

SPORT

INSTALLATION

USE AND MAINTENANCE

MANUAL



Revision - 03 | 03/2022



Original instructions: Italian

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1. GENERAL INFORMATION

1.1. PURPOSE OF THE MANUAL

This manual is an integral part of the SPORT unit and was written by the manufacturer in its original language (Italian) to provide all the information needed 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, the users and technicians must read the instructions and strictly adhere to them. In case of doubt about the correct interpretation of the instructions, please contact the manufacturer for any necessary clarification. Only by observing the following can the regular operation of the unit be assured over time and the onset of dangerous situations can be avoided for people and property. The manual provides warnings and indications regarding safety regulations for the prevention of accidents. In any case, the safety regulations imposed on them by the regulations in force must be observed with the utmost care by the operators. Any amendments to the safety regulations that may take place over time must be acknowledged and implemented.



WARNING: Please read this manual carefully before installing and operating the unit.

OLY eBIKE System, with a view to continuous improvement, could change some characteristics of the components used without prior notice. This does not affect the validity of the information in this document. If there are any inconsistencies between what is described in the manual and the use of the machine, please notify the manufacturer.



IMPORTANT: The updated copy of this manual is available on the website www.olieds.com.

1.2. STORAGE 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 need it. The manual must accompany the unit if it is transferred to a new user or owner.

1.3. MANUFACTURER

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

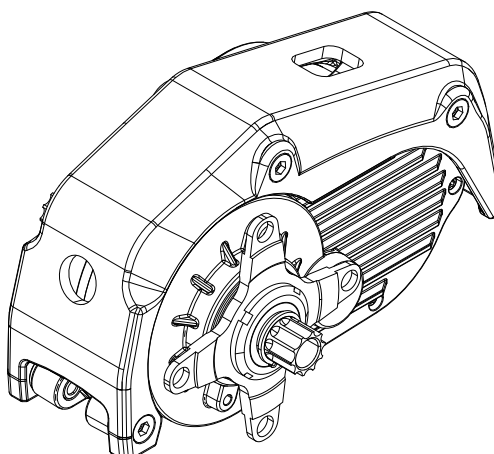
OLI eBike Systems
Via delle pesche, 891 - 47522 Cesena - (FC) -ITALY
Tel +39 / 0547 / 318322
info@oli-ebike.com
www.oli-ebike.com

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

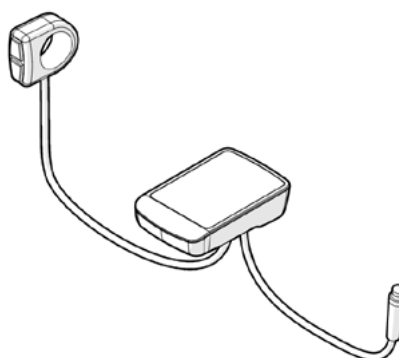
1.4. DESCRIPTION

The SPORT unit consists of the following components:

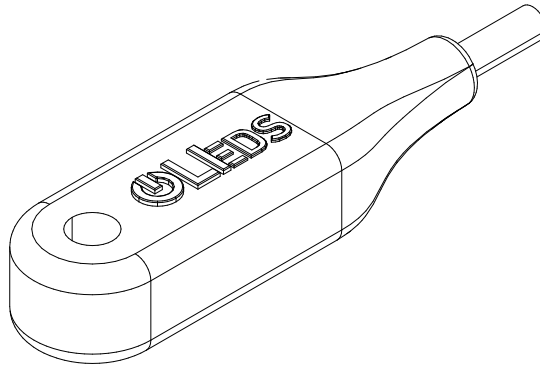
1. Drive unit



2. Display and control panel



3. Speed Sensor



4. Speed sensor magnet



WARNING: The drive unit is intended exclusively for use as an e-bike engine. Uses other than the uses intended that are not compliant with what is described in this manual, besides being considered misuse and prohibited, can create dangerous conditions for people and property.



IMPORTANT: The manufacturer declines all responsibility for non-compliance with these regulations.

1.5. CERTIFICATION

The SPORT unit was built in compliance with the relevant EU Directives applicable at the time of its introduction to the market, as specified in the declaration of conformity, therefore it meets the safety requirements required by the machinery directive 2006/42/EC.

Specifically, the following standards were applied:

- UNI EN 15194:2018 - CEI EN 61000-4-2:2011-04 - CEI EN 55012:2009-03 - CEI EN 55012/A1:2010-05 - ISO 11451-1:2015

All the products described in this manual have been manufactured according to the operating procedures defined by the OLI eBike Quality System of the OLI@spa Division. The company Quality System, certified in compliance with the UNI EN ISO 9001 Standard, is able to ensure that the entire production process, from the formulation of the order through to the post-delivery technical service, is carried out in a controlled and suitable manner to guarantee the product quality standard.

1.6. WARRANTY

The SPORT unit is covered by a warranty on the materials for a period of 36 months from the date shown on the transport document. The buyer loses the right to the warranty in the event of incorrect installation or use or when they have made changes or repairs to the supply without the authorisation of the manufacturer. Upon receipt of the product, the recipient must check that there are no defects, damage deriving from transport and/or missing items in the supply. Any complaints must be immediately notified to the manufacturer in writing and countersigned by the carrier. Labour services such as sending a technician are excluded from the warranty. Under no circumstances can compensation be claimed for damages. For further clarifications on the warranty assistance conditions, refer to the sales contract.

IMPORTANT: Products sent for repair under warranty must be returned with prepaid transportation to the manufacturer's factory.



1.7. 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;
- › year of manufacture.

The correct reference guarantees quick and precise answers.

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 malfunctioning of the unit if original spare parts and the recommended cleaning and maintenance products are not used.



1.8. TRANSPORT, PACKAGING AND STORAGE

The drive unit and the HMI unit are supplied with dedicated packaging that prevents damage due to transport.

Upon receipt of the goods, the customer must check if the model and quantity received match the data on the order confirmation.

The components must be stored indoors in dry environments, protected from atmospheric agents and at temperatures above -10°C.

IMPORTANT: It is the responsibility of the installer to properly dispose of the packaging in compliance with the applicable laws in force.



1.9. IDENTIFICATION OF THE DRIVE UNIT

The identification of the drive unit takes place via the manufacturer's plate. The plate includes the following information.

- A. Model
- B. Internal code OLI eds
- C. Serial number



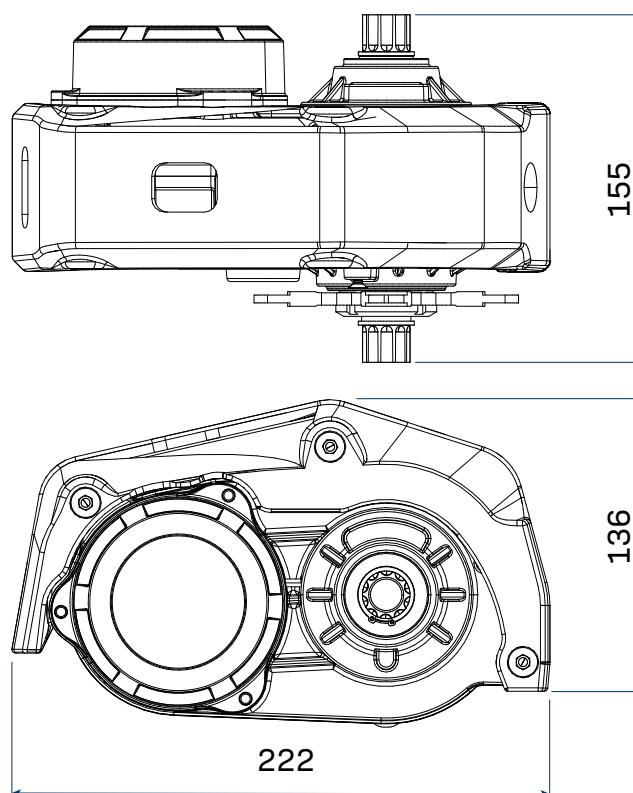
IMPORTANT: The identification plate must never be removed.

