



SIDE VISION

User Manual

To read and keep.



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1.1 Purpose of the manual

This manual is an integral part of the HMI unit and has been drawn up by the manufacturer in its original language (Italian) to provide all the information necessary for an adequate and safe use of the drive unit and the HMI unit throughout their life cycle (from transport, delivery, installation, use and maintenance to disposal).

Before carrying out any operation, users and technicians must carefully read the instructions and scrupulously comply with them. If you have any doubts about their correct interpretation, consult the manufacturer to obtain the necessary clarifications. Only by observing the following is the smooth operation of the unit over time and the onset of dangerous situations for people and things avoided.

The manual provides warnings and indications relating to safety rule for the prevention of accidents. In any case, the safety rules imposed on them by current regulations must be observed with the utmost care by the operators. Any changes to the safety rules that may take place over time must be transposed and implemented.



CAUTION: It is recommended that you read this manual carefully before installing and operating the unit. OLI eBike Systems with a view to continuous improvement may change without notice some characteristics of the components used. This does not affect the validity of the information contained in this document. If inconsistencies are found between what is described in the manual and the use of the machine, please inform the manufacturer.



IMPORTANT: The updated copy of this manual can be found on the website www.oli-ebike.com.

1.2 Preservation of the manual

The installation, use and maintenance manual must accompany the unit throughout its life cycle and must be available to all operators and technicians who may need it. The manual must follow the unit if it is transferred to a new user or owner.

1.3 Constructor

Our company is at your disposal for any problem or information. Communications and requests can be forwarded to:

OLI eBike Systems srl

Via delle Pesche, 821 - 47522 Cesena - (FC) -ITALY

Phone +39 / 0547 318322

info@oli-ebike.com

www.oli-ebike.com

For any need concerning the use, maintenance, or request of spare parts, please specify the identification data of the unit shown on the manufacturer's label.

1.4 Guarantee and returns

The product is covered by a guarantee according to the terms and provisions of the law and commercial agreements. The buyer loses the right to the warranty in case of incorrect installation or use or when he has made changes or repairs to the supply without the authorization of the manufacturer. Upon receipt of the product, the recipient must verify that there are no defects, damage resulting from transport and / or incompleteness in the supply. Any complaints must be immediately reported to the manufacturer by written communication and countersigned by the carrier. Labor services such as sending a technician are excluded from the warranty. Under no circumstances may compensation be claimed for damages.

If you return the product, reuse the original packaging for shipping, trying to protect it as best as possible from any impacts resulting from transport.

1.5 Technical assistance

Ordinary and extraordinary maintenance must take place in accordance with the instructions contained in this manual. For any cases not included and for any kind of assistance, it is recommended to contact the manufacturer directly, referring to the data reported on the identification plate of the unit: model, serial number
The correct reference guarantees quick and precise answers.

1.6 Transport, packaging and storage

The unit is supplied with a dedicated packaging that avoids damage due to transport.

Upon receipt of the goods, the customer must check whether the model and quantity received correspond to the data of the order confirmation.

Components must be stored indoors in dry, weather-protected environments and at temperatures above -10 °C.

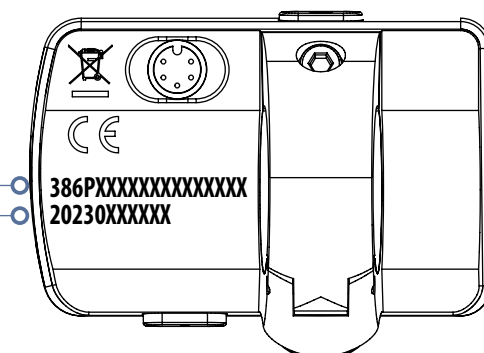
! **IMPORTANT:** It is the responsibility of the installer to dispose of the packaging in an appropriate manner in compliance with the laws in force on the subject.

1.7 Identification of the HMI unit

The identification of the HMI unit is shown on the back of the device via code and serial number

• Code

• Serial number



! **IMPORTANT:** Identification code and serial number must never be removed.

1.8 Safety

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

All unauthorized modifications will invalidate the guarantee. Furthermore, a modified eBike could lead to accidents for which substantial compensation must be paid.

Accidental activation of the vehicle can cause injury (even in the case of the push aid).

Walk mode may involve the rotation of the pedals, therefore keep at a distance that does not interfere with them.

In order to minimise the causes that can create hazardous situations for users and others, we encourage you to adopt good rules of behaviour. Particularly when using the eBike, it is good practice to respect the following points:

- consult your doctor before starting a training program;
- observe the traffic regulations relating to pedal assisted bicycles;
- don't get distracted by looking at the display when you are riding the bicycle;
- do not use the display as a handle;
- only use the HMI unit and the control panel supplied;
- remove the battery before performing any type of operation.

