

Active Line



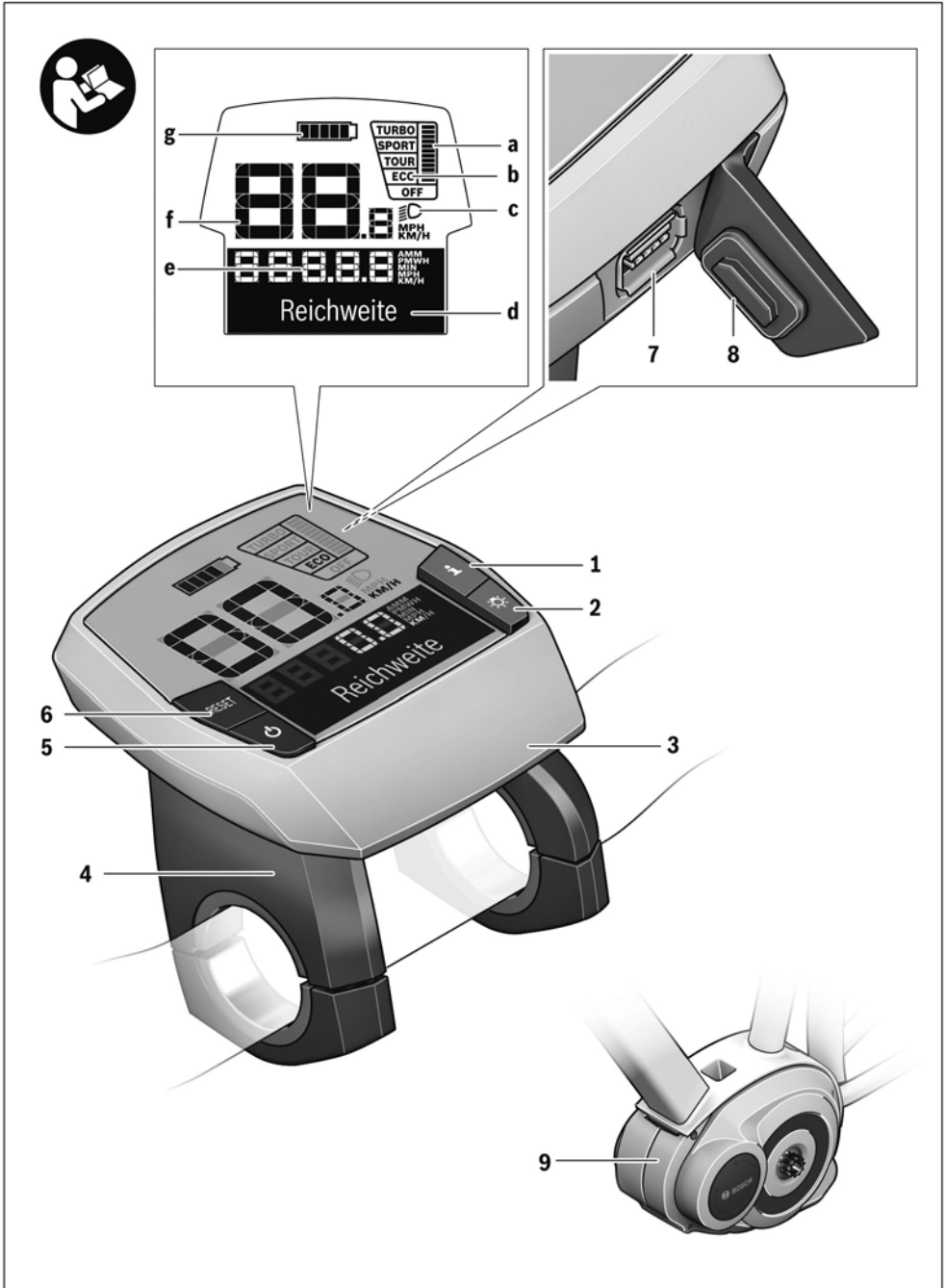
Drive Unit | Intuvia | PowerPack 300 | PowerPack 400 | Charger