1.10. TECHNICAL DATA

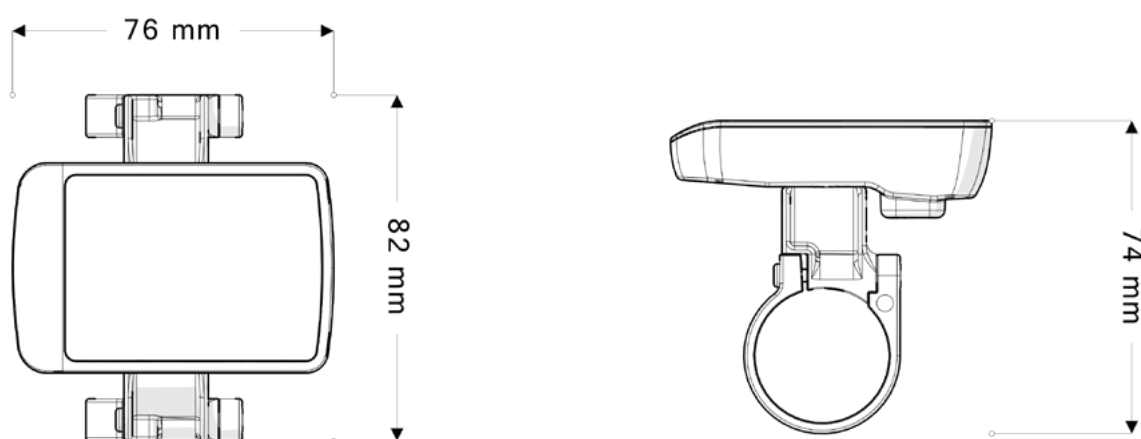
Drive unit	
Rated power	250 W
Max. Torque	83 Nm
Rated tension	36 V
Operating temperature	-5°C / 40°C
Storage temperature	-10°C / 50°C
Degree of protection	IP 54
Weight	3.5 Kg
Insulation class	F
HMI unit	
Display type	Dot matrix LCD
Operating temperature	-5°C / 40°C
Storage temperature	-10°C / 50°C
Degree of protection	IP 54

1.11. SIZE AND DIMENSIONS

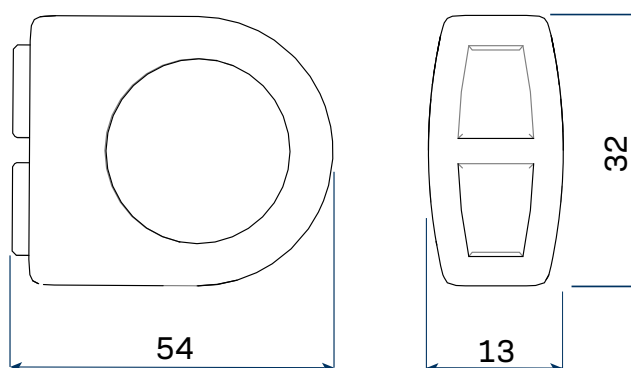
1. Drive unit



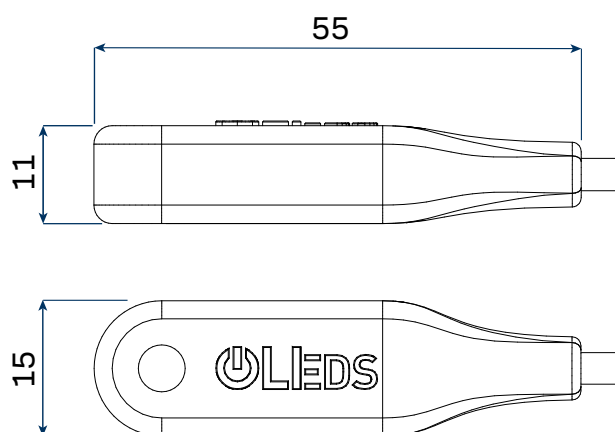
2. Display



3. Control panel;



4. Speed Sensor

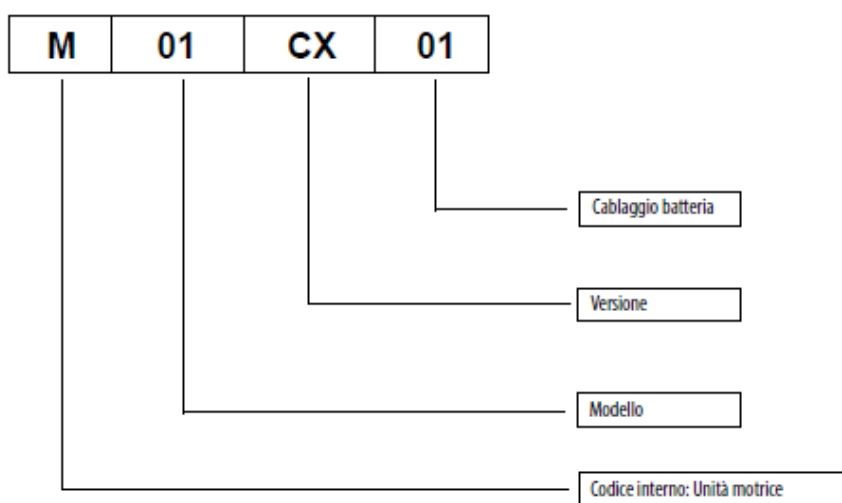


1.12. DECLARATION OF CONFORMITY

The unit complies with the laws in force. Furthermore, since these are products with a strong technical and regulatory evolution, OLI eBike System reserves the right to update its products as quickly as possible due to new technological knowledge and the applicable official standards (UNI, EN, ISO) that may become available from time to time.


OLI® SPA

Via Canalazzo, 35 - 41036 Medolla (MO) - ITALY

**Dichiara che,
la famiglia delle unità motrici:**


numero di serie :

YY	EDS	
----	-----	-------

N° progressivo (1...999999).

Anno (2017,)

è conforme alle direttive elencate nelle seguenti dichiarazioni

DICHIARAZIONE DI CONFORMITÀ CE

con i requisiti delle direttive comunitarie e successive modifiche.

La conformità è stata verificata sulla base dei requisiti delle norme o dei documenti normativi riportati di seguito:

- UNI EN 15194:2018 - CEI EN 61000-4-2:2011-04 - CEI EN 55012:2009-03 - CEI EN 55012/A1:2010-05 - ISO 11451-1:2015



Medolla 5/06/2017

 Giorgio Gavioli
(il Legale Rappresentante)

2. INSTALLATION.

2.1. SYMBOLS AND TERMINOLOGY

Below are the symbols used in the manual and what they mean.

Pictogram	Description
	HEXAGONAL MALE KEY
	PHILLIPS SCREWDRIVER
	SCREWDRIVER FOR SLOTTED SCREWS
	SLOTTED SCREWS
	HEXAGONAL OPEN KEY
	RING NUT KEY
	TIGHTENING TORQUE TO APPLY

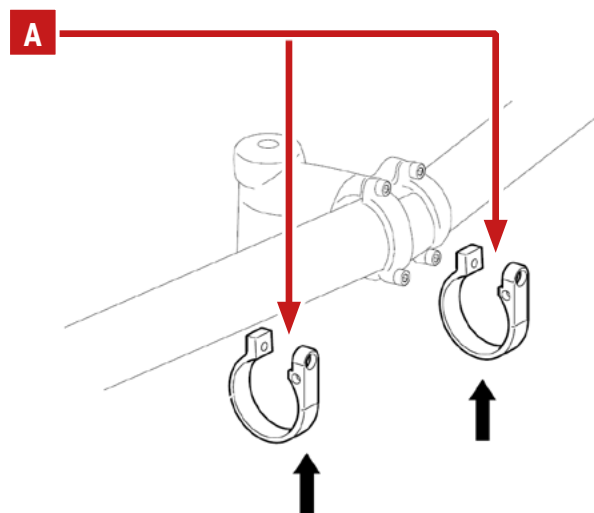


IMPORTANT: Wear appropriate clothing and personal protective equipment appropriate to the work to be performed.