It is necessary to remove the battery:

- Before any intervention on the eBike
- During transport by car / plane
- In case of conservation



IMPORTANT: The manufacturer declines all responsibility for damage to persons or property resulting from improper use of the equipment, from errors in installation and use or from inexperience, imprudence and negligence with respect to the indications / instructions given in this manual.



IMPORTANT: The manufacturer declines all responsibility for damage to persons or property, as well as to the defective operation of the unit if no original spare parts and products recommended for cleaning and maintenance are used.

1.9 EU Declaration of Conformity

UE Declaratrion of conformity

Manufacturer: OLI eBike Systems S.r.l.
Address: Via delle Pesche, 821, 47522 Cesena FC (IT)

Declares that this document is released under his sole responsibility.

Object of the declaration:

Description	Code	Trading name
Human Machine Interface	EBHMI0005	Display Side Vision

The object of the declaration described above is in conformity with the following relevant Union harmonization legislation:

- DIRECTIVE 2014/30/EU of 26 February 2014 relating to electromagnetic compatibility.
- DIRECTIVE 2011/65/EU of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS), subsequent amendments and/or additions.

The following regulations have been applied:

- EN 55032:2015
- EN 55035:2017
- EN 15194:2017

Signed in the name and on behalf of OLI eBike Systems.

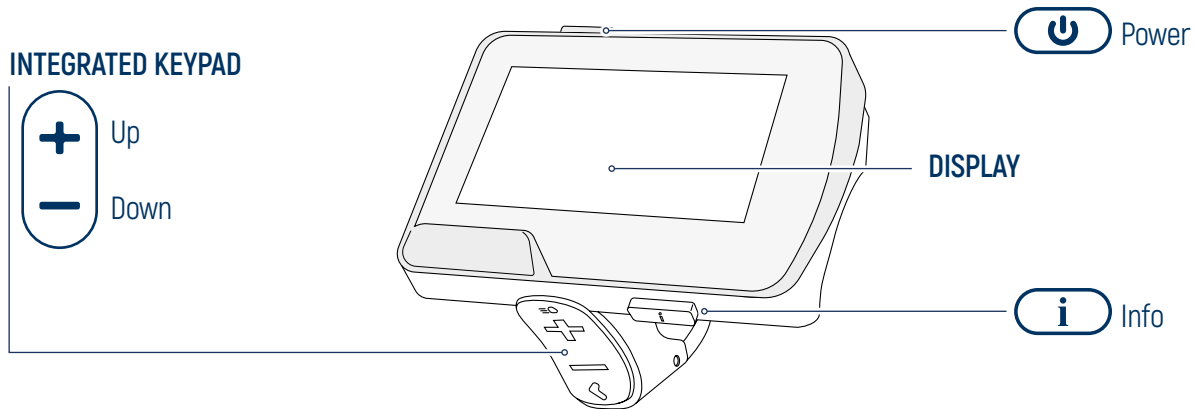
Cesena, 27/07/2023


Giorgio Gavioli
Chief Executive Officer

1. GENERAL INFORMATIONS

1.10 General description

SIDE VISION is an HMI unit that allows you to analyse and view data relating to the eBike and the training in progress. The unit consists of a sturdy, injection-moulded ABS body housing the LCD display and an integrated keypad containing the keys that allow for control and navigation.



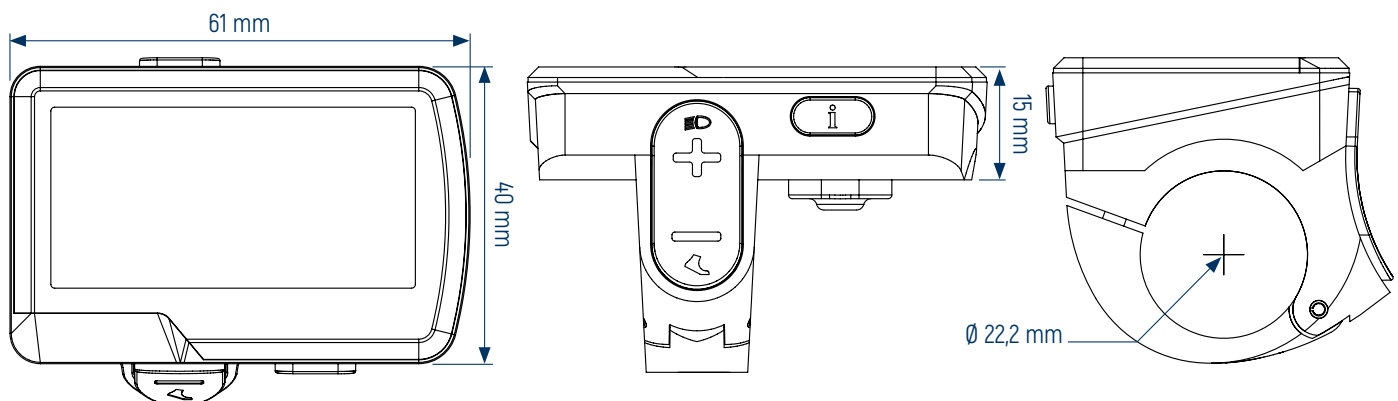
! **IMPORTANT:** The SIDE VISION unit is exclusively intended for use as an HMI on an eBike. Uses other than those foreseen and not compliant with what is described in this manual, as well as being considered improper and prohibited, can create dangerous conditions for people and things.