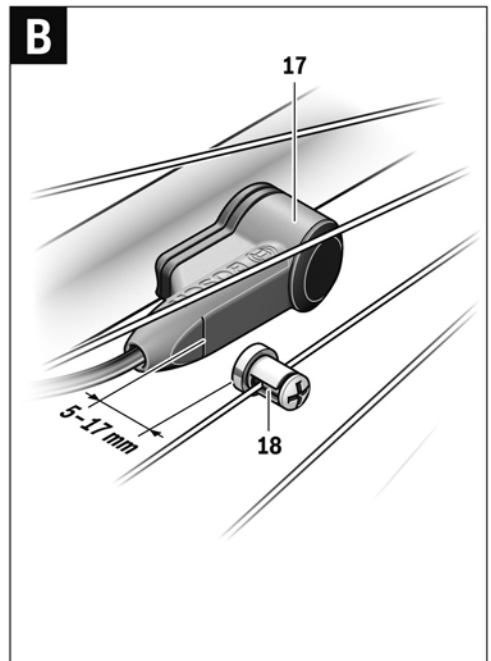
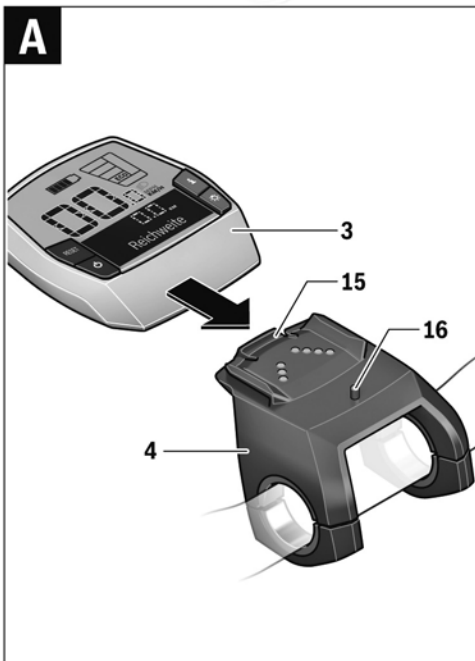
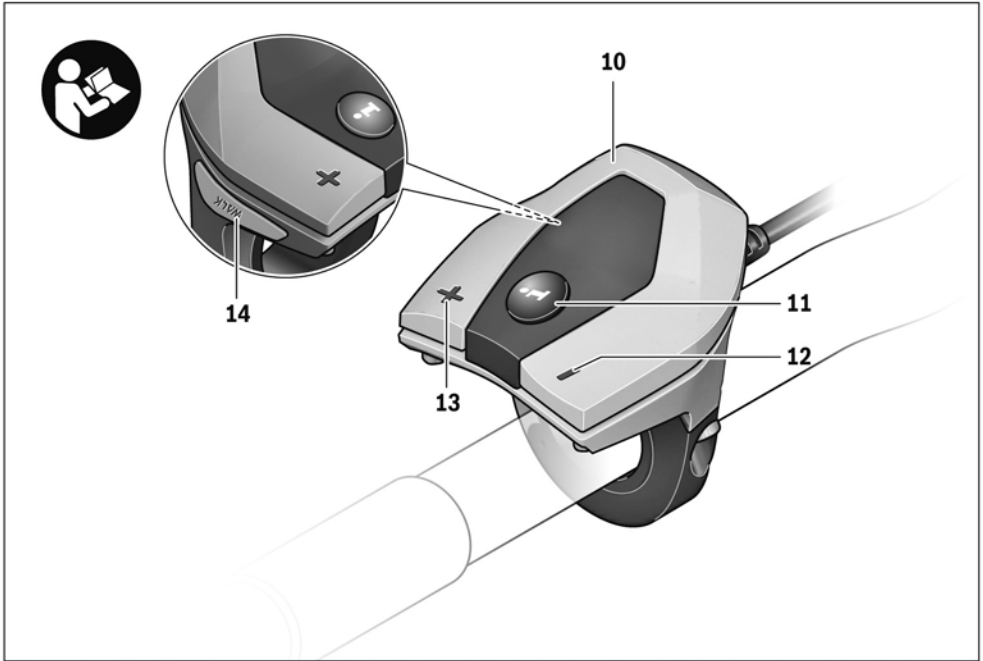
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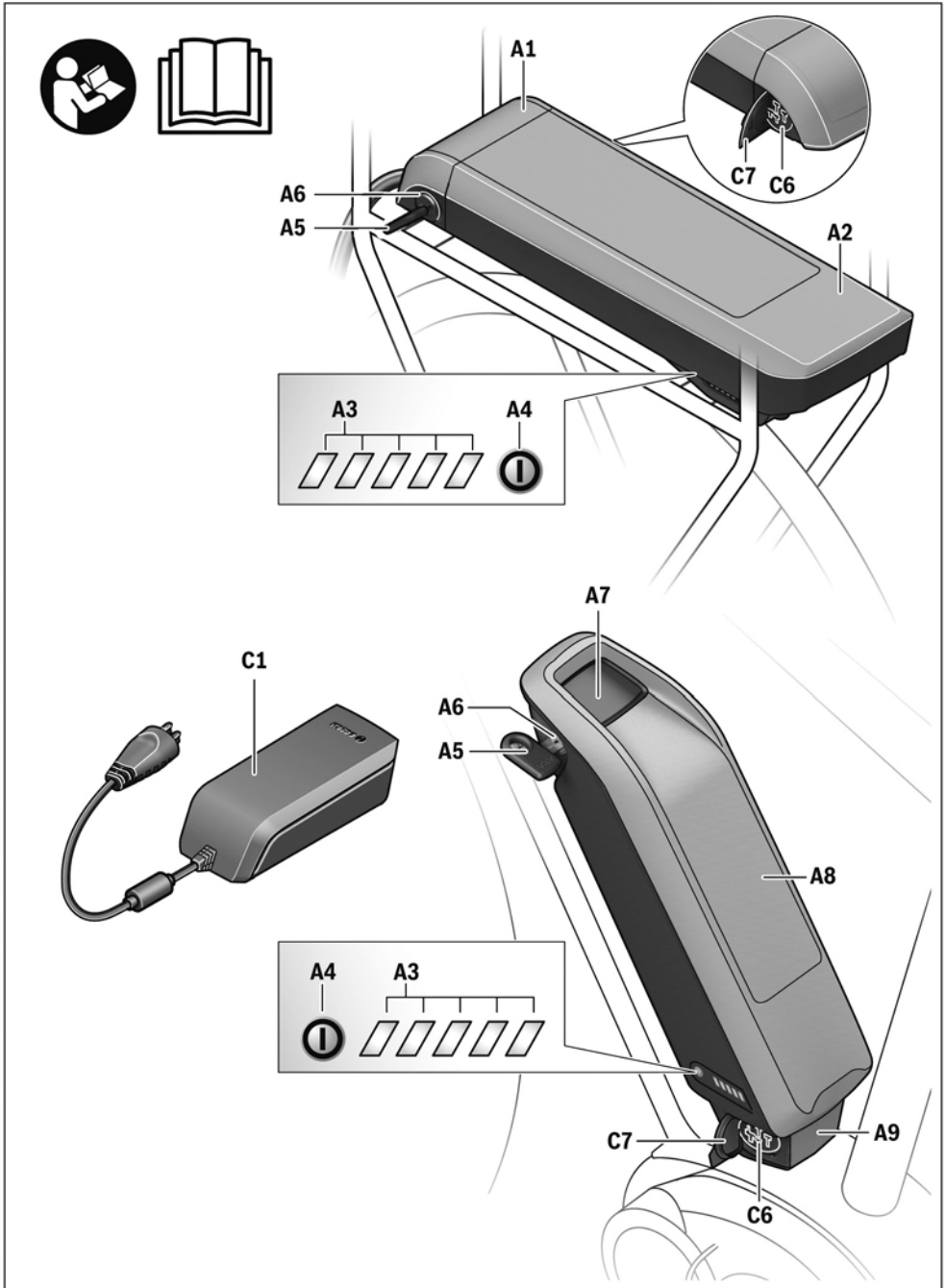


