Performance Line

Drive Unit (45 km/h)

0 275 007 041

en Original instructions
Safety Notes

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions, irrespective of model, refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier).

Do not open the drive unit yourself. The drive unit must be repaired only by qualified experts and only with original spare parts. This will ensure that the safety of the drive unit is maintained. Unauthorised opening of the drive unit will void warranty claims.

All components mounted to the drive unit and all other components of the eBike drive (e.g., the chainwheel, chainwheel seat, pedals) may be replaced only with identical components or components specifically approved for your eBike by the bicycle manufacturer. This protects the drive unit against overload and damage.

Remove the battery pack from the eBike before beginning work (e.g. inspection, repair, assembly, maintenance, work on the chain, etc.) on the eBike, transporting it by car or plane, or storing it. Unintentional activation of the eBike system poses a risk of injury.

The eBike system can switch itself on when the eBike is pushed backwards.

The push-assistance function may only be used when pushing the eBike. Danger of injury when the wheels of the eBike do not have ground contact while using the push-assistance function.

If the push assistance is switched on, the pedals will also rotate on bikes with back-pedalling function. When the push assistance is activated, make sure that your legs are a sufficient distance away from the rotating pedals. There is a risk of injury.

Use only original Bosch battery packs approved for your eBike by the manufacturer. Using other battery packs can lead to injuries and pose a fire hazard. When using other battery packs, Bosch shall not assume any liability and warranty.

Do not make any modifications to your eBike system or fit any other products which would be suitable for increasing the performance of your eBike system. This normally reduces the lifetime of the system and risks damage to the drive unit and the bike. There is also a risk of losing the guarantee and warranty claims on the bike you have purchased. By handling the system improperly you are also endangering your safety and that of other road users, thus running the risk of high personal liability costs and possibly even criminal prosecution in the event of accidents attributable to manipulation.

Please observe all national regulations on registering and using eBikes.

Read and observe the safety warnings and instructions in all operating instructions of the eBike system and in the operating instructions of your eBike.

Product Description and Specifications

Intended Use

The drive unit is intended only for driving your eBike and must not be used for other purposes.

Product Features

The numbering of the components shown refers to the illustrations on the graphic pages at the beginning of the manual. All illustrations of bike parts except for the drive unit, on-board computer including operating unit, speed sensor and the corresponding holders are schematic and may differ on your eBike.

1. Drive unit
2. Speed sensor
3. Spoke magnet of the speed sensor

Technical Data

<table>
<thead>
<tr>
<th>Drive Unit</th>
<th>Drive Unit Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article number</td>
<td>W 0 275 007 041</td>
</tr>
<tr>
<td>Rated continuous output</td>
<td>W 250</td>
</tr>
<tr>
<td>Torque at drive, max.</td>
<td>Nm 63</td>
</tr>
<tr>
<td>Rated voltage</td>
<td>V 36</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C –5...+40</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>°C –10...+50</td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP 54 (dust and splash water protected)</td>
</tr>
<tr>
<td>Weight, approx.</td>
<td>kg 4</td>
</tr>
</tbody>
</table>
Assembly

Inserting and removing the battery pack
For inserting and removing the eBike battery pack in/from the eBike, please read and observe the battery pack operating instructions.

Checking the Speed Sensor (see figure A)
The speed sensor 2 and its spoke magnet 3 must be mounted in such a manner that the spoke magnet, after a turn of the wheel, moves past the speed sensor with a clearance of at least 5 mm, yet no more than 17 mm.

Note: If the distance between the speed sensor 2 and the spoke magnet 3 is too small or too large, or if the speed sensor 2 is not properly connected, the speed indication will fail, and the eBike drive unit will operate in emergency mode.

Once switched on, the eBike system is in the "OFF" mode. Select the desired assistance level and set off.

Switching the eBike System On/Off
Options for switching on the eBike system:
- If the on-board computer is already switched on when you insert it into the holder, then the eBike system will be switched on automatically.
- When the on-board computer and the eBike battery pack are inserted, briefly press the On/Off button of the on-board computer.
- When the on-board computer is inserted, press the On/Off button of the eBike battery pack (see battery pack operating instructions).

Options for switching off the eBike system:
- Press the On/Off button of the on-board computer.
- Switch the eBike battery pack off by its On/Off button (see battery pack operating instructions).
- Remove the on-board computer out of its holder.

If the eBike is not moved and no button is pressed on the on-board computer for 10 minutes, the eBike system will shut down automatically in order to save energy.

Operation

Initial Operation
Requirements
The eBike system can only be activated when the following requirements are met:
- A sufficiently charged battery pack is inserted (see battery pack operating instructions).
- The on-board computer is properly inserted in the holder (see on-board computer operating instructions).
- The speed sensor is connected properly (see "Checking the Speed Sensor", page English – 2).

Switching the Push-assistance mode On/Off
Options for switching on the eBike system:
- If the on-board computer is already switched on when you insert it into the holder, then the eBike system will be switched on automatically.
- When the on-board computer and the eBike battery pack are inserted, briefly press the On/Off button of the on-board computer.
- When the on-board computer is inserted, press the On/Off button of the eBike battery pack (see battery pack operating instructions).

Options for switching off the eBike system:
- Press the On/Off button of the on-board computer.
- Switch the eBike battery pack off by its On/Off button (see battery pack operating instructions).
- Remove the on-board computer out of its holder.

If the eBike is not moved and no button is pressed on the on-board computer for 10 minutes, the eBike system will shut down automatically in order to save energy.

Setting the Assistance Level
On the on-board computer you can set how much the eBike drive assists you while pedalling. The assistance level can be changed at any time, even while cycling.

Note: For individual versions, it is possible that the assistance level is pre-set and cannot be changed. It is also possible that less assistance levels are available for selection than listed here.
The following assistance levels (max.) are available:

- **"OFF"**: The motor assistance is switched off, and the eBike can be moved as a normal bicycle only by pedalling. The push assistance cannot be activated in this assistance level. Once switched on, the eBike system is in the "OFF" mode.
- **"ECO"**: Effective assistance at maximum efficiency for maximum cruising range
- **"TOUR"**: Uniform assistance, for touring with long cruising range
- **"SPORT"**: Powerful assistance for sportive riding off road as well as for urban traffic
- **"TURBO"**: Maximum assistance, supporting highest cadence for sportive riding

The requested motor output appears on the display of the on-board computer. The maximum motor output depends on the selected assistance level.