! **IMPORTANT:** The manufacturer declines all responsibility for improper use of the product.

1.11 Technical table

Display type	LCD TFT
Operating Temperature	-5° / 40° C
Storage Temperature	-20° / 60° C
Protection level	IP66

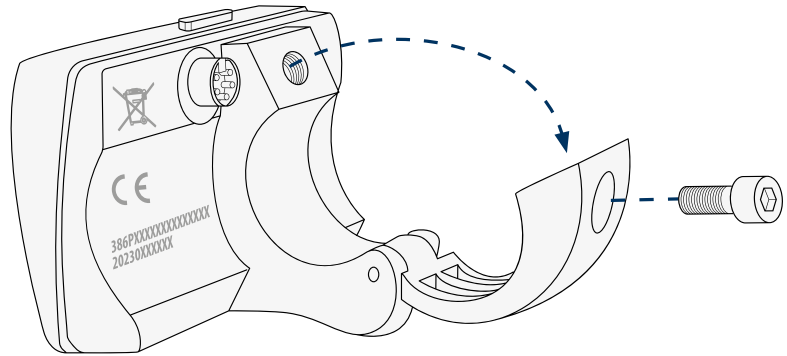
1.12 Size



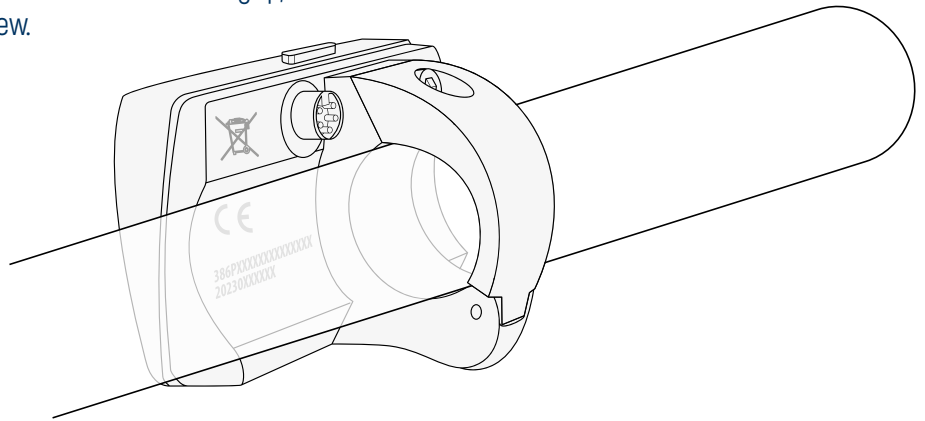
2. INSTALLATION

2.1 Assembly

- 1 Unscrew the M3 screw and open the holder.

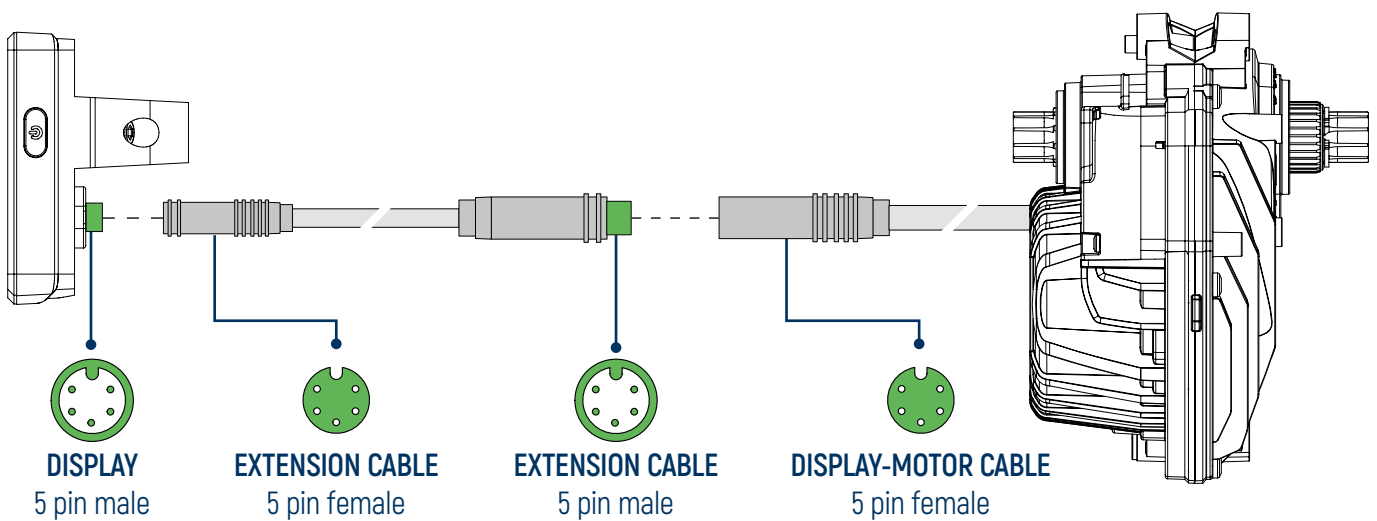


- 2 Place the display on the handlebar next to the left grip, close the holder and tighten the M3 screw.











