

A detailed line drawing of a bicycle, showing the front wheel, handlebars, and frame. The drawing is in a sketchy, technical style with some shading on the wheels and frame.

FISCHER

die fahrradmarke

EN

SYSTEM MANUAL

ORIGINAL OPERATING INSTRUCTIONS PEDELEC 2019 | ELECTRIC DRIVE

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Legal disclosure

Fischer System version 2.0 November 2018

For any questions regarding your pedelec, please contact our service hotline.
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Inter-Union Technohandel GmbH is represented by: Managing director: Jürgen Herrmann, Frank Jansen
The declaration of conformity for Fischer pedelecs can be found on the internet at www.fischer-fahrrad.de.
Responsible for distributing and marketing the operating instructions: inMotion mar.com
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Legal inspection by a lawyer's office specialising in intellectual property.
This operating manual covers the requirements and scope of EN 15194:2018-11.
In case of delivery and use outside this scope, the manufacturer of the vehicle must supply the requisite manuals. Subject to modifications. Status editorial closing date 11/2018
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General information



When using this product, be sure to follow the instructions given in the original instruction manual.



Please ensure you read the chapters "Before the first ride" and "Before each ride" before using the pedelec for the first time.

- If you lend your pedelec to a third party, please give them all operating instructions along with the pedelec.
- After reading the user manual carefully, keep it in a safe place for later reference.

You will also find a wide range of information and videos about use, maintenance and settings of your pedelec online.



[www.fischer-die-fahrradmarke.de/
service/wartung-und-reparatur.html](http://www.fischer-die-fahrradmarke.de/service/wartung-und-reparatur.html)



[www.youtube.com/user/
FischerFahrradmarke](https://www.youtube.com/user/FischerFahrradmarke)

For your safety



Always apply the pedelec's brakes before placing your foot on the pedal. The motor will drive forward as soon as you push down the pedal. This force may be unfamiliar and can lead to falls, danger or even traffic accidents, which could result in injury.

- Staring at the display screen for too long while cycling may result in you falling off or causing an accident.
- When riding a pedelec, make sure that you are fully familiar with the starting characteristics of the pedelec before riding it. If the pedelec starts off suddenly, accidents may occur.
- Neither the bike nor the drive may be tampered with to increase the speed or performance of the pedelec. Even the application of tuning kits or modifying the gear transmission is not permitted.

Pedelec tuning is prohibited



Do not modify the pedelec's technology in any way. Manipulating the bike in any way to increase performance or speed can lead to legal problems and/or make the bike less safe to ride.

Possible legal implications:

- The pedelec is required by law to be registered for approval and insured. All legal requirements regarding the bike's configuration and as stated by the road traffic licensing authority must be adhered to.
- The manufacturer does not offer any kind of guarantee, warranty or liability.
- Criminal consequences cannot be ruled out. For instance, a negligent bodily injury may result in a legal offence.
- Expiry of the pedelec insurance

Possible technological implications:

- Tampering with the bike's technology may limit its capabilities, cause defects or break the bike parts.
- The motor and battery may become overloaded and overheat.
Consequences: Irreparable damages and risk of fire
- The brakes and other parts may become overworked.
Consequences: Malfunction, overheating, increased wear and tear

Safety Instructions

- Regularly check the entire electrical system for damage, especially to cables, plugs and housings. If the battery charger is damaged, it must not be used until it has been repaired.
- The pedelec is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lacking the required experience and knowledge, unless supervised or having received instructions concerning use of the product by a person responsible for their safety.
- Do not allow children to play near the pedelec.
- Do not modify the system yourself. Doing so may lead to system malfunctions.
- The product is designed to be fully waterproof so as to withstand wet weather riding conditions. However, do not deliberately immerse it in water.
- Do not clean the pedelec using a high-pressure cleaner. If water gets into any of the components, operating problems or rusting may result.
- When shipping the pedelec on a vehicle exposed to rain, remove the battery and store it in a safe place to stop it from getting wet.
- Handle the pedelec carefully, and avoid subjecting it to any strong impacts.
- Important information given in the user manual may also be found in product labels.
- When using or giving out a spare key for the battery, be sure to provide the number on the battery key. Please keep the number in your mind or your notebook.
- Use a wrung-out damp cloth to clean the battery casing.

- If you have any questions regarding the maintenance and use of the pedelec, please contact our service hotline.
- Natural wear and tear due to normal use and aging is not within our scope of our quality warranty.
- Please contact your dealer for software updates.

Intended use

The electrical components have been solely designed and approved for use in electrically assisted bicycles, i.e. so-called pedelecs or EPACs. They are not to be used for any other purpose. It is not permissible to use it for competitions or commercial purposes.

Maintenance and upkeep



Before performing any kind of work on your pedelec, turn off the electric unit and remove the battery. Not doing so may result in serious injury and/or electric shock



The electrical system of your pedelec is very powerful. If you notice any damage to the electrical system, remove the battery immediately. After a fall or accident, live components may be exposed. If you have a question or a problem, please contact our service hotline. A lack of expertise can lead to serious accidents.



Only perform operations described in this manual. Do not interfere with or modify the system. You should not disassemble or open any modules.



Keep the all components of the electrical system clean. Clean gently with a damp, soft cloth. The components must not be immersed in water or cleaned with a water jet or steam jet. If the components are no longer functional, contact your dealer.



Do not clean the pedelec with a steam jet, high-pressure cleaner or water hose. Water may seep into the electrics or drive and destroy the equipment.



The frequency of maintenance will vary depending on riding conditions. Periodically clean the chain using an appropriate chain cleaner. Do not use alkaline or acidic cleaning agents to remove rust under any circumstances. If such cleaning agents are used, they may damage the chain and serious injury may result.



Only have maintenance, repairs and repair work carried out by qualified personnel and only with original spare parts. If you have a flat tyre or a technical problem, have the repair work carried out by an expert/Fischer's customer service technician.

Riding a pedelec

How your pedelec works:

The drive is activated as soon as you begin to pedal. The amount of assistance depends on the settings you have chosen. The drive unit turns off as soon as you stop pedalling or reach maximum speed (25 km/h). The assistance is automatically reactivated as soon as the speed is below the maximum assistance speed and you reapply pressure to the pedal.

How to most efficiently use your pedelec engine:

- Always select the optimal gear and keep your pedalling rate between 60-90 rpm.
- Start with the low gears.
- As soon as your pedalling rate becomes too high, shift to the next higher gear.
- As soon as your pedalling rate becomes too low, shift to the next lower gear.
- If your pedelec uses a hub gear, reduce your pressure on the pedal before shifting gears.

Your pedelec's range



It is best to charge your battery while it is warm and set it just before you start a journey.

The battery's drain cycle may be effected by:

- Assistance level:
The higher the assistance level used, the higher the power consumption and the lower the range.

- Riding style:
With the optimal use of gear shifting, you can save energy. In lower gears, you need less power, less support, and the drive of your pedelec consumes less energy.
- Ambient temperature:
Batteries discharge faster at cold outside temperatures and have a shorter range.
- Terrain:
In hilly terrain, more energy is needed so the range goes down.
- Weather and vehicle weight:
In addition to the temperature, wind conditions can also have an effect on the range. A strong headwind requires more power when cycling. Bags and luggage will increase the weight, therefore more force is required.
- Technical condition of your pedelec:
Air pressure that is too low in the tyres increases driving resistance, especially when riding over a smooth surface, such as tarmac. The range of your pedelec can be reduced by a rubbing brake or a poorly maintained chain.
- Charging status of the battery:
The charge state indicates the amount of electrical energy that is stored in the battery at any given time. More energy means more range.



www.reichweitenassistent.fischer-die-fahrradmarke.de is your online tool for information about driving ranges. This allows you to plan a tour under different conditions.

Before the first ride



Please consult the operating manuals, issued by the individual component manufacturers and which were supplied with your pedelec or are available online.

- Charge the battery until it is fully charged.
- Ensure that the battery is properly inserted and locked.

Before each ride

Do not use your pedelec if you think it may not be in perfect condition. Contact our service hotline. Be sure to have a specialist check all of the bike's important parts on a regular basis, especially if you ride your pedelec intensively. A component may unexpectedly begin to malfunction if you use it beyond its lifespan or recommended period of use. This may lead to accidents and serious injury.

Electrical system



Modern pedelec technology is high tech, and working on pedelec parts requires expert knowledge, experience and specialist tools. Do not do any work on your pedelec yourself. Contact our service hotline (+49 721 97902560).

The electrical system includes the following components:

- Display
- Control unit
- Battery
- Drive unit
- Charger
- Sensors
- Controller

Important Instructions



The electrical system of your pedelec is very powerful. If you notice any damage to the electrical system, remove the battery immediately. After a fall or accident, live components may be exposed. If you have a question or a problem, please contact our service hotline. A lack of expertise can lead to serious accidents.



Before performing any work on your pedelec, disconnect the electrical system and remove the battery.



Do not clean the pedelec with a steam jet, high-pressure cleaner or water hose. Water may seep into the electronics or drive and destroy the equipment.



The operating temperature should be between -15°C and +60°C. The recommended storage temperature is between -10°C and +35°C



Only perform operations described in this manual. Do not change the device. You should not disassemble or open any modules.

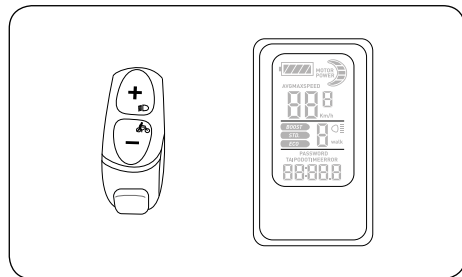
Replace parts that are defective or worn, such as the battery, charger, cable, with original spare parts produced by the manufacturer or parts recommended by the manufacturer. Otherwise, any guarantees and/or manufacturer's warranties will be voided. If non-original or incorrect spare parts are used, the pedelec may not function correctly.

Improper operation of the drive system and changes made to the battery, charger or motor may result in injury or costly damage. In this case, the manufacturer declines any liability for the damage caused. Changes to the electric system may result in criminal prosecution. This may be the case if the maximum assisted speed is modified.

Operating display and display Screen



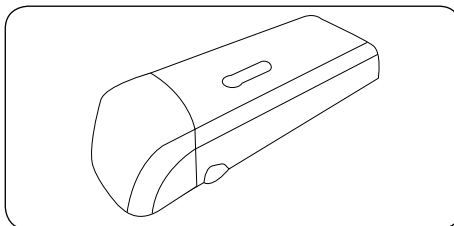
Your pedelec can be equipped with various displays and control units. Take into account the functional descriptions and operating instructions in the chapter "Displays and Settings" on page 16.



Battery



Your pedelec can be equipped with different batteries. You will find more detailed information and specifications in the chapter "Technical Data" on page 40 and in the chapter "Operation" on page 9.



Read the indications printed on the external label of the battery before using the battery.

Rechargeable Li-Ion Battery

Model No: SF- D6S
Nominal Voltage: 48V DC
Energy: 556.8 Wh
Capacity: 11.6 Ah
Cell designation: 13ICR19/66-4

Safety advices for Lithium-Ion batteries

Don't crush Don't heat or incinerate Don't short-circuit Don't dismantle Don't immerse in any liquid it may vent or rupture

Respect charging instructions

Charge 0 to 50 °C Discharge -10 to +60 °C

Made in Germany

GEB 15-W5/Art.: 14091-3/F119205



Sample illustration



Use only original chargers from the manufacturer to charge the battery.

- The battery is not fully charged when delivered. Recharge the battery completely before the first use and before storing.
- Under normal operating conditions, immediately charging the battery after each use will increase the battery's lifespan. Allow the battery to cool down for approximately 30 minutes before charging. Never allow your battery to drain completely. Recharge your battery even after using it for a short time. The service life of the battery is reduced when it is frequently fully discharged during later use.
- Do not charge the battery longer than instructed in the table found on page 40 in chapter "Technical characteristics".
- If the battery is completely discharged, charge it as soon as possible. Leaving the battery uncharged for long periods of time will damage its capacity.

