

7 DEALER MANUAL FOR DP C010.CB



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7.1 IMPORTANT NOTICE

- If the error information from the display cannot be corrected according to the instructions, please contact your retailer.
- The product is designed to be waterproof. It is highly recommended to avoid submerging the display under water.
- Do not clean the display with a steam jet, high-pressure cleaner or water hose.
- Please use this product with care.
- Do not use thinners or other solvents to clean the display. Such substances can damage the surfaces.
- Warranty is not included due to wear and normal use and aging.
- Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures: (1) Reorient or relocate the receiving antenna. (2) Increase the separation between the equipment and receiver.(3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.(4) Consult the dealer or an experienced radio/TV technician for help.

7.2 INTRODUCTION OF DISPLAY



- Model: DP C010.CB
- The housing is made of PC+ABS; the LCD display windows is made of tempered glass; the button is made of ABS:

- The label marking is as follows:



i **Note:** Please keep the QR code label attached to the display cable. The information from the Label is used for a later possible software update.

7.3 PRODUCT DESCRIPTION

7.3.1 Specification

- 4.0", 480*800 (RGB) TFT screen
- Power supply: 36/43/48/50.4/60/72Vdc
- Operating temperature: -20 °C~45 °C
- Storage temperature: -20 °C~60 °C
- Waterproof: IP66
- Storage Humidity: 30%-70% RH

7.3.2 Functional Overview

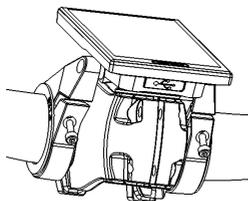
- Battery capacity indicator
- Power-assisted mode selection
- Speed indication (including the max. speed and average speed)
- Unit switching between km and mile
- Motor power indication
- Mileage indication (including single-trip distance TRIP, total distance ODO, and remaining distance Range)
- Walk assistance
- Automatic sensors explanation of the lighting system
- Brightness setting for backlight
- Intelligent indication (including energy consumption CAL and Cadence, only when the matching controller supports this function)
- Information of controller, HMI and battery
- Error code and warn code indication
- Bluetooth Function
- USB charge (max. charge current: 1A)
- Service indication
- Clock indication
- 3 Themes (Sporty, Fashion, Technology)
- 6 Languages (English, German, Dutch, French, Italian, Czech)

7.4 DISPLAY INSTALLATION

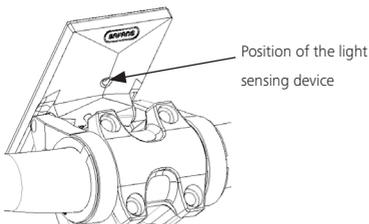
1. **Match the rubber sleeve:** Select the required rubber sleeve according to the diameter of the handlebar (for specifications: Ø22.2, Ø25.4, Ø31.8, Ø35). Open the two clamps of the HMI, then place the suitable rubber sleeves into the clamps.

Diameter of handlebar	Diameter of rubber sleeves
Ø35	Ø35
Ø31.8	Ø31.8
Ø25.4	Ø31.8 + Ø25.4
Ø22.2	Ø31.8 + Ø22.2

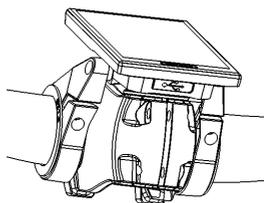
2. **Temporarily install the HMI:** Place the two clamps with rubber sleeves on the handlebar, then use an M3 hex wrench to tighten the fixing screws M3*12 temporarily.



Note: The light sensing device is on the back of the HMI. Do not cover this area in case of blocking out the light.

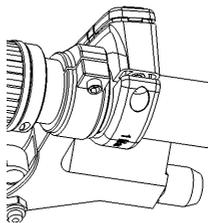


3. **Install the HMI:** Adjust the angle of the HMI to make it easier to see the screen when cycling, then tighten the screws with tightening torque of 1N.m.

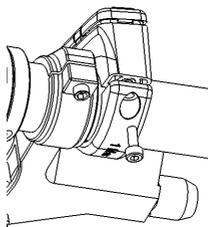


4. **Temporarily install the control unit:** Open the clamp of the control unit, then place the clamp with rubber sleeve on the suitable position. Adjust the angle of the control unit to make it easier to operate.