### Switching the Push-assistance mode On/Off

The push-assistance feature makes it easier to push the eBike. The speed in this function depends on the set gear and cannot exceed 6 km/h (max.). The lower the set gear, the lower the speed in the push-assistance function (at full output).

> **The push-assistance function may only be used when pushing the eBike.** Danger of injury when the wheels of the eBike do not have ground contact while using the push-assistance function.

To activate the push-assistance function, briefly press button "WALK" on your on-board computer. After activation, press button "+" within 3 s and keep it pressed. The eBike drive is switched on.

**Note:** The push assistance cannot be activated in the "OFF" assistance level.

The push assistance is switched off as soon as one of the following occurs:
- you release button "+",
- the wheels of the eBike are blocked (e.g. by actuating the brakes or impacting against an obstacle),
- the speed exceeds 6 km/h.

**Note:** On some systems the push-assistance function can be started directly by pressing the "WALK" button.

**Note:** A speed of 18 km/h (start assistance) can be reached on some systems.

### Switching bike lights on/off

In the version which has the bike lights powered by the eBike system, the front and rear lights can be switched on and off at the same time via the on-board computer.

### Notes on Riding with the eBike System

#### When does the eBike Drive Unit Operate?

The eBike drive unit assists you when riding, as long as you step into the pedals. Without pedaling, there is no assistance. The motor output always depends on the amount of your pedaling power.

When applying less pedaling power, the assistance or support will be lower than when applying a lot of pedaling power. This applies independent of the assistance Level.

The eBike drive automatically switches off at speeds in excess of 45 km/h. When the speed falls below 45 km/h, the drive is automatically available again.

An exception applies to the start-assistance function, in which the eBike can be driven at low speed without pedalling. The pedals may also rotate when the start assistance is used.

The eBike can also be ridden as a normal bicycle without assistance at any time, by either switching off the eBike system or setting the assistance level to "OFF". The same applies when the battery pack is empty.

#### Interaction of the eBike System with the Bicycle Gears

The bicycle gears should be used as with a normal bicycle, even with eBike motor assistance (please observe the operating instructions of your eBike).

Independent of the type of gearing, it is recommended to briefly interrupt the pedaling while changing gears. This makes changing gears easier and reduces the wear of the drive train.

By selecting the right gear, you can increase the speed and range with the same pedaling effort.

#### Gathering First Experience

It is recommended to gather first experience with the eBike away from roads with heavy traffic.

Test the various assistance levels. Start with the lowest assistance level. As soon as you feel confident, you can ride your eBike in traffic like any other bike.

Test the operating range of your eBike under different conditions before planning longer and more challenging rides.

---

### Assistance Level

<table>
<thead>
<tr>
<th>Assistance Level</th>
<th>Assistance Factor * (Derailleur)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;ECO&quot;</td>
<td>55%</td>
</tr>
<tr>
<td>&quot;TOUR&quot;</td>
<td>120%</td>
</tr>
<tr>
<td>&quot;SPORT&quot;</td>
<td>190%</td>
</tr>
<tr>
<td>&quot;TURBO&quot;</td>
<td>275%</td>
</tr>
</tbody>
</table>

* The motor output can vary for individual versions.
Influences on the Operating Range
The range is affected by a number of factors, such as:
- Assistance level
- Speed
- Gear changing behaviour
- Tyre type and tyre pressure
- Age and condition of the battery
- Route profile (gradients) and conditions (road surface)
- Headwind and ambient temperature
- Weight of eBike, driver and luggage.

For this reason, it is not possible to precisely predict the range before and during a trip. General rules:
- With the same assistance level on the eBike drive: The less energy you need to exert in order to reach a certain speed (e.g. by changing gears optimally), the less energy the eBike drive will consume and the higher the range per battery charge will be.
- The higher the assistance level under otherwise same conditions, the lower the range.

Careful Handling of the eBike
Please observe the operating and storage temperatures of the eBike components. Protect the drive unit, on-board computer and battery against extreme temperatures (e.g. from intense sunlight without adequate ventilation). The components (especially the battery pack) can become damaged through extreme temperatures.

Maintenance and Service
Maintenance and Cleaning
When changing the bulbs, ensure that the bulbs are compatible with the Bosch eBike system (ask your bicycle dealer) and that the specified voltage matches. Bulbs must be replaced only with bulbs of the same voltage.

Do not immerse any components, including the drive unit, in water or clean them with pressurised water.

Have your eBike system checked by an expert at least once a year (including mechanical parts, up-to-dateness of system software).

For service or repairs on the eBike, please refer to an authorised bicycle dealer.

After-sales Service and Application Service
In case of questions concerning the eBike system and its components, please refer to an authorised Bosch eBike dealer.

For contact data of authorised Bosch eBike dealers, please refer to www.bosch-ebike.com

Disposal
The drive unit, on-board computer including operating unit, battery pack, speed sensor, accessories and packaging should be disposed of in an environmentally correct manner.

Do not dispose of eBikes and their components into household waste!

Only for EC countries:
According to the European Guideline 2012/19/EU, electrical devices/tools that are no longer usable, and according to the European Guideline 2006/66/EC, defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.

Subject to change without notice.
Active Line/Performance Line

Purion
1 270 020 916 | 1 270 020 917

en Original instructions
Safety Notes

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions, irrespective of model, refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier).

Make sure to not be distracted by the display of the on-board computer. If you do not focus exclusively on the traffic, you risk being involved in an accident.

Read and observe the safety warnings and instructions in all operating instructions of the eBike system and in the operating instructions of your eBike.

Product Description and Specifications

Intended Use

The Purion on-board computer is designed to control Bosch eBike systems and display riding data.

Product Features

The numbering of the components shown refers to the illustrations on the graphic pages at the beginning of the manual. Individual illustrations in these operating instructions may differ slightly from the actual circumstances depending on the equipment of your eBike.