Safety Instructions



Risk of fire or explosion if battery is used with an incompatible system. Do not open, disassemble or pierce battery due to risk of short circuit, fire or explosion. If the battery is dropped or subjected to any other form of strong impact, discontinue its use and contact our service hotline. Only use the original charger as supplied with battery due to risk of fire or explosion. Disposal of used batteries should follow locally enforced regulations. Please carefully read the manual before use.

- Do not drop or throw the battery. Avoid any strong impacts. This may result in fluid leakage, fire or explosion.
- Do not apply force to the battery. If the battery becomes deformed, the built-in safety mechanism may be damaged. This may result in fire or explosion.
- Do not use the battery when damaged. The battery fluid may leak, and it can cause loss of vision if it comes into contact with your eyes!
- Remove the battery from the pedelec if you want to transport it (e.g. by car).
- Also remove the battery before any work on the pedelec is performed, e.g. maintenance, installation. You are at risk of injury or electric shock if you accidentally press the on/off switch.

- Never open the battery. Doing so may cause a short circuit. Any warranties or guarantees are void if the battery has been opened.
- Do not store or carry the battery with metal objects that can cause short circuits (e.g. paper clips, nails, screws, keys, coins). A short circuit may result in burns or fire.
- Keep the battery away from heat sources, such as strong sunlight and fire. Failure to do so may result in an explosion.
- Do not expose the battery to water or other liquids. Contact with them may damage the battery's safety circuit and safety mechanism. This may result in fire or explosion.
- Do not clean the battery with a high-pressure washer. Use a damp rag when cleaning the battery. Never use aggressive cleaning solutions.
- If improperly used, the battery may leak fluid. This may result in skin irritation and burns. Avoid contact with the battery fluid. If you do come into contact with it, rinse the fluid off with plenty of water. In case of contact with eyes, seek medical attention.
- Fumes may be released in the event of damage and/or improper use. Provide fresh air and seek medical attention in the event of any complaints.
- The battery must be fully snapped into place and locked in the holder before beginning a journey, you may otherwise lose the battery while riding.
- Avoid deep discharging the battery. Doing so will result in irreversible cell damage.

- The battery is only suitable for use with electric bicycle drives from pedelecs. Improper use or handling may result in injury or fire. Fischer is not liable for any damage resulting from improper use.

Battery storage



If you do not use your pedelec for an extended period of time, remove the battery, charge it (60-80%) and store it separately in a frost-free, dry room.

- Avoid direct sunlight. This can lead to overheating, distortion, rupturing, poorer performance and a shorter lifespan of the battery.
- To prevent deep discharge, the battery will go into sleep mode after a certain time. The battery changes from this state when it has been briefly charged.
- Do not expose the battery to temperatures outside the permissible storage temperature range of -10°C to 35°C. Note that temperatures of around 45°C are common near heaters, in direct sunlight or in over-heated vehicle interiors.
- When storing the battery for a long period, make sure it is charged to at least half its capacity, and charge it again three months later. Do not wrap it with conductive material, as to do so will cause damage due to direct contact between metal and the battery.



If you notice the battery becoming hot during use, charging or storage, developing a strong odour, changing appearance, or any other abnormality, do not continue to use the battery. Contact our service hotline.

Battery wear



The battery can be fully loaded approximately 750 times and partially loaded approximately 1,000 times. The battery capacity decreases during this time, making the battery drain faster with the use of the pedelec's motor assistance. This does not constitute a defect. You should then replace the battery. If the range is still sufficient, you can continue to use it.

The battery life depends on various factors:

- The number of charging operations (about 1000 charging cycles)
- The age of the battery
- Storing and Operating Conditions

Of course, your battery will deteriorate and capacity will be lost even if you do not use the battery.

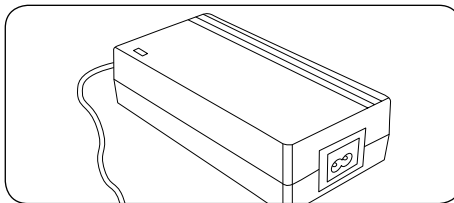
The lifetime of your battery can be lengthened by the following measures:

- Charging your battery after every ride, even short trips. Lithium-ion batteries are not subject to a memory effect.
- Avoiding driving in high gears with high levels of push-assistance.

Charger



The chargers were specially developed for charging lithium-ion batteries. They are equipped with an integrated fuse and protection against overcharging.





Operating Instructions

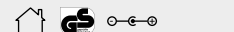


Read the indications on your charger's external label before using the battery.



Li-ion Battery Charger

MODEL: SSLC084V42XHA
INPUT: AC100V-240V~1.8A MAX
47-63Hz

OUTPUT: 42.0V  2.0A 



- CHARGING
- CHARGE-FULL OR DISCONNECT

 CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK: DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL. BEFORE CHARGING READ THE INSTRUCTIONS! FOR INDOOR USE, OR DO NOT EXPOSE TO RAIN 

Sample illustration



The charger must not be taken apart. Maintenance work should only be done by qualified service workers. Make sure to read the information about your battery charger before charging your battery for the first time. Unplug the charger before attaching or removing the battery from the charger. Flammable gases can leak out. Prevent flames and sparks.



Keep the charger away from children and animals. Small children and animals may damage the device or the cable while playing. This can lead to an electric shock, a malfunction or a fire.

- The charger must not be used by children, or by persons with limited physical, sensory or mental capabilities, unless under the supervision of a responsible adult.
- Make sure the charger is clean to avoid risk of electric shock.
- Do not use your charger in humid or dusty places.
- Avoid direct sunlight.
- Only use the charger that came with your pedelec or one produced by the same manufacturer.
- Don't cover the charger while it is in use. It could otherwise short circuit or cause a fire.
- When you clean the charger, unplug it from the electrical socket first.
- Stop charging the battery if the charging cycle is taking longer than the length listed in the table found on page 40 under the chapter "Technical Data".
- After charging, if not in use, remove the battery from the charger and unplug the charger.

Drive unit

i Your pedelec might be powered by a hub motor in the front wheel, a central motor or a hub motor in the rear wheel. All types have a maximum average performance of 250 watts.



Keep in mind that the motor of your pedelec can heat up during long up-hill runs. Do not touch the motor, as you may get burnt.



In hub motors, you hear a quiet driving noise during operation. This noise may grow louder with increased strain and is completely normal.



Note that if the road surface or ground are slippery (due to rain, snow, sand, etc.), there is a risk that the drive wheel of your pedelec may skid and slide.

Operation

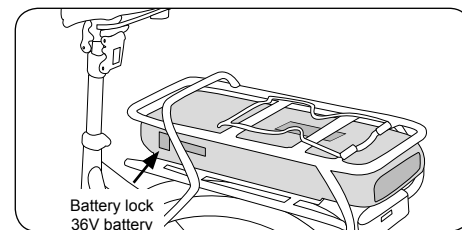


Depending on the pedelec model, a 36V or 48V battery may be used. A black sticker at the bottom of the battery indicates which type of battery is used.

Battery Pack in carrier rack



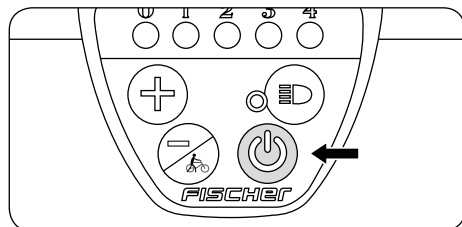
The luggage rack battery is secured by a lock on the left side. The lock is integrated into 36V models and located below the battery rail for 48V models. Remove the key to avoid losing or breaking it.



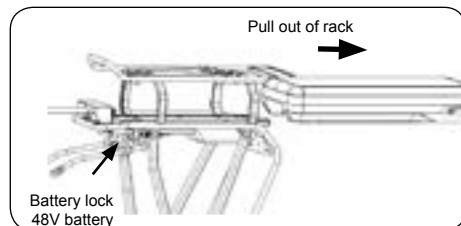
Sample illustration

Removing the battery

1. Turn off the electrical power unit system before removing the battery.



2. Insert the key into the battery lock. Turn the key anticlockwise towards the left. The key must be held in this position in order to **remove** the battery!



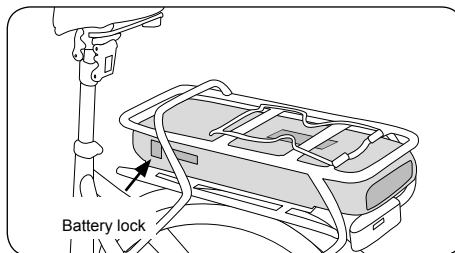
3. Remove the battery from its holder. Removing the battery requires some force.



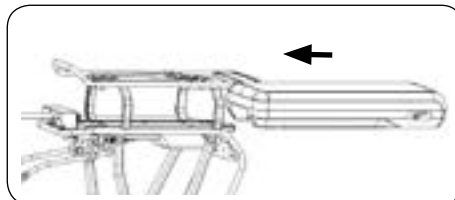
Hold the battery tightly as it is heavy

Installing the battery

1. For the battery to be inserted, the lock must be unlocked. You can lock and unlock the battery by turning the key provided.

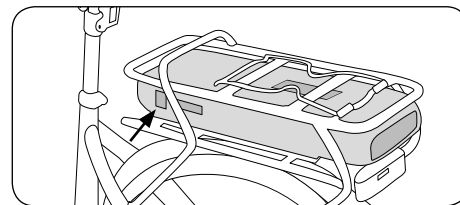


2. Slide the battery along the rail track as far as possible into the connection device.



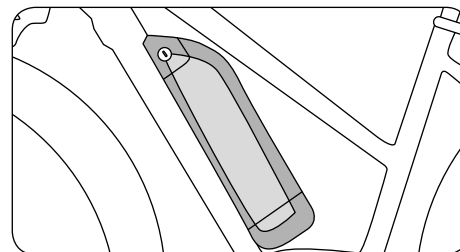
The **36V battery** latches audibly and closes automatically. Additional locking is not necessary or not possible.

The **48V battery** does NOT latch. The battery must therefore be inserted with sufficient force up to the final point, where it is in contact with the limit stop. Warning: It is essential to secure the battery before each drive by inserting the key, turning it clockwise and removing it.



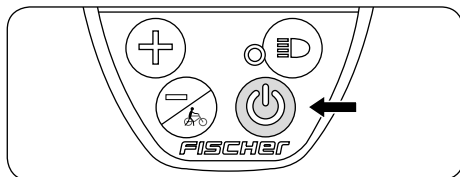
When inserting the battery, ensure that it fits appropriately into the guide structure, as safe locking is otherwise not assured. For correct insertion, the battery must be inserted and locked from the rear of the casing as far as it will go. Without contact with the battery, the electric drive of your pedelec will not work.

Frame battery



Removal

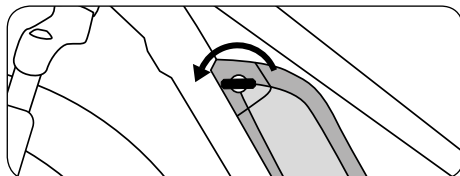
1. Turn off the electrical power unit system before removing the battery.



2. To remove the battery, insert the key into the battery lock and turn it towards the left.



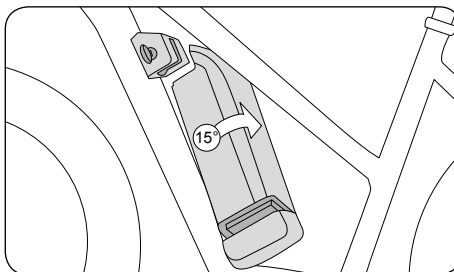
The key must be held in this position.



3. Tilt the battery to the right.



During removal, take care that an angle of 15° is not exceeded, as the battery holder might otherwise get damaged.