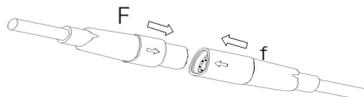
(Note: The diameter of the control unit is Ø22.2mm.)



5. **Install the control unit:** Use an M3 hex wrench to tighten the fixing screw M3*12 with tightening torque of 1 N.m.



6. **Link the connectors:** Link the male connector of HMI (F) to the female connector of EB-BUS (f).



7.5 DISPLAY



- 1 Battery capacity indication
- 2 Warn code indication
- 3 Speed in real-time
- 4 Speed bar
- 5 Power-assisted mode indication (4 Modes/ 6 Modes)
- 6 Unit switching of speed (km/h, mph)
- 7 Multifunction indication (Clock, TRIP, ODO, MAX, AVG, Range, CAL, Cadence, Time)
- 8 Symbol indication (Headlight, USB, Service, Bluetooth)

7.6 KEY DEFINITION

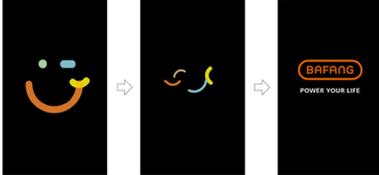


7.7 NORMAL OPERATION

7.7.1 Power ON/OFF

Press  and hold (>2S) to power on the HMI, and the HMI displays the boot up LOGO.

Press  and hold (>2S) again to power off the HMI.



7.7.2 Power-Assisted Mode Selection

When HMI powers on, briefly press  or  (<0.5S) to select the power-assisted mode and change the output power of motor. 4 Modes or 6 Modes can be selected, but the default selection is 6 Modes of which the lowest mode is ECO and the highest mode is BOOST. The default mode is ECO after HMI powering on, mode OFF means no power assistance.



(6 Modes)



(4 Modes)

7.7.3 Headlight / Backlight

The headlight can be switched on manually or automatically. When the HMI powers on, the auto light function works.

Press and hold  (>2S) to turn on the headlight and reduce the brightness of backlight.

Press and hold  (>2S) again to turn off the headlight and increase the brightness of backlight.

(Note: The headlight can be automatically switched according to the ambient light, but the auto light function fails once user manually switches the headlight on/off. After restarting the HMI, the function works again.)



mode OFF.



7.7.4 Walk Assistance

Note: The walk assistance can only be activated with a standing e-bike.

Briefly press  button (<0.5S) until this symbol  appears. Next keep pressing the  button until the walk assistance is activated and the  symbol is flashing. (When the real-time speed is less than 2.5km/h, the speed indication is shown as 2.5km/h.) Once releasing the  button, it will exit the walk assistance and the  symbol stops flashing. If no operation within 5s, the HMI will automatically return to

7.7.5 Multifunction Selection

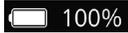
Briefly press  button (<0.5S) to switch the different function and information.

The position of multifunction indication displays the real-time clock (Clock) → single trip distance (TRIP, km) → total distance (ODO, km) → maximum speed (MAX, km/h) → average speed (AVG, km/h) → remaining distance (Range, km) → energy consumption (CAL, kcal) → riding cadence (Cadence, rpm) → riding time (Time, min) → cycle.



7.7.6 Battery Capacity Indication

HMI displays the real-time battery capacity from 100% to 0%. When the battery capacity is less than 5%, the indicator will blink at frequency of 1 Hz to alert to recharge.



7.7.7 Bluetooth Function

This HMI is equipped with OTA function, which can update the firmware of HMI, controller, sensor and battery through the Bluetooth.

This HMI can be connected to the Bafang Go+ APP through Bluetooth.



(BAFANG GO+ for Android™ and iOS™)

The data that can be sent to the APP are as follows:

No.	Function
1	Speed
2	Power-assisted mode
3	Battery capacity
5	Headlight state
6	TRIP
7	ODO
8	Range
9	Heartbeat (customized)
10	Calories
11	Sensor signal

No.	Function
12	Battery info.
13	System info.
14	Error code



7.7.8 USB Charge Function

When the HMI is off, insert the USB cable to the charge port on the HMI, and then turn on the HMI to start charging. The maximum charge voltage is 5V and the maximum charge current is 1A.



