

CONTENT

For your Safety	2	4 Battery (Optional)	17
Note	3	4.1 Using the Battery Properly	18
2 System Installation.....	4	4.2 Charging the Battery.....	18
2.1 List of Tools to be used	4	5 Display Error Code List	19
2.2 Component Names	5	6 List of Materials	20
2.3 Display Installation	6		
2.4 Auxiliary Keypad Installation	7		
2.5 Battery Rail Installation.....	9		
2.6 External Speed Sensor Installation SR SD02.01	9		
2.7 Drive Unit Installation	12		
3 System Cabling.....	15		
3.1 Connection of the Battery Cable to the Drive unit.....	15		
3.2 Connection of the Speed Sensor to the Drive unit.....	15		
3.3 Connection of the EB-BUS to the Drive unit.....	16		
3.4 Connection of the Gear Sensor to the Drive Unit.....	16		

FOR YOUR SAFETY

When installing this product, be sure to follow the instructions given in the manual!

It is recommended that you use only genuine BAFANG parts at all times. Serious injury may result if loose or faulty bolts and nuts suddenly come off.

If the product is improperly adjusted, accidents and serious injury can occur.

- When performing maintenance operations (for example parts replacement), be sure to wear goggles or eye protection.
- Please refer to the website www.szbf.com or contact the dealer for information on the product not covered by this manual.
- Keep this Dealer Manual in a safe place for later reference.

Inform the purchaser about the following issues:

- Giving too much of your attention to the e-bike display while riding can lead to an accident.
- It is important to check that the wheels are properly attached to the bicycle before commencing riding. If the wheels are not securely attached fixed serious injury may result.
- When riding a pedal-assisted electric bicycle, you should be fully familiar with the starting-off characteristics of the e-bike before riding it. If the e-bike starts off suddenly, accidents may result.
- It is important to turn on the lights when riding in the evening and at night.

Instructions on e-bike installation and maintenance

- When cabling the product or installing the parts onto the e-bike, be sure to disconnect the battery. Not doing so may result in electric shock.
- When installing this product, be sure to follow the instructions given in the manual. If bolts and nuts are not tightened correctly or if the product is damaged, the e-bike may suddenly fall over and serious injury may result.
- The frequency of maintenance will vary depending on the usage of the e-bike. The chain should be cleaned periodically 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.


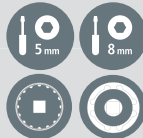



NOTE

Important information for the purchaser:

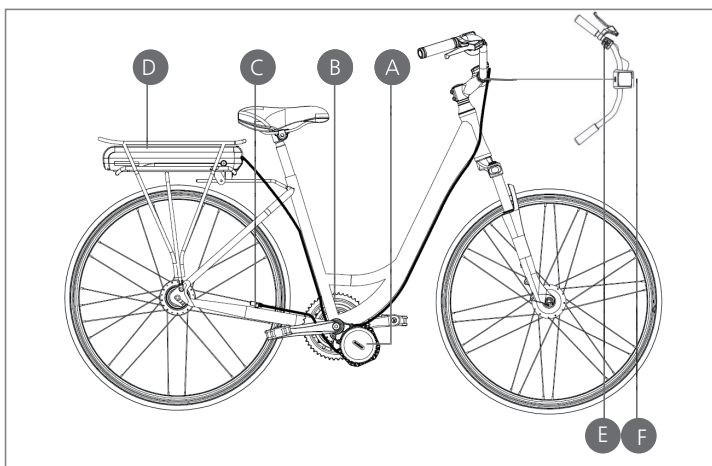
- Please follow instructions given in the manual for your riding safety.
- Examine the battery charger regularly for damage, especially the cable, plug and housing. If the battery charger is damaged, it must not be used until it has been repaired.
- Please follow the guidance given by the safety supervisor or the instructions indicated in the manual when using the product. This product is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or persons lacking experience and knowledge in using the product.
- Do not allow children to play near the product.
- Please consult the nearest dealer for any errors or problems.
- Do not modify the system. Doing so may lead to malfunction of the system.
- For information on product installation and adjustment, please consult your dealer.
- The product is designed to be fully waterproof to withstand wet weather riding conditions. However, do not deliberately immerse it in water.
- Do not clean the bicycle with a high-pressure water spray. If water gets into any of the components, operation problems or rusting may result.
- When transporting the product on a car in wet weather, remove the battery and put it in a safe place to stop it from getting wet due to the rain.
- Handle the product carefully and avoid subjecting it to any strong shocks.
- Some important information given in this manual may also be found on the product labels.
- When buying a spare key for the battery, be sure to provide the number on the battery key. Please write down the number and keep it in a safe place.
- Use a wrung-out damp cloth to clean the battery and the plastic housing.
- For any questions regarding the maintenance and use of the product, please contact your dealer.
- Normal wear and tear due to normal use and aging is not within our scope of quality guarantee.