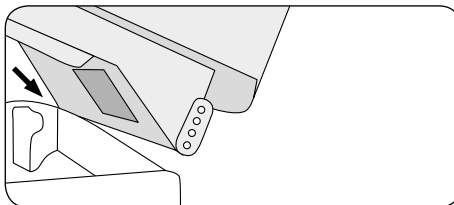
4. Slightly lift the battery and detach it from the battery holder.



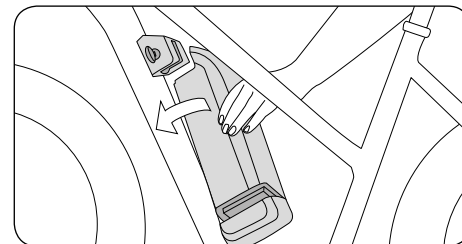
Hold the battery tightly as it is heavy.

Insertion

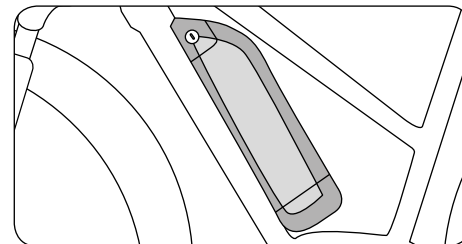
1. Hold the battery slightly tilted to one side. Place the right bottom edge of the battery on the battery holder



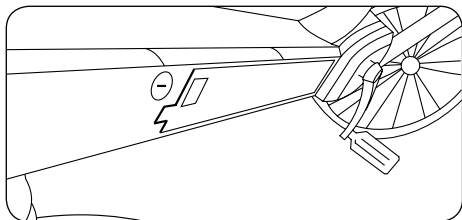
2. Then tilt the battery sideways into its structure.



3. As soon as the battery is correctly placed, it will latch with an audible sound. Additional locking is not necessary or not possible.

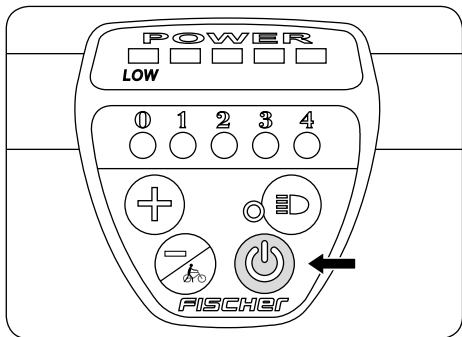


Integrated battery

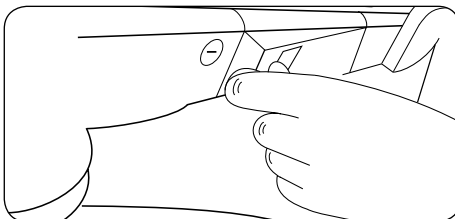
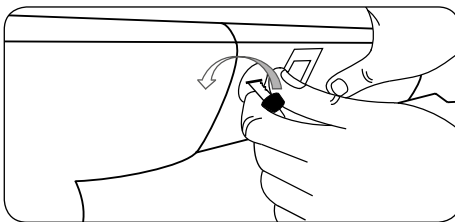


Removing the battery

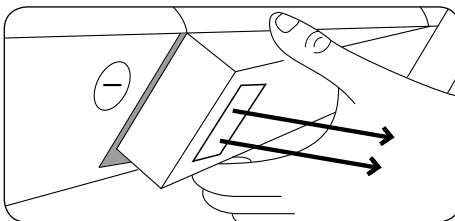
1. Turn off the electrical power unit system before removing the battery.



2. Insert the key into the battery lock. Turn the key anticlockwise towards the left until it reaches the limit stop ①. Then the battery detaches from the battery holder ②.



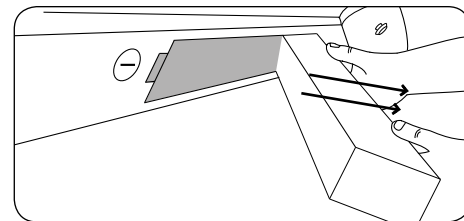
3. Pull the battery out of the battery holder.



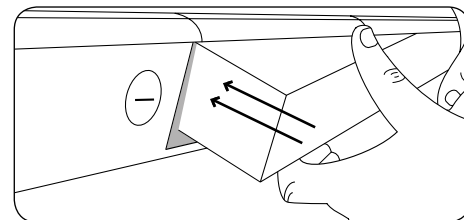
Hold the battery tightly as it is heavy.

Insertion

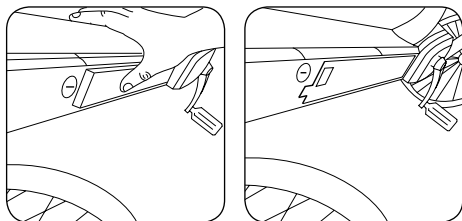
1. Hold the battery slightly tilted to one side. Place the left, bottom edge of the battery on the battery holder.



2. Then tilt the battery sideways into its guide structure.



3. As soon as the battery is correctly placed, it will latch with an audible sound. Additional locking is not necessary or not possible.



Charging the battery



You can charge your battery both while mounted on the pedelec and removed.



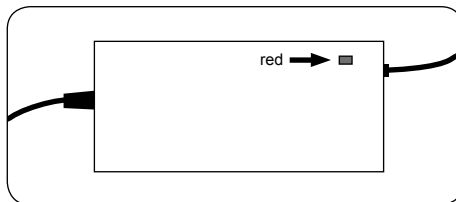
Lithium-ion batteries are not subject to a memory effect. You can recharge your battery at any time, even after short trips.

Charge your battery at temperatures between 0°C and 45°C (ideally at room temperature or 20°C). Give the battery sufficient time before charging to reach this temperature.

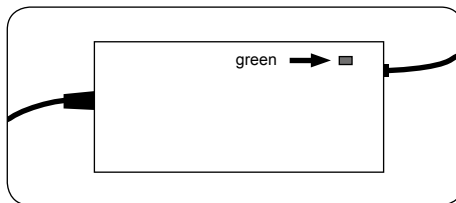


Read the instructions on the charger before charging.

1. First insert the plug of the charging cable into the charging socket on the battery, then the plug the charger into a socket.
2. As soon as the charger is connected to the power supply, a red LED will light up.



3. When charging is complete, the LED changes from red to green. As soon as the battery is fully charged, first remove the plug from the power outlet and wait until the LED on the charger goes out. Only then should you remove the plug from the battery.



Charging time depends on various factors. It can vary greatly according to the temperature, age, usage and capacity of the battery. Information about your battery's charging time can be found in the technical information regarding your battery.

When the battery is fully charged, the charging process is automatically terminated. Unplug the plug from the battery and the power outlet.

Safety Instructions



Only use the charger designed for the battery.

Make sure you use the correct mains voltage. The required mains voltage is indicated on the charger. It must comply with the voltage of the current source. Chargers marked 230V can also be operated at 220V.

- Do not touch the power plug with wet hands. There is a risk of electric shock.
- Note: Sudden temperature changes can cause condensation to form on the battery. Avoid this by storing the battery in the same place it is charged.
- Before use, check that the charger, cable and plug are not damaged. If damage occurs, do not use the charger. There is a risk of electric shock.
- Charge the battery in well-ventilated rooms only.
- Do not cover the charger and/or battery during charging. There is a risk of over-heating, fire, or explosion.
- Only charge on a dry, non-flammable surface.



The battery has to be recharged completely at least every 3 months, in order to avoid damaging or destroying the cells.



If the charging cycle is taking longer than usual, the battery may be damaged. In this case, immediately stop charging. You will find the charging times in the table on page 40.

Error description	Cause	Solution
The LED does not light up.	The mains plug is not properly connected to the power supply.	Check all connections and whether the charger is properly plugged into the power supply.
The LED does not light up even after checking the power supply.	The battery may have a malfunction.	Contact our service hotline.
LED flashes red.	Wrong battery/charger combination (36V/48V), other defect.	Contact our service hotline.

Error description	Cause	Solution
LED does not change immediately from red to green, even when the battery is fully charged.	The battery may be defective.	Contact our service hotline.

LED charging state display

36 V Luggage rack battery

Keep pressing the test button to check the charging state. If the battery is full, four of the five LEDs will light up in green. The last LED turns red as soon as the battery needs charging.

48 V Luggage rack battery

Hold down the test button to check the charging state. When the battery is fully charged, all five LEDs light up in blue. As soon as the battery is empty and needs charging, only the last LED will light up blue.

Frame battery

Hold down the test button to check the charging state. When the battery is fully charged, all five LEDs turn blue. As soon as the battery is empty and needs charging, only the last LED will light up blue.

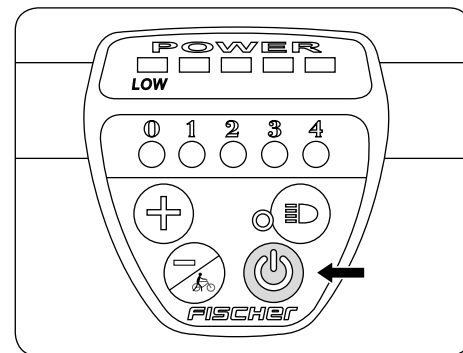
Integrated battery

Briefly press the test button of the battery to check the charging state. When the battery is fully charged, all five LEDs light up in blue. As soon as the battery is empty and needs charging, only the last LED will light up blue.

Switching the electrical system on and off

Press the "On/Off" button on your external operating unit to switch on the electrical system.

To turn it off, push and hold down the same key until the system turns off.



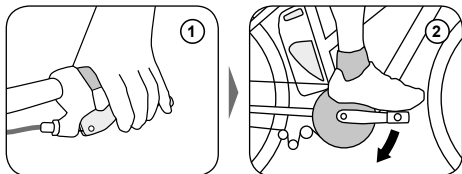
Requirements:

The following requirements must be met before you can activate and use your pedelec:

- A sufficiently charged battery must be used.
- The battery must be inserted correctly into the battery holder.
- The motor, control unit, battery, etc. must all be connected correctly.



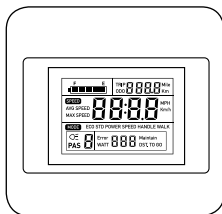
Always squeeze the brakes of your pedelec before placing a foot on the pedal. The electric engine starts working as soon as you begin to pedal. This boost is surprising to begin with, and can lead to falls or cause dangerous traffic accidents and injury to occur.



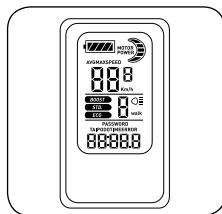
Initial display configuration



You will have to perform an initial configuration before initial operation if your pedelec is equipped with one of the following display models: Fischer LCD800, Fischer LCD500 or Fischer LCD900.



Fischer LCD 800

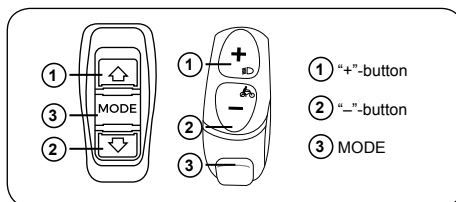


Fischer LCD 500



Fischer LCD 900

This configuration can very easily be performed by using the operating unit on the left side of the handlebar. There are two versions of the operating unit, which only differ in the arrangement of the three buttons and in their shape:



Before you start with the configuration, make a note of the following data for your pedelec:

- Battery voltage (volts)
- Battery capacity (Ah)
- Tyre size



Information on your battery is provided on the black sticker located on the bottom of the battery. The tyre size is indicated on the outside of the tyre.

