

FISHAW 2021

UB400 DISPLAY MANUAL



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1 IMPORTANT NOTICE



All users must be aware of the following:

- If the fault information cannot be rectified according to the instructions, stop operation, please contact your FiSHAW representative.
- Do not let the wiring ports and buttons soak in water.
- Although this product is designed to be completely waterproof for riding on rainy days, do not let this product soak in water or use in water.
- Do not clean the Pedelec with a steam jet, high-pressure cleaner or water hose. Water may seep into the electrics or drive and destroy the equipment.
- Please use this product with care and protect from strong impacts.
- Do not use thinner or other solvents to clean any of the Display Control Panel. Such substances may damage the surfaces.
- Not guaranteed to wear out due to normal use and wear and tear over time.



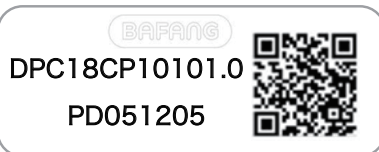
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2 INTRODUCTION

- Name: smart display and controller (HMI)
- Model: DP C18.CAN
- The housing material is PC, the window is high hardness glass, as following:



- Cable label identification is as following:



- i Note: Contents on this Label contains important information of this product. Please keep in a safe place for when needed for updating of software or providing after-sales service.

3 PRODUCT DESCRIPTION

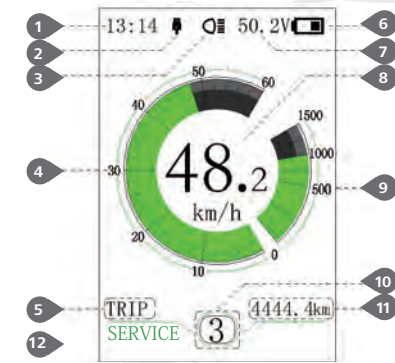
3.1 Performance

- Operating temperature: -20 C - 45 C
- Storage temperature: -20 C - 50 C
- Water-proof grade: IP65
- Storage humidity: 30%-70% RH

3.2 Functions Overview

- Speed indication (including maximum speed and average speed, unit switching between km and mile).
- Battery capacity indication.
- Control and indication for the headlight (light senses).
- Brightness adjustment for back light.
- Indication of power assistance level.
- Motor power **output** and current **output** indication.
- Time indication for a single ride.
- Trip indication (including single-trip distance, total distance and remaining distance).
- Walk assistance mode.
- Support level setting.
- Indication for consumption of energy CALORIES (Note: If the display has this function).
- Indication for the remaining distance. (Note: the display may not support this function).
- Power-on password setting.

4 INDICATION AREA



1 Time indication

2 USB charge indication: When external device connected into the display, it displays this symbol

3 Headlight indication

4 Speed scale display


5 Mode selection: single-trip distance (TRIP) → total distance ODO → maximum speed (MAX) → average speed (AVG) → remaining distance (RANGE) → energy consumption (CALORIES) → time (TIME). (Note: some functions may be unavailable)

6 Indication for the current remaining capacity of battery.

7 Voltage indication/percentage indication.

8 Speed digital indication.

9 Power indication/current indication (with scale).

10 Power assistance level indication/Walk assistance, Note:  symbol means Walk assistance mode.

11 Data indication: displays current data corresponding to the mode.



12 "Service" indication.

5 BUTTON DEFINITION





6 NORMAL OPERATION

6.1 Power ON/OFF

Press  and hold (>2S) to power on the display, the display begins to operate. Press  and hold (>2S) again to power off the display.


If the "automatic shutdown" time is set to 5 minutes (it can be set in function "Auto Off"), the HMI will be automatically turned off within this set time, When it is not operated. If password function is turned on, than must input correct password to enter into the normal display interface.