1 On/Off button for on-board computer
2 Push-assistance button “WALK”
3 Fastening screw for on-board computer
4 Holder for on-board computer
5 Decrease assistance level button “–”
6 Increase assistance level button “+”
7 Display
8 Protective cap of USB port
9 USB diagnostic socket (for servicing purposes only)
10 Battery lid

Display elements of on-board computer

- Speed indication
- km/h unit indicator
- mph unit indicator
- Total distance indicator “TOTAL”
- Range indicator “RANGE”
- Service indicator
- Battery charge-control indicator
- Light indicator
- Assistance level indicator/value indicator
- Trip distance indicator “TRIP”

Technical Data

<table>
<thead>
<tr>
<th>On-board computer</th>
<th>Purion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article number</td>
<td>1 270 020 916/917</td>
</tr>
<tr>
<td>Batteries</td>
<td>2 x 1.5 V CR2016</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>°C</td>
</tr>
<tr>
<td>Protection type</td>
<td>IP 54 (dust and splash water protected)</td>
</tr>
<tr>
<td>Weight, approx.</td>
<td>kg</td>
</tr>
</tbody>
</table>

1) We recommend using the batteries offered by Bosch. You can purchase them from your bicycle dealer (part number: 1 270 016 819).
2) When USB cover is closed

Bosch eBike system uses FreeRTOS (see www.freertos.org)

Operation

Initial Operation

Requirements

The eBike system can only be activated when the following requirements are met:
- A sufficiently charged battery pack is inserted (see battery pack operating instructions).
- The speed sensor is connected properly (see drive unit operating instructions).

Switching the eBike System On/Off

Options for switching on the eBike system:
- Press the On/Off button 1 of the on-board computer with the eBike battery pack inserted.
- Press the On/Off button of the eBike battery pack (see battery pack operating instructions).

The drive is activated as soon as you step on the pedals (except for in the push assistance function or in assistance level “OFF”). The motor output depends on the settings of the assistance level on the on-board computer.
As soon as you stop pedaling when in normal operation, or as soon as you have reached a speed of 25/45 km/h, the assistance from the eBike drive is switched off. The drive is automatically re-activated as soon you start pedaling again and the speed is below 25/45 km/h.

Options for switching off the eBike system:
- Press the On/Off button 1 of the on-board computer.
- Switch the eBike battery pack off by its On/Off button (see battery pack operating instructions).

If the eBike is not moved and no button is pressed on the on-board computer for 10 minutes, the eBike system will shut down automatically in order to save energy.

**Note:** Always switch off the eBike system when you park the eBike.

**Note:** If the batteries of the on-board computer are empty, you can still switch on your eBike using the bike’s battery pack. It is, however, recommended that you replace the internal batteries as soon as possible in order to avoid damage.

### Displays and configurations of the on-board computer

**Symbols and their meaning**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔄</td>
<td>short button press (less than 1 second)</td>
</tr>
<tr>
<td>🔄</td>
<td>medium button press (between 1 second and 2.5 seconds)</td>
</tr>
<tr>
<td>🔄</td>
<td>long button press (longer than 2.5 seconds)</td>
</tr>
</tbody>
</table>

### Energy supply of the on-board computer

The on-board computer is supplied with voltage by two CR2016 button cells.

### Changing the Batteries (see figure A)

If the on-board computer shows “LOW BAT” on the display, remove the on-board computer from the handlebars by unscrewing the fastening screw 3 of the on-board computer.

Open the battery lid 10 using a suitable coin, remove the used batteries and insert new CR 2016 batteries. You can obtain the batteries recommended by Bosch from your bicycle dealer.

When inserting batteries, pay attention to the correct polarity.

Close the battery compartment again and fasten the on-board computer to your eBike’s handlebars using the fastening screw 3.

### Battery Charge-control Indicator

The battery charge-control indicator g displays the charge level of the eBike battery pack. The charge level of the eBike battery pack can also be checked on the LEDs of the battery pack itself.

On indicator g, each bar of the battery pack symbol is equivalent to a capacity of approx. 20 %:

- 🔄: The eBike battery pack is fully charged.
- 🔄: The eBike battery pack should be recharged.
- 🔄: The LEDs of the charge-control indicator on the battery extinguish. The capacity for assisting the drive has been used up, and assistance is gently switched off. The remaining capacity is made available for the lighting. The indicator flashes.

### Switching the Push-assistance mode On/Off

The push-assistance feature makes it easier to push the eBike. The speed in this function depends on the set gear and cannot exceed 6 km/h (max.). The lower the set gear, the lower the speed in the push-assistance function (at full output).

- The push-assistance function may only be used when pushing the eBike. Danger of injury when the wheels of the eBike do not have ground contact while using the push-assistance function.

To activate the push-assistance function, short-press the button “WALK” on your on-board computer. After activation, press button “+” within 3 s and keep it pressed. The eBike drive is switched on.

**Note:** The push assistance cannot be activated in the “OFF” assistance level.

The push assistance is switched off as soon as one of the following occurs:
- you release button “+” 6.
- the wheels of the eBike are blocked (e.g. by actuating the brakes or impacting against an obstacle),
- the speed exceeds 6 km/h.

**Note:** On some systems the push-assistance function can be started directly by pressing the “WALK” button.
Setting the Assistance Level

On the on-board computer you can set how much the eBike drive assists you while pedalling. The assistance level can be changed at any time, even while cycling.

**Note:** For individual versions, it is possible that the assistance level is pre-set and cannot be changed. It is also possible that less assistance levels are available for selection than listed here.

The following assistance levels (max.) are available:

- **“OFF”**: The motor assistance is switched off, and the eBike can be moved as a normal bicycle only by pedalling. The push assistance cannot be activated in this assistance level.
- **“ECO”**: Effective assistance at maximum efficiency for maximum cruising range
- **“TOUR”**: Uniform assistance, for touring with long cruising range
- **“SPORT”**: Powerful assistance for sportive riding off road as well as for urban traffic
- **“TURBO”**: Maximum assistance, supporting highest cadence for sportive riding

To **increase** the assistance level, short-press the button “+” 6 on the on-board computer repeatedly until the required assistance level appears in indicator i. To **decrease** the assistance level, short-press the button “–” 5.

Switching bike lights on/off

In the version which has the bike lights powered by the eBike system, medium-press the button “+” to switch on the front and rear lights at the same time. To switch off the bike lights, long-press the button “+”. The lighting symbol h is displayed when the light is on. Switching the bike light on and off has no effect on the back lighting of the display.