2 SYSTEM INSTALLATION

2.1 List of Tools to be used

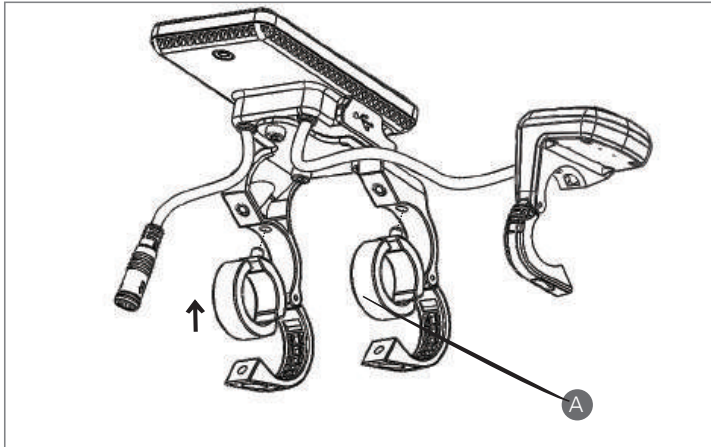
Components	Use of the Tools	Tools
Display	To tighten M3 & M4 screws	 Internal hex wrench
Drive Unit	To fasten M6 & M8 & M33 bolts and nuts onto the frame adapter and the drive unit	 Internal hexagonal wrench and two dedicated tools
	To fasten M8 screws on the crank mounting	 Internal hexagonal wrench
Speed Sensor	To install the iron magnet	 T20 Security Torx Bit
Battery	Optional	 Internal hex wrench

2.2 Component Names



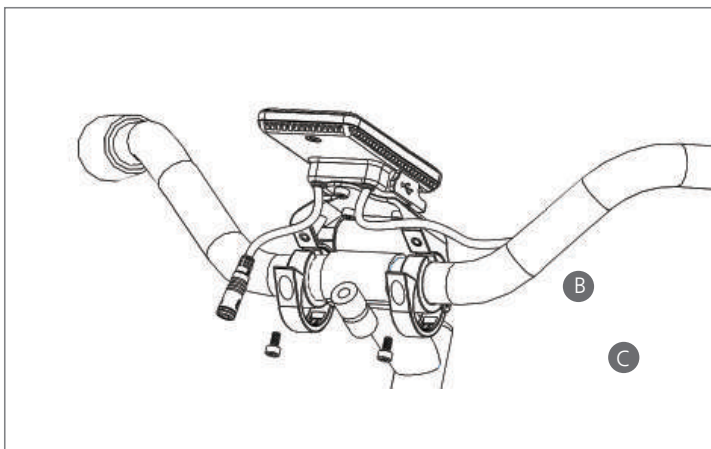
- A Drive unit
- B Front chain wheel
- C External speed sensor
- D Battery(Optional)
- E Auxiliary keypad
- F Display

2.3 Display Installation



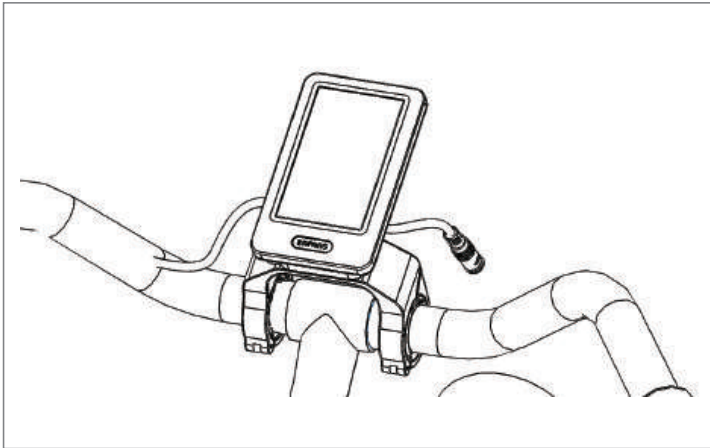
- Ⓐ Rubber clamping ring
Left and right display
clamps for the $\varnothing 22.2$
handlebar:
Left and right display
clamps for the $\varnothing 25.4$
handlebar:

One or two rubber clamping rings may be needed depending on the diameter of the handlebar (the applicable handlebar specifications are $\varnothing 22.2$, $\varnothing 25.4$ and $\varnothing 31.8$).
Open the left or right display clamp, and insert one or two clamping rings into the right position of the display clamp as shown in the picture above.