Proceed as follows:

1. Make sure that the battery is installed and charged.
2. Switch on the display by keeping the “MODE” button pressed for approximately three seconds.
3. Now keep both arrow keys pressed at the same time for approximately 2 seconds.
4. Repeat step 3. You have now reached the second configuration menu.
5. During the initial configuration, you can skip the setting shown by pressing the “MODE” button 6x in a row. Then the wheel size adjustment flashes.
6. Select the correct wheel size for your bicycle by using the arrow keys and confirm it by briefly pressing the “MODE” button.
7. The volt value, e.g. “36” is now flashing on the display. Select the correct voltage for your bicycle, i.e. 36 or 48, and confirm it with the “MODE” button.
8. The setting for the battery capacity in Ah is now flashing. Select the capacity of your battery by using the arrow keys and confirm it with the “MODE” button.
9. Keep the “MODE” button pressed for approximately three seconds to leave the menu.
10. Switch off your display by keeping the “MODE” button pressed down. As soon as the display has switched itself off, you can restart it.

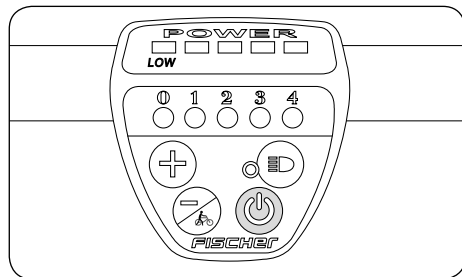
→ This completes the initial configuration.

Displays and settings



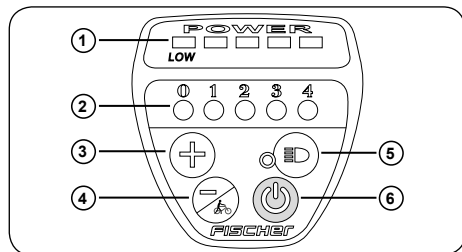
Your pedelec can be equipped with various displays and control units.

Control unit LED 300



The LED display, a functional operating unit, is mounted next to the left handle. It shows all relevant information with simple LEDs.

Functional overview and operation



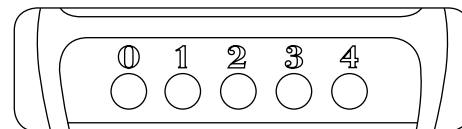
1. Battery charging state
 - All LEDs on = battery is fully charged
 - One LED flashes = battery is empty
 - As soon as the last LED flashes, the motor is no longer supported, but the lighting and display are still working.
2. Motor support
 - 0 = No motor support (only lighting)
 - 1 = 25 % assistance
 - 2 = 50 % assistance
 - 3 = 75 % assistance
 - 4 = 100 % assistance
3. “+”-button
 - Press briefly = Increase motor support
4. “-”-button
 - Press briefly = Reduce motor support
 - Keep pressed = Activate pushing support
5. “Light” button
 - Press briefly = Switch lighting on/off
6. “On/Off” button
 - Keep pressed = Switch system on/off

Error codes



Always quote the error code when contacting our service department.

Specific LEDs on the display light up in the event of a malfunction. In this way you can narrow down the error and eliminate the potential cause yourself or contact our service department.



LED

flash- Error description and solution
es

1 Motor overloaded

Solution: Reduce the strain (e.g. steep incline, high additional load or trailer). Pedal more strongly. If the motor has failed completely, it requires approximately 5 minutes of cool-down time. Also check that all visible motor connectors are 100% secure. If nothing works, contact our service hotline.

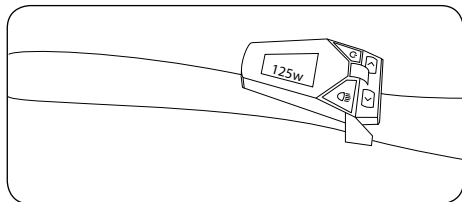
1+2 Motor or motor cable short-circuit 1

Solution: Check the cable to the motor for possible breakage. Contact our service hotline.

1+2+3 Communication error

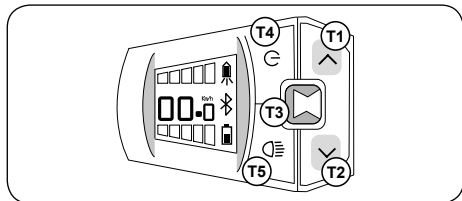
Solution: Detach the plug-in connection of the display and attach it again. Repeat this step at least twice. If this does not help, contact our service hotline.

Comfort operating unit

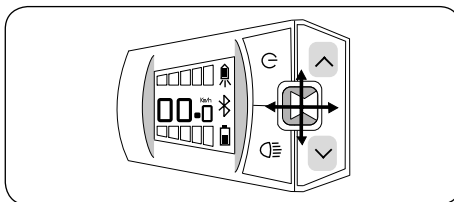


The LED display, a functional operating unit, is mounted next to the left handle. Your hand may remain on the handle while your thumb activates the buttons and the joystick.

Functional overview and operation



- T1** Increasing the support level
Activating the push assistance
- T2** Reducing the support level
- T3** Joystick



- ↑ Move one page up
Change to editing mode
In edit mode, move one page up
- ← Move to the next page towards the left
In edit mode, leave the mode and confirm the value
 - In edit mode, process the marked value
- Move to the next page towards the right
In edit mode, leave the mode and confirm the value
- ↓ Move one page down
Change to editing mode
In edit mode, move one entry up
- T4** Switching the operating unit on/off
- T5** Press briefly: Switch on light.
Press and hold: Switch off light.

Switching the operating unit on and off

Switching the Comfort operating unit on

Press the **T4** button until the display lights up.

Switching the Comfort operating unit off

Press the **T4** button until the display turns off.

Switching the light on and off

Briefly press the **T5** button to switch on the light. The following symbol appears on the display:
☹ Light on

To switch off the light, press the **T5** button for longer than 2 seconds.

Support levels

The electrical motor of your pedelec supports your pedalling effort.

Several support levels are available:

Normal	bicycle conditions – the motor is not active.
ECO	Efficient support for maximum battery range
NORMAL	Even support over long distances for large battery range
HIGH	Strong support for brisk driving on mountainous routes or in city traffic

Selecting the support levels

Press the **T1** button to increase the motor support.

To reduce it, press the **T2** button.

Activating the push assistance



The push assistance provides support, e.g. when you have to handle a steep ramp out of an underground car park or an underpass. Do not use it to ride the bike.

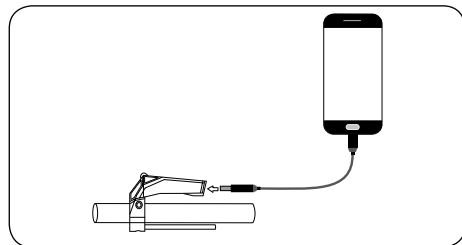


The push assistance is not a start-up support! If you activate your push assistance under a load that is too heavy, your motor will start to jerk or even perform an emergency shut-down!

Keep the **T1** button pressed to activate the push assistance. The motor supports you by pushing your pedelec at a speed of up to 6km/h. As soon as you let go of the **T1** button, the push assistance mode is deactivated.

USB connection

The operating unit has a micro-USB AB plug. It is protected from dirt and humidity by a rubber cap.



We are not liable for damage to a mobile phone resulting from a connection to the operating unit.

Connecting a USB device.

1. Open the rubber protective cap of the USB connector of the operating unit.
2. Connect the USB device with the USB connector of the operating unit.

Removing a USB device

Take note of the information regarding the separation of the USB connection in the operating instructions of the connected device.

1. Pull the connection cable of the USB device out of the USB connector of the operating unit.
2. Then close the USB connector with the rubber protection cap.

The operating unit is only protected from water and dirt when the rubber cap is closed.

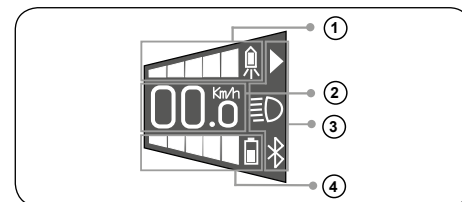
Bluetooth connection

The operating device can use an active Bluetooth connection to exchange data with a smart phone or a chest strap.

Display

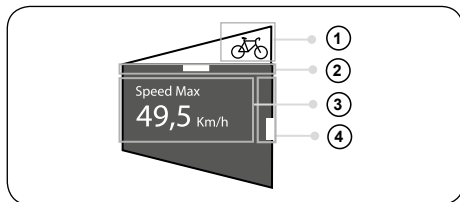
The operating unit display offers a range of information on different pages. Change between the pages by moving the joystick sideways. Some of the pages offer further pages that can be accessed by vertical movements of the joystick.

Main page



1. Display of the current support level
2. Current speed
3. Status display for triangular symbol: Push assistance active
Lights: full beam
Bluetooth symbol: Bluetooth activated
4. Battery charge

Additional pages



The additional pages are arranged according to the following pattern:

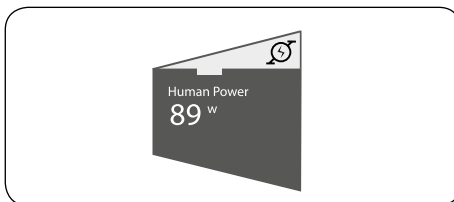
1. Page symbol
2. Horizontal navigation position
3. Content of page
4. Vertical navigation position: Refers to additional pages and shows the current position

You can change the current selection as follows:

1. Move the joystick upwards or downwards.
2. Another option can be marked with a vertical movement of the joystick.
3. You activate the marked option by pressing the joystick. The change is immediately adopted.
4. Change to the next page by pressing the joystick towards the left or right side.

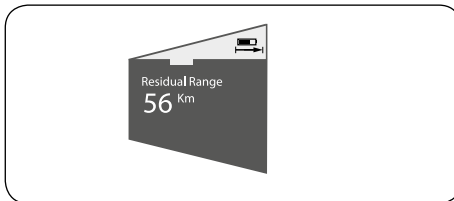
Rider performance

Shows the current performance of the driver in watts.



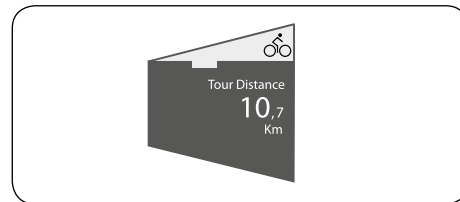
Range

Shows the remaining range using the currently selected support level.



Tour distance

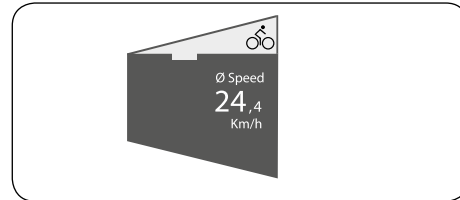
Shows the distance covered since the value had been reduced.



Additional pages are associated with this page:

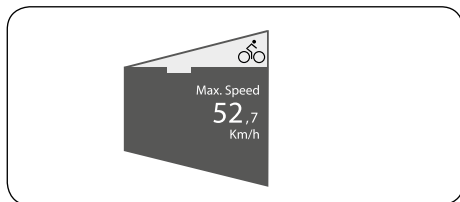
Tour distance / Average speed

Show the average speed on the distance covered.




Tour distance / Maximum speed

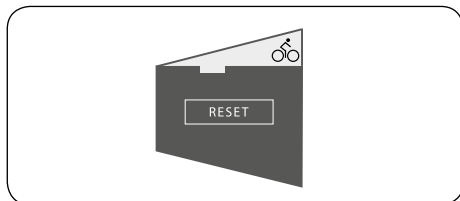
Shows the highest speed on the distance covered.



Tour distance / Reset

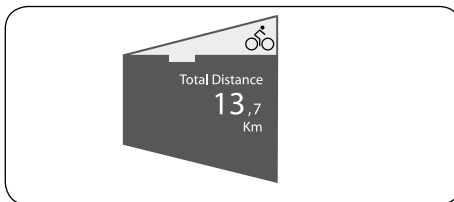
The values for the distance covered, for the average speed and the highest speed are deleted and set to "0".

Push the joystick  downwards. The values for the tour are set to "0" by pressing the joystick.