Displays and configurations of the on-board computer

**Speed and Distance Indication**

The speed indication a always displays the current speed. Indicator i always displays the last setting as standard. Repeatedly medium-press the button “–” to display the trip distance “TRIP”, the total distance “TOTAL” and the range of the battery pack “RANGE” one after the other. (Short-pressing the button “–” will decrease the assistance level!)

The trip distance “TRIP” is reset by simultaneously long-pressing the buttons “+” and “–”. The display will initially show “RESET”. If you continue to press both buttons, the trip distance “TRIP” will be set to “0”.

You can switch the displayed values from kilometres to miles by holding down button “–” and briefly pressing the On/Off button 1.

The versions of the subsystems can be displayed for the purposes of servicing. With the system switched off, simultaneously press buttons “–” and “+” and then press the On/Off button 1.

The USB socket is reserved for connecting diagnostic systems. The USB socket does not have any other function.

- **The USB connection must always be completely sealed with the protective cap 8.**

<table>
<thead>
<tr>
<th>Action</th>
<th>Buttons</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch on on-board computer</td>
<td>Any</td>
<td>Any</td>
</tr>
<tr>
<td>Switch off on-board computer</td>
<td>Any</td>
<td>Any</td>
</tr>
<tr>
<td>Increase assistance</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Decrease assistance</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Display “TRIP”, “TOTAL”, “RANGE”, assistance modes</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Switch on bike lights</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Switch off bike lights</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Reset trip distance</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Activate push assistance</td>
<td>WALK</td>
<td>1.</td>
</tr>
<tr>
<td>Perform push assistance</td>
<td>+</td>
<td>2. Any</td>
</tr>
<tr>
<td>Switch from kilometres to miles</td>
<td>–</td>
<td>1. Hold</td>
</tr>
<tr>
<td>Display the versions</td>
<td>– +</td>
<td>1. Hold</td>
</tr>
</tbody>
</table>

1) The eBike system must be switched off.
2) The information is shown as scrolling text.
### Error Code Indication

The components of the eBike system are continuously and automatically monitored. If an error is detected, the corresponding error code will appear in the speed indication. Depending on the type of error, the drive unit is automatically shut off, if required. Continued travel without assistance from the drive unit is possible at any time. However, have the eBike checked before attempting new trips. ▶ **Have all repairs performed only by an authorised bike dealer.**

<table>
<thead>
<tr>
<th>Code</th>
<th>Cause</th>
<th>Corrective Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>410</td>
<td>One or more buttons of the on-board computer are blocked.</td>
<td>Check if any buttons are blocked, e.g. from dirt or debris. Clean the buttons, if required.</td>
</tr>
<tr>
<td>414</td>
<td>Connection problem of the operating unit</td>
<td>Have connections and contacts checked.</td>
</tr>
<tr>
<td>418</td>
<td>One or more buttons of the operating unit are blocked.</td>
<td>Check if any buttons are blocked, e.g. from dirt or debris. Clean the buttons, if required.</td>
</tr>
<tr>
<td>419</td>
<td>Configuration error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>422</td>
<td>Connection problem of the drive unit</td>
<td>Have connections and contacts checked.</td>
</tr>
<tr>
<td>423</td>
<td>Connection problem of the eBike battery pack</td>
<td>Have connections and contacts checked.</td>
</tr>
<tr>
<td>424</td>
<td>Communication error among the components</td>
<td>Have connections and contacts checked.</td>
</tr>
<tr>
<td>426</td>
<td>Internal time-out error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer. In this error status, it is not possible to display or adjust the wheel circumference in the basic settings menu.</td>
</tr>
<tr>
<td>430</td>
<td>Internal battery pack of the on-board computer is empty.</td>
<td>Charge the on-board computer (in the holder or via the USB port).</td>
</tr>
<tr>
<td>431</td>
<td>Software version error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>440</td>
<td>Internal error of the drive unit</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>450</td>
<td>Internal software error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>460</td>
<td>Error at USB connection</td>
<td>Remove the cable from the USB connection of the on-board computer. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>490</td>
<td>Internal error of the on-board computer</td>
<td>Have the on-board computer checked.</td>
</tr>
<tr>
<td>500</td>
<td>Internal error of the drive unit</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>502</td>
<td>Bike lighting error</td>
<td>Check the light and the associated wiring. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>503</td>
<td>Error of the speed sensor</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>510</td>
<td>Internal sensor error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>511</td>
<td>Internal error of the drive unit</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>530</td>
<td>Battery pack error</td>
<td>Switch off the eBike, remove the eBike battery pack and reinsert the eBike battery pack. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>Code</td>
<td>Cause</td>
<td>Corrective Measure</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>531</td>
<td>Configuration error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>540</td>
<td>Temperature error</td>
<td>The eBike is outside of the permissible temperature range. Switch off the eBike system and allow the drive unit to either cool down or heat up to the permissible temperature. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>550</td>
<td>An improper load was detected.</td>
<td>Remove load. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>580</td>
<td>Software version error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>591</td>
<td>Authentication error</td>
<td>Switch off the eBike system. Remove the battery pack and reinsert it. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>592</td>
<td>Incompatible component</td>
<td>Insert a compatible display. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>593</td>
<td>Configuration error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>595, 596</td>
<td>Communication error</td>
<td>Check the wiring to the transmission and restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>602</td>
<td>Internal battery pack error while charging</td>
<td>Unplug the charger from the battery pack. Restart the eBike system. Plug the charger into the battery pack. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>602</td>
<td>Internal battery pack error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>603</td>
<td>Internal battery pack error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>605</td>
<td>Battery pack temperature error</td>
<td>The eBike is outside of the permissible temperature range. Switch off the eBike system and allow the drive unit to either cool down or heat up to the permissible temperature. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>605</td>
<td>Battery pack temperature error while charging</td>
<td>Unplug the charger from the battery pack. Allow the battery pack to cool. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>606</td>
<td>External battery pack error</td>
<td>Check the wiring. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>610</td>
<td>Battery pack voltage error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>620</td>
<td>Charging error</td>
<td>Replace the charger. Contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>640</td>
<td>Internal battery pack error</td>
<td>Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>655</td>
<td>Multiple battery pack errors</td>
<td>Switch off the eBike system. Remove the battery pack and reinsert it. Restart the system. If the problem persists, contact your Bosch eBike dealer.</td>
</tr>
<tr>
<td>656</td>
<td>Software version error</td>
<td>Contact your Bosch eBike dealer so that he can perform a software update.</td>
</tr>
<tr>
<td>7xx</td>
<td>Transmission error</td>
<td>Please observe the operating instructions provided by the transmission manufacturer.</td>
</tr>
<tr>
<td>No display</td>
<td>Internal error of the on-board computer</td>
<td>Restart your eBike system by switching it off and back on.</td>
</tr>
</tbody>
</table>
Maintenance and Service