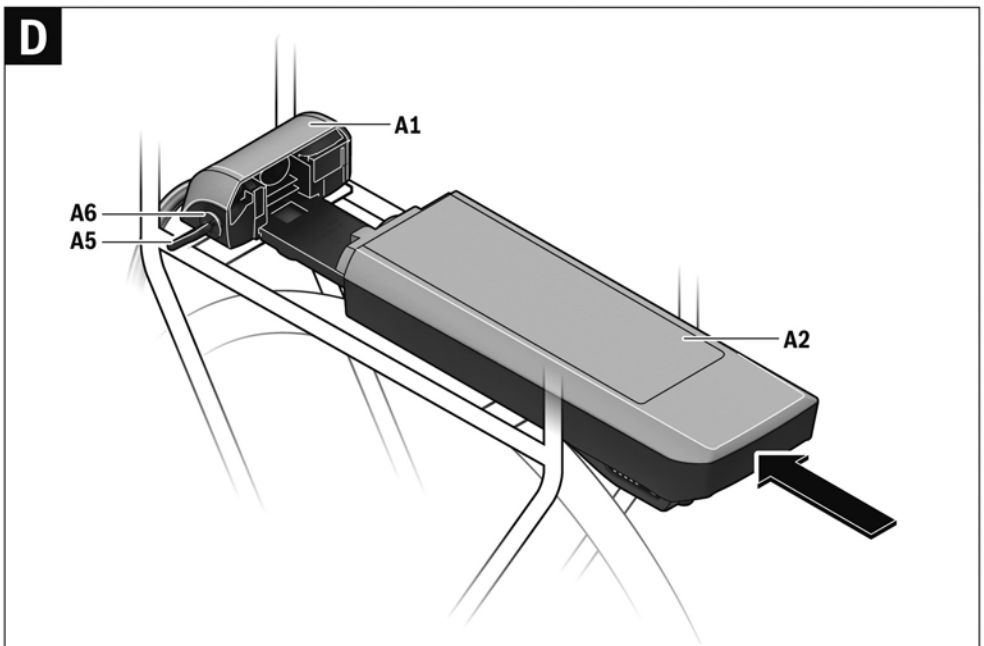
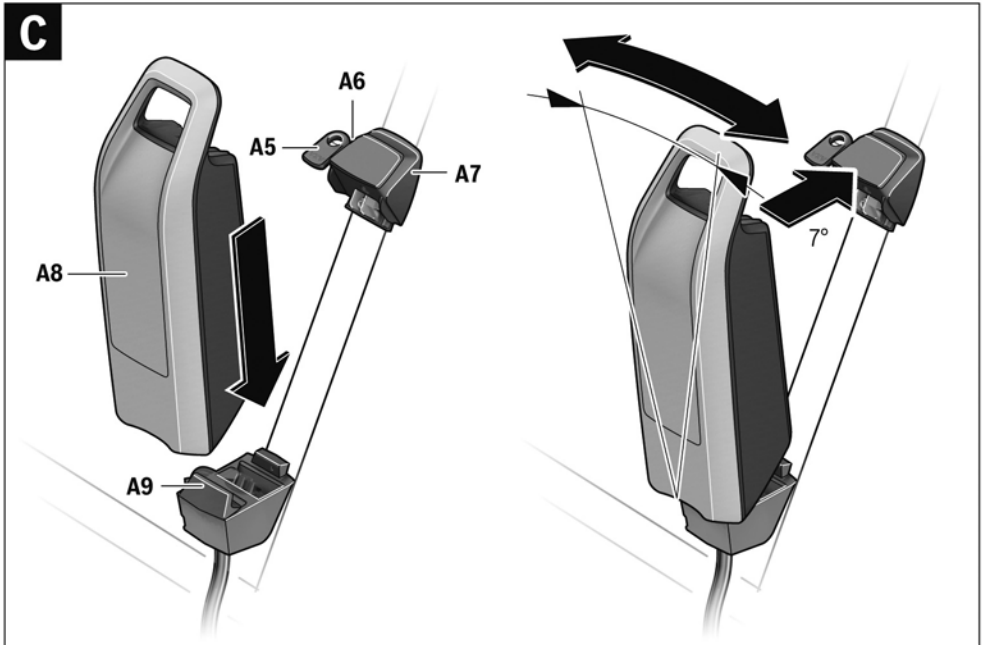
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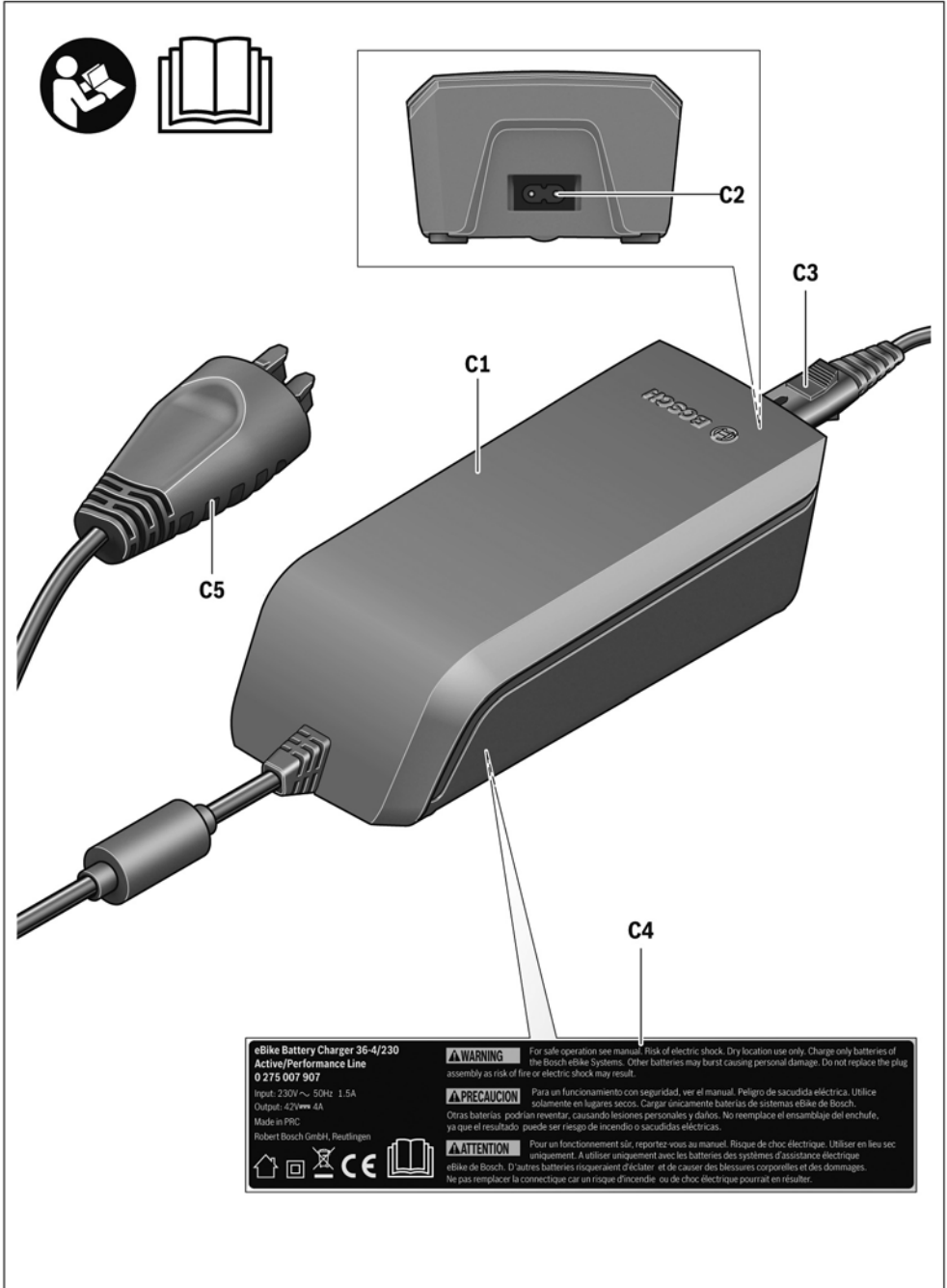