Total distance

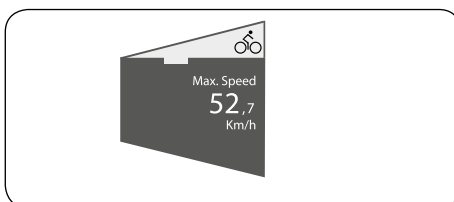
Shows the total distance covered with the pedelec.



This display includes an additional page:

Total distance / Highest speed

Shows the highest speed along the entire route.

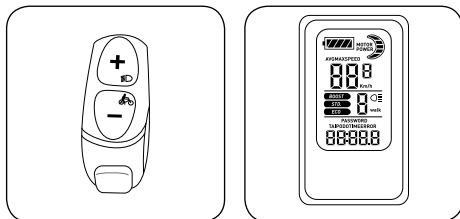


Error codes

Error code	Error description and solution
10	The battery voltage is too low. Charge the battery.
11	The battery voltage is too high. Switch the electrical system off and on again. If the problem persists, contact our service hotline.
12	The battery is almost or completely discharged. Charge the battery.
20	Electrical measurements are faulty. Switch the electrical system off and on again. If the problem persists, contact our service hotline.
21	Temperature sensor defective Switch the electrical system off and on again. If the problem persists, contact our service hotline.
24	The internal voltage is outside the working range. Charge the battery.
25	Error in the motor current measurement Switch the electrical system off and on again. If the problem persists, contact our service hotline.

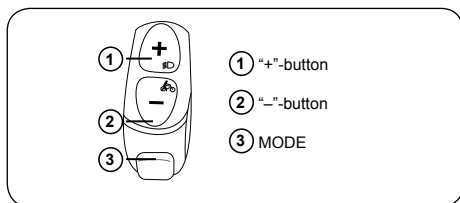
<i>Error code</i>	<i>Error description and solution</i>	<i>Error code</i>	<i>Error description and solution</i>	<i>Error code</i>	<i>Error description and solution</i>
26	A software reset has been carried out. Switch the electrical system off and on again. If the problem persists, contact our service hotline.	60	Interruption of the data exchange on the CAN BUS. Check the cable and the plug-in connections of all components of the e-bike system.	80	Faulty motor parameter Switch the electrical system off and on again. If the problem persists, contact our service hotline.
40/41	Detecting overcurrent in the motor Reducing the strain on the motor by pedalling less or by reducing the support level.	70	Force exerted on the pedal not within the valid range. Switch the electrical system off and on again. If the problem persists, contact our service hotline.	81	Speed signal not detected Ensure that the spoke magnet is correctly positioned relative to the speed sensor.
42	Fault in the motor rotation Switch the electrical system off and on again. If the problem persists, contact our service hotline.	71	Turning of the pedals is not detected. Switch the electrical system off and on again. If the problem persists, contact our service hotline.	82	The program has been manipulated Switch the electrical system off and on again. If the problem persists, contact our service hotline.
43	Short circuit in the motor Switch the electrical system off and on again. If the problem persists, contact our service hotline.	72	Force exerted on the pedal is not detected. Switch the electrical system off and on again. If the problem persists, contact our service hotline.	83	Error in the program sequence Switch the electrical system off and on again. If the problem persists, contact our service hotline.
44	Overheating of the motor Reducing the strain on the motor by pedalling less or by reducing the support level.	73	The connection to the pedal force sensor is faulty. Switch the electrical system off and on again. If the problem persists, contact our service hotline.	84	Faulty motor parameter Switch the electrical system off and on again. If the problem persists, contact our service hotline.
45	The software has corrected an error in the motor rotation.	74	Errors were detected in the data Switch the electrical system off and on again. If the problem persists, contact our service hotline.		
46	No motor movement detected although a current > 2A was measured. Switch the electrical system off and on again. If the problem persists, contact our service hotline.				

LCD 500 display with control unit



Control unit

Functional overview and operation

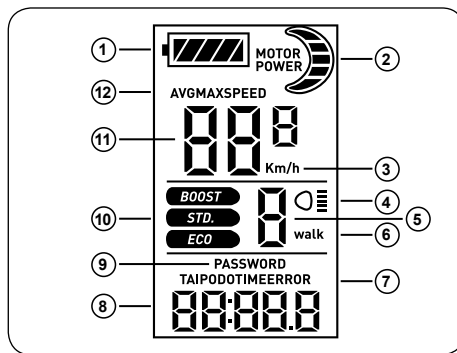


1. Keep the "MODE" button pressed to switch the display on/off.
2. The "+" and "-" buttons can be used to change the support levels, to select menus or to change values.
3. In standard mode, hold the "+" button and the "MODE" button at the same time to switch the display lighting on/off.
4. In standard mode, hold down the "-" button and the "MODE" button at the same time to reset the trip meter (TRIP).

5. Keep the "-" button pressed to activate the push assistance. Warning: This is NOT a start-up support.
6. Keep the "+" button pressed to switch between current, average and maximal speed.
7. Press the "MODE" button to switch between "trip meter" (TRIP), "odometer" (ODO) and "km range" (H).
8. Briefly press the "MODE" button in "Menus" to confirm your input or move up one menu level.
9. In "Menus" you move one menu level back or leave the menu when you keep the "MODE" button pressed for approximately 3 seconds. This works at any place in the menu.

Display

Functional overview



1. Battery charge status
2. Motor power
3. Speed or km/hr (depending on the setting)
4. The small headlamp lights up when you activate the display lighting. If pedelec lighting is available, it is switched on at the same time, depending on the model.
5. The current motor support level is shown here.
6. "Walk" flashes when the push assistance is activated.
7. Information line:
 - Trip = Trip counter
 - ODO = Total kilometres
 - Error = error code
8. Additional information line:
 - Primarily displays the data of the information line. Optionally shows the range.
9. "Password"
 - Lights up when a password needs to be entered.
10. Riding levels:
 - ECO = Low support and low power consumption
 - STD = Normal support and normal power consumption
 - BOOST = High support and high power consumption
11. Main display:
 - The current speed or other menu points are shown here, depending on the setting.
12. Speeds:
 - Speed: Current speed
 - AVG Speed: Average speed
 - MAX Speed: Maximum speed

Settings



Do NOT change the settings while riding your pedelec.

This LCD display offers you various personalization options. First, switch on the display by holding down the “MODE” button on the operating unit.

Hold down both arrow keys on the operating unit at the same time for approximately two seconds to get to the first menu level. You are now in the standard settings menu.

Background lighting

This is the first settings option. The number “1” flashes. You have a choice between:

- 1 = Weak display lighting
- 2 = Moderate display lighting
- 3 = Bright display lighting

Use the arrow keys to adjust the value as desired. You can move on by using the “MODE” button.



Push assistance



The pushing aid function works to assist you if you, for example, have to climb a steep ramp from an underground car park or underpass. Do not use it to ride the bike.



The push assistance is not a start-up support! If you activate your push assistance under a load that is too heavy, your motor will start to jerk or even perform an emergency shut-down!

The standard setting is “25”. This means that the motor is pushing with 25% of its total power. You can increase this value in steps of 1% to a maximum of 50%.

You can move on by using the “MODE” button.



This function is not available for pedelecs with a central motor. Just change the gear on your gearbox to regulate the strength of the push assistance. Lower gear = Stronger push assistance.

Start-up strength

The start-up strength of the motor can be set to four levels:

- 1 = 100 %
- 2 = 90 %
- 3 = 80 %
- 4 = 70 %

The default is level 1. Selecting a lower level has a positive effect on the range of the battery and its service life. Keep the “MODE” button pressed to leave the menu.





Hold both arrow keys at the same time for approx. two seconds to get to the second menu level. Now again keep both arrow keys pressed for approximately two seconds. You are now in the extended menu.

Support levels

First, you can select the number of support levels. The standard is five levels, but you can also have three, seven or nine levels. The more steps you configure, the finer the motor support can be graded. This makes the motor more efficient and thus improves the battery range. You can configure the individual steps after pressing the "MODE" button.



Starting with level 1 (see number in the middle), you will be asked how much support in % you want to get at the level shown.

The bottom field shows a "from-to" recommendation. The setting is made in 1% steps and is in each case confirmed by pressing briefly on the

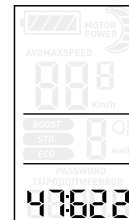
"MODE" button, which moves you to the next level. This continues until the last level has been reached and confirmed.



This function is not available for pedelecs with a central motor. These settings can unfortunately not be performed, due to the specific type of motor controller used.

Wheel size

The next parameter to select is the wheel size. This is required to ensure that the speed displayed as well as the kilometres ridden are correctly represented. You have a choice between 38-622 | 42-622 | 47-622 | 27.5" | 26"/47-559. The size of your wheel is shown on your tyre. For trekking bikes 38/42-622 | City bikes 47-622 | MTB 27.5" | 26" /47-559.



Battery voltage and capacity

The correct battery voltage in Volt must be provided to ensure that the battery charge display works correctly. You have a choice of 36 or 48 volts (the upper number flashes). The voltage of your battery is shown on the sticker attached to your battery among other places. When you have selected the voltage, confirm it with the "MODE" button.

A selection of capacities is now automatically provided, depending on the battery voltage set. The same applies here: The battery capacity is specified in "Ah" and this value is also shown on the sticker of your battery. This setting is necessary to show the correct battery range on your display at a later time.



Personal PIN

The display is not removable and therefore accessible to unauthorized persons. You can choose to set a 4-digit PIN that is required when switching on. After entering the PIN, confirm it by pressing the "MODE" button. You can now use your display in the usual way.

Proceed as follows to get to the appropriate menu:

Press both arrow buttons at the same time for approximately two seconds: Then keep the "MODE" and the up-arrow buttons pressed at the same time. A 4-digit PIN query appears. The standard PIN is 1234.



You can now choose "N" for "no PIN" or "Y" for "yes, activate PIN".



After activating the PIN query, you will be asked to specify a number. Confirm it afterwards with the "MODE" button.



Carefully secure or note your PIN! If you forget your PIN, you will require the help of a technician or a display exchange via parcel mail. This is not covered by the warranty.

Error codes



Always quote the error code when contacting our service hotline.

Error No.

Error description and solution

21

Motor overloaded

Solution: Reduce the load (e.g. steep incline, high additional load or trailer). Pedal more strongly. If the motor has failed completely, it requires approximately 5 minutes of cool-down time. Also check that all visible motor connectors are 100% secure. If nothing works, contact our service hotline.

Error No.

Error description and solution

23

Motor or motor cable short-circuit 1

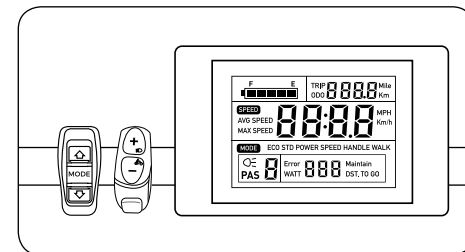
Solution: Check the cable to the motor for possible breakage. Contact our service hotline.

30

Communication error

Solution: Detach the plug-in connection of the display and attach it again. Repeat this step at least twice. If this does not work, contact our service hotline.

LCD 800 display with control unit

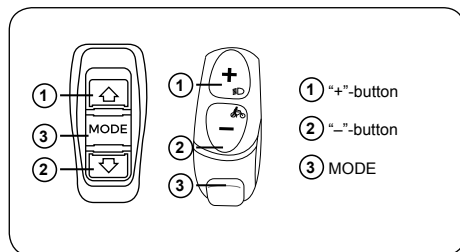


Control unit



There are two different external operating units. Both have three buttons with the same functions and only differ in their external appearance.