2.2 Connection

Use the extension cable to connect the display to the display-motor cable.



3.1 Commands

To navigate the software there are 4 keys that can be used with short press or with a press of more than 2 seconds. Throughout this manual, the following icons are used to indicate the type of key and press for each action.

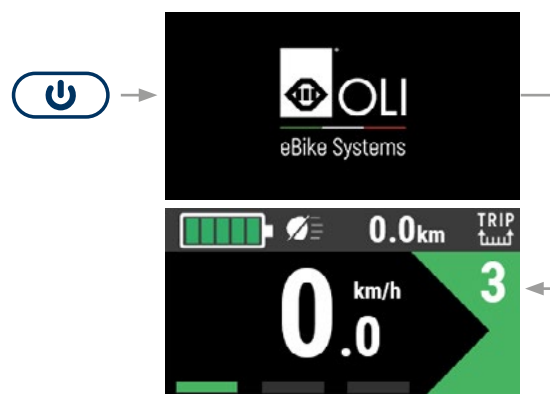
Key	Short press (< 1")	Long press (> 2")
Power	 Turn on the system	 Shut down the system
Up	 Increase the level of assistance	 Turns the lights on/off
Down	 Decreases the assistance level	 Activate walk mode: pushes the bike to 6 km/h
Info	 Scroll through ride information	 Enter the menu

3.2 Power ON

To turn on the display, depending on the type of battery installed:

- Press and hold the power-on key until the power-on screen with the manufacturer's logo is displayed
- Press the on key on the battery.

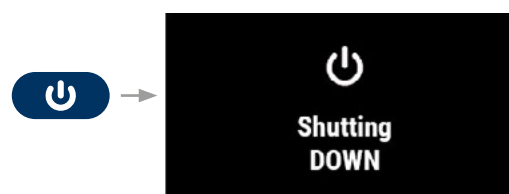
Wait a few seconds to display the first Home screen.



3.3 Power OFF

To turn off the display, depending on the type of battery installed:

- Press and hold the power-on key until the power-off screen appears
- Press the off key on the battery.



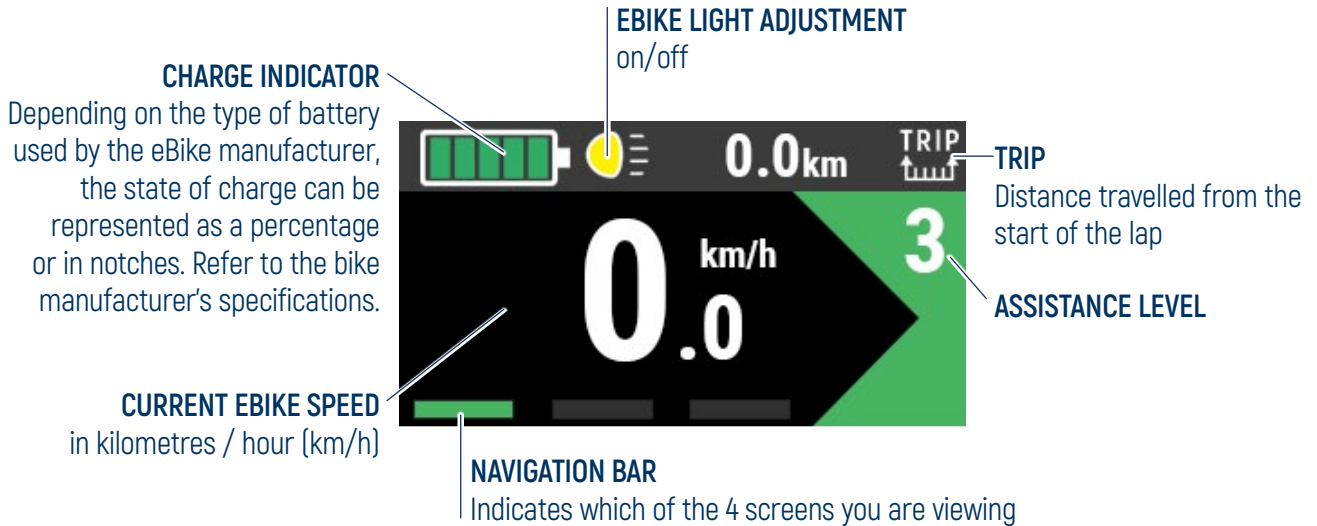
Wait a few seconds for the system to shut down completely.