Maintenance and Cleaning
Do not immerse any components, including the drive unit, in water or clean them with pressurised water.
Clean your on-board computer using a soft cloth dampened only with water. Do not use any detergents.
Have your eBike system checked by an expert at least once a year (including mechanical parts, up-to-dateness of system software).
The bicycle manufacturer or dealer may also store a distance travelled for the service date in the system. In this case, the on-board computer will show you that the service date is due by displaying f“ ”.
For service or repairs on the eBike, please refer to an authorised bicycle dealer.

After-sales Service and Application Service
In case of questions concerning the eBike system and its components, please refer to an authorised Bosch eBike dealer.
For contact data of authorised Bosch eBike dealers, please refer to www.bosch-ebike.com

Disposal
The drive unit, on-board computer including operating unit, battery pack, speed sensor, accessories and packaging should be disposed of in an environmentally correct manner.
Do not dispose of eBikes and their components into household waste!

Only for EC countries:
According to the European Guideline 2012/19/EU, electrical devices/tools that are no longer usable, and according to the European Guideline 2006/66/EC, defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.
Please return battery packs and on-board computers that are no longer usable to an authorised bicycle dealer.

Subject to change without notice.
Active Line/Performance Line

PowerPack 300 | 400 | 500

0 275 007 509 | 0 275 007 510 | 0 275 007 511 | 0 275 007 512
0 275 007 513 | 0 275 007 514 | 0 275 007 522
0 275 007 529 | 0 275 007 530 | 0 275 007 531 | 0 275 007 532
Safety Notes

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier), except when explicitly referring to the design type.

- Remove the battery pack from the eBike before beginning work (e.g. inspection, repair, assembly, maintenance, work on the chain, etc.) on the eBike, transporting it by car or plane, or storing it. Unintentional activation of the eBike system poses a risk of injury.
- Do not open the battery pack. Danger of short-circuiting. Opening the battery pack voids any and all warranty claims.
- Protect the battery against heat (e.g. prolonged sun exposure) and fire and from being submerged in water. Do not store or operate the battery near hot or flammable objects. There is a risk of explosion.
- Keep the battery pack not being used away from paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery-pack terminals together may cause burns or a fire. For short-circuiting damage caused in this manner, any and all warranty claims through Bosch shall be invalid.
- Do not place the charger or battery pack near to flammable materials. Charge battery packs only when dry and in a fireproof area. There is a risk of fire due to the heat generated during charging.
- The eBike battery must not be left unattended while charging.
- Under abusive conditions, liquid may be ejected from the battery pack. Avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery pack may cause skin irritations or burns.
- Battery packs must not be subjected to mechanical impacts. There is a risk that the battery pack will be damaged causing vapours to escape. The vapours can irritate the respiratory system. Provide for fresh air and seek medical attention in case of complaints.

- The battery may give off fumes if it becomes damaged or is used incorrectly. Provide a fresh air supply and seek medical advice in the event of pain or discomfort. These fumes may irritate the respiratory tract.
- Charge the battery pack only with original Bosch battery chargers. When using non-original Bosch chargers, the danger of fire cannot be excluded.
- Use the battery pack only together with eBikes that have an original Bosch eBike drive system. This is the only way to protect the battery pack against dangerous overload.
- Use only original Bosch battery packs approved for your eBike by the manufacturer. Using other battery packs can lead to injuries and pose a fire hazard. When using other battery packs, Bosch shall not assume any liability and warranty.
- Do not use the rack-type battery pack as a handle. Lifting the eBike up by the battery pack can cause damage to the battery pack.
- Read and observe the safety warnings and instructions in all operating instructions of the eBike system and in the operating instructions of your eBike.
- Keep the battery pack out of reach of children.

Product Description and Specifications

Product Features

The numbering of the product features refers to the illustrations on the graphics pages. All representations of bike components, with exception of the battery packs and their holders, are schematic and can deviate from your eBike.

1 Holder of the rack-type battery pack
2 Rack-type battery pack
3 Operation and charge-control indicator
4 On/Off button
5 Key of the battery pack lock
6 Battery-pack lock
7 Upper holder of the standard battery pack
8 Standard battery pack
9 Bottom holder of the standard battery pack
10 Cover lid (Supplied only on eBikes with 2 battery packs)
11 Battery charger
12 Socket for charge connector
13 Charge socket cover
Technical Data

<table>
<thead>
<tr>
<th>Lithium-ion battery pack</th>
<th>PowerPack 300</th>
<th>PowerPack 400</th>
<th>PowerPack 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article number</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard battery pack</td>
<td>0 275 007 509</td>
<td>0 275 007 510</td>
<td>0 275 007 529</td>
</tr>
<tr>
<td></td>
<td>0 275 007 511</td>
<td>0 275 007 512</td>
<td>0 275 007 530</td>
</tr>
<tr>
<td>Rack-type battery pack</td>
<td>0 275 007 513</td>
<td>0 275 007 514</td>
<td>0 275 007 531</td>
</tr>
<tr>
<td></td>
<td>0 275 007 522</td>
<td>0 275 007 532</td>
<td></td>
</tr>
<tr>
<td>Rated voltage</td>
<td>V=</td>
<td>36</td>
<td>36</td>
</tr>
<tr>
<td>Rated capacity</td>
<td>Ah</td>
<td>8.2</td>
<td>11</td>
</tr>
<tr>
<td>Energy</td>
<td>Wh</td>
<td>300</td>
<td>400</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C</td>
<td>-10...+40</td>
<td>-10...+40</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>°C</td>
<td>-10...+60</td>
<td>-10...+60</td>
</tr>
<tr>
<td>Allowable charging temperature range</td>
<td>°C</td>
<td>0...+40</td>
<td>0...+40</td>
</tr>
<tr>
<td>Weight, approx.</td>
<td>kg</td>
<td>2.0/2.4</td>
<td>2.5/2.6</td>
</tr>
<tr>
<td>Degree of protection</td>
<td></td>
<td>IP 54 (dust and splash water protected)</td>
<td>IP 54 (dust and splash water protected)</td>
</tr>
</tbody>
</table>

Assembly

- **Place down the battery pack only on clean surfaces.** In particular, avoid soiling the charge socket and the contacts, e.g. by means of sand or soil.