Functional overview and operation

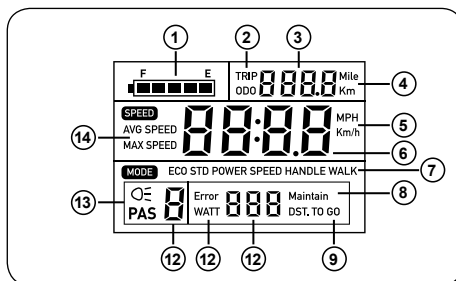


1. Keep the "MODE" button pressed in order to switch the display on/off.
2. The "+" and "-" buttons can be used to change the support levels, to select menus or to change values.
3. In standard mode, hold the "+" button and the "MODE" button at the same time to switch the display lighting on/off.
4. In standard mode, hold the "-" button and the "MODE" button at the same time to reset the trip counter (TRIP).
5. Keep the "-" button pressed to activate the push assistance. Warning: This is NOT a start-up support.
6. Keep the "+" button pressed to switch between current, average and maximal speed.

7. Press the "MODE" button to switch between "trip meter" (TRIP), "odometer" (ODO) and range (DST TO GO "km range").
8. After confirming your input by briefly pressing the "MODE" button, you get to the next menu level.
9. Keeping the "MODE" button pressed for approximately 3 seconds while being in the menus moves you one menu level back or makes you leave the menu. This works at any place in the menu.

Display

Functional overview



1. Charge status of the battery
2. Trip: Trip counter / ODO: Total kilometres
3. General: Display of kilometres of the day or total kilometres
In the settings menu: Information on the current menu
4. Trip
5. Speed

6. Main display
 - The current speed or other menu points are shown here, depending on the setting.
7. Mode
 - The current motor support mode or push assistance (WALK) is shown, depending on the setting.
8. Maintain
 - Only pops up in the event of a fault.
9. DST TO GO
 - If this is shown, the range in km is displayed to the left of it.
10. Error code or range display
11. "Error" is only shown here in the event of an error.
"Watt" is only shown when requested.
12. PAS
 - The currently set PAS (motor support strength) is shown here.
13. The small headlamp lights up when you activate the display lighting.
If pedelec lighting is available, it is switched on at the same time, depending on the model.
14. Speeds:
 - Speed: Current speed
 - AVG Speed: Average
 - MAX Speed: Maximum

Settings



Do NOT change the settings while riding your pedelec.

This LCD offers you various personalization options. First, switch on the display by holding down the "MODE" button on the operating unit.

Hold down both arrow keys on the operating unit at the same time for approximately two seconds to get to the first menu level. You are now in the standard settings menu.

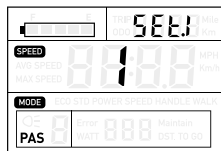
Background lighting

This is the first settings option. The number "1" flashes.

You have a choice between:

- 1 = Weak display lighting
- 2 = Moderate display lighting
- 3 = Bright display lighting

Use the arrow keys to adjust the value as desired. You can move on by using the "MODE" button.



Push assistance



The pushing aid function works to assist you if you, for example, have to climb a steep ramp from an underground car park or underpass. Do not use it to ride the bike.



The push assistance is not a start-up support! If you activate your push assistance under a load that is too heavy, your motor will start to jerk or even perform an emergency shut-down!

The standard setting is "25". This means that the motor is pushing with 25% of its total power. You can increase this value in steps of 1% to a maximum of 50%.

You can move on by using the "MODE" button.



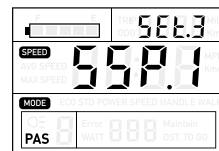
This function is not available for pedelecs with a central motor. Just change the gear on your gearbox to regulate the strength of the push assistance. Lower gear = Stronger pushing assistance.

Start-up strength

The start-up strength of the motor can be set to four levels:

- 1 = 100 %
- 2 = 90 %
- 3 = 80 %
- 4 = 70 %

The default is level 1. Selecting a lower level has a positive effect on the range of the battery and its service life. Keep the "MODE" button pressed to leave the menu.



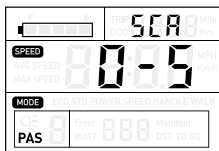
This function is not available for pedelecs with a central motor. Just change the gear with your gear selector to regulate the start-up strength. Lower gear = higher start-up strength.



Hold both arrow keys at the same time for approx. two seconds to get to the second menu level. Now again keep both arrow keys pressed for approximately two seconds. You are now in the extended menu.

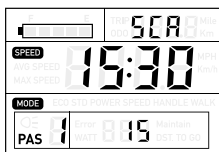
Support levels

First, you can select the number of support levels. The standard is five levels, but you can also have three, seven or nine levels. The more steps you configure, the finer the motor support can be graded. This makes the motor more efficient and thus improves the battery range. You can configure the individual steps after pressing the "MODE" button.



Starting with level 1 (see number in the middle), you will be asked how much support in % you want to get at the level shown.

The bottom field shows a “from-to” recommendation. The setting is made in 1% steps and is in each case confirmed by pressing briefly on the “MODE” button, which moves you to the next level. This continues until the last level has been reached and confirmed.



This function is not available for pedelecs with a central motor. These settings can unfortunately not be performed, due to the specific type of motor controller used.

Wheel size

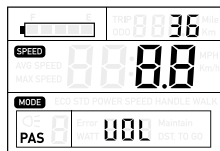
The next parameter to select is the wheel size. This is required to ensure that the speed displayed as well as the kilometres ridden are cor-

rectly represented. You have a choice between 38-622 | 42-622 | 47-622 | 27.5" | 47-559. The size of your wheel is shown on your tyre.

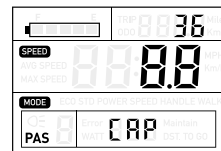


Battery voltage and capacity

The correct battery voltage in Volt must be provided to ensure that the battery charge display works correctly. You have a choice of 36 or 48 volts (the upper number flashes). The voltage of your battery is shown on the sticker attached to your battery among other places. When you have selected the voltage, confirm it with the “MODE” button.



A selection of capacities is now automatically provided, depending on the battery voltage set. The same applies here: The battery capacity is specified in “Ah” and this value is also shown on the sticker of your battery. This setting is necessary to show the correct battery range on your display at a later time.

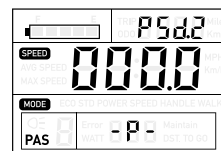


Personal PIN

The display is not removable and therefore accessible to unauthorized persons. You can choose to set a 4-digit PIN that is required when switching on. After entering the PIN, confirm it by pressing the “MODE” button. You can now use your display in the usual way.

Proceed as follows to get to the appropriate menu:

Press both arrow buttons at the same time for approximately two seconds: Then keep the “MODE” and the up-arrow button pressed at the same time. A 4-digit PIN query appears. The standard PIN is 1234.



You can now choose “N” for “no PIN” or “Y” for “yes, activate PIN”.



After activating the PIN query, you will be prompted to specify a number. Confirm it afterwards with the “MODE” button.



Carefully secure or note your PIN! If you forget your PIN, you will require the help of a technician or a display exchange via parcel mail. This is not covered by the warranty.

Error codes



Always quote the error code when contacting our service hotline.

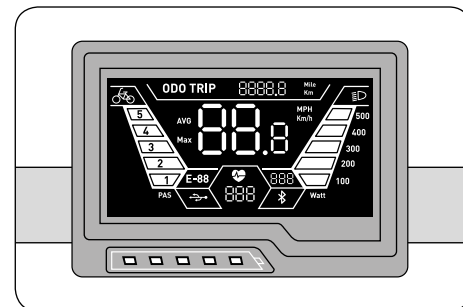


In the event of an error, the “ERROR” information line and an additional number for error identification will light up in the display to help identify the error.

Error description and solution

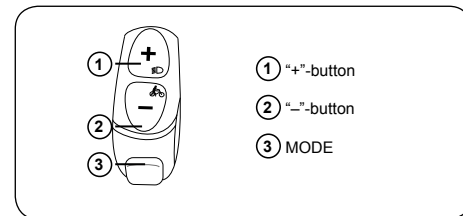
- | Error No. | Error description and solution |
|-----------|--|
| 21 | Motor overloaded
Solution: Reduce the load (e.g. steep incline, high additional load or trailer). Pedal more strongly. If the motor has failed completely, it requires approximately 5 minutes of cool-down time. Also check that all visible motor connectors are 100% secure. If nothing works, contact our service hotline. |
| 23 | Motor or motor cable short-circuit 1
Solution: Check the cable to the motor for possible breakage. Contact our service hotline. |
| 30 | Communication error
Solution: Detach the plug-in connection of the display and attach it again. Repeat this step at least twice. If nothing works, contact our service hotline. |

LCD 900 display with control unit



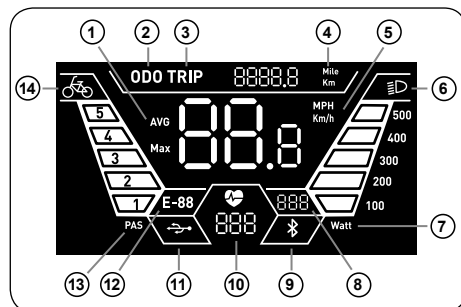
Control unit

Functional overview and operation



Display

Functional overview



1. Speeds:

- Speed: Current speed (default setting of main display)
- AVG Speed: Average speed
- MAX Speed: Maximum speed

2. ODO = Total kilometres

3. Trip = Trip counter

4. Speed unit

5. Speed or km/hr (depending on the setting)

6. The small headlamp lights up when you activate the display lighting. If pedelec lighting is available, it is switched on at the same time, depending on the model.

7. Watt display (100 – 500)

8. Range

9. Bluetooth

10. Heart rate meter

11. USB charging function

12. Error codes

13. Motor support levels

14. Push assistance

Operation

Switching the display on/off

Keep the “MODE” button pressed to switch the display on/off.

If you should forget to switch off the display, it will switch itself off automatically after 10 minutes.

Switching the light on and off

Press the “+” button for 2-3 seconds to switch on the lighting. Repeat the process to switch off the light again.

Speed display

Keep the “MODE” button pressed and then press the “+” button to change between the current speed, the average speed and the maximum speed.

The default setting shows the current speed after switching on the display.



Current speed



Average speed



Maximum speed

Display the total kilometres and the trip counter
Press the “MODE” button to switch between “trip meter” (TRIP) and “odometer” (ODO).



Total kilometres



Trip counter

Reset the trip counter

Hold the “MODE” button and the “-” button at the same time until the display is reset to “0”.

Activating the push assistance



The pushing aid function works to assist you if you, for example, have to climb a steep ramp from an underground car park or underpass. Do not use it to ride the bike.



The push assistance is not a start-up support! If you activate your push assistance under a load that is too heavy, your motor will start to jerk or even perform an emergency shut-down!

Keep the “-” button pressed to activate the push assistance. The motor supports you by pushing your pedelec at a speed of up to 6m/h. As soon as you let go of the “-” button, the push assistance mode is deactivated.



Push assistance activated

Select motor support

You can select the strength of the motor support by pressing the “+” or the “-” button. After switching on the display, level 1 is selected by default.



Motor support level

Watt display

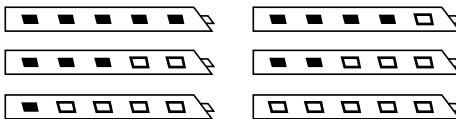
The motor power appropriate for the support level selected is also shown in watts.



Watt display

Display of battery charging state

The battery charging state is shown with 5 bars. 5 black bars mean that the battery is fully charged. The battery must be recharged at the latest when no more bar is shown and the frame of the display flashes.



Battery charging state display

USB charging function

You have the option of using the USB charger socket to charge your smart phone.



Charging via a USB socket



Do not charge your smart phone while riding! Do not insert the charger cable while riding!

Displaying the remaining range

The calculation of the remaining range is based on the currently selected motor support level. Changing the strength of the support also changes the remaining range.



Displaying the remaining range

Connection via Bluetooth

You can show all relevant data of your pedelec on your smart phone by using the Bluetooth connection. Load the “Tahuna” APP onto your phone for this purpose. It is available on AppleStore and PlayStore.