7.7.9 Service Tip

When the total mileage exceeds 5000 km, the  symbol will be displayed on the HMI, reminding users to go to the after-sales outlet for maintenance. The function is off by default.



7.7.10 Riding Data Interface

Double press the  button (<0.5S) to enter the interface of riding data. Press the  button (<0.5S) to switch the pages. Double press the  button (<0.5S) again to return the main interface.

When the real-time speed is less than 5 km/h and the power assisted mode is not walk assistance, press and hold the  button (>2S) to clear the riding data of Trip, MAX, AVG, Time.



7.8 SETTINGS

7.8.1 "Quick settings" Interface

When you in the main interface, press and hold the  and  button (at the same time) to enter the "Quick settings" interface.

When you in the "Quick settings" interface, press and hold the  and  button (at the same time) to exit back to the main interface.

7.8.1.1 "Brightness" Set the brightness of backlight

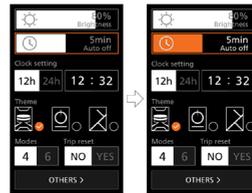
Briefly press the  or  button (<0.5s) to select "Brightness", and briefly press the  to enter the item. Then select the desired percentage from 10% to 100% by pressing the  or  button, and briefly press the  button (<0.5s) to save and exit back to the "Quick settings" interface.



7.8.1.2 "Auto off" Set automatic off time

Briefly press the  or  button (<0.5s) to select "Auto off", and briefly press the  to enter the item. Then select the automatic off time as "OFF"/"1"/"2"/"3"/"4"/"5"/"6"/"7"/"8"/"9" with the  or  button. Once you have chosen your desired selection, press the  button (<0.5s) to save and exit back to the "Quick settings" interface.

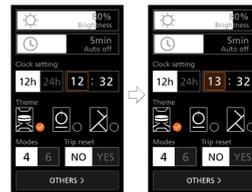
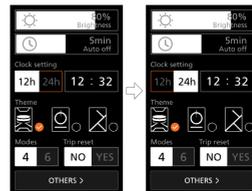
Note: "OFF" means the "Auto off" function is off.



7.8.1.3 "Clock setting" Set the clock

Briefly press the  or  button (<0.5s) to enter the "Time format" setting, and briefly press the  button to select "12h" or "24h".

Briefly press the  or  button (<0.5s) to select the "Clock setting" item, briefly press the  button to enter the item. Then set the accurate time by pressing the  or  button, and briefly press the  button (<0.5s) to save and exit back to the "Quick settings" interface.



7.8.1.4 "Theme" Set the theme

Briefly press the  or  button (<0.5s) to select the desired "Theme", and briefly press the  button to save the selection.



7.8.1.5 "Modes" Set the power-assisted modes

Briefly press the or (<0.5S) to enter the "Modes" setting, and briefly press the to select "4 Modes" or "6 Modes".



7.8.1.6 "Trip reset" Reset the single-trip

Briefly press the or (<0.5S) to enter the "Trip reset" setting, and briefly press the to select "YES" or "NO".



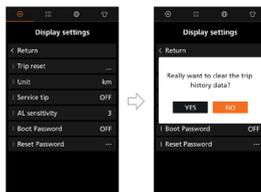
7.8.2 "Display settings" Interface

When you in the "Quick settings" interface, briefly press the or (<0.5S) to select the "OTHERS" and enter the "Display settings" interface.

7.8.2.1 "Trip reset" Reset the single-trip

Briefly press the or (<0.5S) to select the "Trip reset" item, and briefly press the to enter the item. Then select "YES"/"NO" ("YES"- to clear, "NO"-no operation) with the or button and briefly press the (<0.5S) to save and exit back to the "Display settings" interface.

Note: The riding time (Time), average speed (AVG) and maximum speed (MAX) will be reset simultaneously when you reset TRIP.