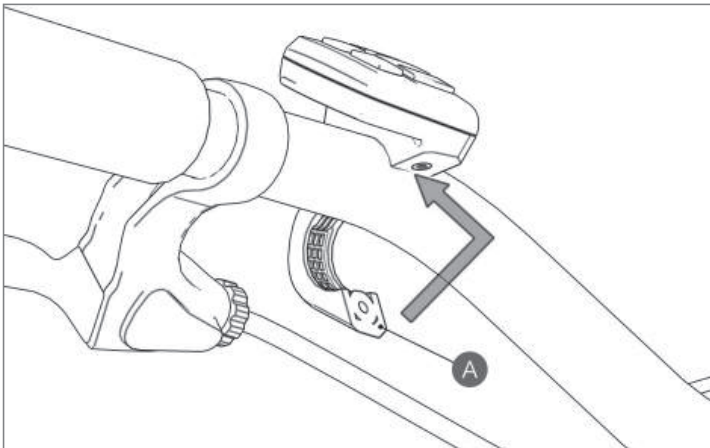
- Ⓑ display clamp
- Ⓒ hex socket head cap
screws M4×8

Insert the clamping ring(s) to each of the two display clamps and mount them onto the handlebar. Use an internal hex wrench to fasten the left and right clamps onto the handlebar.



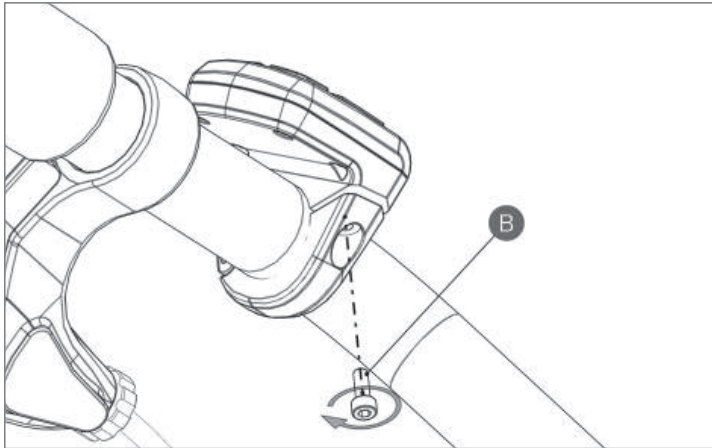
Adjust the angle of the display so that you can easily see the display screen when riding. After the angle has been adjusted, tighten the screws to the specified torque.
Tightening torque: 1 N.m

2.4 Auxiliary Keypad Installation



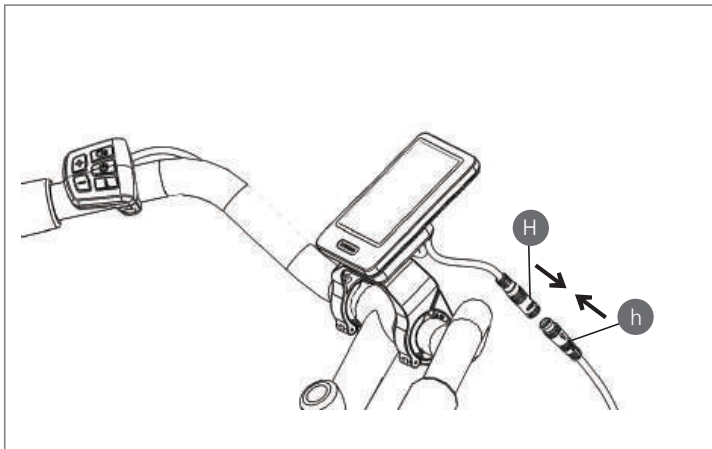
A keypad clamp

Open the auxiliary keypad and assemble it onto a position that is easy for operation. Adjust the angle of the auxiliary keypad to ensure that the keypad is easy to see during riding.
(Applicable to the handlebar whose external diameter is $\varnothing 22.2\text{mm}$)



- B** hex socket head cap screw M3×8

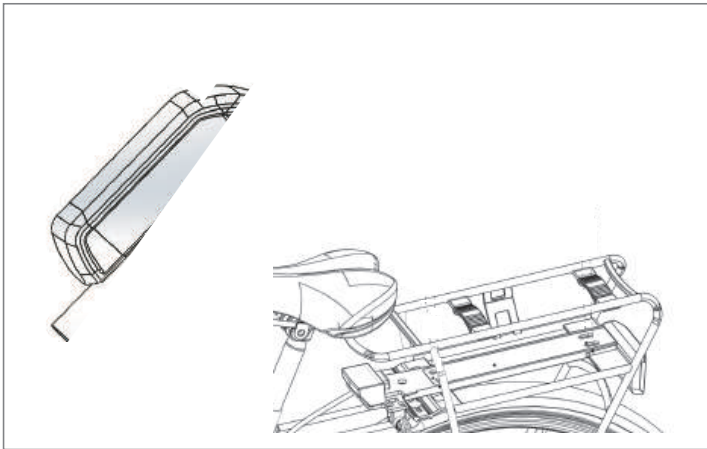
Fix the keypad onto the handlebar with a screw. Then tighten the fixing screw with an internal hex wrench. Tightening torque:1 N.m



- H** female connector at the display
- h** male connector at the EB-BUS

Match the female connector at the display with the male connector at the EB-BUS as shown in the picture above.