Heart rate measurement

Your current heart rate is also shown through the Bluetooth connection. A chest strap must be worn in order to measure the heart rate.

Attach the chest strap in order to connect the display with the chest strap.

Press all 3 buttons of your operating unit simultaneously for approximately 5 seconds. The display changes while you keep the buttons pressed. Keep pressing the buttons until the standard display reappears and your heart rate is shown.



Display Bluetooth + heart rate

Standard settings



Do NOT change the settings while riding your pedelec.

First, switch on the display by holding down the “MODE” button on the operating unit.

Keep the “+” and the “-” button pressed at the same time for 2 seconds. You are now in the settings menu.

Background lighting

This is the first settings option. The number “1” flashes. You have a choice between:

- 1 = Weak display lighting
- 2 = Moderate display lighting
- 3 = Bright display lighting

Use the arrow keys to adjust the value as desired. You can move on by using the “MODE” button.

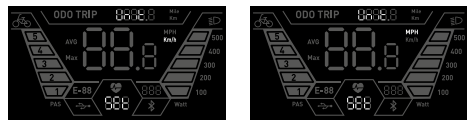


Background lighting of the display

Kilometre or mile display

Set the desired distance unit (miles/kilometres) in the next menu.

Select the desired value using the “+” or “-” buttons. The “MODE” button brings you to the next menu.



Push assistance

The standard setting is “25”. This means that the motor is pushing with 25% of its total power. You can increase this value in steps of 1% to a maximum of 50%.

You can move on by using the “MODE” button.



This function is not available for pe-delecs with a central motor. Just change the gear on your gearbox to regulate the strength of the push assistance. Lower gear = Stronger pushing assistance.

Start-up strength

The start-up strength of the motor can be set to four levels.

- 1 = Strongest start-up support/
- 4 = Weakest start-up support

The default is level 1. Selecting a lower level has a positive effect on the range of the battery and its service life. Keep the “MODE” button pressed to leave the menu.



This function is not available for pe-delecs with a central motor. Just change the gear with your gear selector to regulate the start-up strength. Lower gear = higher start-up strength.



Settings - second menu level



Hold both arrow keys at the same time for approx. two seconds to get to the second menu level. Now again keep both arrow keys pressed for approximately two seconds. You are now in the extended menu.

Support levels

First, you can select the number of support levels. The default is five levels, but also three levels are possible. The more steps you configure, the finer the motor support can be graded. This makes the motor more efficient and thus improves the battery range. You can configure the individual steps as soon as you press the “MODE” button.



Starting with level 1, you are then asked to enter the % support for the level displayed. The default setting for level 1 is 30%.

The setting is made in 1% steps and is in each case confirmed by pressing briefly on the “MODE” button, which moves you to the next level. This continues until the last level has been reached and confirmed.



Wheel size

The next parameter to select is the wheel size. This is required to ensure that the speed displayed as well as the kilometres ridden are correctly represented.

The size of your wheel is shown on your tyre. The default is 28 inches.



Setting the maximum speed

The motor supports you up to a maximum speed of 25 km/h.

You have the option of setting maximum support individually to a value between 12 km/h and 25 km/h. The default is 25 km/h. Keep the “MODE” button pressed to leave the menu.



Battery voltage and capacity

The correct battery voltage in Volt must be provided to ensure that the battery charge display works correctly.

You have a choice of 36 or 48 volts. The voltage of your battery is shown on the sticker attached to your battery among other places. When you have selected the voltage, confirm it with the “MODE” button.



This setting is necessary to show the correct battery range on your display at a later time. The battery capacity is specified in “Ah” and this value is also shown on the sticker of your battery.



Personal PIN

The display is not removable and therefore accessible to unauthorized persons. You can choose to set a 4-digit PIN that is required when switching on. After entering the PIN, confirm it by pressing the “MODE” button. You can now use your display in the usual way.

Proceed as follows to get to the appropriate menu:

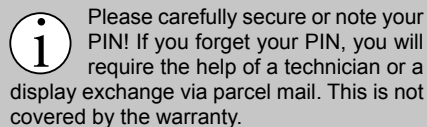
Press both arrow buttons at the same time for approximately two seconds: Then keep the “MODE” and the up-arrow button pressed at the same time. A 4-digit PIN query appears. The standard PIN is 1234.



You can now choose “N” for “no PIN” or “Y” for “yes, activate PIN”.

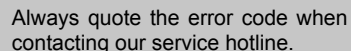


After activating the PIN query, you are requested to specify a number. Confirm it afterwards with the “MODE” button.



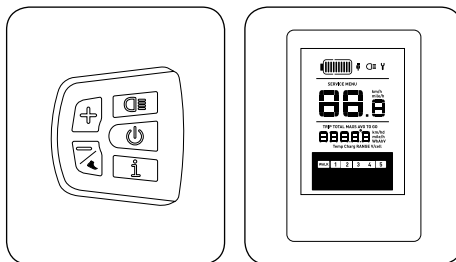
Hold the "MODE" button for 2 seconds to store the changed value. You are then leaving the settings menu and are back in the standard mode of the operating module.

A code will be shown on the display if your pe-delec's system encounters an error. The error code will automatically disappear only once the problem has been remedied.

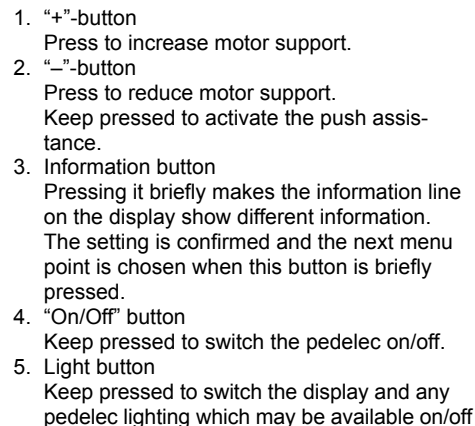


Error No.	Error description and solution
21	<p>Motor overloaded</p> <p>Solution: Reduce the load (e.g. steep incline, high additional load or trailer). Pedal more strongly. If the motor has failed completely, it requires approximately 5 minutes of cool-down time. Also check that all visible motor connectors are 100% secure. If nothing works, contact our service hotline.</p>
22, 23, 24	<p>Drive fault</p> <p>Contact our service hotline.</p>
25	<p>Brake fault</p> <p>Contact our service hotline.</p>
30	<p>Communication error</p> <p>Solution: Detach the plug-in connection of the display and attach it again. Repeat this step at least twice. If this does not work, contact our service hotline.</p>

LCD 1300 display with control unit

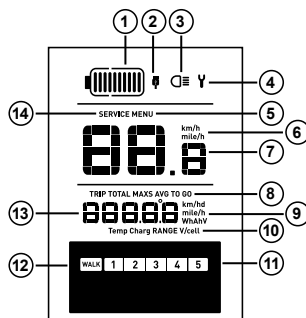


Functional overview and operation



Display

Functional overview



1. Charge status of the battery
This shows the current charge status of the battery. The battery is empty when only the frame flashes.
2. USB connected
This symbol lights up as soon as a USB device has been connected for charging.
3. Illumination activated
This symbol lights up as soon as the display lighting and any permanently installed lighting system have been activated.
4. Error
This symbol is shown as soon as an error occurs. An error number is shown on the display at the same time.
5. Menu
Only pops up when you are in menu mode.

6. Unit
It shows the measuring unit used to measure speed.
7. Main display
It primarily shows the speed. It is used in the menu for navigation and setting purposes.
8. Information line
A short press of the “i” button changes to the following displays:
 - TRIP = Trip counter
 - TOTAL = Total kilometres
 - AVG = Average speed
 - TO GO = Approximate remaining range
9. Information line – Units
The appropriate measuring unit for the value displayed in the information line is shown here.
10. Information line – Units 2
The appropriate measuring unit for the value displayed in the information line is shown here.
11. Assistance level
It shows the currently selected support level. The motor support is switched off when no number is shown.
12. Walk
Is only shown when the pushing assistance is activated.
13. Information line – Values
The corresponding value will be shown as a number in the information line, depending on the setting. In addition, there is the “C” information that shows an integer number - indicating the calories approximately used during the current ride.



This display only works for pedelecs with a central motor.

14. Service

As soon as an inspection of the pedelec becomes due, an appropriate note will flash 3x when the system is switched on.

Settings



Do NOT change the settings while riding your pedelec.

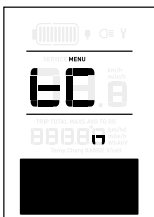
This LCD offers you various personalization options. First, switch on the display by holding down the “MODE” button on the operating unit.



To get to the settings menu, first switch on your display. Thereafter, quickly press the “i” button twice in a row. The time between the two presses of the “i” button should be at most 0.3 seconds.

Reset the daily information

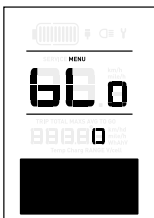
The first menu can be used to reset trip information such as the “trip meter”. Choose “y” using the “+” or “-” buttons in the display. Confirm this with “i”. The trip information is now set to zero.



Brightness sensor

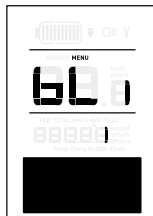
Your display has a brightness sensor on the back. In the dark, it automatically switches on the display lighting as well as the permanently installed lighting system, if available. You can choose at which level of darkness the lighting is to be activated. Select the desired sensitivity level with the “+” or “-” buttons: 0 = Brightness sensor is off, 1-5 brightness sensor is on.

The higher the number, the more sensitive the sensor and the earlier the lighting system will be activated. Conform your input with the “i” button.



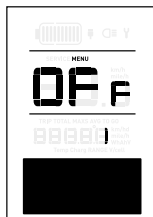
Background lighting

The intensity of the display background lighting can be set at five levels. Select the desired brightness from 1 to 5 by using the “+” or “-” buttons on the display. The higher the number, the brighter the lighting. Conform your input with the “i” button.



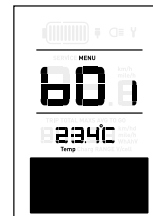
Switch-off time

Your pedelec provides an automatic switch-off function. This switch-off function is activated if the pedelec has not been used for some time. The default is 5 minutes. The time to switch-off can be adjusted between 1 and 9 minutes. Select the desired switch-off time with the “+” or “-” buttons on the display and confirm the input with the “i” button.



Battery communication

This menu point can be disregarded. It is only included for service purposes.



Wheel size

The display “LUd” indicates the wheel size currently set. This value cannot be changed, as it is only included to check whether the display software is correctly set.



Maximum speed

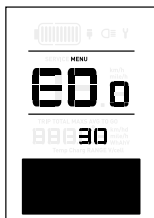
The display "SPL" shows you at which speed the motor will stop providing support. This value cannot be changed, as it is only included to check whether the display software is correctly set.



Error Code Indication

The display provides a memory containing the last 10 error codes. It is possible to go through them with the "i" button.

Please quote the error number(s) in the event of a fault.



Error codes



Always quote the error code when contacting our service hotline.



In the event of an error, the display shows the symbol and an error number to help identify the error.

Error No.	Error description and solution
06	Deep discharge protection Solution: Charging the battery.
07	Overcurrent shutdown Solution: Switch the system off and on again. Checking the battery. If the error recurs, please contact our service hotline.
08	Motor hall effect sensor malfunction Solution: Restart the system. Contact the service hotline. If the error recurs, please contact our service hotline.
09	Motor phase malfunction Solution: Check the motor unit. Contact our service hotline.