7.8.2.2 "Unit" Select the mileage unit

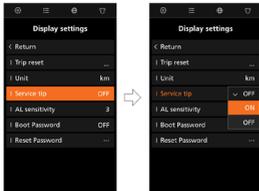
Briefly press the or (<0.5S) to select the "Unit" item, and briefly press the to enter the item. Then select "km"/"mile" with the or button and briefly press the (<0.5S) to save and exit back to the "Display settings" interface.



7.8.2.3 "Service tip" Set the service tip

Briefly press the or (<0.5S) to select the "Service tip" item, and briefly press the to enter the item. Then select "ON"/"OFF" with the or button and briefly press the (<0.5S) to save and exit back to the "Display settings" interface.

Note: The default setting is OFF. If the ODO is more than 5000 km, the "Service tip" indication will flash.



7.8.2.4 "AL Sensitivity" Set light sensitivity

Briefly press the or (<0.5S) to select the "AL sensitivity" item, and briefly press the to enter the item. Then select the level of the light sensitivity as "OFF"/"1"/"2"/"3"/"4"/"5" with the or button and briefly press the (<0.5S) to save and exit back to the "Display settings" interface.

Note: "OFF" means the light sensor is off. Level 1 is the weakest sensitivity and level 5 is the strongest sensitivity.

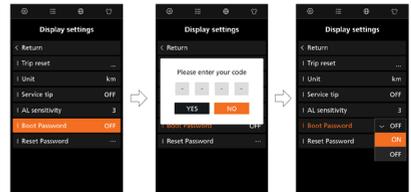


7.8.2.5 "Boot Password" Set the boot password

Briefly press the or (<0.5S) to select the "Boot Password" item, and briefly press the to enter the item. Then select the 4-digit number as "0"/"1"/"2"/"3"/"4"/"5"/"6"/"7"/"8"/"9" with the or button. After setting, select the "YES" by briefly pressing the (<0.5S) to save and exit back to the "Display settings" interface.

After back to the "Display settings" interface, briefly select "ON"/"OFF" with the or button and briefly press the (<0.5S) to save and exit back to the "Display settings" interface.

Note: The default password is 0000, and the default setting is OFF.

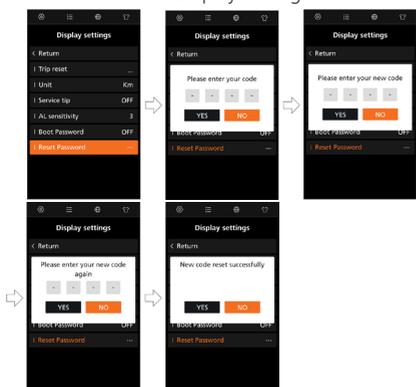


After successful setting, the HMI will request to enter the password when powering on. Select the 4-digit number as "0"/"1"/"2"/"3"/"4"/"5"/"6"/"7"/"8"/"9" with the or button, then enter the main interface.



7.8.2.6 "Reset Password" Reset the boot password

Briefly press the or (<0.5S) to select the "Reset Password" item, and briefly press the to enter the item. Enter the 4-digit old password with the or , then enter the new password and confirm the new password. After setting, select the "YES" by briefly pressing the (<0.5S) to save and exit back to the "Display settings" interface.



7.8.3 "Information" Interface

Note: All information here cannot be changed, it is to be viewed only.

7.8.3.1 "Wheel size"

After entering the "Information" page, you can see "Wheel size --inch" directly.

7.8.3.2 "Speed limit"

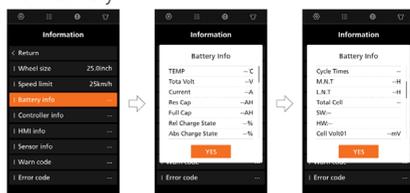
After entering the "Information" page, you can see "Speed limit --km/h" directly.



7.8.3.3 "Battery info"

Briefly press the or (<0.5S) to select "Battery info", and briefly press the to enter, then briefly press the or to view the battery information.

Note: If the battery doesn't have communication function, you won't see any data from battery.



7.8.3.4 "Controller info"

Briefly press the or (<0.5S) to select "Controller info", and briefly press the to view the hardware version and software version.

Press the (<0.5S) again to exit back to the "Information" interface.