6.2 Power assistance level selection

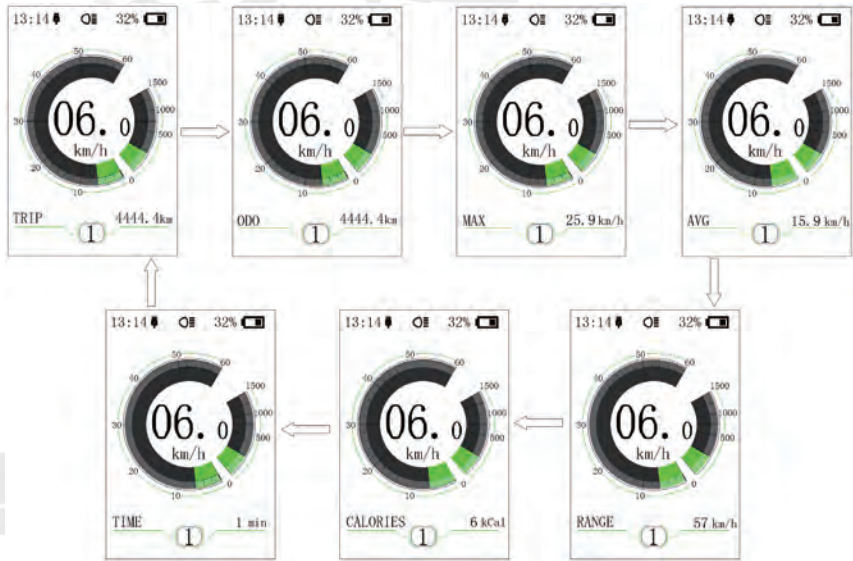
When HMI power on, briefly press  or  (<0.5S) to switch the assistance level (the number of assistance levels needs to be adapted to controller), The lowest level is Level 0, the highest Level is 5. On the default is Level 1, "0" means no power assistance. The interface is as following:




6.3 Mileage mode and Speed mode


Briefly press  (0.5s) to view the mileage and speed information.

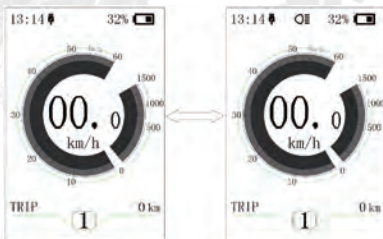
1. System with torque sensor, circularly show the trip distance (TRIP) → total distance (ODO) → maximum speed (MAX) → average speed (AVG) → remaining distance (RANGE) → energy consumption (CALORIES) → time (TIME).
2. If system with a speed sensor, circularly show the trip distance (TRIP) → total distance (ODO) → maximum speed (MAX) → average speed (AVG) → remaining distance (RANGE) → time (TIME).







6.4 Headlight /backlight

Press  and hold (>2S) to turn on the backlight as well as headlight.

Press  and hold (>2S) again to turn off the backlight and the headlight. The brightness of backlight can be set in function "Brightness". (If the display is turned on in a dark environment, the display backlight/ headlight will be turned on automatically. If the display backlight/headlight are turned off manually, they also need to be turned on manually afterwards)



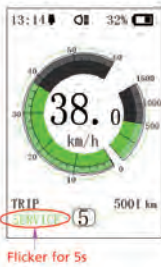
6.5 Walk assistance mode

When your Pedelec is motionless, press  button until the Walk assistance indicator  is displayed. At this point, long press  button, the Pedelec enters the walk assistance mode, the indicator . Release the button to stop this, if no any operations within 5s will automatically return to 0 level. Then is stopped from the Walk assistance mode.(as following)



6.6 "SERVICE" indication

HMI will prompt for maintenance according to the mileage and battery charger times. When mileage exceeds 5000km and the "Service" function is enabled, the "SERVICE" indication will be displayed every time. This function can be set in the interface. Instructions are detailed in the following text.



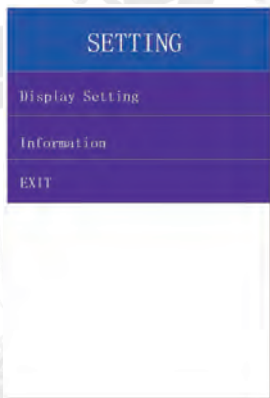
7 USER SETTING

7.1 "SETTING" interface

After the HMI powered on, briefly press (<0.5S) **[i]** for two times to enter into the "SETTING". Briefly press (<0.5S) **[+]** or **[-]** to select and then briefly press (<0.5S) **[i]** to confirm and enter into the option.

Select "EXIT" and briefly press (<0.5S) **[i]** to exit, or briefly press (<0.5S) **[i]** twice in any interface to exit, then the set dates are saved.

If there is not any operation within 20s, the set interface will be exited and no data is saved (as follows).