If the eBike isn't used for a certain amount of time, depending on the type of battery, the system will switch off automatically.

! **IMPORTANT:** Some specifications, features and aesthetic details may vary depending on the eBike manufacturer. Refer to the bike manufacturer's specifications.

3.4 Display screens

Side Vision has 3 screens where you can view different information



The 3 screens differ from each other in the type of information displayed.

<p>DISTANCE SCREEN</p>		<p>TRIP ↑↑↑↑↑</p> <p>Indicates the distance travelled in kilometres (km) since the last reset.</p>
<p>TIME SCREEN</p>		<p>ODO ↑↑↑↑↑</p> <p>Indicates the time elapsed in motion since the last reset. The value is expressed in hours: minutes: seconds.</p>
<p>ODO SCREEN</p>		<p>ODO ↑↑↑↑↑</p> <p>Indicates the total distance traveled in km. Non-resettable value.</p>

3.5 Assistance level

From any screen in the Home section it is possible to change the assistance level by pressing the up key (+) to increase it and the down key (-) to decrease it.

The table shows the multiplication factor for each level of assistance.

Level	Multiplicative factor*
LEVEL 0	0%
LEVEL 1	50%
LEVEL 2	100%
LEVEL 3	200%
LEVEL 4	300%
LEVEL 5	400%

* The assistance percentages of the levels are indicative because they can be customized by the eBike manufacturer.

! **IMPORTANT:** The standard configuration of OLI eBike Systems is described below. Some eBike manufacturers, in collaboration with OLI eBike Systems, may have developed different configurations and varied the number of levels available. Refer to the eBike manufacturer's specifications.

3.6 Battery charge indication

The remaining charge indication can be in percentage or notches, depending on the type of battery mounted on the eBike. Refer to the eBike manufacturer to find out the type of battery installed on your eBike.

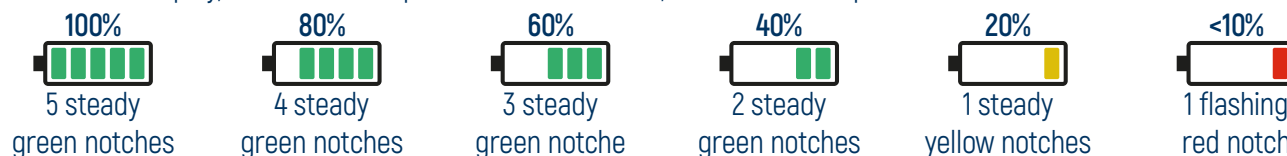
INDICATION IN %

The communication between the battery and the Drive Unit allows for a precise indication of the remaining charge. This gives you access to the **actual remaining charge values** as they are calculated directly from the built-in BMS.

INDICATION IN NOTCHES

Batteries that do not allow communication with the OLI eBike system do not allow access to the actual remaining charge values. In these cases, the indication of the remaining charge level shown on the display is an estimate, which can be conditioned by multiple external factors: years of battery life, charge and discharge cycles, level of assistance used, outside temperature, etc.

Countless tests on batteries of different capacities have allowed us to considerably improve the reliability of the estimate shown on the display, which will be represented in 5 notches, each of them represents 20%.

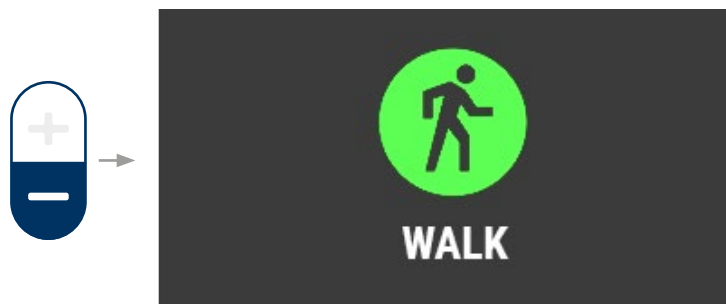


ENERGY SAVING

When the battery is less than 10% charged, the drive unit goes into power saving mode, providing up to 2 hours of light on. Initially, it is possible to use assistance up to level 3, then the drive unit provides assistance up to level 2, and finally the drive unit ceases to provide assistance entirely.

3.7 Walk mode


The system is equipped with a walk assistance function, which allows you to activate the motor up to a maximum speed of 6 km / h, allowing you to tackle short stretches more easily by pushing the eBike.



To activate the walk assistance function, press and hold the down key . The motor will start in Walk mode and the corresponding icon will appear on the display. To deactivate Walk mode, release the down key .