2.5 Battery Rail Installation

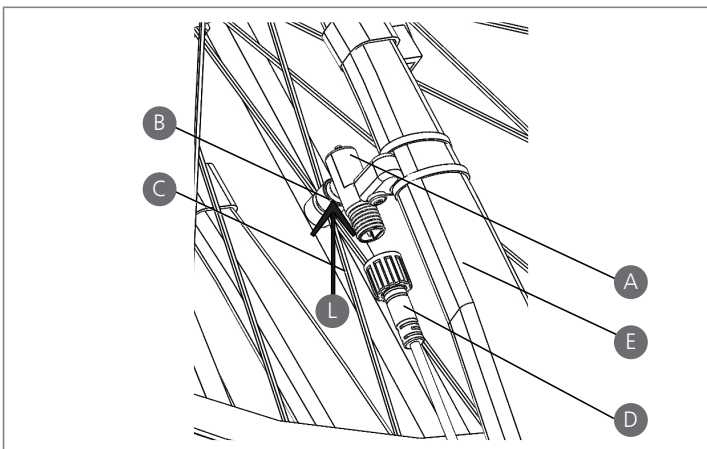


Align the mounting holes of the carrier with the mounting holes of the battery rail. Fasten the battery rail onto the battery carrier with hex socket head screws (M5).

Tightening torque: 2 N.m

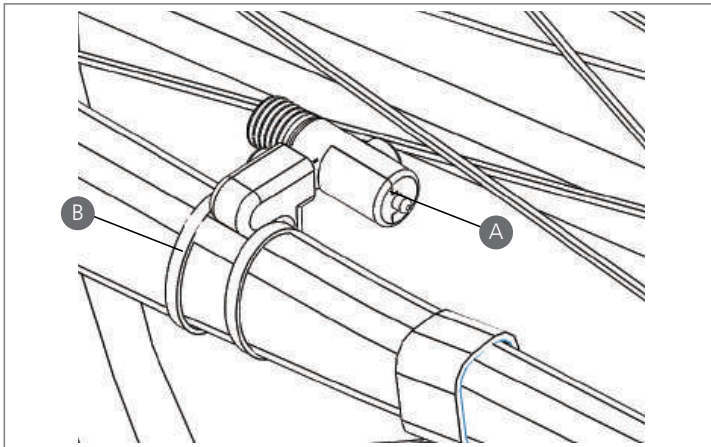
Choosing a corresponding battery and under the help of professional mechanics or local dealers to assemble it.

2.6 External Speed Sensor Installation S R SD02.01



- A external speed sensor
- B magnet unit
- C spoke
- D cable of speed sensor
- E chain stay

Before installing the speed sensor, please make sure the gap between the speed sensor and the magnetic unit is between 3 and 5 mm.