Checking the Battery Pack Before Using for the First Time

Check the battery pack before charging it or using it with your eBike for the first time.

For this, press the On/Off button 4 to switch on the battery pack. When no LED of the charge-control indicator 3 lights up, the battery pack may be damaged.

When at least one, but not all LEDs of the charge-control indicator 3 is lit, then fully charge the battery pack before using for the first time.

- **Do not attempt to charge or use a damaged battery pack.** Please refer to an authorised Bosch eBike dealer.

Charging the Battery Pack

- **Use only the Bosch charger provided with your eBike or an identical original Bosch charger.** Only this charger is matched to the lithium-ion battery pack used in your eBike.

**Note:** The battery pack is supplied partially charged. To ensure full battery pack capacity, completely charge the battery pack in the charger before using for the first time.

For charging the battery pack, read and observe the operating instructions of the charger.

The battery pack can be recharged at any time on its own or on the bike without shortening the lifespan. Interrupting the charging process does not damage the battery pack.

The battery pack is equipped with a temperature control indicator, which enables charging only within a temperature range between 0 °C and 40 °C.

When the battery pack is not within the charging-temperature range, three LEDs of the charge-control indicator 3 flash. Disconnect the battery pack from the charger until its temperature has adjusted.

Do not connect the battery pack to the charger until it has reached the allowable charging temperature.

**Charge-control Indicator**

When the battery pack is switched on, the five green LEDs of the charge-control indicator 3 indicate the charge condition of the battery pack.

In this, each LED indicates approx. 20 % capacity. When the battery pack is completely charged, all five LEDs light up.

The charge level of the switched on battery pack is also shown on the display of the on-board computer. When doing so, read and observe the operating instructions of the drive unit and on-board computer.

If the capacity of the battery pack is below 5 %, all LEDs of the charge-control indicator 3 on the battery pack go out. However there is another display function of the on-board computer.
Using Two Battery Packs for One eBike (optional)

An eBike can also be equipped with two battery packs by the manufacturer. In this case, one of the charge sockets is not accessible or is sealed by the bicycle manufacturer with a sealing cap. Charge the battery packs only at the accessible charge socket.

► Never open charge sockets that have been sealed by the manufacturer. Charging at a previously sealed charge socket can lead to irreparable damage.

If you have an eBike that is designed for two battery packs and you want to use it with only battery pack, cover off the contacts of the unused socket using the cover lid provided because otherwise the open contacts pose a risk of short-circuiting (see figures A and B).

Charging with Two Battery Packs Inserted

If two battery packs are mounted on one eBike, both battery packs can be charged using the unsealed connection. The charging process will charge both battery packs alternately, automatically switching between both battery packs numerous times. The charging times add up.

Both battery packs are also discharged alternately during operation.

If you take the battery packs out of the holders, you can charge each battery pack individually.

Charging with One Battery Pack Inserted

If only one battery pack is inserted, then you can charge only the battery pack that has the accessible charge socket on the bike. You can charge the battery pack with the sealed charge socket only when you take the battery pack out of the holder.

Inserting and removing the battery pack (see figures A – B)

► Always switch off the battery pack and the eBike system when you insert the battery pack into the holder or when you take it out of the holder.

In order for the battery pack to be inserted, the key must be inserted into the lock and the lock must be unlocked.

To insert the standard battery pack, place it with the contacts on the lower holder on the eBike (the battery pack can be inclined up to 7° to the frame). Tilt it into the upper holder until it engages.

To insert the rack-type battery pack, slide it with the contacts facing ahead until it engages in the holder of the rear rack/carrier.

Check if the battery pack is tightly seated. Always lock the battery pack with lock, as otherwise the lock can open and the battery pack could fall out of the holder.

After locking, always remove the key from the lock. This prevents the key from falling out and the battery pack from being removed from unauthorised persons when the eBike is parked.

To remove the standard battery pack, switch it off and unlock the lock with the key. Tilt the battery pack out of the upper holder and pull it out of the lower holder.

To remove the rack-type battery pack, switch it off and unlock the lock with the key. Pull the battery pack out of the holder.

Operation

Initial Operation

► Use only original Bosch battery packs approved for your eBike by the manufacturer. Using other battery packs can lead to injuries and pose a fire hazard. When using other battery packs, Bosch shall not assume any liability and warranty.

Switching On and Off

Switching on the battery pack is one of the ways of switching on the eBike system. When doing so, read and observe the operating instructions of the drive unit and on-board computer.

Before switching on the battery pack or the eBike system, check that the lock is locked.

To switch on the battery pack, press the On/Off button. The LEDs of indicator light up and at the same time indicate the charge condition.

Note: If the capacity of the battery pack is below 5%, no LED on the charge-control indicator lights up. It is only visible on the on-board computer, if the eBike system is switched on.

To switch off the battery pack, press the On/Off button again. The LEDs of indicator go out. This also switches off the eBike system.

If no power is drawn from the eBike drive for about 10 minutes (e.g. because the eBike is not moving) and no button is pressed on the on-board computer or the operating unit of the eBike, the eBike system and therefore also the battery pack will shut down automatically to save energy.

The battery pack is protected against deep discharging, overheating and short-circuiting through the “Electronic Cell Protection (ECP)”. In case of hazardous situations, a protective circuit automatically switches off the battery pack.

When a defect of the battery pack is detected, two LEDs of the charge-control indicator flash. In this case, please refer to an authorised Bosch eBike dealer.
Notes for Optimum Handling of the Battery Pack

The battery-pack life can be prolonged when being properly maintained and especially when being operated and stored at the right temperatures.