2.2. INSTALLATION OF THE HMI UNIT

2.2.1. Display

Insert the display support rings **A** on the handlebar.



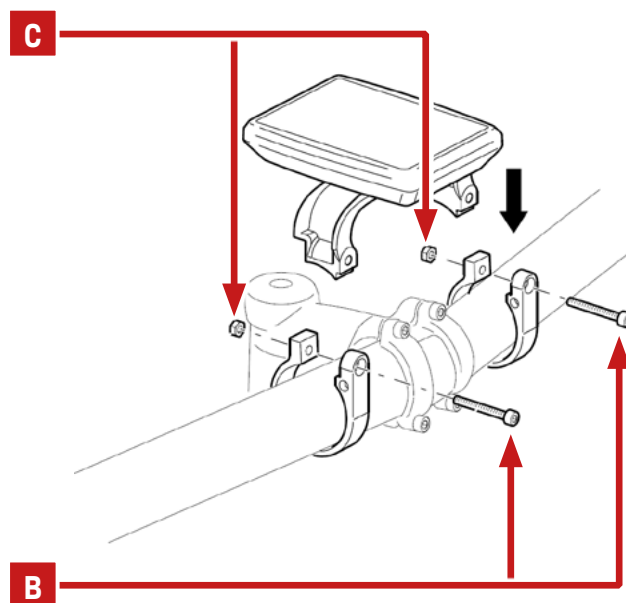
Position the display on the supports carefully at the angle (15° - 35° in relation to the horizontal plane) and tighten the fixing screws **B** with the two nuts **C**



2.5

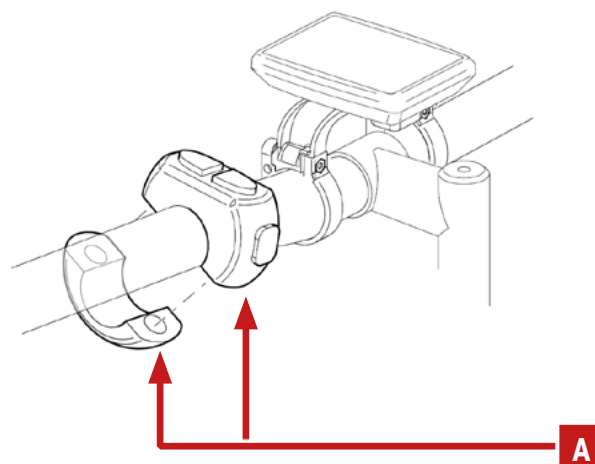


1.5 - 3 Nm



2.2.2. Control panel;

Position the keypad **A** paying attention to the angle (15° - 35° in relation to the horizontal plane) so as to allow the user to operate it comfortably during motion.



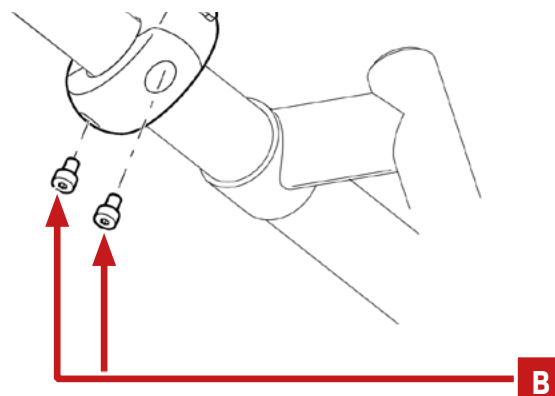
Tighten the fixing screws **B**



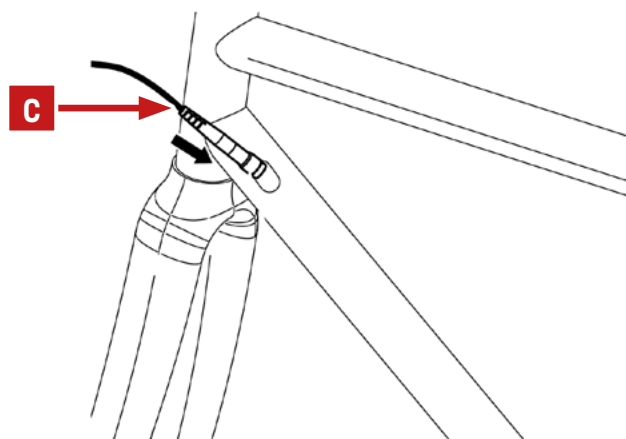
3



1.5 - 3 Nm

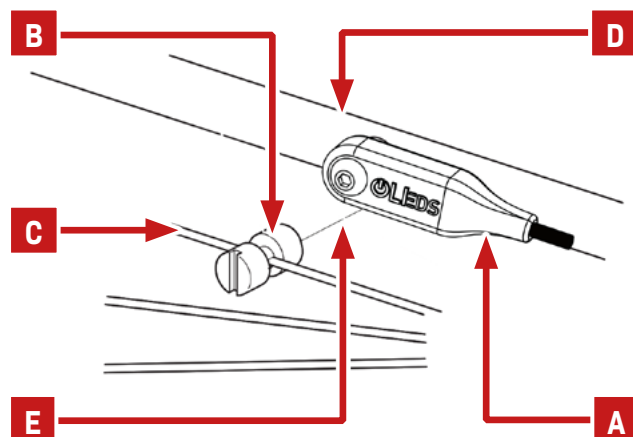


Insert the display cable **C** into the frame to be able to connect it to the drive unit later.

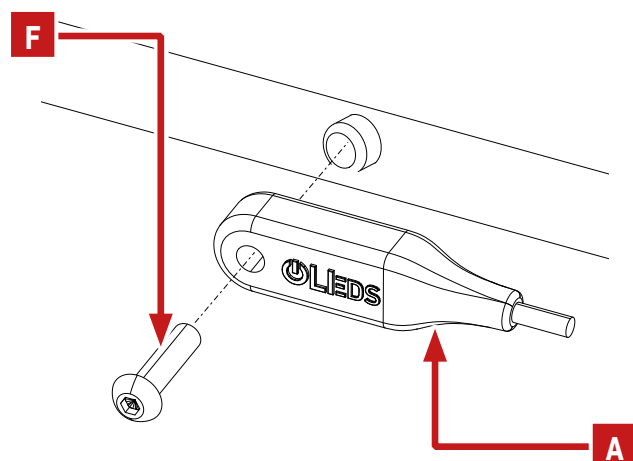


2.2.3. Speed sensor installation

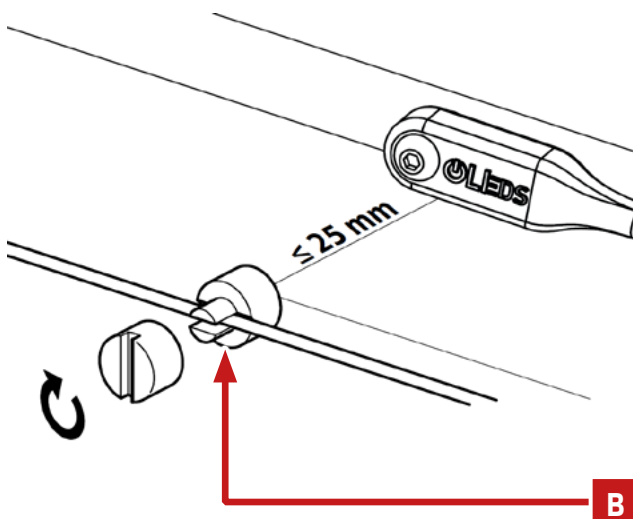
- A.** speed sensor
- B.** magnet
- C.** wheel radius
- D.** bicycle frame
- E.** magnet-speed sensor distance



Fix the speed sensor **A** to the frame using an M5x12 screw **F**.