7.8.3.5 "HMI info"

Briefly press the or (<0.5S) to select "HMI info", and briefly press the to view the hardware version and software version.

Press the (<0.5S) again to exit back to the "Information" interface.



7.8.3.6 "Sensor info"

Briefly press the or (<0.5s) to select "Sensor info", and briefly press the to view the hardware version and software version.

Press the (<0.5s) again to exit back to the "Information" interface.

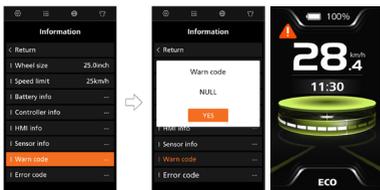
NOTE: If your e-bike doesn't have torque sensor, "--" will be displayed.



7.8.3.7 "Warn code"

Briefly press the or (<0.5s) to select "Warn code", and briefly press the to view the message of warn code.

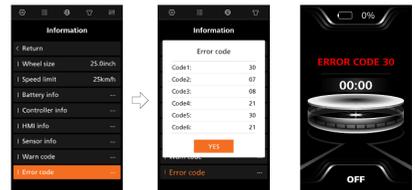
Press the (<0.5s) again to exit back to the "Information" interface.



7.8.3.8 "Error code"

Briefly press the or (<0.5s) to select "Error code", and briefly press the to view the message of error code.

Press the (<0.5s) again to exit back to the "Information" interface.



7.8.4 "Language" Interface

When you in the "Language" interface, briefly press the or (<0.5s) to select the desired language as "English"/"Deutsch"/"Nederlands"/"Français"/"Italiano"/"Čeština" and briefly press the to save the selection.



7.8.5 "Theme" Interface

When you in the "Theme" interface, briefly press the  or  button (<0.5S) to select the desired theme as "Sporty"/"Technology-"/"Fashion" and briefly press the  button to save the selection.



(Sporty)

(Technology)

(Fashion)

7.9 ERROR CODE DEFINITION

The ebike system's parts are automatically monitored in real time. If a part is abnormal, the corresponding error code is displayed on the HMI. The DP C010.CB displays the error code on the HMI directly.

The troubleshooting methods in the list are listed in order according to the fault probability and the operability of the related parts. In practice, dealers can adjust the order based on the existing tools and spare parts. (For detailed disassembly steps, please refer to the dealer manual of the corresponding parts on the official website. <www.bafang-e.com>)



In order to protect the electric parts, before disassembling the parts, please switch off the system power first by pressing the control unit of HMI and then disconnect the power cable of the disassembled part. When installing the parts, please fix the parts first, then connect the power cable of the parts, and finally switch on the system power by pressing the control unit of HMI.



Please contact Bafang after-sale service personnel <service@bafang-e.com> if the above troubleshooting fails to solve the problem or the error code is not in the above list.

Code	Cause	Troubleshooting	
		Hub Motor System	Mid Motor System
05	Throttle not in place	<ol style="list-style-type: none"> 1. Check whether the throttle is in place. 2. Check whether the throttle cable is connected correctly or the cable (from throttle to controller) is damaged. 3. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the throttle 2) Replace the controller 	<ol style="list-style-type: none"> 1. Check whether the throttle is in place. 2. Check whether the throttle cable is connected correctly or the cable (from throttle to drive unit) is damaged. 3. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the throttle 2) Replace the drive unit
07	System overvoltage protection	<ol style="list-style-type: none"> 1. Check whether the nominal voltage of the battery is the same as the controller. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the battery 2) Replace the controller 	<ol style="list-style-type: none"> 1. Check whether the nominal voltage of the battery is the same as the drive unit. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the battery 2) Replace the drive unit
08	Hall signal in motor is abnormal	<ol style="list-style-type: none"> 1. Check whether the motor cable is connected correctly or the cable (from motor to controller) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the motor 2) Replace the controller 	Replace the drive unit