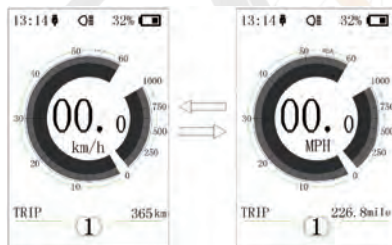
7.2 "Display setting" interface

In "SETTING" interface, briefly press (<0.5S) **[+]** or **[-]** to select "Display setting" and then briefly press (<0.5S) **[i]** to confirm and enter into "Display setting". There are thirteen options in this interface.

Display Setting	
Unit	Metric
Service Tip	OFF
Brightness	100%
Auto OFF	5Min
MAX PAS	5
Power View	Power
SOC View	Percent
TRIP Reset	NO
AL Sensitivity	3
Password	>
Set Clock	>
BACK	

7.2.1 "Unit" --- set unit for km/mile

Briefly press (<0.5S) **[+]** or **[-]** to select "Unit", and then briefly press (<0.5S) **[i]** to enter into the interface. Select "Metric"/"Imperial", and then briefly press (<0.5S) **[i]** to save and exit back to "Unit" interface, then briefly press (<0.5S) **[i]** twice to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.



7.2.2 "Service Tip" --- turn on/off the Service indication

Briefly press (<0.5S) **+** to select "SERVICE", and then briefly press (<0.5S) **i** to enter into the interface. Select "ON/YES", and then briefly press (<0.5S) **i** save and exit back to "Service Tip" interface, then briefly press (<0.5S) **+** twice to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

7.2.3 "Brightness" --- set backlight brightness

Briefly press (<0.5S) **+** or **-** to select "Brightness", and then briefly press (<0.5S) **i** to enter into the interface. Select the percentage as "100%" / "75%" / "50%" / "30%" / "10%". 100% means the highest brightness, 10% is lowest brightness. And then briefly press (<0.5S) **i** to save and exit back to "Brightness" interface, then briefly press (<0.5S) **+** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

7.2.4 "Auto Off" --- set automatic Off time

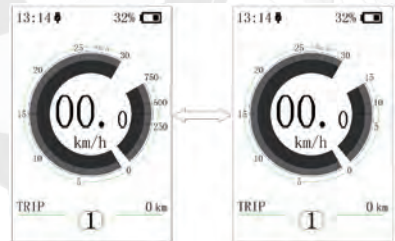
Briefly press (<0.5S) **+** or **-** to select "Auto Off", and then briefly press (<0.5S) **i** to enter into the interface. Select the automatic Off time as "OFF" / "9" / "8" / "7" / "6" / "5" / "4" / "3" / "2" / "1", OFF means don't turn off. The unit is in minute. And then briefly press (<0.5S) **i** to save and exit back to "Auto Off" interface, then briefly press (<0.5S) **+** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

7.2.5 "MAX PAS" --- set riding mode

Briefly press (<0.5S) **+** or **-** to select "MAX PAS", and then briefly press (<0.5S) **i** to enter into the interface. Select support mode: 3/5/9. And then briefly press (<0.5S) **i** to save and exit back to "MAX PAS" interface, then briefly press (<0.5S) **+** twice to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

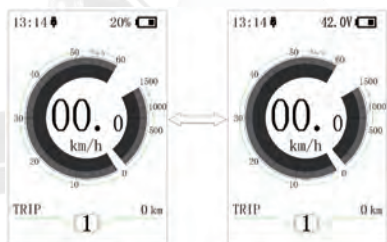
7.2.6 "Power View" --- set output display mode

Briefly press (<0.5S) **+** or **-** to select "Power View", and then briefly press (<0.5S) **i** to enter into the interface. Select the output display mode as "Power" / "Current". And then briefly press (<0.5S) **i** to save and exit back to "Power View" interface, then briefly press (<0.5S) **+** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface. As following:



7.2.7 "SOC View" --- set indication mode for battery capacity

Briefly press (<0.5S) **+** or **-** to select "SOC View", and then briefly press (<0.5S) **1** to enter into the interface. Select the display mode for output as "Percent"/ "Voltage". And then briefly press (<0.5S) **1** to save and exit back to "SOC View" interface, then briefly press (<0.5S) **1** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.