Secure the magnet **B**
The distance of the magnet from the sensor must be 25 mm.



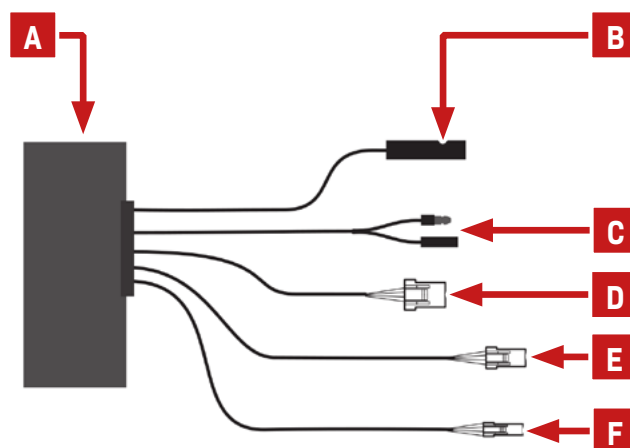
WARNING: If the distance between the speed sensor and the magnet is greater than 25 mm, insert a shimming bushing (supplied) between the frame and the sensor.



2.3. IDENTIFICATION OF THE DRIVE UNIT

2.3.1. Connection diagram

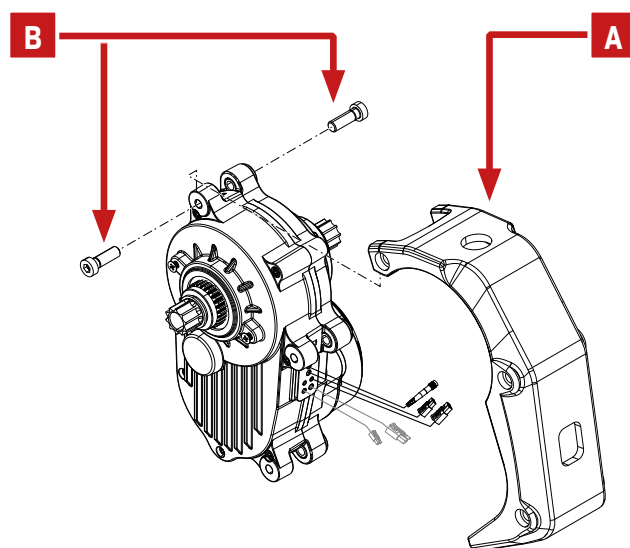
- A.** drive unit
- B.** display cable
- C.** battery cable
- D.** battery cable
- E.** speed sensor cable
- F.** lights cable



2.3.2. Assembly of the drive unit

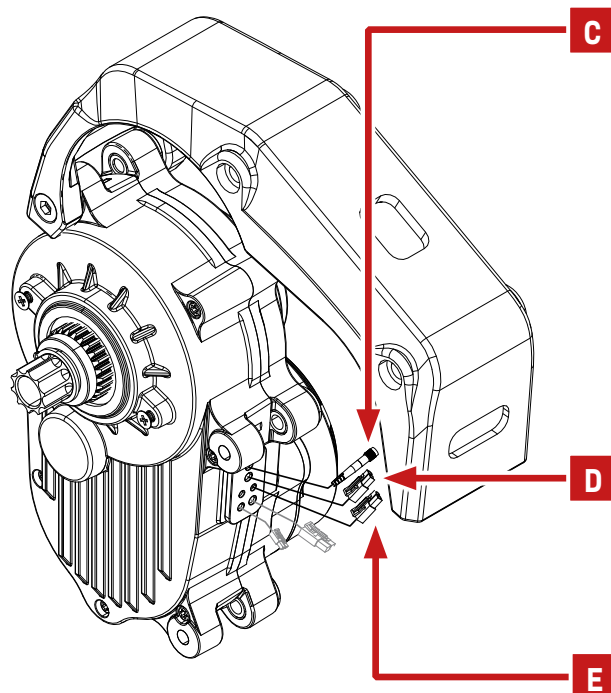
Position the drive unit in correspondence with the interface of the frame **A**

Insert the M8x25 screws **B** in the connections on the right and left, without tightening them.



Connect the following cables:

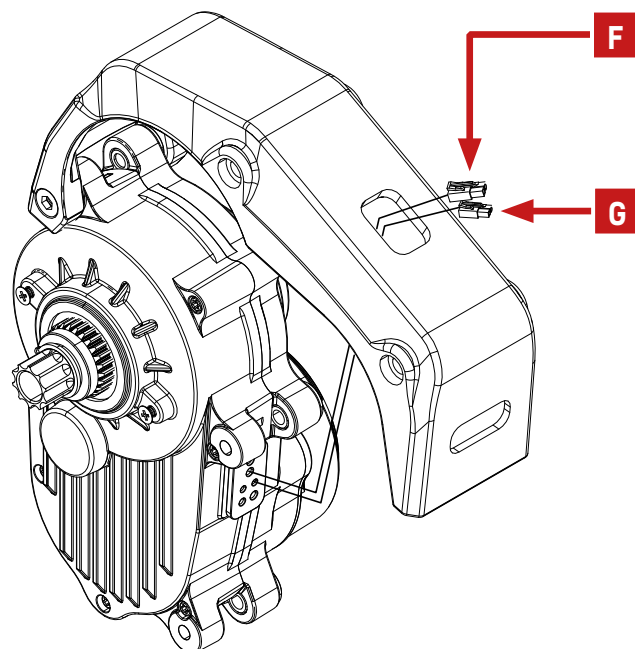
- display **C**
- speed sensor **D**
- lighting system **E** (if provided for by the installation).



WARNING: During assembly, check that no cables are blocked between the motor and the interface.

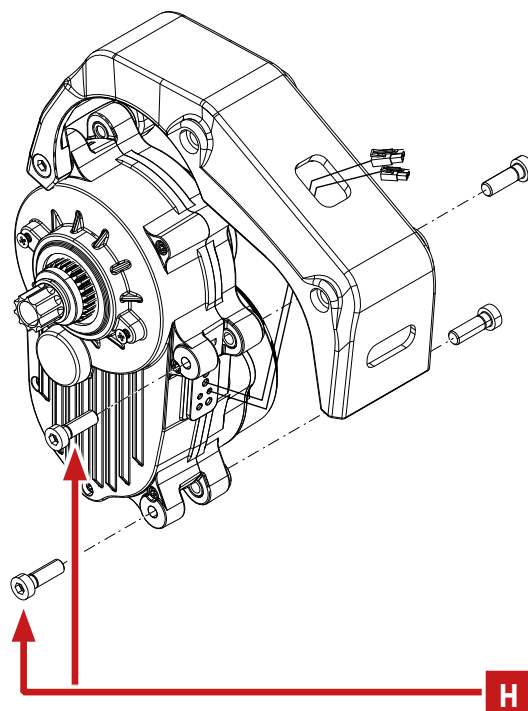


Insert the cables to be connected to the battery **F** and **G** in the hole in the interface of the frame.