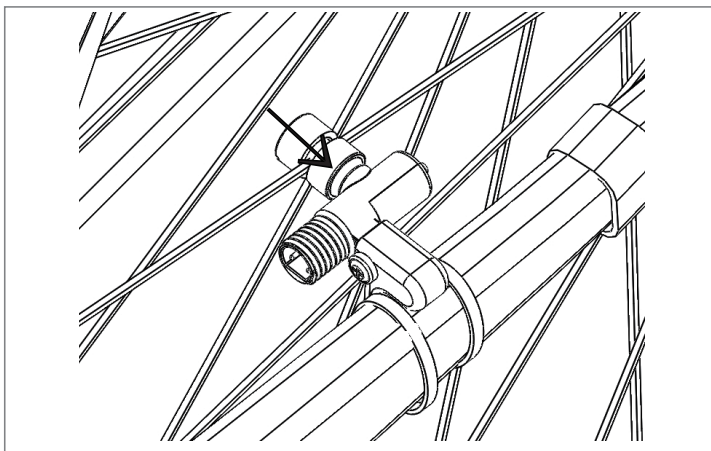


- A external speed sensor
- B cable ties

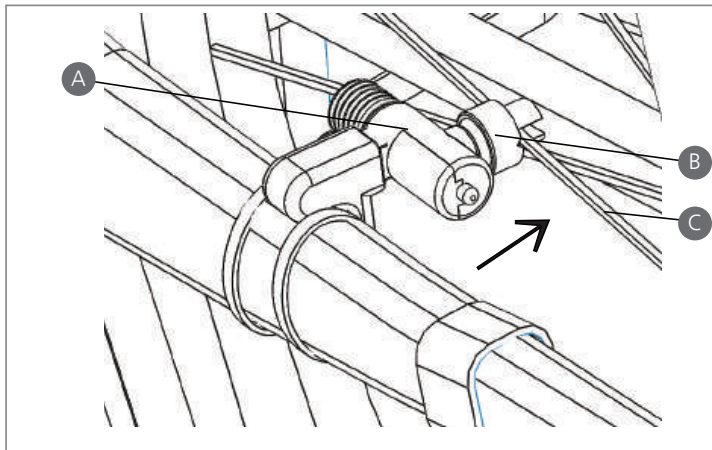
If the gap is within the specified range, use the mounting bolt to fix the speed sensor.

If the gap is more than 25 mm, please put spacers between the sensor and the chain stay boss to reduce this gap.

Tightening torque: 1.5-2 N.m

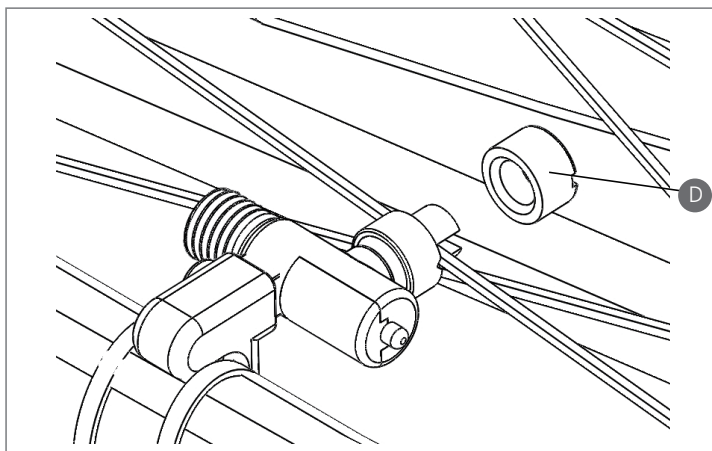



Arrange the speed sensor and the magnet unit as shown in the picture above. When installing the magnet unit, make sure its center is aligned with the center of the speed sensor's induction zone.



- A external speed sensor
- B magnet unit
- C spoke

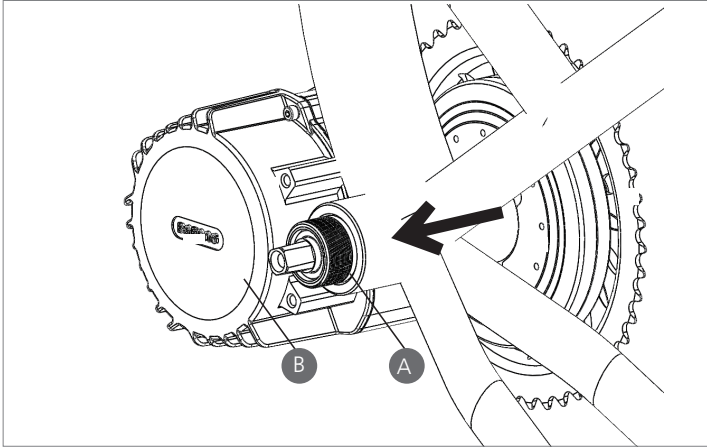
Arrange the speed sensor and the magnet unit as shown by the picture above. Mount the magnet unit onto the spoke.



- 
- D T20 security Torx Screw

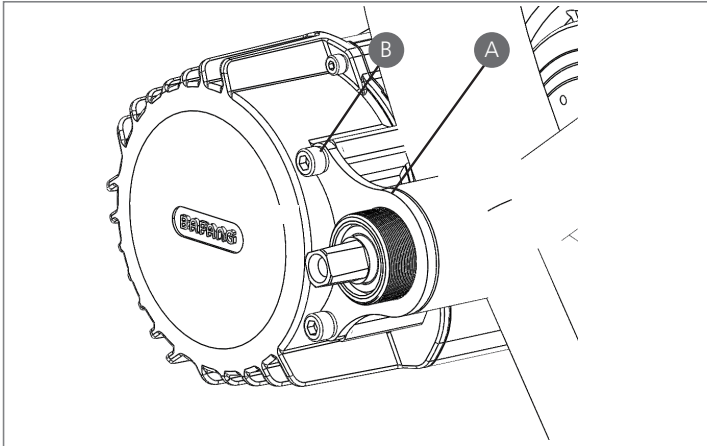
Tighten up the mounting nut with a T20 security Torx screwdriver. Tightening torque: 1.5-2 N.m