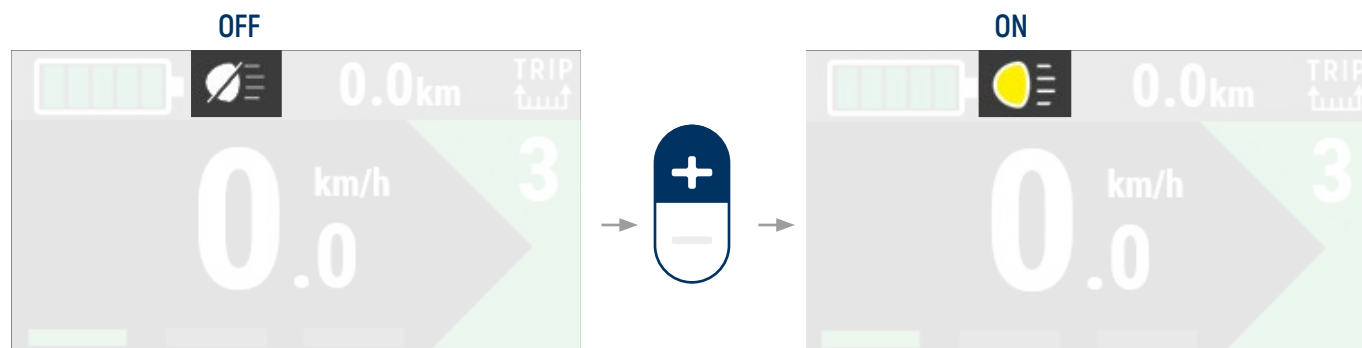
If assistance level zero (0) is set, the motor is disabled and the walk assistance function cannot be used.


The motor will shut down in the following cases:

- release of the down key ,
- speed exceeding 6 km / h,
- locking the eBike wheel.

3.8 Lights operation

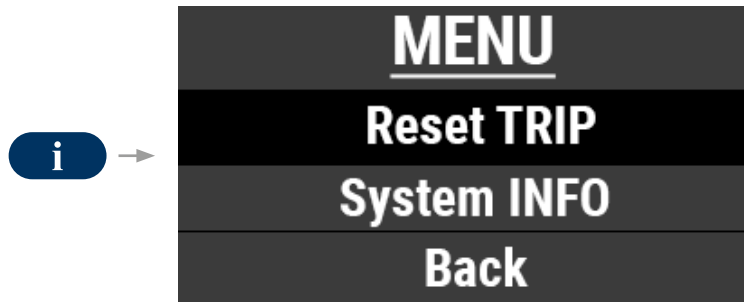
The lights turn on and off by holding down the button for a long time . When the lights are on, the icon on the display changes to yellow.



 **IMPORTANT:** In some countries, the switching on and off of the lights on PEDELECs is regulated by the highway code. Check with the eBike manufacturer that the configuration of your vehicle complies with the regulations in force in the country in which it is used.

3.9 Menu

To access the menu, press and hold the key for a long time 

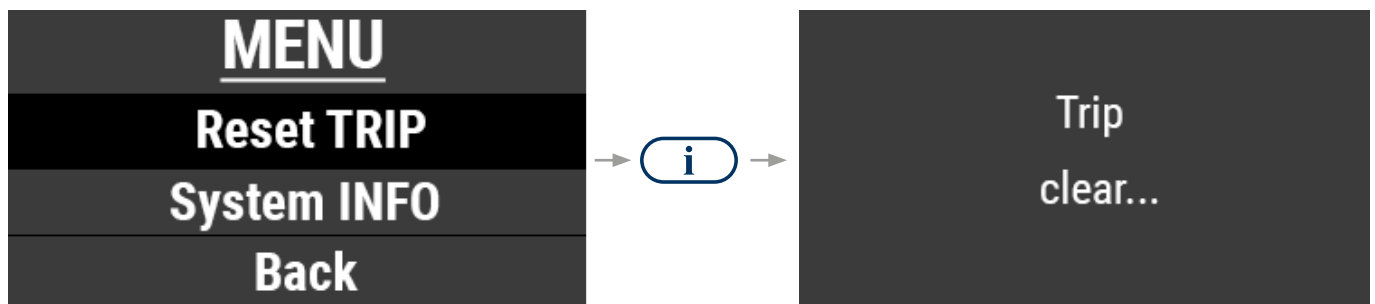


RESET TRIP

The Reset trip item allows you to reset all the recorded lap data by returning the counters to zero [0].

By pressing the key  it starts immediately upon reset.