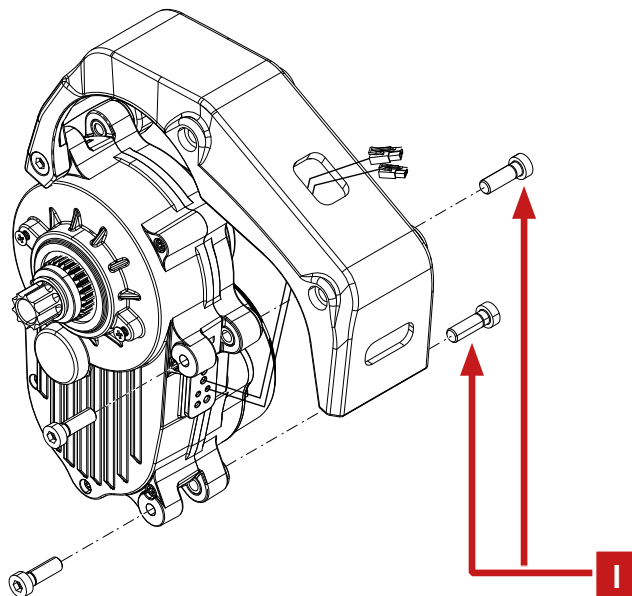
Lift the drive unit until it reaches its final position.

Insert the M8x25 screws **H** on the right side without tightening them.



IMPORTANT: To optimize the assembly, it is necessary to first insert the screws on the right side of the drive unit.

Insert the M8x25 screws **I** on the left side without tightening them.



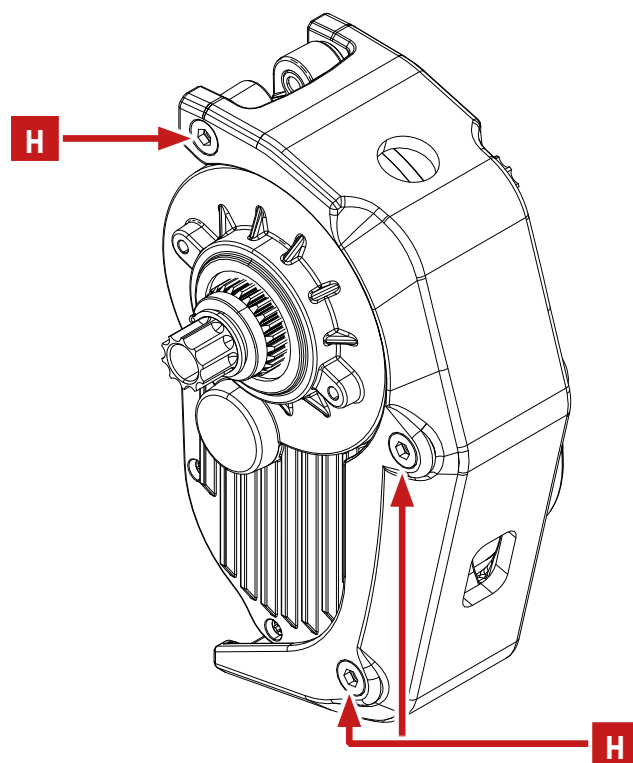
Tighten the screws **H** on the right side.



8



10 Nm



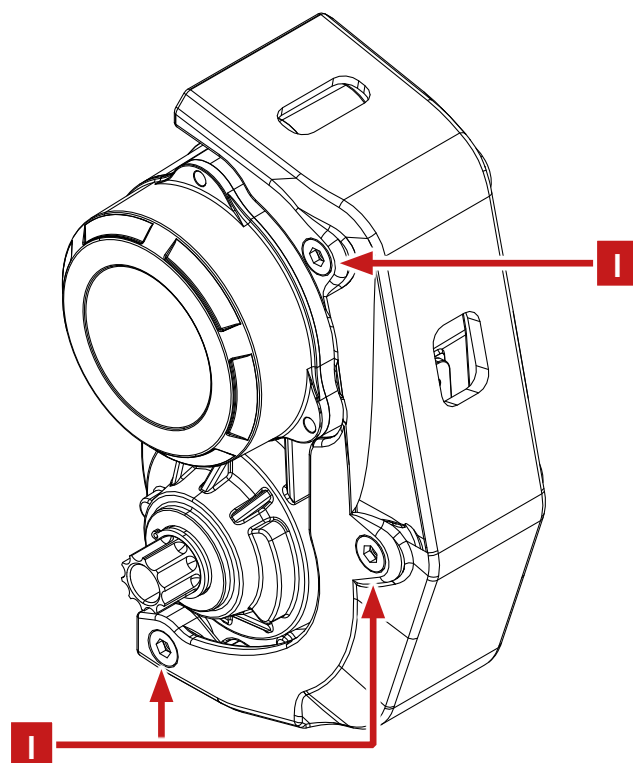
Tighten the screws **I** on the left side.



8

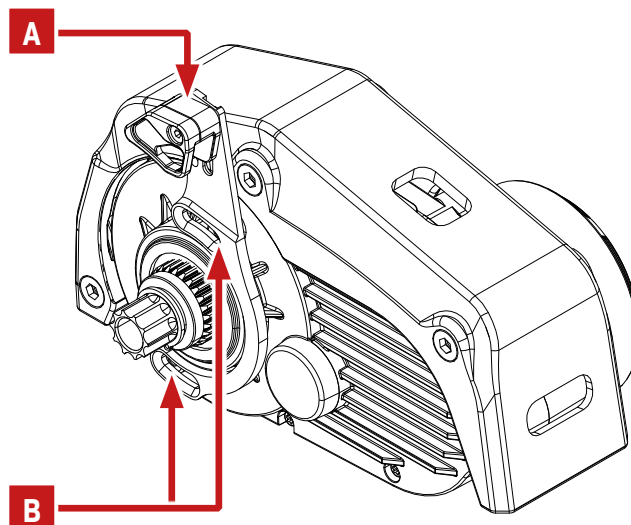


10 Nm

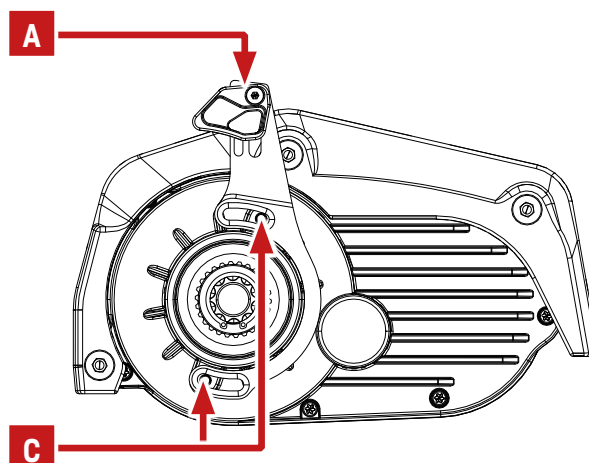


2.3.3. Chain guide assembly (optional)

Position the chain guide **A** so that the fixing slots are in correspondence with the threaded holes **B** present in the drive unit.



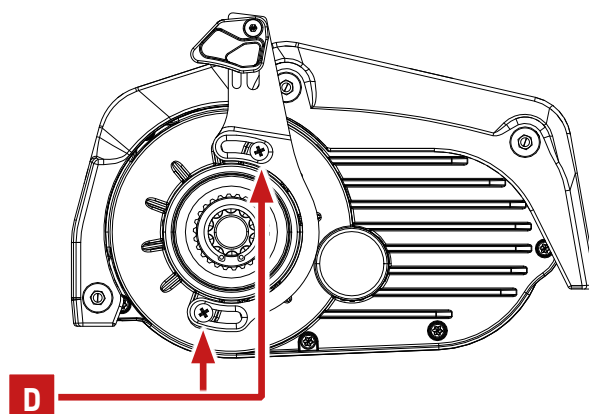
If necessary, optimize the angle of the chain guide **A** in relation to the assembly position of the drive unit using the adjustment slots **C**.