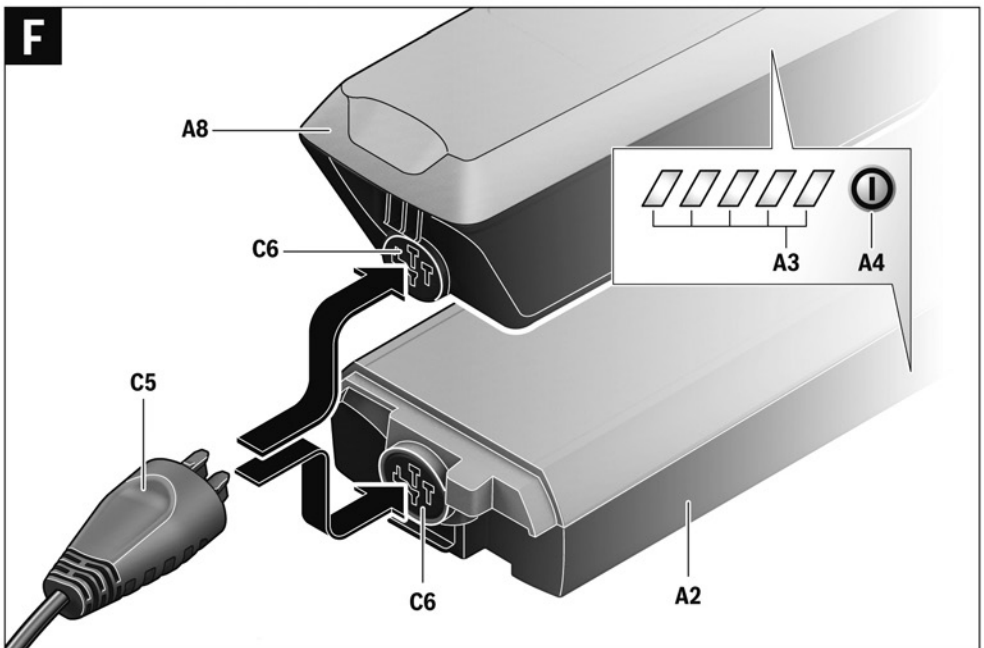
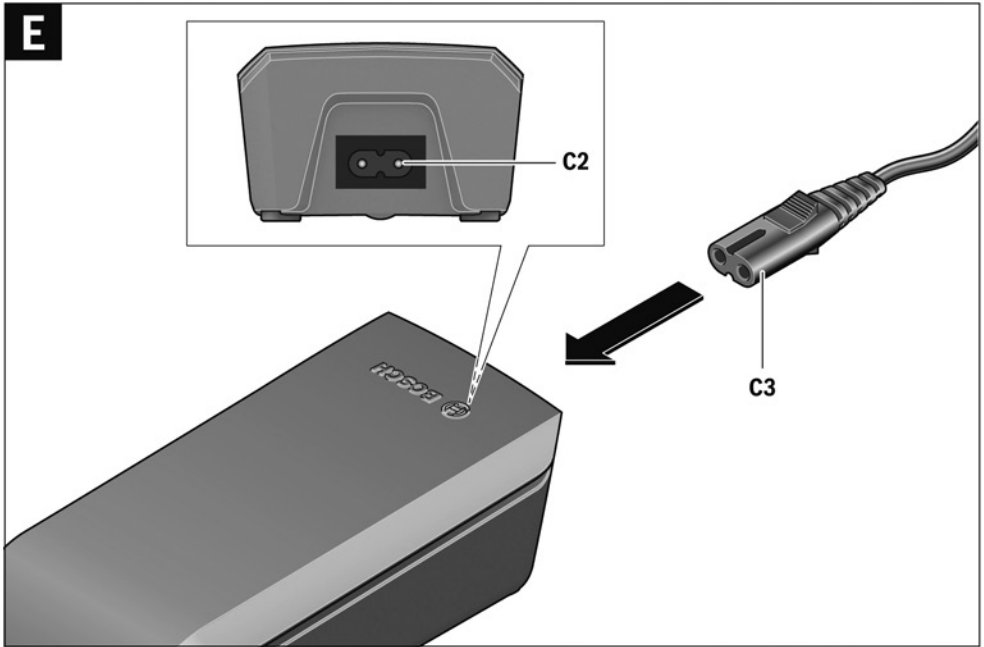


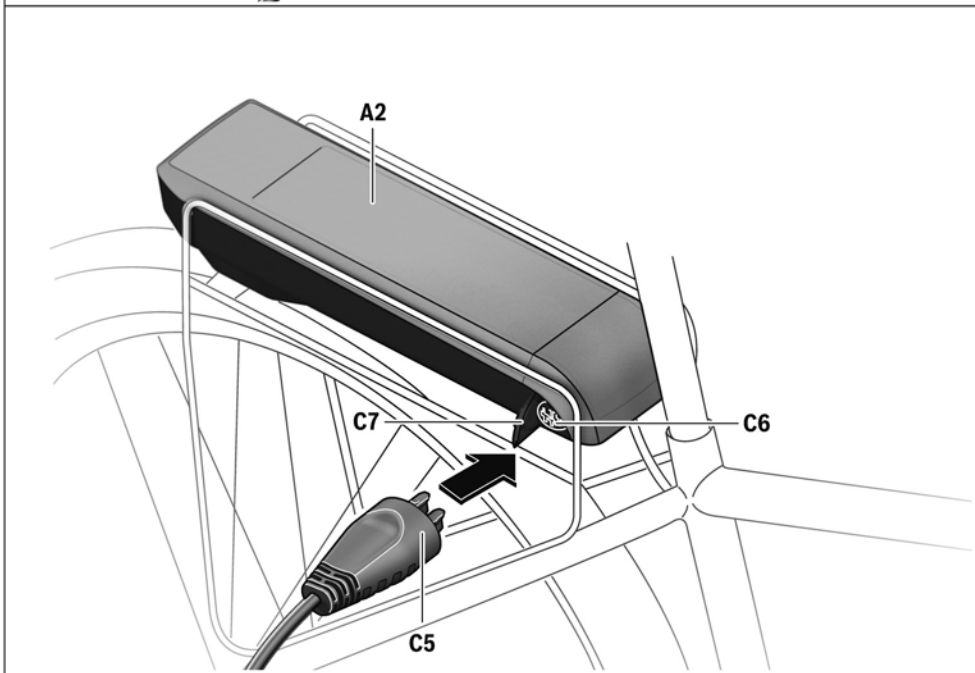
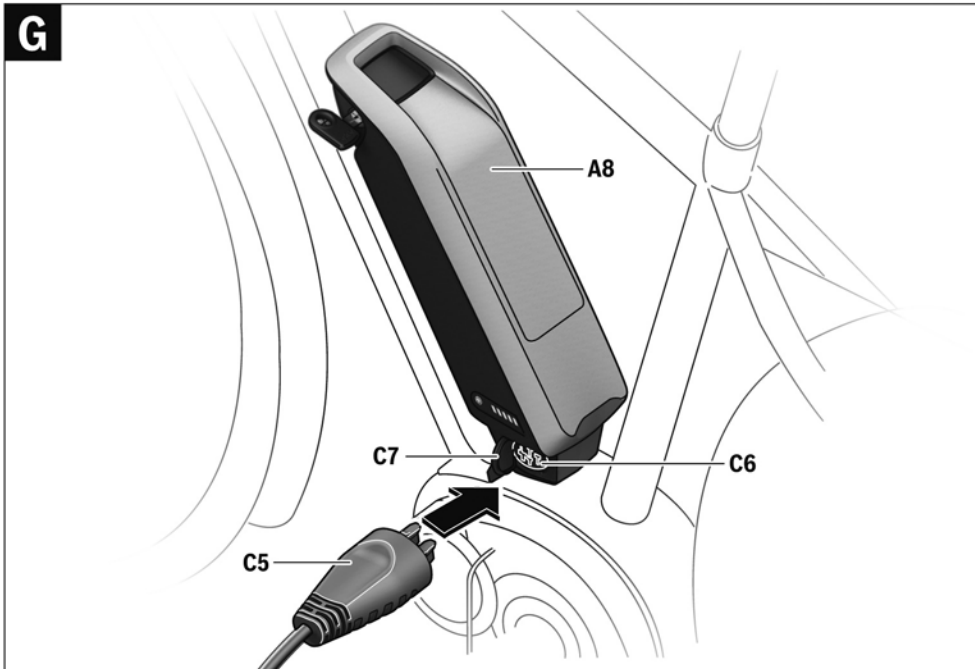