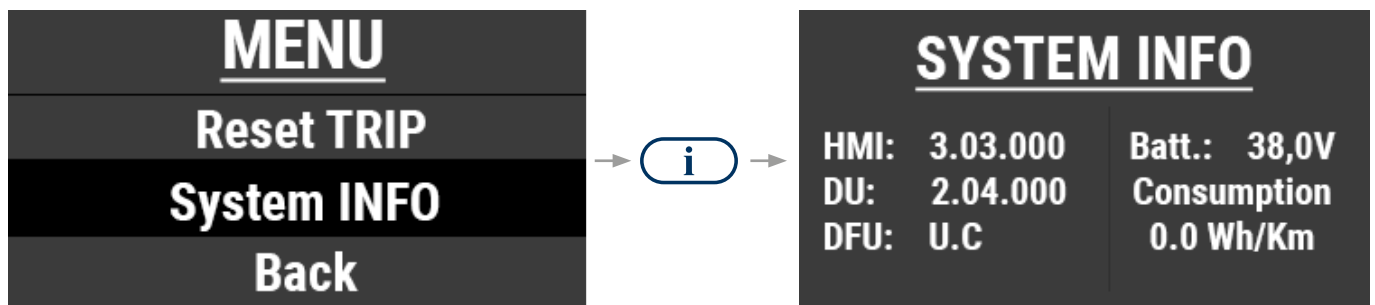
The message "Trip clear..." appears on the display for a few seconds, when the reset is complete, the Menu page is displayed again.



SYSTEM INFO

In this screen you can view various information:

- HMI and motor firmware version
- Battery voltage
- Average consumption in Wh/Km
- Support update mode



BACK

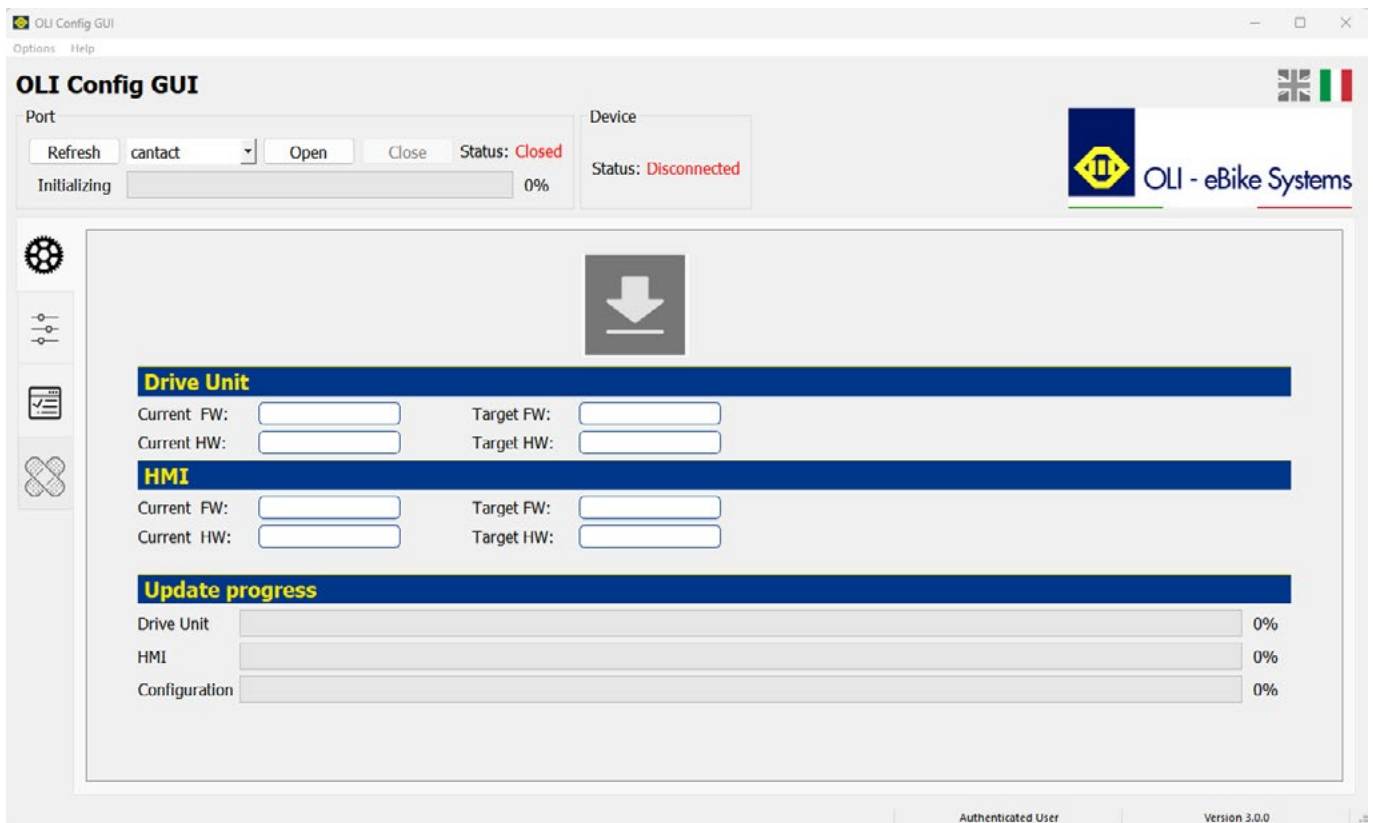
Select BACK and press the key  to exit the MENU

4.1 Connection and communication

You can use one of the following peripherals to interface the drive unit to your PC:

- OLI eBike Systems serial programming cable that connects to the USB port
- CAN OLI eBike Systems programming cable that connects to the USB port

The proprietary software, necessary for firmware changes and updates, is the OLI Config GUI. The software could be modified at any time to correct errors and / or defects in use.