7.2.8 "TRIP Reset" --- set reset function for single-trip

Briefly press (<0.5S) **+** or **-** to select "TRIP Reset", and then briefly press (<0.5S) **1** to enter into the interface. Select "NO" and "YES", be reset date includes maximum speed (MAXS), average speed (AVG), single-trip distance (TRIP). And then briefly press (<0.5S) **1** to save and exit back to "TRIP Reset" interface, then briefly press (<0.5S) **1** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

7.2.9 "AL Sensitivity" --- set light sensitivity

Briefly press (<0.5S) **+** or **-** to select "AL Sensitivity", and then briefly press (<0.5S) **1** to enter into the interface. Select the level of the light sensitivity as "0"/"1"/"2"/"3"/"4"/"5"/"OFF". OFF means close the function. And then briefly press (<0.5S) **1** to save and exit back to "AL Sensitivity" interface, then briefly press (<0.5S) **1** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

7.2.10 "Password" --- set access password

Briefly press (<0.5S) **+** or **-** to select "Password", and then briefly press (<0.5S) **1** to enter into the interface. Select "BACK" or "Start PassWord" and then briefly press (<0.5S) **1** again to confirm. After that briefly press (<0.5S) **+** or **-** to select "OFF"/"ON". The below is the specific way of switching.

Starting password:

In "Start PassWord" interface and select "ON". Briefly press (<0.5S) **1** to confirm, and then can input password in this interface. At this moment, briefly press (<0.5S) **+** or **-** to select numbers "0-9", and then briefly press (<0.5S) **1** to confirm and to input next number. After input, need to repeat the above step to input password again. If the both password is same, the system will prompt, it is successful to set password, otherwise it need to repeat the first step to input the new password and then re-confirm.

After setting the password, the interface exit back automatically to original interface within two seconds. Briefly press **1** for two times (< 0.5S) to exit back to main interface or select "BACK" → "EXIT" to exit back to main interface, as following:



Reset password:

After setting, the interface "Password" will add a option for "Reset Password". Briefly press (<0.5S) **+** or **-** to select "Reset Password", and then briefly press (<0.5S) **1**. It prompt that input current password in this interface. If input not correct password for ten times, the display will turn off automatically. When correct, then prompts input new password in the interface. And the following step is same with starting password. After changing the password, it will exit automatically back to the original interface within two seconds. Briefly press **1** for two times (< 0.5S) to exit back to the main interface or select "BACK" → "EXIT" to exit back to main interface.



Cancel password access

In "Start PassWord" interface to select "OFF" and then briefly press (<0.5S) **1**. This moment, it prompts input password. If input not correct password for ten times, the display will turn off automatically. After input right password, it prompts it is successful and close password in the interface. Two seconds later will exit back automatically to the main interface. Briefly press **1** for two times (<0.5S) to exit back to the main interface or select "BACK" → "EXIT" to exit the main interface.



7.2.11 "Set Clock" --- time setting

Briefly press (<0.5S) **+** or **-** to select "Set Clock", and then briefly press (<0.5S) **1** to confirm. Select hour and minute, and then briefly press (<0.5S) **1** to save and exit back to "Set Clock" interface, then briefly press (<0.5S) **1** for two times to exit or you can also select "BACK" → "EXIT" to exit back to the main interface.

7.3 "Information" interface

(Not all settings are available for this model.)

In "SETTING" interface and briefly press (<0.5S) **+** or **-** to select "Information" and briefly press (<0.5S) **1** to confirm and can check all content in "Information" interface, but can't use the HMI to modify the content. As following:

Information	
Wheel Size	27"
Speed Limit	25km/h
Battery Info	>
Ctrl Info	>
Display Info	>
Torque Info	>
Back	

7.3.1 Check "Wheel" and "Speed Limit"

In "Information" interface can check data of "Wheel Size" and "Speed Limit". Briefly press (<0.5S) **1** for two times to exit back or select "BACK" → "EXIT" to exit back to the main interface.

7.3.2 Check "Battery Info." (Function not available for this model)

Briefly press (<0.5S) **+** or **-** to select "Battery Info." and briefly press (<0.5S) **1** to enter into and check content. This moment, select "Next Page" and briefly press (<0.5S) **1** to check content at next page. As following list:

Display content	Explanation
TEMP	Current temperature
Total Volt	Battery voltage
Current	Current
Res Cap	Remaining battery capacity
Full Cap	Battery capacity of Full charged
RelChargeState	Relative Charge in percentage
AbsChargeState	Absolute Charge in percentage
Cycle Times	Cycle Times
Max Uncharge Time	Max Uncharge Time
Last Uncharge Time	Last Uncharge Time
Total Cell	The number of cell
Cell Voltage 1	Voltage Cell 1
Cell Voltage 2	Voltage Cell 2
Cell Voltage n	Voltage Cell n
HW	Battery Hardware Version
SW	Battery Software Version

NOTE: If no data is detected, it displays "--".