Secure the chain guide to the drive unit using the screws **D**.



3-5 Nm



2.3.4. Spider and crank installation

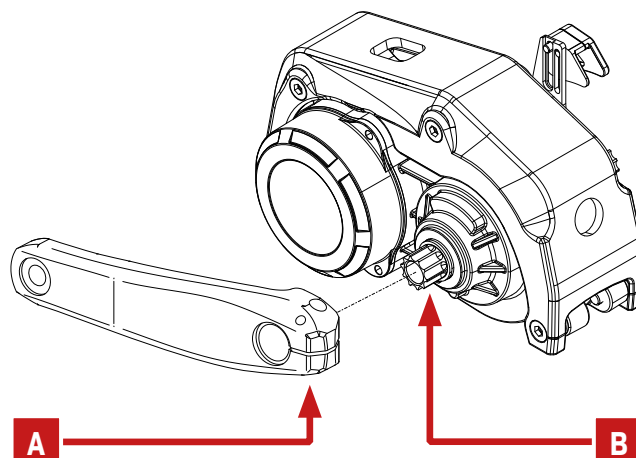
Engage the crank arm **A** (left side) on the shaft **B** and tighten.



8



Refer to the manufacturer's specifications.



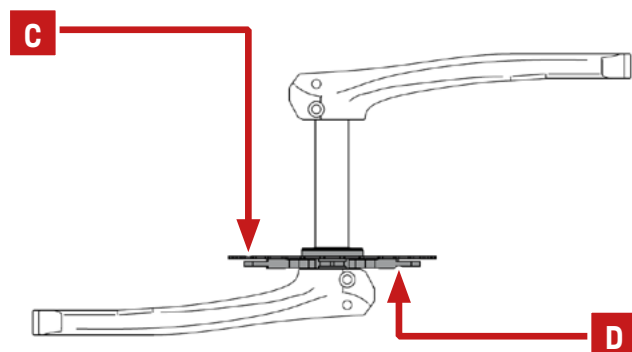
Crown installation

The crown can be installed on the inner or outer side of the spider, according to the rear carriage stop.

Standard chain line

C. crown

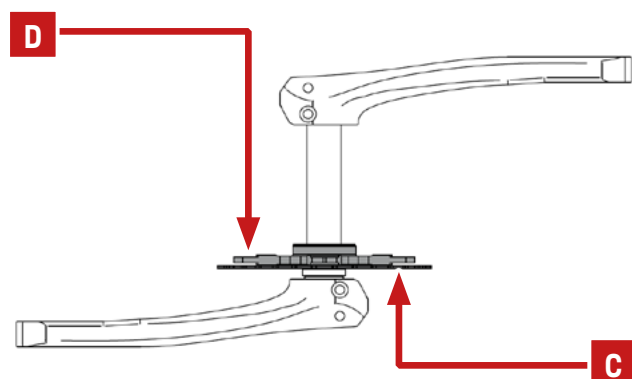
D. spider



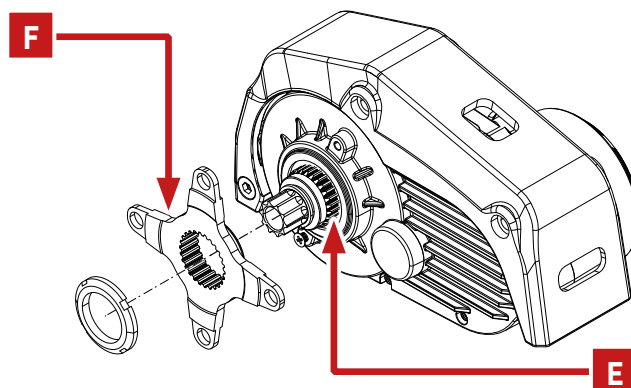
Boost chain line

C. crown

D. spider



Lubricate the coupling of the spider **E** and then engage the spider **F** (right side).



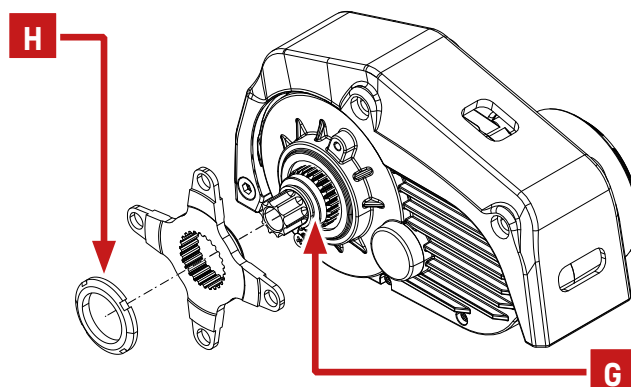
Lubricate the thread **G** and then tighten the fixing ring **H**



KM30



25 Nm



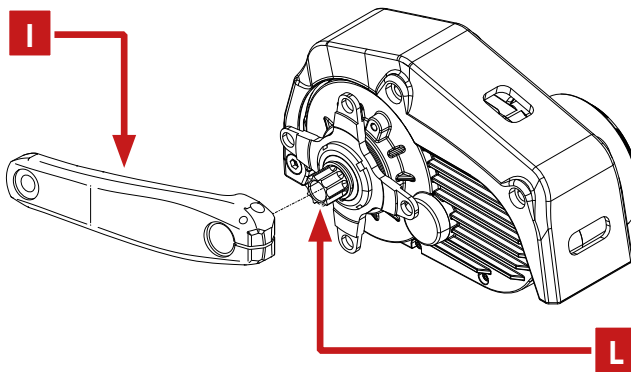
Engage the crank arm **I** (right side) on the shaft **L** and tighten.



8

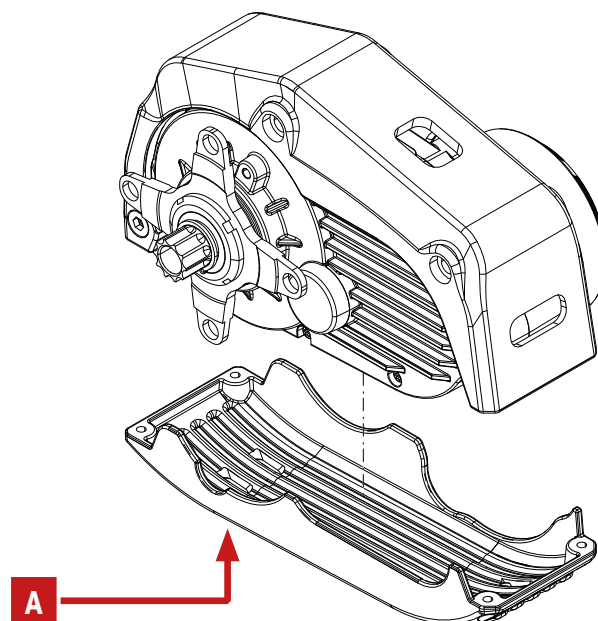


Refer to the manufacturer's specifications.



