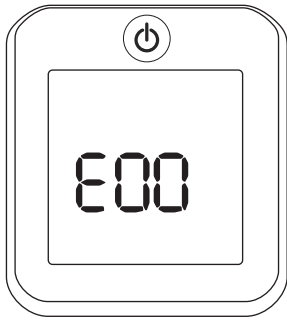


6. Replace the cable ties to secure the motor cable connector underneath the non-drive side chain stay.





## Error codes



In the rare event of a system malfunction, an error message will appear on the display. If an error message appears, turn the system completely OFF and then ON. If the error message still appears, contact your local dealer for assistance.



Error	Problem Description	Trouble shooting	If problem still exists
<b>Error 00</b>	Controller communication problem	Remove the Battery for 5 minutes and then Power-on again	Replace Controller or Display
<b>Error 01</b>	Controller overheating	Let the Controller cool down	Replace Controller
<b>Error 04</b>	Bike lightning system	Check the lighting system of the bike	Replace Controller
<b>Error 05</b>	Controller Data failure	Remove the Battery for 5 minutes and then Power-on again	Replace Controller
<b>Error 11</b>	Display Communication failure	Check the Display-holder and cable connections	Replace Display or Display-cable
<b>Error 21</b>	Torque Sensor electrical problem	Check the Torque Sensor cable contacts	Replace the Chainwheel with ATS sensor
<b>Error 22</b>	Torque Sensor mechanical problem	Check the Torque Sensor cable contacts	Replace the Chainwheel with ATS sensor
<b>Error 32</b>	Overcurrent problem	Check the Battery Voltage, also the Battery-contacts in the Controller	Replace Battery or Controller
<b>Error 34</b>	Overvoltage problem	Check the Battery Voltage	Replace Battery or Controller
<b>Error 41</b>	Motor overheating problem	Let the Motor cool down	Replace Motor or Motorcable
<b>Error 42</b>	Motor Sensor failure	Check the Motorcable contacts to the Motor	Replace Motor or Motorcable

## Contact

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