Error No.	Error description and solution
10	Motor temperature protection. The motor is too hot. Solution: Reduce the support, pedal harder, possibly switch off the system and let it cool down for 5 minutes. If the error recurs, please contact our service hotline.
11	Controller temperature protection. The controller is too hot. Solution: Reduce the support, pedal harder, possibly switch off the system and let it cool down for 5 minutes. If the error recurs, please contact our service hotline.
12	Power sensor malfunction Solution: Restart the system. If the error recurs, please contact our service hotline.
21	Speed sensor - no signal Solution: Check the distance between magnet and sensor. Checking the speed sensor. If the error recurs, please contact our service hotline.
30	Communication error Solution: Check the plug-in connection of the display. Test it by separating and reconnecting it 2-3x. If the error recurs, please contact our service hotline.

Transporting the pedelec



Remove the battery of your pedelec before transportation and transport it separately.

The battery is not considered a hazardous material when transported to operate the pedelec. The battery becomes a hazardous material when it is transported any other way. In this case, you must follow the appropriate guidelines.



Never send the battery yourself. Batteries are considered hazardous materials. In some circumstances, it can overheat and catch fire. Discuss the issue with your transport company. Your specialist/Fischer customer service technician can arrange transport as hazardous goods. Contact our service hotline.



By car

You can transport your pedelec by car as you would a normal bicycle. Remove the battery before transport and transport it separately. The weight of the pedelec will call for a heavier-duty rack. Always adjust your riding behavior to the load you are pulling in the carrier.



On the train

The same regulations apply as when transporting a bicycle. Know which busses and trains you can take before using public transportation. It is best to remove the battery from the bike before and while using public transportation.

Replacing parts on your pedelec

Guidelines for the parts replacement of CE-marked e-bikes / pedelecs up to a pedal assist of 25 km/h (15.5 mph)

Category 1

Components which require the approval of the vehicle manufacturer/system provider before the replacement

- **Motor**
- **Sensors**
- **Electronic control unit**
- **Electric cables**
- **Operating unit on the handlebar**
- **Display**
- **Battery pack**
- **Charger**

Category 2

Parts which must not be replaced without approval of the vehicle manufacturer

- **Frame**
- **Rear shock**
- **Rigid fork and suspension fork**
- **Wheel forhub motor**
- **Brake system**
- **Brake pads** (rim brakes)
- **Luggage carrier**

(Luggage carriers directly affect the load distribution on the bicycle. Both negative and positive modifications will result in a riding behaviour potentially different from that intended by the manufacturer.)

Category 3 *

Parts which may be replaced upon approval of the vehicle or component manufacturer

- **Crank arm**
(Provided that the distances crank arm – frame centre (Q-Factor) are observed)

- **Wheel without hub motor**
(Provided that the ETRTO is observed)
- **Chain / Toothed belt**
(Provided that the original width is observed)
- **Rim tape**
(Rim tape and rims must be compatible. Modified combinations may result in rim tape shifting and thus in defective inner tubes)
- **Tyres**
(The stronger acceleration, the additional weight and more dynamic cornering require the use of tyres approved for e-bike use. In this respect observance of the ETRTO is essential)
- **Brake cables / Brake hoses**
- **Brake pads**
(Disc, roller, drum brakes)
- **Handlebar-stem unit**
(Provided that there is no need to change the lengths of cables and/or hoses. A modification of the seating position for the benefit of the consumer should be possible within the original cable lengths. A modification beyond results in a significantly changed load distribution on the bicycle and entails potentially critical steering properties)
- **Saddle and seat post unit**
(Provided that the offset to the rear does not exceed 20 mm with regard to the series/original field of use. In this case, as well, a modified load distribution beyond the intended setting may possibly lead to critical steering properties. The length of the saddle rails at the saddle structure as well as the saddle form are also important.)

- **Headlights**
(Headlights are designed for a specific voltage which must be compatible with the rechargeable battery of the vehicles. In addition, the electromagnetic compatibility (EMC) must be ensured whereas the headlight may be responsible for a part of the potential disturbance.)

* An approval can only be given by the component manufacturer, if the component was tested sufficiently according to its intended use and the respective standards in advance and if a risk analysis was made.

Category 4

Components which do not require a specific approval

- **Headset**
- **Bottom bracket**
- **Pedals**
(Provided that the pedal is not wider than the series/original pedal)
- **Front derailleur**
- **Rear derailleur**
(All gear change parts must be suitable for the number of gears and be compatible with one another)
- **Shift levers / Twist grip**
- **Cables and housings**
- **Cranksets/pulley/cassette**
(Provided that the number of teeth and the diameter is identical to the series/original area of application)
- **Chain guard**
- **Wheel protectors**
(Provided that the width is not smaller than the series/original parts and the distance to the tyre is at least 10 mm)
- **Spokes**
- **Inner tube of the same type with the same valve**

- **Dynamo**
- **Rear light**
- **Reflector**
- **Spoke reflectors**
- **Kickstand**
- **Grips with screw clamps**
- **Bell**

Category 5

Special notes for mounting accessories

- **Bar ends are permitted**
- **provided that they are mounted on the front**
(The load distribution must not be significantly changed)
- **Rear view mirrors are allowed.**
- **Additional battery/rechargeable battery-operated headlights are permitted in accordance with § 67 StVZO (Germany's Road Traffic Licensing Regulations).**
- **Trailers are only permitted after approval by the vehicle manufacturer.**
- **Child seats are only permitted after approval by the vehicle manufacturer.**
- **Front baskets are problematic, due to the undefined load distribution. Only permitted after approval by the vehicle manufacturer.**
- **Bicycle bags and top cases are permitted. Respect the maximum permissible weight, the maximum load of the rack and the load distribution.**
- **Attached weather protectors are only permitted after approval by the vehicle manufacturer.**
- **Front and rear luggage racks are only permitted after approval by the vehicle manufacturer.**

Source: www.ziv-zweirad.de, updated on May 08, 2018

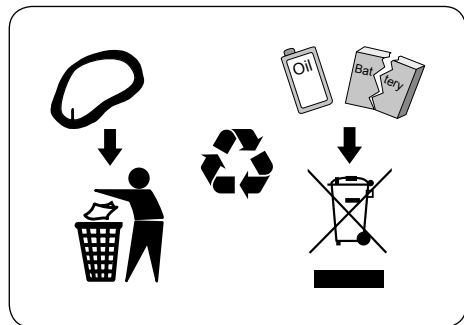
Environment protection tips/ Disposal

General cleaning and maintenance: Remember the environment when maintaining and cleaning your pedelec. You should use care and cleaning products which are biodegradable wherever possible. Please make sure that no cleaning agents are disposed of in the sewage.

Pedelec batteries

Batteries belonging to pedelecs should be treated as hazardous and are therefore subject to compulsory special labelling.

Please contact our service hotline about how to dispose of your battery.



Technical characteristics

Battery

	36 V battery	48 V battery
Rated voltage	36V	48V
Nominal Capacity	422 Wh	557 Wh
Rate Capacity	8.8 Ah	11.6 Ah
Charging time	4.5-6 h	4.5-6 h
Storage	-10 to 35°C	-10 to 35°C
Maximum charging cycles	1000	1000

Charger

Operating voltage	220V
Output current	2Ah and 3Ah

Motors

	Front motor (ShengYi)	Central motor (Brose)	Central motor (ShengYi)	Central motor (Bafang)	Rear motor (Bafang & ShengYi)
Operating voltage (DCV)	36	36	48	48	48
Rated power (W)	250	250	250	250	250
Maximum torque (Nm)	25	90	≥ 50	≥ 80	Trekking: max. 25, MTB max. 45

Battery riding distance

			Riding Distance (km)	
Volt	Ah	Wh	Min.	Max.
36	8.8	317	10	80
36	14.5	522	20	140
48	8.7	418	10	120
48	10.5	504	20	140
48	11.6	557	20	160



Only use the charger that was delivered with your pedelec!

Warranty



The conditions for guarantee / liability for faults are (partially) harmonised in countries that are subject to EU law. Find out about the relevant national stipulations that apply to you.

Within the scope of EU law, the seller is liable for material faults for at least the first two years from the date of purchase. This includes defects that were present at the time of purchase or handing over. Moreover, during the first six months it is assumed that the fault already existed at the time of purchase.

Bicycles – especially those with auxiliary electrical motors – are complex vehicles. Therefore it is required to implement all service intervals properly. Omitting servicing puts the claim of the seller at risk if the error could have been avoided by servicing. The necessary maintenance is outlined in the chapters of these operating instructions and in the enclosed instructions from the component manufacturers.



Contact our service hotline in the event of a defect/liability claim. We recommend filing all purchase receipts and inspection reports as proof for your records.

Guarantees

FISCHER – the bicycle brand® grants you, besides the warranty required by law that are not affected hereby, an additional

MANUFACTURER'S GUARANTEE:

General

Inter-Union Technohandel GmbH, Klaus-von-Klitzing-Str. 2, 76829 Landau/Pfalz grants you a 24-month guarantee for this product and a 30-year guarantee for a frame break. Regardless of this warranty, you are entitled without restriction to your statutory rights as a consumer. Your guarantee rights according to Section 437 BGB (German Civil Code) – i.e. the right to rectification, withdrawal or reduction and compensation – are not affected by this manufacturer's guarantee.

Duration of the guarantee

The guarantee granted by Inter-Union Technohandel GmbH concerns guarantees with a duration of 24 months for the overall product and 30 years for a frame break. The guarantee begins at the time of delivery of the good to you or a third party named by you, who is not the carrier.

Guarantee scope

The guarantee applies in the event of manufacturing or material defects.

Warranty terms and conditions

This guarantee is granted exclusively to private individuals, who have bought the FISCHER e-bike themselves from FISCHER trade partners, who exclusively use it for intended, private use outside of competitions and register with us online within 6 weeks of the purchase date.* Please retain the purchase receipt for your records at least for the duration of the guarantee.

The warranty excludes:

All wearable parts according to the list of wearable parts in the operating manual, which the sellers are happy to show you prior to purchase. Damages that are caused by technical modifications, improper repairs or defective maintenance according to the operating manual. Further detailed guarantee exceptions can be found in the operating manual. We are obliged to provide evidence with regard to the aforementioned exceptions.

Applicable law

German law is applicable for claims arising from the guarantee.

* Registration is possible at www.fischer-fahrrad.de. In order to complete the form, your personal data as well as the data of your bicycle logbook (contained in the operating manual) and the purchase receipt are required.

Services

Warranty terms and conditions (extract):

- Exclusively for private end consumers who have bought the FISCHER e-bike from a FISCHER-approved FISCHER trade partner (evidence in the form of a purchase receipt required)
- Only for intended use for private purposes; i.e. especially no use for competitions or renting
- Online registration within 6 weeks of the purchase date at www.fischer-fahrrad.de
- No guarantee for damages that are caused by technical modifications, improper repairs or defective maintenance. Information on proper maintenance can be found in the operating manual you received together with your FISCHER e-bike.
- In cases covered by warranty, we will replace or repair the defective part.
- The extensive guarantee conditions can be found at www.fischer-fahrrad-kundendienst.de

The law of the Federal Republic of Germany applies.

You receive a comprehensive offer of additional services when purchasing a FISCHER pedelec.

Service hotline

Our free service hotline for service and warranty cases for models from 2014, 2015, 2016, 2017 and 2018 can be reached from December to January Monday to Friday from 8 am to 5 pm, from February to April and October to November Monday to Friday from 8 am to 6 pm and from May to September Monday to Friday from 8 am to 8 pm and on Saturdays from 10 am to 4 pm on +49 721 97902560 (calls from Germany) or +43 1 9073366 (calls from Austria) *or at the following link: www.fischer-fahrrad-kundendienst.de*

Please keep the following data from serial plate at hand when calling the hotline:

1. Year of construction
2. Model (e.g. ECU 1820 or EM 1864...)
3. Item No. (e.g. 18005 or 18024...)

The serial plate is at the bottom of the saddle tube of the pedelec or in the operating instructions under "Pedelec Identification".

In addition, we will need your contact details for further processing.



Inter-Union Technohandel GmbH
FISCHER Kundenservice
Klaus-von-Klitzing Straße 2
76829 Landau i. d. Pfalz
Germany

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Service-Hotlines

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