2.7 Drive Unit Installation



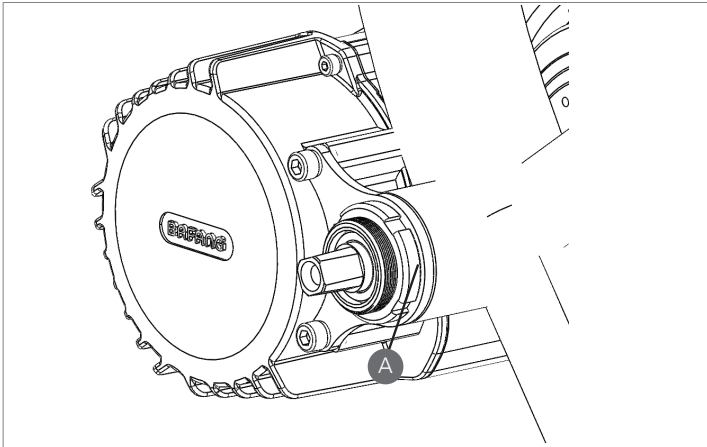
- A bottom bracket
- B drive unit

Dedicated bottom bracket internal hole, machining it to $\Phi 33.6\text{mm}$
Assemble the drive unit from right side of bike frame into bottom bracket.



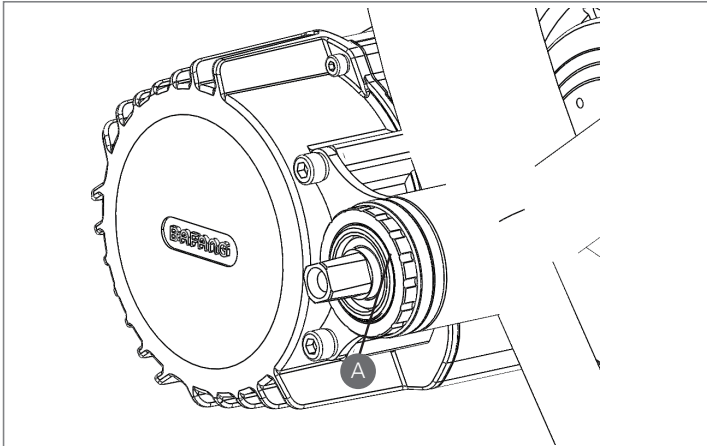
-  5mm
- A fixed holder
- B 2-M6 screw
- C M8 screw(dedicated BB)

Put the fixed holder on the bottom bracket. Fasten it with M6 screw. Tightening torque: 10 N.m
Dedicated: fasten it with M8 screw. Tightening torque: 20 N.m



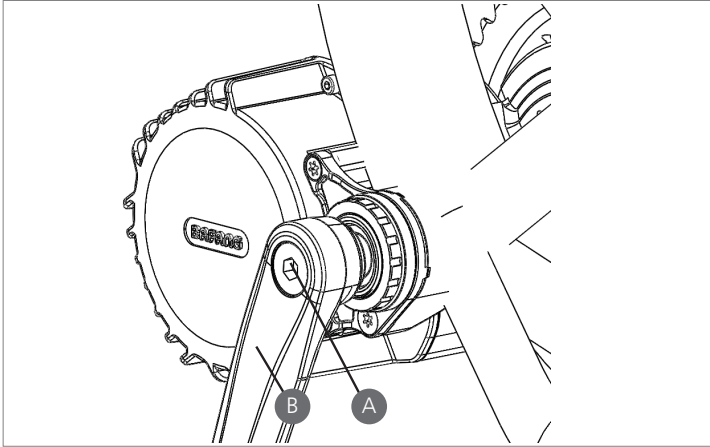
A M33 steel nut

Fasten the dedicated M33 steel nut required torque. Tightening torque: 50 N.m



A M33 aluminum nut

Fasten the dedicated M33 aluminum nut tool to required torque. Tightening torque: 25 N.m