Drive Unit Cruise/ HMI Intuvia

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).

- ▶ **Do not open the drive unit yourself. The drive unit is maintenance-free and 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 against 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. 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 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.
- ▶ **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.**
- ▶ **Please read and observe the safety warnings and instructions enclosed in the operating instructions of the battery pack as well as in the operating instructions of your eBike.**

Product Description and Specifications

Intended Use

The drive unit is intended exclusively for your eBike and may not be used for other purposes.

The eBike is intended for use on paved paths. It is not permitted for use in competition.

Product Features (See page 2 - 3)

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, HMI including operating unit, speed sensor and the corresponding holders are schematic and may differ on your eBike.

- 1 Display-function button “i”
- 2 Illumination button
- 3 HMI
- 4 Holder for HMI
- 5 HMI On/Off button
- 6 “RESET” button
- 7 USB port
- 8 Protective cap of USB port
- 9 Drive unit
- 10 Operating unit
- 11 Display-function button “i” on the operating unit
- 12 Reduce value/scroll down button “-”
- 13 Increase value/scroll up button “+”
- 14 Push-assistance button “WALK”
- 15 Lock latch for HMI
- 16 Locking screw for HMI
- 17 Speed sensor
- 18 Spoke magnet of the speed sensor

Indication Elements, HMI

- a Motor-output indicator
- b Assistance-level indicator
- c Illumination indicator
- d Text indication
- e Value indication
- f Speed indication
- g Battery charge-control indicator

Technical Data

Drive Unit		Drive Unit
Article number		0 275 007 020 0 275 007 022
Rated continuous output	W	250
Torque at drive, max.	Nm	48
Rated voltage	V [~]	36
Operating temperature	°C	-5 ... +40
Storage temperature	°C	-10 ... +50
Degree of protection		IP 54 (dust and splash water protected)
Weight, approx.	kg	4

HMI		Intuvia
Article number		1 270 020 906
Max. charging current, USB connection	mA	500
Charging voltage, USB connection	V	5
Operating temperature	°C	-5 ... +40
Storage temperature	°C	-10 ... +50
Charging temperature	°C	0 ... +40
Degree of protection		IP 54 (dust and splash water protected)
Weight, approx.	kg	0.15

Lighting*		
Rated voltage	V [~]	6
Power output		
– Front light	W	6.6
– Rear light	W	0.6

* Not possible via the eBike battery pack in all country-specific versions, depending on the statutory regulations

Assembly

Inserting and Removing the Battery Pack

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

Inserting and Removing the HMI (see figure A)

To **insert** the HMI **3**, slide it from the front into the holder **4**. To **remove** the HMI **3**, press the lock latch **15** and slide the HMI toward the front out of the holder **4**.

► Remove the HMI when you park the eBike.

It is possible to secure the HMI against removal in the holder. To do so, remove the holder **4** from the handlebars. Put the HMI in the holder. Screw the locking screw **16** (thread M3, 8 mm long) from below into the thread provided in the holder. Mount the holder back onto the handlebars.

Checking the Speed Sensor (see figure B)

The speed sensor **17** and its spoke magnet **18** 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 clearance between speed sensor **17** and spoke magnet **18** is too small or too large, or if the speed sensor **17** is not properly connected, the speed indication **f** will fail, and the eBike drive will operate in emergency mode.

In this case, loosen the screw of the spoke magnet **18** and fasten the spoke magnet to the spoke in such a manner that it runs past the mark of the speed sensor at the correct clearance. When the speed is still not being indicated in the speed indication **f** after this, please refer to an authorised bicycle dealer.

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 operating instructions of the battery pack).
- The HMI is properly inserted in the holder (see “Inserting and Removing the HMI”, page English – 2).
- The HMI is properly connected (see “Checking the Speed Sensor”, page English – 2).

Switching the eBike System On/Off

Options for **switching on** the eBike system:

- If the HMI is already switched on when inserted into the holder, then the eBike system will be switched on automatically.
- When the HMI and the battery pack are inserted, briefly press the On/Off button **5** of the HMI once.
- When the HMI is inserted, press the On/Off button of the battery pack (see battery pack operating instructions).

The drive is activated as soon as you step into the pedals (except when in push-assistance mode, see “Switching the Push-assistance mode On/Off”, page English – 4). The motor output depends on the settings of the HMI.

As soon as you stop pedaling when in normal operation, or as soon as you have reached a speed of 25 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 km/h.

Options for **switching off** the eBike system:

- Press the On/Off button **5** of the HMI.
- Switch the battery pack off by its On/Off button (see battery pack operating instructions.)
- Remove the HMI out of its holder.

If no power is drawn from the drive for about 10 minutes (e.g. because the eBike is not moving), the eBike system will shut down automatically to save energy.

Indications and Settings of the HMI

Power Supply of the HMI

When the HMI is inserted in holder **4**, a sufficiently charged battery pack is inserted in the eBike and the eBike system is switched on, power is supplied to the HMI via the eBike's battery pack.

When the HMI is removed from holder **4**, it is supplied with power via an internal battery pack. If the internal battery pack is low when switching on the HMI, **"Attach to bike"** is displayed for 3 s in text indication **d**. Afterwards, the HMI switches off again.