Code	Cause	Troubleshooting	
		Hub Motor System	Mid Motor System
09	Phase wire in motor abnormal	<ol style="list-style-type: none"> 1. Check whether the motor cable is connected correctly or the cable (from motor to controller) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the motor 2) Replace the controller 	Replace the drive unit
10	Motor overtemperature protection (Only occur when the motor is equipped with the temperature sensor.)	<ol style="list-style-type: none"> 1. If riding for a long time, turn off the system and let the motor cool down. 2. If no ride or riding for a short time, troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the motor 2) Replace the controller 	<ol style="list-style-type: none"> 1. If riding for a long time, turn off the system and let the drive unit cool down. 2. If no ride or riding for a short time, replace the drive unit.
11	Motor temperature sensor abnormal (Only occur when the motor is equipped with the temperature sensor.)	<ol style="list-style-type: none"> 1. Check whether the motor cable is connected correctly or the cable (from motor to controller) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the motor 2) Replace the controller 	Replace the drive unit
12	Controller current sensor abnormal	Replace the controller	Replace the drive unit
14	Controller overtemperature protection	<ol style="list-style-type: none"> 1. If riding for a long time, turn off the system and let the controller cool down. 2. If no ride or riding for a short time, replace the controller. 	<ol style="list-style-type: none"> 1. If riding for a long time, turn off the system and let the drive unit cool down. 2. If no ride or riding for a short time, replace the drive unit.
15	Controller temperature sensor abnormal	Replace the controller	Replace the drive unit

Code	Cause	Troubleshooting	
		Hub Motor System	Mid Motor System
21	Speed sensor abnormal	<ol style="list-style-type: none"> 1. Check whether the motor cable is connected correctly or the cable (from motor to controller) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the motor 2) Replace the controller 	<ol style="list-style-type: none"> 1. Check whether the spoke magnet has fallen off or the clearance between the spoke magnet and the speed sensor is within the normal range (10-15mm). 2. Check whether the speed sensor cable is connected correctly or the cable (from sensor to drive unit) is damaged. 3. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the speed sensor 2) Replace the drive unit
26	Torque sensor abnormal (Only occur when the drive system is equipped with the torque sensor.)	<ol style="list-style-type: none"> 1. Check whether the torque sensor cable is connected correctly or the cable (from sensor to controller) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the torque sensor 2) Replace the controller 	Replace the drive unit
30	Communication abnormal	<ol style="list-style-type: none"> 1. Check whether the HMI cable is connected correctly or the cable (from HMI to controller) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the controller if the HMI turns off automatically after appearing error code for 20 seconds. 2) Replace the HMI if the HMI doesn't turn off automatically after appearing error code for 20 seconds. (move to the next page) 	<ol style="list-style-type: none"> 1. Check whether the HMI cable is connected correctly or the cable (from HMI to drive unit) is damaged. 2. Troubleshoot the faulty part: <ol style="list-style-type: none"> 1) Replace the drive unit if the HMI turns off automatically after appearing error code for 20 seconds. 2) Replace the HMI if the HMI doesn't turn off automatically after appearing error code for 20 seconds. (move to the next page)

Code	Cause	Troubleshooting	
		Hub Motor System	Mid Motor System
30	Communication abnormal	3) If the BESST tool is available, connect it with HMI and controller, read the information of HMI and controller and replace the part that cannot read information.	3) If the BESST tool is available, connect it with HMI and drive unit, read the information of HMI and drive unit and replace the part that cannot read information.
36	ON/OFF Button detection circuit abnormal (Only occur when the drive system is equipped with Bafang CAN communication protocol.)	1. If keep pressing the ON/OFF button when the HMI powers on, the error code will alarm. Release the button and observe whether the code disappears. 2. Troubleshoot the faulty part: 1) Replace the HMI 2) Replace the controller	1. If keep pressing the ON/OFF button when the HMI powers on, the error code will alarm. Release the button and observe whether the code disappears. 2. Troubleshoot the faulty part: 1) Replace the HMI 2) Replace the drive unit
37	WDT (Watch Dog Timer) in controller is abnormal	Replace the controller	Replace the drive unit
42	Discharge voltage of battery pack is too low	1. Charge the battery 2. Replace the battery	
49	Discharge voltage of single cell is too low	1. Charge the battery 2. Replace the battery	
4C	Voltage difference between single cell	Replace the battery	



The battery error codes of 42, 49, 4C only occur when the drive system is equipped with the smart BMS and Bafang CAN communication protocol.