With increasing age, however, the battery-pack capacity will diminish, even when properly maintained.

A significantly reduced operating period after charging indicates that the battery pack is worn out and must be replaced.

You can replace the battery pack yourself.

Recharging the Battery Pack prior to and during Storage

When not using the battery pack for a longer period, charge it to approx. 60 % (3 to 4 LEDs lit on the charge-control indicator 3).

Check the charge condition after 6 months. When only one LED of the charge-control indicator 3 lights up, recharge the battery pack again approx. 60 %.

Note: When the battery pack is stored discharged (empty) for longer periods, it can become damaged despite the low self-discharging feature and the battery-pack capacity may be strongly reduced.

It is not recommended to have the battery pack connected permanently to the charger.

Storage Conditions

Store the battery pack in a dry, well-ventilated location. Protect the battery pack against moisture and water. Under unfavourable weather conditions, it is recommended e.g. to remove the battery pack from the eBike and store it in an enclosed location until being used again.

The battery pack can be stored at temperatures between –10 °C and +60 °C. For a long battery-pack life, however, storing the battery pack at a room temperature of approx. 20 °C is of advantage.

Take care that the maximal storage temperature is not exceeded. As an example, do not leave the battery pack in a vehicle in summer and store it out of direct sunlight.

It is recommended to not store the battery pack on the bike.

Maintenance and Service

Maintenance and Cleaning

Keep the battery clean. Clean it carefully with a soft, damp cloth.

► The battery must not be submerged in water or cleaned using a jet of water.

When the battery pack is no longer operative, please refer to an authorised Bosch eBike dealer.

After-sales Service and Application Service

In case of questions concerning the battery packs, please refer to an authorised Bosch eBike dealer.

► Note down the manufacturer and the number of the key 5. In case of loss of the keys, please refer to an authorised bicycle dealer. Please provide the name of the manufacturer and the number of the key.

For contact data of authorised Bosch eBike dealers, please refer to www.bosch-ebike.com

Transport

► If you carry your eBike outside of your car, e.g. on a luggage rack, remove the eBike battery pack in order to avoid damaging it.

The battery packs are subject to the Dangerous Goods Legislation requirements. Private users can transport undamaged battery packs by road without further requirements.

When being transported by commercial users or third parties (e.g. air transport or forwarding agency), special requirements on packaging and labelling must be observed (e.g. ADR regulations). If necessary, an expert for hazardous materials can be consulted when preparing the item for shipping.

Dispatch battery packs only when the housing is undamaged. Tape or mask off open contacts and pack up the battery pack in such a manner that it cannot move around in the packaging. Inform your parcel service that the package contains dangerous goods. Please also observe the possibility of more detailed national regulations.

In case of questions concerning transport of the battery packs, please refer to an authorised Bosch eBike dealer. The Bosch eBike dealers can also provide suitable transport packaging.

Disposal

Battery packs, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of the battery packs into household waste!

Tape or mask off the contact surfaces of the battery pack’s terminals with adhesive tape before disposing of battery packs.

Only for EC countries:

According to the European Guideline 2012/19/EU, electrical devices/tools that are no longer usable, and according to the European Guideline 2006/66/EC, defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.

Please return battery packs that are no longer usable to an authorised bicycle dealer.

Li-ion:

Please observe the instructions in section “Transport”, page English – 4.

Subject to change without notice.
Active Line/Performance Line

Charger

0 275 007 907 | 0 275 007 915
Standard Charger

eBike Battery Charger 36-4/230
0 275 007 907
Input: 230V ～ 50Hz  1.5A
Output: 36V ～ 4A
Made in [缺口]
Robert Bosch GmbH, Reutlingen

Standard Charger
Li-Ion
Use ONLY with BOSCH Li-Ion batteries

Use ONLY with BOSCH Li-Ion batteries
Compact Charger

**eBike Battery Charger 36-2/100-240**

0 275 007 915

Input: 100-240V  ~ 50/60 Hz  1.6A
Output: 36V === 2A

Made in PRC
Robert Bosch GmbH, Reutlingen

**Active/Performance Line**

Li-Ion
USE ONLY with BOSCH Li-Ion batteries
Safety Notes

- **Read all safety warnings and all instructions.** Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

- Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions refers to both standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier).

- **Keep the charger away from rain or moisture.** The penetration of water into a battery charger increases the risk of an electric shock.

- **Only charge eBike-approved Bosch lithium-ion battery packs.** The battery-pack voltage must match the battery-pack charging voltage of the charger. Otherwise there is danger of fire and explosion.

- **Keep the battery charger clean.** Contamination can lead to danger of an electric shock.

- **Before each use, check the battery charger, cable and plug.** If damage is detected, do not use the battery charger. Never open the battery charger yourself. Have repairs performed only by a qualified technician and only using original spare parts. Damaged battery chargers, cables and plugs increase the risk of an electric shock.

- **Do not operate the battery charger on easily inflammable surfaces (e.g., paper, textiles, etc.) or surroundings.** The heating of the battery charger during the charging process can pose a fire hazard.

- **Use caution when touching the charger during the charging procedure. Wear protective gloves.** Especially in high ambient temperatures, the charger can heat up considerably.

- **The battery may give off fumes if it becomes damaged or is used incorrectly.** Provide a fresh air supply and seek medical advice in the event of pain or discomfort. These fumes may irritate the respiratory tract.

- **Do not place the charger or battery pack near to flammable materials.** Charge battery packs only when dry and in a fireproof area. There is a risk of fire due to the heat generated during charging.

- **The eBike battery must not be left unattended while charging.**

- **Supervise children during use, cleaning and maintenance.** This will ensure that children do not play with the charger.

- **Children or persons that owing to their physical, sensor-y or mental limitations or to their lack of experience or knowledge, are not capable of securely operating the charger, may only use this charger under supervision or after having been instructed by a responsible person.** Otherwise, there is danger of operating errors and injuries.