To recharge the internal battery pack, insert the HMI into the holder **4** (a battery pack must be inserted in the eBike). Switch the eBike battery pack off by its On/Off button (see battery pack operating instructions).

The HMI can also be charged via USB connection. Open protective cap **8** for this. Using a matching USB cable, connect the USB port **7** of the HMI to a commercially available USB charger or to the USB port of a computer; (5 V charging voltage; max. 500 mA charging current). **"USB connected"** is displayed in text indication **d** of the HMI.

Switching the HMI On/Off

To **switch on** the HMI, briefly press the On/Off button **5**. When the internal battery pack is sufficiently charged, the HMI can also be switched on when not inserted in the holder. To **switch off** the HMI, press the On/Off button **5**.

When the HMI is not inserted in the holder and no button is pressed, it automatically switches off after 1 min to save energy.

Battery Charge-control Indicator

The battery-pack charge-control indicator **g** indicates the charge condition of the eBike's battery pack, and not the charge condition of the HMI's internal battery pack. The charge condition of the eBike's battery pack can also be read from the battery pack's LEDs.

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



The battery is fully charged.



The battery should be recharged.



The LEDs of the charge-control indicator on the battery extinguish. The capacity for supporting the drive has been used up, and support is gently switched off. The remaining capacity is made available for the lighting and the HMI. The indicator flashes.

The capacity of the battery is enough for about 2 more hours of lighting. This does not account for other consumers (e.g. automatic gearbox, charging external devices at the USB port).

When the HMI is removed from holder **4**, the last indicated battery pack charge condition is stored.

Setting the Assistance Level

The level of assistance of the eBike drive when pedaling can be adjusted via the HMI. The assistance level can be changed anytime, even during riding.

Note: For individual versions, it is possible that the 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 drive is switched off, the eBike can be operated as a normal bicycle through pedaling.
- **"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, press the **"+"** button **13** on the operating unit until the desired assistance level is displayed in indicator **b**; to **decrease** the assistance level, press the **"-"** button **12**.

The requested motor output is displayed in indicator **a**. The maximum motor output depends on the selected assistance level.

Assistance Level	Assistance Factor*
"ECO"	40 %
"TOUR"	100 %
"SPORT"	150 %
"TURBO"	225 %

* The motor output can vary for individual versions.

When the HMI is removed from holder **4**, the last indicated assistance level is stored; the motor-output indicator **a** remains empty.

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, press and hold the **“WALK”** button **14** on the operating unit. The eBike's drive is activated.

The push-assistance function is **switched off** as soon as any of the following incidents occur:

- You release the **“WALK”** button **14**,
- The wheels of the eBike are blocked (e. g., through braking or running against an obstruction),
- Your speed exceeds 6 km/h.

Back-pedalling function (optional)

For bikes with back-pedalling function, the pedals rotate when the push aid is switched on. If the rotating pedals are blocked, the push aid switches off.

Switching the Lighting On/Off

In the version in which the driving light is powered via the eBike system, you can use the **2** button on the HMI to simultaneously switch the front light and rear light on and off.

When the lighting is switched on **“Lights on”** appears and when the lighting is switched off **“Lights off”** appears for approx. 1 s in the text indication **d**. The illumination symbol **c** is displayed when the light is on.

Switching the driving light on and off has no effect on the back lighting of the display. The back lighting of the display is active as soon as the system or the display is switched on.

Speed and Distance Indication

The **speed indication f** always displays the current speed.

The following functions are available in the **function indication** (combination of text indication **d** and value indication **e**):

- **“Range”**: Estimated range of the available battery-pack charge (for constant conditions such as assistance level, route profile, etc.)
- **“Distance”**: Distance covered since the last reset
- **“Trip time”**: Trip time since the last reset
- **“Avg. Speed”**: Average speed achieved since the last reset
- **“Max. Speed”**: Maximum speed achieved since the last reset
- **“Clock”**: Current time
- **“odometer”**: Display of the total distance travelled with the eBike (not resettable)

To **switch between the indication functions**, press the **“i”** button **1** on the HMI or the **“i”** button **11** on the operating unit until the desired function is displayed.

To **reset “Distance”, “Trip time” and “Avg. Speed”**, switch to any of the three functions and then press and hold the **“RESET”** button **6** until the indication is set to zero. This also resets the values of the other two functions.

To **reset the “Max. Speed”**, switch to this function and then press and hold the **“RESET”** button **6** until the indication is set to zero.

To **reset “Range”**, switch to this function and then press the **“RESET”** button **6** until the display is reset to the value of the factory setting.

When the HMI is removed from the holder **4**, all function values remain stored and can be viewed.

Displaying/Adapting Basic Settings

The basic settings can be displayed and changed no matter if the HMI is in the holder **4** or not.

To access the basic settings menu, press and hold the **“RESET”** button **6** and the **“i”** button **1** until **“Configuration”** is displayed in text indication **d**.

To **switch between the basic settings**, press the **“i”** button **1** on the HMI until the desired basic setting is displayed. When the HMI is inserted in holder **4**, you can also press the **“i”** button **11** on the operating unit.

To **change the basic settings**, press the On/Off button **5** next to the **“–”** indication to decrease the value or scroll down, or the illumination button **2** next to the **“+”** indication to increase the value or scroll up.

When the HMI is inserted in holder **4**, you can also change the values with the **“–”** button **12** or the **“+”** button **13** on the operating unit.

To exit the function and store a changed setting, press the **“RESET”** button **6** for 3 s.

The following basic settings are available:

- **“unit km/mi”**: The speed and distance can be displayed either in kilometres or miles.
- **“time format”**: The time can be displayed either in the 12 hour or 24 hour format.
- **“clock”**: The current time can be set here. Pressing and holding the setting buttons fast-forwards the setting speed.
- **“English”**: The language for text indication can be changed. The available languages are German, English, French, Spanish, Italian and Dutch.
- **“power-on hours”**: Indicates the total travel duration with the eBike (not changeable).
- **“wheel circum.”**: You can change this value pre-set by the manufacturer by $\pm 5\%$.

Error Code Indication

The components of the eBike system are continuously and automatically monitored. When an error is detected, the respective error code is indicated in text indication **d**.

To return to the standard indication, press any button on the HMI **3** or on the operating unit **10**.

Depending on the type of error, the drive is automatically shut off if required. Continued travel without assistance from the drive is possible at any time. However, have the eBike checked before attempting new trips.