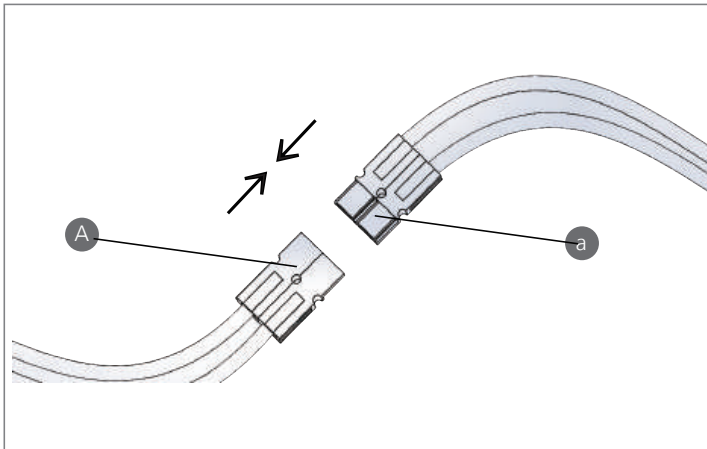
A M8*15 screw

B L/R crank

Assemble the R/L cranks on the main shaft. Lock it with M8 screw. Tightening torque: 35-40 N.m

3 SYSTEM CABLING

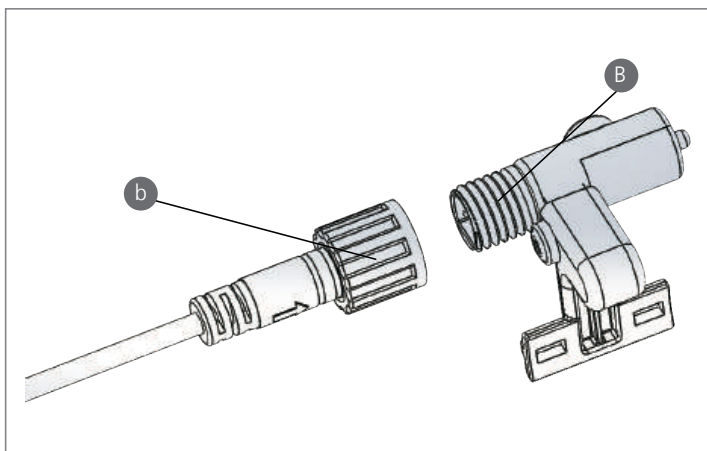
3.1 Connection of the Battery Cable to the Drive Unit



- A female connector for the positive cable at the battery(optional)
- a male connector for the negative cable at the drive unit(optional)

The power bus, which is made up of a positive battery cable, a negative battery cable and battery communication cables(optional), is connected to the battery cables at the drive unit.

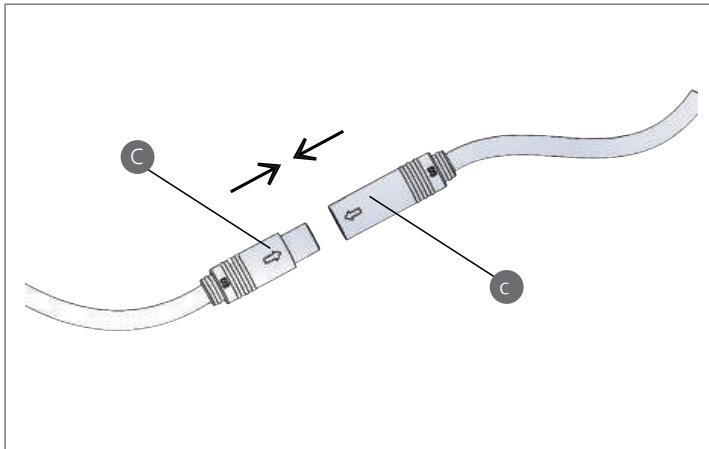
3.2 Connection of the Speed Sensor to the Drive Unit



- B male connector at the speed sensor
- b female connector at the drive unit for connection to the speed sensor

Link the male connector at the external speed-detecting sensor to the female connector for the external speed-detecting sensor cable at the drive unit.

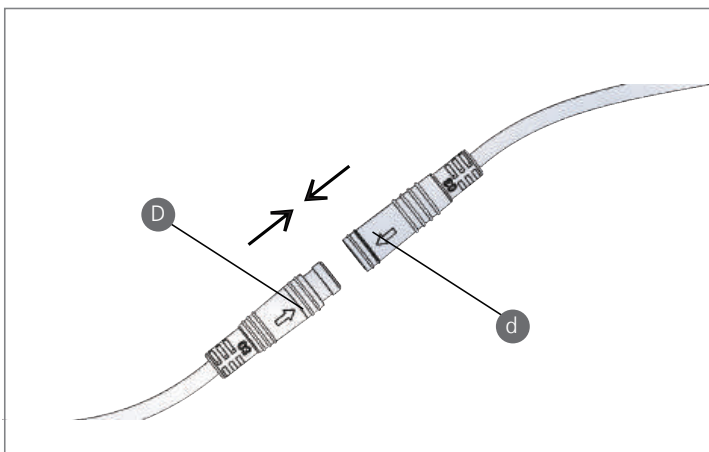
3.3 Connection of the EB-BUS to the Drive Unit



- Ⓒ male connector at the EB-BUS
- Ⓒ female connector at the drive unit for connection to the EB-BUS

Link the EB-BUS cable to the EB-BUS connector at the drive unit.