7.3.3 Check “Ctrl Info”

Briefly press (<0.5S) **+** or **-** to select “Ctrl Info”, and then briefly press (<0.5S) **1** to confirm. If no data is detected, it displays “--”, and then briefly press (<0.5S) **1** two times to exit back to main interface or select “BACK” → “EXIT” to exit back to the main interface.



7.3.4 Check “Display Info”

Briefly press (<0.5S) **+** or **-** to select “Display Info”, and then briefly press (<0.5S) **1** to confirm. If no data is detected, it displays “--”, and then briefly press (<0.5S) **1** two times to exit back to main interface or select “BACK” → “EXIT” to exit back to the main interface.



7.3.5 Check “Torque Info”



Briefly press (<0.5S) **+** or **-** to select “Torque Info”, and then briefly press (<0.5S) **1** to confirm. If no data is detected, it displays “--”, and then briefly press (<0.5S) **1** two times to exit back to main interface or select “BACK” → “EXIT” to exit back to the main interface.



7.3.6 Check “Error Code”

Briefly press (<0.5S) **+** or **-** to select “Error Code”, and then briefly press (<0.5S) **1** to confirm. In “E-CODE” indicates the error information for last ten times, the Error code “00” means no error exist. Refer to the error code table for its meaning.

8 ERROR CODE DEFINITION

 The HMI can show the faults of Pedelec. When a fault is detected, the icon  will be indicated and one of the following error codes will be indicated too.

Note: please read carefully the description of the error code. When the error code appears, please first restart the system. If the problem is not eliminated, please contact FiSHAW technical personnel.

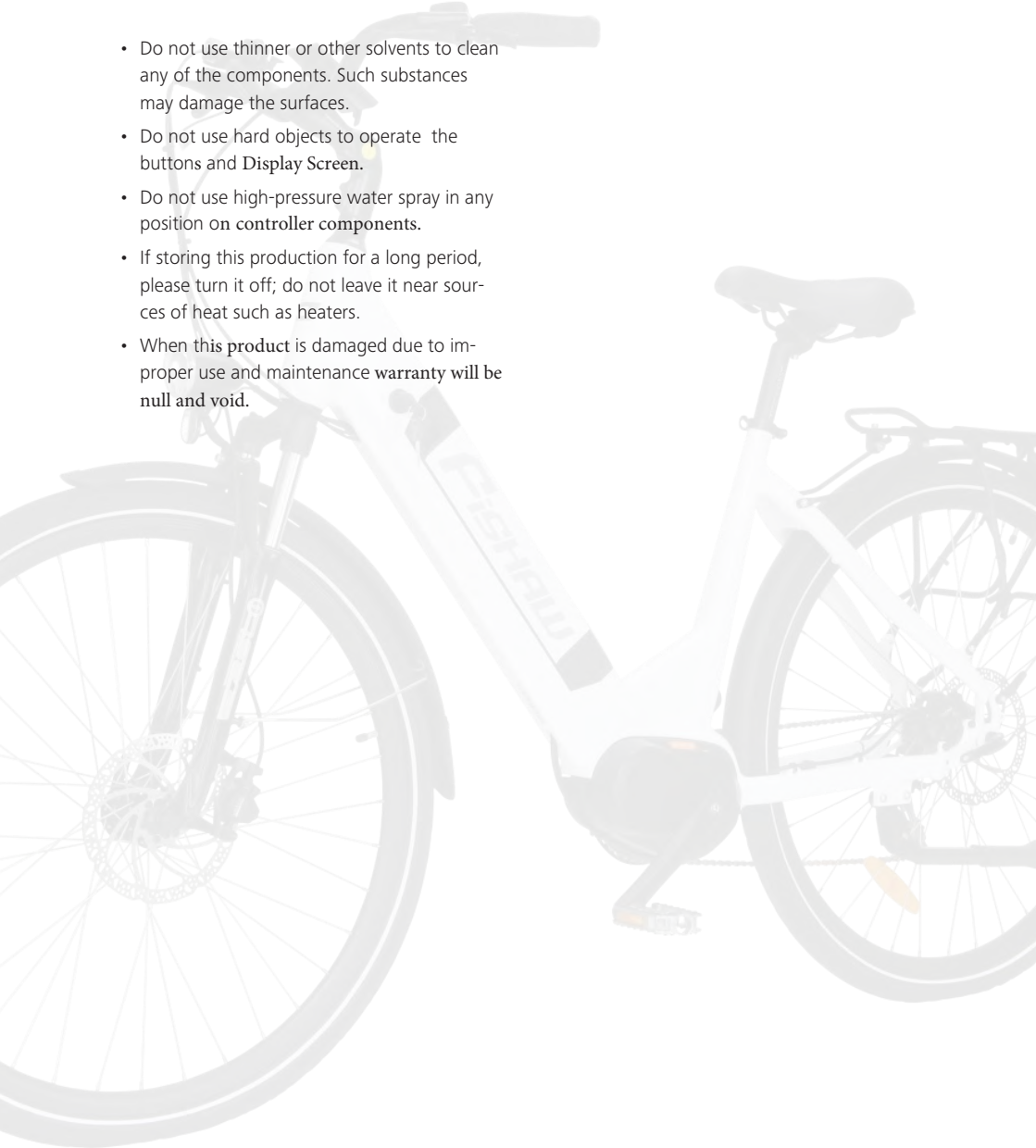
Error	Explanation	Troubleshooting
04	The throttle is not back in correct position.	Check the throttle can be put back in the correct position, if the situation does not improve, please replace with a new throttle.
05	The throttle has a fault.	<ol style="list-style-type: none"> 1. Check the connector or cable of throttle whether they are properly or securely installed; 2. Disconnect the throttle, If the problem is not eliminated, please contact your e-bike mechanic or FiSHAW representative.
07	Over Voltage Protection	<ol style="list-style-type: none"> 1. Re-install or replace the battery; 2. If the problem is not fixed, please contact your FiSHAW representative.
08	Fault with hall sensor/signal inside of motor	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiSHAW.
09	Fault with motor phase lines	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiSHAW.
10	The temperature inside of motor reaches the max protection value	Stop riding and let the motor cool down.
11	The temperature sensor of motor has a fault	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiSHAW.
12	Fault with current sensor inside controller	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiSHAW.
13	Fault with temperature sensor inside of battery	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiSHAW.
14	The temperature inside of controller reaches to the max protection value	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiSHAW.
15	Fault with temperature sensor inside of controller	Stop riding and bring your Pedelec to your specialist bike mechanic to have the error fixed or contact FiSHAW.