► **Have all checks and repairs performed only by an authorised bike dealer.**

Code	Cause	Corrective Measure
410	One or more buttons of the HMI are blocked.	Check if any buttons are blocked, e.g. from dirt or debris. Clean the buttons, if required.
414	Connection problem of the operating unit	Have connections and contacts checked
418	One or more buttons of the operating unit are blocked.	Check if any buttons are blocked, e.g. from dirt or debris. Clean the buttons, if required.
422	Connection problem of the drive unit	Have connections and contacts checked
423	Connection problem of battery pack	Have connections and contacts checked
424	Communication error among the components	Have connections and contacts checked
426	Internal time-out error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
430	Internal battery pack of HMI empty	Charge HMI (in holder or via USB port)
440	Internal error of the drive unit	Restart the system. If the problem persists, contact your Bosch eBike dealer.
450	Internal software error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
490	Internal error of the HMI	Have the HMI checked
500	Internal error of the drive unit	Restart the system. If the problem persists, contact your Bosch eBike dealer.
502	Illumination error	Check the light and the associated wiring. Restart the system. If the problem persists, contact your Bosch eBike dealer.
503	Error of the speed sensor	Restart the system. If the problem persists, contact your Bosch eBike dealer.
510	Internal sensor error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
511	Internal error of the drive unit	Restart the system. If the problem persists, contact your Bosch eBike dealer.
530	Battery pack error	Switch off the e-Bike, remove the battery pack and reinsert the battery pack. Restart the system. If the problem persists, contact your Bosch eBike dealer.
531	Configuration error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
540	Temperature error	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.
550	An improper load was detected.	Remove load. Restart the system. If the problem persists, contact your Bosch eBike dealer.
602	Internal battery pack error while charging	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.

Code	Cause	Corrective Measure
602	Internal battery pack error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
603	Internal battery pack error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
605	Battery pack temperature error	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.
605	Battery pack temperature error while charging	Unplug the charger from the battery pack. Allow the battery pack to cool. If the problem persists, contact your Bosch eBike dealer.
606	External battery pack error	Check the wiring. Restart the system. If the problem persists, contact your Bosch eBike dealer.
610	Batter pack voltage error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
620	Charging error	Replace the charger. Contact your Bosch eBike dealer.
640	Internal battery pack error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
655	Multiple battery pack errors	Switch off the eBike system. Remove the battery pack and reinsert it. Restart the system. If the problem persists, contact your Bosch eBike dealer.
656	Software version error	Contact your Bosch eBike dealer so that he can perform a software update.
No display	Internal error of the HMI	Restart your eBike system by switching it off and back on.

Power Supply of External Devices via USB Connection

With the USB connection, it is possible to operate and charge most devices whose power supply is possible via USB (e. g., various mobile phones).

Prerequisite for the charging is that the HMI and a sufficiently charged battery pack are inserted in the eBike.

Open the protective cap **8** of the USB port on the HMI. Connect the USB port of the external device to the USB socket **7** on the HMI using a standard-compliant Micro A/Micro B USB 2.0 cable. Using a USB cable that is not standard-compliant or a cable/adaptor combination can lead to damage to the HMI.

Notes on Riding with the eBike System

When does the eBike Drive Operate?

The eBike drive supports 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 25 km/h. When the speed falls below 25 km/h, the drive is automatically available again.

An exception applies to the push-assistance function, in which the eBike can be pushed at low speed without pedaling. The pedals may also rotate when the push 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 drive (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.

Try out the different assistance levels. As soon as you feel safe, you can participate in traffic with the eBike as with any other bicycle.

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

Influences on the Operating Range

The operating range depends on many factors, such as:

- Assistance level,
- Gear-switching behaviour,
- Bicycle tyres and tyre pressure,
- Age and condition of the battery pack,
- Route profile (inclines) and road or path conditions (road or path surface),
- Head wind and ambient temperature,
- Weight of the eBike, rider and equipment/luggage.

For this reason, it is not possible to precisely predict the range before commencing a trip. General rules:

- For **the same** motor output of the eBike drive: The less power or force that you have to bring about to reach a certain speed (e.g. through optimal use of the gears), the less energy the eBike drive will consume, and the greater the range for a battery-pack charge.
- 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, HMI and battery pack 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

Keep all components of your eBike clean, especially the battery-pack contacts and corresponding holder contacts. Clean them carefully with a soft, damp cloth.

All components including the drive unit may not be immersed in water or cleaned with a high-pressure cleaner.

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

After-sales Service and Customer Assistance

In case of questions concerning the eBike system and its components, please refer to an authorised bicycle dealer.

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

Transport

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 bicycle dealer. Bicycle dealers can also provide suitable transport packaging.

Disposal



The drive unit, HMI (incl. operating unit), battery pack, speed sensor, accessories and packaging should be sorted for environmental-friendly recycling.

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

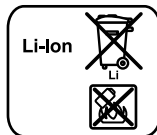
Only for EC countries:



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.

The integrated battery pack in the HMI may only be removed for disposal. Opening the housing shell can damage or destroy the HMI.

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 – 7.

Subject to change without notice.

Lithium ion battery pack PowerPack

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. 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 pack against heat (e.g., also against continuous intense sunlight), fire and immersing into water. Danger 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.
- ▶ **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.
- ▶ **Vapours can escape in case of damage and improper use of the battery pack. Provide for fresh air and seek medical attention in case of complaints.** The vapours can irritate the respiratory system.

- ▶ **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.
- ▶ **Please read and observe the safety warnings and instructions enclosed in the operating instructions of the charger and drive unit/drive HMI (Human Machine Interface), as well as in the operating instructions of your eBike.**
- ▶ **Keep the battery pack out of reach of children.**

Product Description and Specifications

Product Features (See page 4 – 5)

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.

- A1 Holder of the rack-type battery pack
- A2 Rack-type battery pack
- A3 Operation and charge-control indicator
- A4 On/Off button
- A5 Key of the battery pack lock
- A6 Battery-pack lock
- A7 Upper holder of the standard battery pack
- A8 Standard battery pack
- A9 Bottom holder of the standard battery pack
- C1 Battery charger
- C6 Socket for charge connector
- C7 Charge socket cover

Technical Data

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

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 ground.

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 **A4** to switch on the battery pack. When no LED of the charge-control indicator **A3** lights up, the battery pack may be damaged.

When at least one, but not all LEDs of the charge-control indicator **A3** is lit, then fully charge the battery pack before using for the first time.

- ▶ **Do not charge a damaged battery pack and do not use it.** Please refer to an authorised bicycle dealer.

Charging the Battery Pack

- ▶ **Use only the 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 **A3**

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 **A3** 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-control of the switched on battery pack is also indicated on the display of the HMI. Read and observe the operating instructions of the drive unit and the HMI.

When the capacity of the battery pack is below 5 %, all LEDs of charge-control indicator **A3** on the battery pack go out; however, the drive HMI does provide an additional indication function.

Inserting and Removing the Battery Pack (see figures C – D)

► Always switch the battery pack off when inserting or removing it from the holder.

In order for the battery pack to be inserted, the key **A5** must be inserted into the lock **A6** and the lock must be unlocked.