2.3.5. Engine mount assembly (optional)

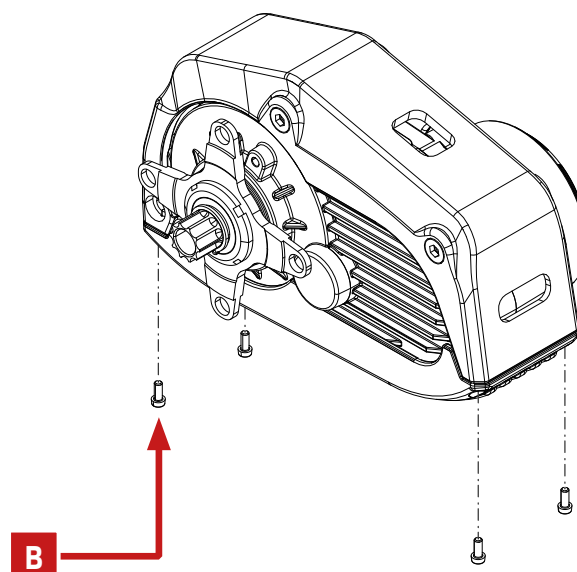
Position the paramotor **A** so that the fixing holes are in correspondence with the threaded holes in the frame of the bicycle.



Tighten the four fixing screws **B**



3-5 Nm



2.4. RESIDUAL RISKS

IMPORTANT: Despite all the measures taken, the unit installation operations present some residual risks the elimination of which is not compatible with correctly meeting the objectives. Therefore operators must always use personal protective equipment.



IMPORTANT: The customer is required to perform a risk analysis based on the work to be performed, the place of installation and the surrounding environment.



3. USE AND MAINTENANCE MANUAL

3.1. SAFETY STANDARDS

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 bicycle, it is good practice to respect the following points:

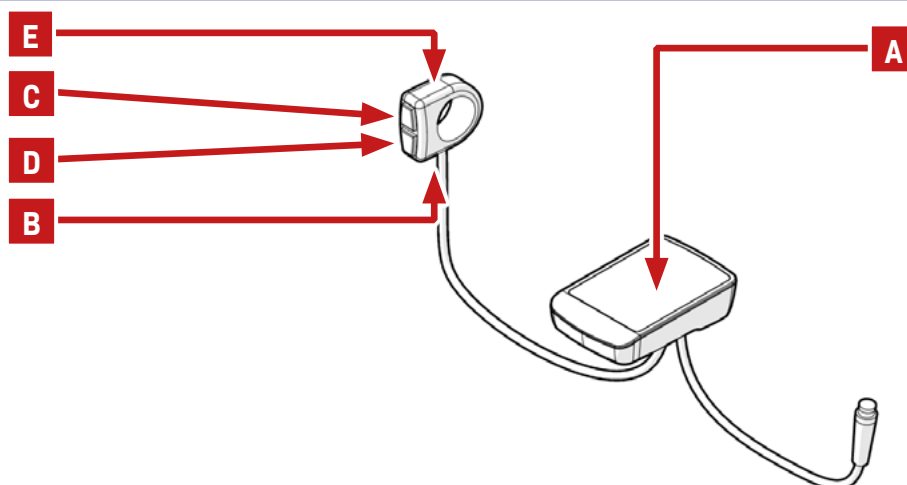
- › consult your doctor before starting a training program;
- › observe the traffic regulations relating to pedal assisted bicycles;
- › don't get distracted by looking at the display when you are riding the bicycle;
- › do not use the display as a handle;
- › only use the HMI unit and the control panel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



IMPORTANT: The Manufacturer declines all responsibility in the event of damage to persons or things due to improper use of the unit or failure to follow the instructions given in the use and maintenance manual.

3.2. DESCRIPTION OF THE HMI UNIT

- A. Display
- B. Control panel;
- C. ON Key
- D. DOWN Key
- E. MODE Key



This manual uses the following conventions:

- › Long press: > 2s
- › Short press: <1s

Note: For use and maintenance of the High Vision Display refer to its manual.

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

Error code	Description
0001	Communication problem with the battery. It is possible that the battery status data is displayed incorrectly. Check that the wiring and the battery contacts are correctly connected and intact.
0101	Communication problem between drive unit and HMI. Check that the wiring is correctly connected and intact.
0104	Speed sensor not detected. Check that the alignment between the magnet and the speed sensor is correct. Check that the speed sensor is installed and connected correctly.
0105	Torque meter signal not compliant. The torque meter signal has a fault. Low power operation.
0106	Torque meter offset not compliant. The torque meter signal has a fault.
0801	Faults in the motor rotation sensors.
0802	Faults in the pedals rotation sensors.
0804	Excessive controller temperature. The temperature sensor inside the controller has detected a temperature above the danger threshold.
0805	Excessive motor temperature. The motor has reached a temperature above the danger threshold.
0806	Peripheral bus voltage not compliant.
0808	Locked rotor. The motor failed to start due to a mechanical blockage or a problem with the internal wiring of the drive unit.
0809	The battery voltage is above the maximum voltage allowed.

Error code	Description
0810	Signal of the current sensor not compliant.
0811	The drive has detected an overcurrent.
1101	Communication problem between HMI and drive. Check that the wiring is correctly connected and intact.
1102	One key on the control panel is locked in the press position.

3.3. TROUBLESHOOTING

The following table lists the main problems that can be found and the possible solutions to be undertaken.

Problem	Cause/Solution
The system does not turn on.	Check that the battery is properly in place and is charged.
Assistance does not activate.	Check that the selected assistance level is greater than 0 and that the battery charge level is sufficient.
The display shows an error message.	The system has detected a fault. Depending on the type of fault, the motor could be deactivated or run at reduced power. For more details refer to the paragraph "Error messages".
The display glass is fogged up.	Due to sudden changes in the environmental conditions, condensation may form inside the glass. The condensation will disappear after temperature stabilisation.



WARNING: If, after this operation, the problem persists, you must go to a service centre.

3.4. 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, only use a cloth dampened with water.

WARNING: Do not use aggressive products. Never use abrasive products or powders or base or acid chemical detergents.



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



3.5. RETURNS

If the product is returned, if the original packaging has been preserved, re-use it for shipping. Otherwise, store the drive unit and/or display in a box, trying to protect them as well as possible from shocks resulting from transport.

3.6. DEMOLITION AND DISPOSAL

At the time of decommissioning and dismantling of the unit it is necessary to separate the plastic parts and the electrical components which are to be sent to the differentiated collection centres in compliance with the regulations in force. The metal parts must be subdivided to correctly send for recycling.

With reference to the WEEE Directive, the electrical and electronic components, marked with a special symbol, must be disposed of in authorised collection centres. Unauthorised disposal of "Waste Electrical and Electronic Equipment" (WEEE) is punishable by penalties governed by applicable laws.

Defective or rechargeable batteries/faulty or used batteries must be collected separately and sent for ecological reuse. Return the non-functioning HMI unit to an authorised e-bike dealership.

IMPORTANT: Demolition operations must be carried out by suitably trained personnel.



4. SPARE PARTS

4.1. HOW TO ORDER SPARE PARTS

OLI eBike Systems thanks to its logistical structure is able to minimize the delivery time of the spare parts. The manufacturer also guarantees quality and high performance for spare parts. Spare parts are subjected to numerous tests to ensure the same standards as the components initially installed on the product and have been developed and approved specifically for the drive unit and the HMI unit. To optimize the process of evasion of the spare parts, please specify the identification data of the unit shown on the manufacturer's plate. Communications and requests may be sent to:

OLI eBike Systems
Via delle pesche, 891 - 47522 Cesena - (FC) -ITALY
Tel +39 / 0547 / 318322
info@oli-ebike.com
www.oli-ebike.com



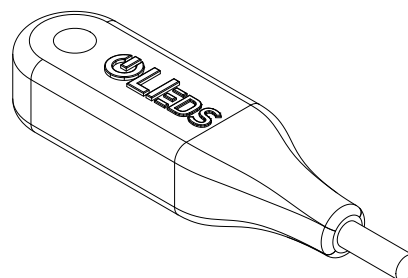
WARNING: Use only original spare parts. Adopting unapproved and untested components can cause malfunctions, breakages and create hazardous conditions.