3.4 Connection of the Gear Sensor to the Drive Unit(Optional)



- Ⓓ female connector at the at the drive unit
- Ⓓ male connector for the Gear Sensor (Gear Sensor plug may look orange however it is still designed to plug into yellow connector)

Link the Gear Sensor cable to the connector at the drive unit.

4 BATTERY (OPTIONAL)

Precautions

- If any liquid leaking from the battery gets into your eyes, rinse immediately with clean water (e.g. tap water). Seek medical advice immediately; otherwise the battery liquid may damage your eyes.
- Do not recharge the battery in places with high humidity or outdoors. Doing so may result in electric shock.
- Do not insert the plug while it is wet. Plug and socket need to be dry, otherwise electric shocks may result.
- If the battery does not become fully charged after 6 hours, unplug the battery from the outlet immediately and stop charging. Not doing so may cause overheating, rupture, or ignition of the battery.
- Do not use the battery if it has any noticeable damage. Doing so may cause rupture, overheating or malfunction.
- The battery may only be used in the temperature ranges states below. Do not use the battery in temperatures outside these ranges. If the battery is used or stored in temperatures outside these ranges, fire, injury or malfunction may occur.
- 1. Temperature for discharging: -10°C to 50°C
- 2. Temperature for charging: 0°C to 40°C

Danger

- Do not deform, modify or disassemble the battery. Do not apply solder directly to the battery. Doing so may cause leakage, overheating, rupture or ignition of the battery.
- Do not leave the battery near sources of heat (e.g. heaters). Do not heat the battery or throw it into a fire. Doing so may cause rupture or ignition of the battery.
- Do not subject the battery to strong shocks or throw it. If this is not observed, overheating, rupture or ignition of the battery may occur.
- Do not immerse the battery into fresh water or seawater, and do not allow the battery terminals to get wet. Doing so may cause overheating, rupture or ignition of the battery.
- Only use the specified charger. Not doing so may cause overheating, bursting, or ignition of the battery. Observe the components during the specified charging conditions when charging the battery.
- Do not short-circuit the discharge port with metal, or else it may cause overheating, rupture or ignition of the battery.
- Do not leave the battery in a place exposed to direct sunlight, inside a vehicle on a hot day or in other hot places. Doing so may result in battery leakage.
- If any leaked fluid gets on your skin or clothes, wash it off immediately with clean water. The leaked fluid may damage your skin.
- Store the battery in a safe place out of the reach of children and pets.

4.1 Using the Battery Properly

The battery can be charged at any time no matter how much power is left. However, in the following cases, the battery needs to be fully charged. Make sure you use the specified charger to charge the battery.

- The battery is usually not fully charged for the convenience of transport. Make sure the battery is fully charged before using the battery.
- If it is not intended to use the battery for a long time, make sure the e-bike battery is charged before storage and that is charged at least once every twelve months thereafter. Do not leave the battery completely discharged.
- Once you have begun to use the battery, please have it charged at least once every two weeks.

4.2 Charging the Battery

- When using the battery for the first time, check that the battery has not run low in transport or storage.
- If it not intended to use the battery for a long time, charge the battery regularly to avoid excessive battery discharge.
- Please charge the battery as soon as possible before it runs out; over-discharge can cause permanent damage to the battery.
- No matter how much power is left, the battery can be charged at any time. However, the specified charger must be used to avoid overcharge of the battery.

5 Error Code Definitions

The display can show e-bike faults. When a fault is detected, one of the following error codes will be displayed:

Error Code	Error Description	Error-shooting Method
"03"	Brake enabled	Check whether a brake cable is stuck
"04"	The throttle has not returned home	Check if throttle has returned home
"05"	Throttle fault	Check the throttle
"06"	Low voltage protection	Check the battery voltage
"07"	Overvoltage protection	Check the battery voltage
"08"	Motor hall signal cable fault	Check the motor module
"09"	Motor phase cable fault	Check the motor module
"10"	The motor temperature has reached the threshold.	Stop the bicycle until the error code "10" disappears from the screen.
"11"	Controller temperature sensor failure	Check the controller
"12"	Current sensor failure	Check the controller
"13"	Battery temperature fault	Check the battery
"21"	Speed sensor fault	Check installation position of speed sensor
"22"	BMS communication fault	Replace the battery
"30"	Communication fault	Check the controller connection

6 LIST OF MATERIALS

Normal Bottom Bracket