To **insert the standard battery pack A8**, place it with the contacts on the lower holder **A9** on the eBike (the battery pack can be inclined up to 7° to the frame). Tilt it into the upper holder **A7** until it engages.

To **insert the rack-type battery pack A2**, slide it with the contacts facing ahead until it engages in the holder **A1** of the rear rack/carrier.

Check if the battery pack is tightly seated. Always lock the battery pack with lock **A6**, as otherwise the lock can open and the battery pack could fall out of the holder.

After locking, always remove the key **A5** from the lock **A6**. 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 A8**, switch it off and unlock the lock with the key **A5**. Tilt the battery pack out of the upper holder **A7** and pull it out of the lower holder **A9**.

To **remove the rack-type battery pack A2**, switch it off and unlock the lock with the key **A5**. Pull the battery pack out of the holder **A1**.

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 the battery pack on is one of the possibilities to start the eBike system. Read and observe the operating instructions of the drive unit and the drive HMI.

Before switching on the battery pack or the eBike system, check that the lock **A6** is locked.

To **switch on** the battery pack, press the On/Off button **A4**. The LEDs of indicator **A3** light up and at the same time indicate the charge condition.

Note: When the battery-pack capacity is below 5 %, none of the LEDs of charge-control indicator **A3** will light up. Only the drive HMI will indicate if the eBike system is switched on.

To **switch off** the battery pack, press the On/Off button **A4** again. The LEDs of indicator **A3** go out. This also switches off the eBike system.

When no power output of the eBike drive is requested for approx. 10 minutes (e. g., because the eBike is parked) and no button of the drive HMI or operating unit is pressed, the eBike system and thus the battery pack automatically switch off to save energy.

The battery pack is protected against deep discharging, overcharging, 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 **A3** flash. In this case, please refer to an authorised bicycle 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 **A3**).

Check the charge condition after 6 months. When only one LED of the charge-control indicator **A3** 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 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 pack clean. Clean the battery pack carefully with a soft, damp cloth. The battery pack may not be immersed in water or cleaned with a water jet.

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

After-sales Service and Customer Assistance

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

- **Note down the manufacturer and the number of the key A5.** 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 bicycle dealers, please refer to www.bosch-ebike.com

Transport

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 bicycle dealer. Bicycle dealers can also provide suitable transport packaging.

Disposal



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

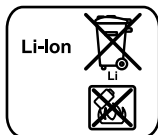
Do not dispose of the battery packs into household waste!

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 – 11.

Subject to change without notice.

Charger

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).



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.
- ▶ **Vapours can escape in case of damage and improper use of the battery pack. Provide for fresh air and seek medical attention in case of complaints.** The vapours can irritate the respiratory system.
- ▶ **Supervise children.** This will ensure that children do not play with the charger.
- ▶ **Children or persons that owing to their physical, sensory 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.

- ▶ **Please read and observe the safety warnings and instructions enclosed in the operating instructions of the battery pack and drive unit/HMI, as well as in the operating instructions of your eBike.**
- ▶ A short version of important safety warnings in English, French and Spanish with the following content can be found on the bottom side of the charger (marked with number **C4** in the representation on the graphics page):
 - For safe operation see manual. Risk of electric shock.
 - Dry location use only.
 - Charge only batteries of the Bosch eBike Systems. Other batteries may burst causing personal damage.
 - Do not replace the plug assembly as risk of fire or electric shock may result.

Product Description and Specifications

Product Features (See page 6 – 8)

The numbering of the product features refers to the illustration of the battery charger on the graphics page.

- C1** Battery charger
- C2** Charger socket
- C3** Plug-in connector
- C4** Safety warnings, charger
- C5** Charge connector
- C6** Socket for charge connector
- C7** Charge socket cover
- A2** Rack-type battery pack
- A3** Battery charge-control indicator
- A4** Battery on/off button
- A8** Standard battery pack

Technical Data

Battery Charger		Charger
Article number		0 275 007 907
Rated voltage	V~	207 – 264
Frequency	Hz	47 – 63
Output voltage	V=	42
Charging current	A	4
Allowable charging temperature range	°C	0 ... +40
Charging time		
– PowerPack 300	h	2.5
– PowerPack 400	h	3.5
Number of battery cells		30 – 40
Operating temperature	°C	0 ... +40
Storage temperature	°C	–20 ... +70
Weight according to EPTA-Procedure 01/2003	kg	0.8
Degree of protection		IP 40

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 E)

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

Plug the charger plug **C3** of the power cord into the charger socket **C2** of the charger.

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

Charging the removed battery (see Figure F)

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 ground.

Insert the charger plug **C5** of the battery charger into the socket **C6** on the battery pack.

Charging the battery on the Bike (see figure G)

Switch the battery off. Clean the cover of the charge socket **C7**. Prevent especially the charge socket and the contacts from getting dirty, e.g. by sand or soil. Lift the cover of the charge socket **C7** and plug the charge connector **C5** into the charge socket **C6**.

► **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 Procedure

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

Note: The charging procedure is only possible when the temperature of the battery pack is within the allowable charging-temperature range.

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

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

When the HMI is connected, the back lighting of the display is switched on at low luminosity and “**Charging**” appears in the text display.

The HMI can be removed during the charging procedure, or it can also be fitted after the charging procedure has begun.

The charging state is displayed by the battery charge-control indicator **A3** on the battery and by the bars on the HMI.

When charging the main battery on the bike, the battery of the HMI can also be charged.

During the charging procedure, the LEDs of charge-control indicator **A3** 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 %.

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

Once the battery is fully charged, the LEDs extinguish immediately and the HMI is switched off. The charging procedure is terminated. The charging state can be displayed for 3 seconds by pressing the on/off button **A4**.



Disconnect the charger from the mains 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 **C6** with the cover **C7** 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

Cause	Corrective Measure
	Two LEDs of the battery pack flashing.
Battery pack defective	Refer to an authorised bicycle dealer
	Three LEDs of the battery pack flashing.
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.
No charging procedure possible (no indication on battery pack)	
Plug not inserted correctly	Check all plug connections
Contacts of battery pack soiled	Carefully clean the contacts of the battery pack
Socket outlet, cable or charger defective	Check mains voltage, have charger checked through bicycle dealer
Battery pack defective	Refer to an authorised bicycle dealer

Maintenance and Service

Maintenance and Cleaning

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

After-sales Service and Customer Assistance

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

For contact data of authorised bicycle dealers, please refer to 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 Guideline 2012/19/EU for Waste Electrical and Electronic Equipment and its implementation into national right, battery chargers that are no longer usable must be collected separately and disposed of in an environmental correct manner.

Subject to change without notice.

Active Line

Robert Bosch GmbH

Bosch eBike Systems
72703 Reutlingen
Germany

www.bosch-ebike.com

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