4.2. SPARE PARTS AVAILABLE

The following table summarizes the spare parts available for the drive unit and the HMI unit.

Code and Description	Spare part identification
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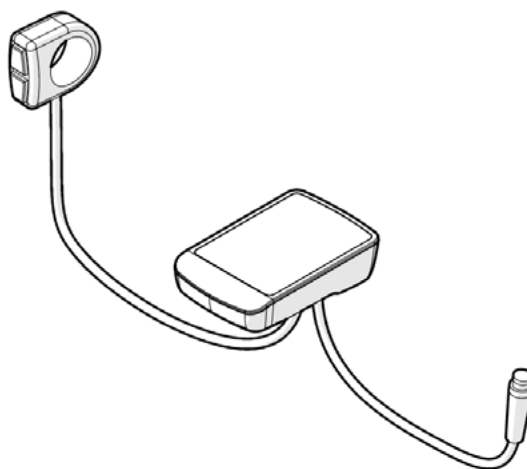
EBKRV0001
Speed Sensor



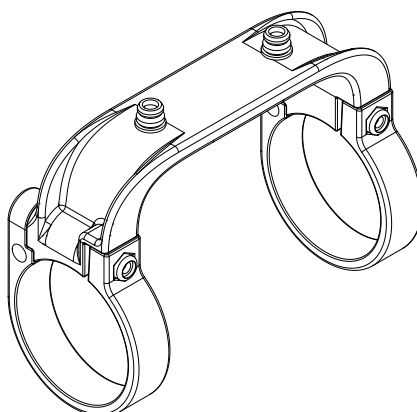
Code and Description

Spare part identification

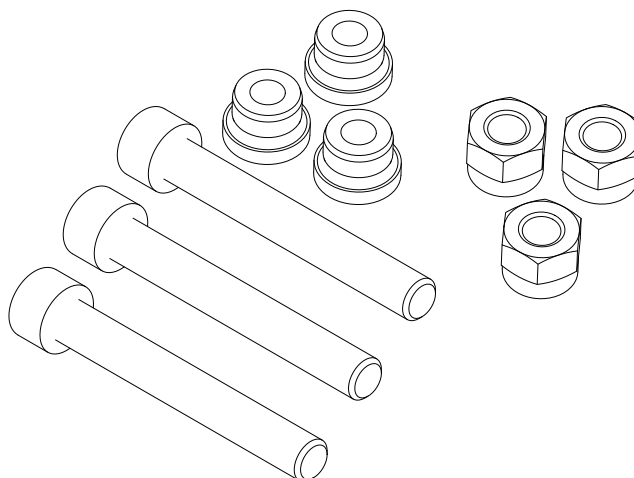
EBHMI0003
Display

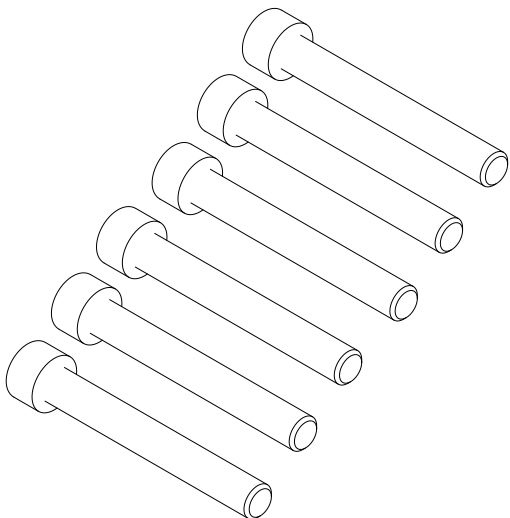
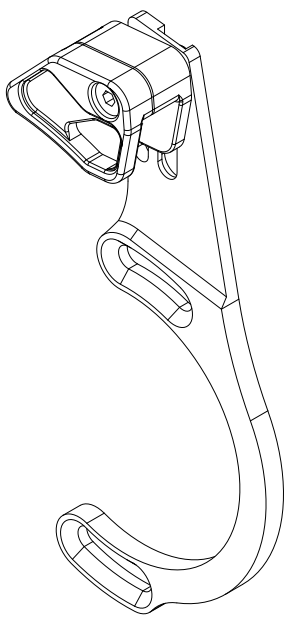
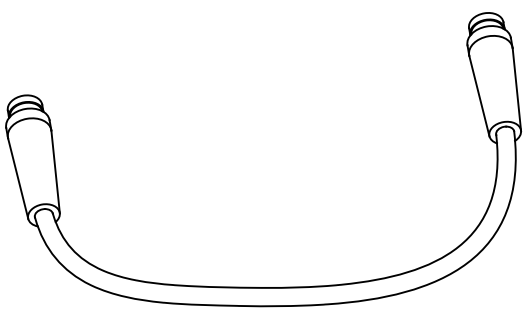


EBHMI000F
Support for display



EBKRV000X
Hardware for Move Plus

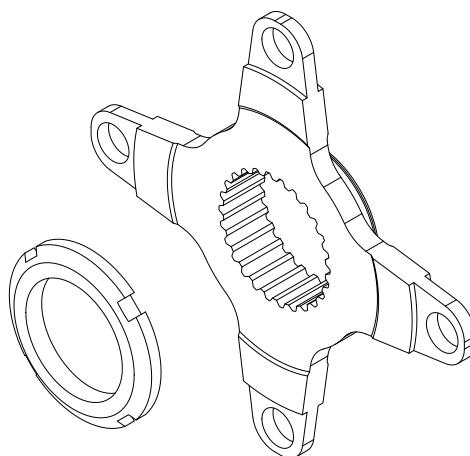


Code and Description	Spare part identification
EKR000Y Hardware for SPORT	
EBCG0001 Chain guide	
EBCE02001 Display extension cable	

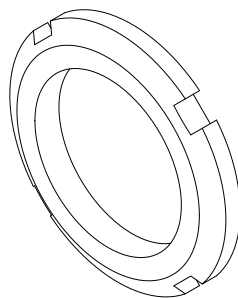
Code and Description

Spare part identification

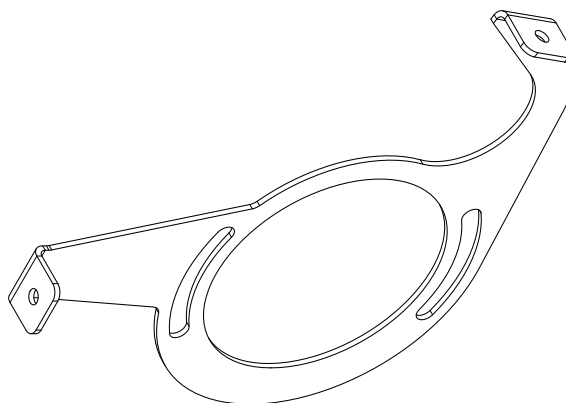
EBKRV0004
Spider



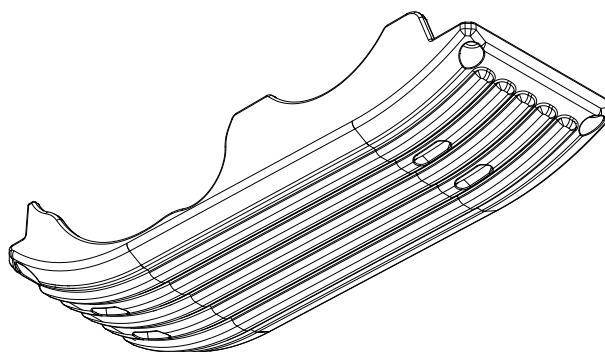
EBSN0002
Ring



EBCB0001
Support for chain guard



EBMG0001
Sport Paramotor





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