- **Read and observe the safety warnings and instructions in all operating instructions of the eBike system and in the operating instructions of your eBike.**

- **A sticker in English is adhered to the bottom of the charger (marked 4 in the diagram on the graphics page). This says: Use ONLY with BOSCH lithium-ion batteries.**

Product Description and Specifications

Product Features

The numbering of the components shown refers to the illustrations on the graphic pages at the beginning of the manual. Individual illustrations in these operating instructions may differ slightly from the actual circumstances depending on the equipment of your eBike.

1. Battery charger
2. Charger socket
3. Plug-in connector
4. Safety warnings, charger
5. Charge connector
6. Socket for charge connector
7. Charge socket cover
8. Rack-type battery pack
9. Operating/state of charge indicator
10. Battery on/off button
11. Standard battery pack
Technical Data

<table>
<thead>
<tr>
<th>Battery Charger</th>
<th>Standard Charger (36 – 4/230)</th>
<th>Compact Charger (36 – 2/100-240)</th>
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<td>0 275 007 915</td>
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<td>90...264</td>
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<td>Frequency</td>
<td>Hz 47...63</td>
<td>47...63</td>
</tr>
<tr>
<td>Output voltage</td>
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<td>36</td>
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<td>Charging current</td>
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<td>2</td>
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<tr>
<td>Charging time</td>
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<td>– PowerPack 300 approx.</td>
<td>h 2.5</td>
<td>5</td>
</tr>
<tr>
<td>– PowerPack 400 approx.</td>
<td>h 3.5</td>
<td>6.5</td>
</tr>
<tr>
<td>– PowerPack 500 approx.</td>
<td>h 4.5</td>
<td>7.5</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C –5 ... +40</td>
<td>–5 ... +40</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>°C –10 ... +50</td>
<td>–10 ... +50</td>
</tr>
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<td>0.6</td>
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<tr>
<td>Degree of protection</td>
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<td>IP 40</td>
</tr>
</tbody>
</table>

The values given are valid for a nominal voltage [U] of 230 V. For different voltages and models for specific countries, these values can vary.

Operation

Initial Operation

Connecting the charger to the mains (see figure A)

► Observe the mains voltage! The voltage of the power supply must correspond with the data given on the name-plate of the battery charger. Battery chargers marked with 230 V can also be operated with 220 V.

Plug the charger plug 3 of the power cord into the charger socket 2 of the charger.

Connect the mains cable (country-specific) to the mains supply.

Charging the removed battery (see figure B)

Switch the battery pack off and remove it from the holder of the eBike. For this, read and observe the operating instructions of the battery pack.

► Place down the battery pack only on clean surfaces. In particular, avoid soiling the charge socket and the contacts, e.g. by means of sand or soil.

Insert the charger plug 5 of the battery charger into the socket 6 on the battery pack.

Charging the battery on the Bike (see figure C)

Switch the battery off. Clean the cover of the charge socket 7. Prevent especially the charge socket and the contacts from getting dirty, e.g. by sand or soil. Lift the cover of the charge socket 7 and plug the charge connector 5 into the charge socket 6.

► Charge the battery only in accordance with all safety instructions. If this is not possible, remove the battery from the holder and charge it in a more suitable location. When doing so, read and observe the operating instructions of the battery.

Charging with Two Battery Packs Inserted

If two battery packs are mounted on one eBike, both battery packs can be charged using the unsealed connection. The charging process will charge both battery packs alternately, automatically switching between both battery packs numerous times. The charging times add up.

Both battery packs are also discharged alternately during operation.

If you take the battery packs out of the holders, you can charge each battery pack individually.

Charging Procedure

The charging procedure begins as soon as the charger is connected to the battery or the charge socket on the bike and the main power supply.

Note: Charging is only possible if the temperature of the eBike battery is within the permitted charging temperature range.

Note: The drive unit is deactivated during the charging procedure.

The battery can be charged with and without the on-board computer. When charging without the on-board computer, the charging procedure can be observed on the battery charge-control indicator.

When the on-board computer is connected, a corresponding message is shown on the display.

The charging state is displayed by the battery charge-control indicator 9 on the battery and by the bars on the on-board computer.

During the charging procedure, the LEDs of charge-control indicator 9 on the battery pack light up. Each continuously lit LED is equivalent to a charge capacity of approx. 20 %. The flashing LED indicates the charging of the next 20 %.
Once the eBike battery is fully charged, the LEDs extinguish immediately and the on-board computer is switched off. The charging procedure is terminated. The charging state can be displayed for 3 seconds by pressing the on/off button 10 on the eBike battery.

Disconnect the charger from the main power supply and the battery pack from the charger.

When disconnecting the battery pack from the charger, the battery pack is automatically switched off.

**Note**: If you have charged on the bike, carefully close the charge socket 6 with the cover 7 after the charging procedure so that no dirt or water can get in.

If the charger is not disconnected from the battery after charging, after a few hours the charger will switch itself back on, check the charging state of the battery and begin the charging procedure again if necessary.

### Troubleshooting – Causes and Corrective Measures

<table>
<thead>
<tr>
<th>Cause</th>
<th>Corrective Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two LEDs of the battery pack flashing</td>
<td>Battery pack defective Refer to an authorised bicycle dealer.</td>
</tr>
<tr>
<td>Three LEDs of the battery pack flashing</td>
<td>Battery pack too warm or too cold Disconnect the battery from the charger until the charging temperature range has been reached. Do not connect the battery pack to the charger until it has reached the allowable charging temperature.</td>
</tr>
<tr>
<td>No LEDs flashing (one or more LEDs will remain permanently lit depending of the state of charge of the eBike battery)</td>
<td>The charger is not charging. Refer to an authorised bicycle dealer.</td>
</tr>
</tbody>
</table>

### Maintenance and Service

#### Maintenance and Cleaning

If the charger should fail, please refer to an authorised bicycle dealer.

#### After-sales Service and Application Service

In case of questions concerning the charger, please refer to an authorised bicycle dealer.

For contact data of authorised Bosch eBike dealers, please refer to [www.bosch-ebike.com](http://www.bosch-ebike.com)

#### Disposal

Battery chargers, accessories and packaging should be sorted for environmental-friendly recycling.

Do not dispose of battery chargers into household waste!

**Only for EC countries:**

According to the European Directive 2012/19/EU on waste electrical and electronic equipment and its transposition into national law, chargers that are no longer usable must be collected separately and sorted for environmental-friendly recycling.

Subject to change without notice.