Error	Explanation	Troubleshooting
21	Fault with wheel speed sensor	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
25	Torque signal of Torque sensor is faulty	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
26	Speed signal of Torque sensor is faulty	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
27	Over-current in controller	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
30	Communicate failed	<ol style="list-style-type: none"> 1. Communication failed between controller and HMI, check the connector or cable whether they are properly or securely installed; 2. If the problem is not eliminated, please contact your FiShaw representative.
33	Brake detection circuit is faulty	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
35	Detection circuit for 15V is faulty	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
36	Detection circuit for button is faulty	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
37	WDT circuit is faulty	Stop riding and bring your Pedelec to your specialist e-bike mechanic to have the error fixed or contact FiShaw.
41	Total voltage of battery is too high	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
42	Total voltage of battery is too low	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
43	Total current of battery cells is too high	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.

Error	Explanation	Troubleshooting
44	Voltage of single cell is too high	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
45	Temperature of battery is too high	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
46	Temperature of battery is too low	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
47	SOC of battery is too high	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
48	SOC of battery is too low	Replace the battery, if the problem is not eliminated, please contact your FiShaw representative.
61	Gear shifter stuck	Replace the gear shifter, if the problem is not eliminated, please contact your e-bike mechanic or FiShaw.
62	Gear shifter cannot release	Replace the gear shifter, if the problem is not eliminated, please contact your e-bike mechanic or FiShaw.
71	Electronic lock stuck	Replace the electronic lock, if the problem is not eliminated, please contact your FiShaw representative.
81	Bluetooth module fault	Replace the Bluetooth module, if the problem is not eliminated, please contact your FiShaw representative.

9 MAINTENANCE

- Do not use thinner or other solvents to clean any of the components. Such substances may damage the surfaces.
- Do not use hard objects to operate the buttons and Display Screen.
- Do not use high-pressure water spray in any position on controller components.
- If storing this production for a long period, please turn it off; do not leave it near sources of heat such as heaters.
- When this product is damaged due to improper use and maintenance warranty will be null and void.



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