5.1 Maintenance tips

It is recommended to periodically check the drive unit to check the integrity of the components and the firmware. Before installing lights on the eBike, check that they are compatible and have the same voltage as the drive unit.

Respect the operating and storage temperatures of the drive unit.

It is important to protect the unit from temperatures outside the recommended temperature ranges, such as heat sources and unventilated environments with strong solar radiation.

For assistance or repairs, contact an authorized dealer.

5.2 Cleaning

Cleaning operations do not require dedicated products or tools. None of the components, including the drive unit, should be immersed in water or cleaned with a high pressure jet. To clean the motor and the HMI unit, use only a cloth moistened with water.



CAUTION: Do not use aggressive products. Never use abrasive products or powders or basic or acid chemical detergents.



IMPORTANT: The manufacturer declines all responsibility for damage caused by incorrect cleaning or deriving from the use of unsuitable products.

5.3 Demolition and disposal

HMI unit, display, keypad, various accessories, and packaging must be disposed of in accordance with environmental regulations existing. Do not throw the various components into household waste bins.

Do not throw this product into the fire.

FOR UE COUNTRIES ONLY:

in accordance with European Directive 2012/19/EU electrical appliances that have become unusable and, according to European Directive 2006/66/EC, Rechargeable batteries/defective or worn batteries must be collected separately and sent for environmentally friendly reuse.

Return the non-functioning HMI unit to an authorized eBike dealership.

5.4 Error code

The following table lists the possible faults and the 4-character codes displayed in the error messages.

Code	Description
0104	SPEED SENSOR ERROR Try changing speed sensor. If the error persists, change the drive unit.
0106	TORQUE OFFSET ERROR Change torque sensor. If the error persists, change the drive unit.
0803	DISPLAY OR LIGHTS POWER ERROR External device or electronic card power supply problem. Try replacing displays or lights. If the error persists, change the engine.
0804 0811	MOTOR SELF PROTECTION Error can occur while the cyclist is pedaling, with too high a current request: <ul style="list-style-type: none"> • Try reloading the bike configuration • Perform a firmware update if available Check with the cyclist under what conditions the error occurred. If the error persists, change the drive unit.
0806	PERIPHERAL POWER SUPPLY PROBLEM It is a problem on the card similar to 0x803. Try disconnecting the BMS cable or smart devices if present. If the error persists, change the drive unit.
0807	UNDERVOLTAGE ERROR Battery or cable connection problem. It could also be a problem with the card. Check that the battery cables and the battery work properly. If the error persists, change the battery. If the error still persists, change the engine.
0809	OVERVOLTAGE ERROR Battery problem or board problem. Check that the battery cables and the battery work properly. If the error persists, change the battery. If the error still persists, change the engine.
080A 080B	OVERHEATING Engine overheating error. Let the engine cool down and restart. If persists, change drive unit.
0810	CURRENT OFFSET ERROR Card error on power up. If the error persists, change the drive unit.
0813 0815 0830	SOFTWARE ERROR Check with the cyclist under what conditions the error occurred, and if available, perform a firmware update.

Code	Description
0805 080C 080D 080E 080F 0814 0816 0818 0820	ERRORE SCHEDA HARDWARE Try resetting the bike. If the error persists, change the drive unit
0817	COMUNICAZIONE CAN ERROR Check the integrity of both Display and BMS cables. If the error persists, change the drive unit.
0812 0819 081A	PARAMETER ERROR Parameter configuration error. Try reprogramming the motor to the correct configuration and restart the bike.

5.5 Warning code

Warning screens are screens that indicate the presence of detected anomalies that are considered not harmful to the security of the drive drive. The firmware will automatically correct them.

The following table lists the possible anomalies and the 4-character codes displayed in the warning messages.

Code	Description
0200	LOST COMMUNICATION WITH BATTERY BMS Some battery readings may no longer be reliable. Press any button, the firmware will automatically correct the problem. If the problem persists, contact your local dealer.
0201	MAGNET NOT DETECTED Check that the magnet is seated correctly. Press any key to continue. If the problem persists, contact your local dealer.
0202	ABNORMAL TORQUE GAUGE SIGNAL Move the cranks and rear wheel backwards a few degrees. Press any key to continue. If the problem persists, contact your local dealer.
0203	CRITICAL TEMPERATURE OF THE DRIVE UNIT The Drive Unit stops delivering power until the temperature goes back to normal. We recommend stopping and waiting for the Drive Unit to cool down.
0204 0205	PARAMETER READ ERROR Press any button, the firmware will automatically correct the problem. If the problem persists, contact your local dealer.



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