



The eBike Display
Users Manual

KD51C-D

Product model

E-bike Intelligent LCD display

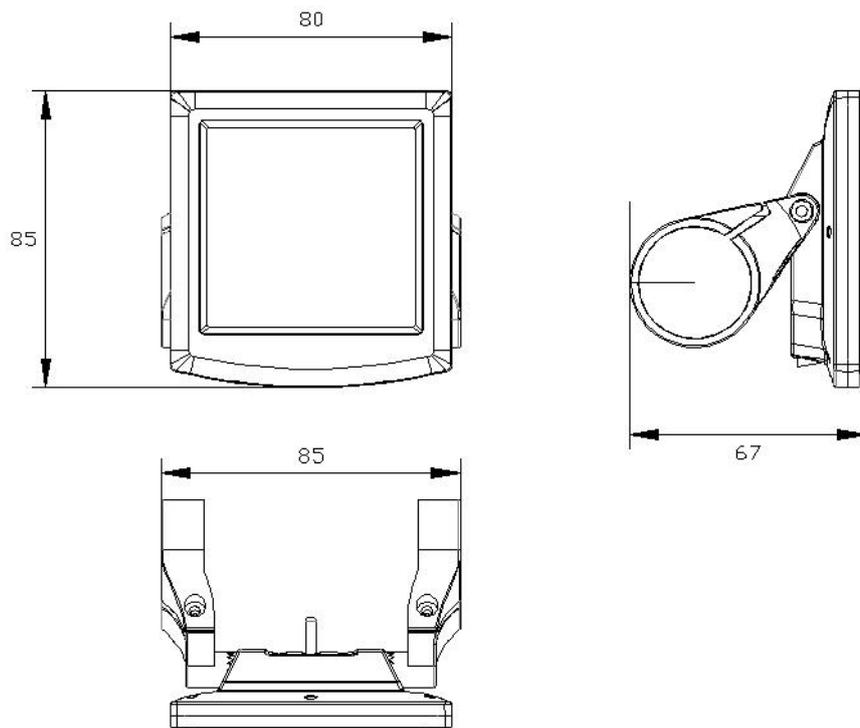
Model: KD51C-D

Specifications

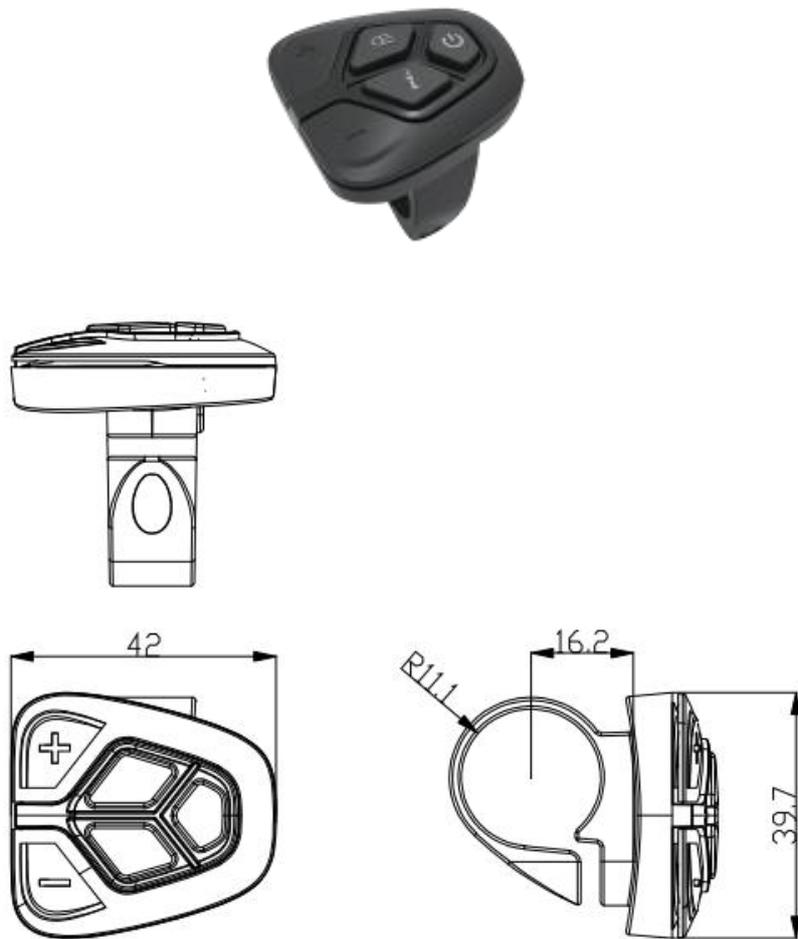
- 24V/36V/48V Power Supply
- Rated working current :10mA
- The maximum working current: 30mA
- Off-state leakage current: <math><1\mu\text{A}</math>
- Operating temperature: $-20^{\circ}\text{C}\sim 60^{\circ}\text{C}$
- Storage temperature: $-30^{\circ}\text{C}\sim 70^{\circ}\text{C}$

Appearance and Size

Product appearance and dimension drawing (unit: mm)



Remote appearance and dimension drawing (unit: mm)



Function Summary

KD51C-D has many functions to meet your riding needs. The indicating contents are as follows:

- Battery and battery percentage indication
- Motor Power indication
- assist-level indication
- Speed indication (incl. running speed, Max. speed and Ave. speed)
- Odometer and trip distance
- The push-assist function
- Trip time indication
- Backlight On/Off
- Error code indication
- Pedaling frequency indication(optional)
- USB connection indicator (optional)
- The remaining range indication(optional)
- Various Parameters Settings (e.g., wheel size, speed-limited, battery level bar, assist level, controller limited current, password enable, etc.)
- Recover Default Settings

General Operation

◆ Switching the E-bike System On/Off

Briefly press the power button to switch on the E-bike system, and provides the power supply for the controller .To hold the power button for 2s, the E-bike system will be switched off .The E-bike system no longer use the battery power.

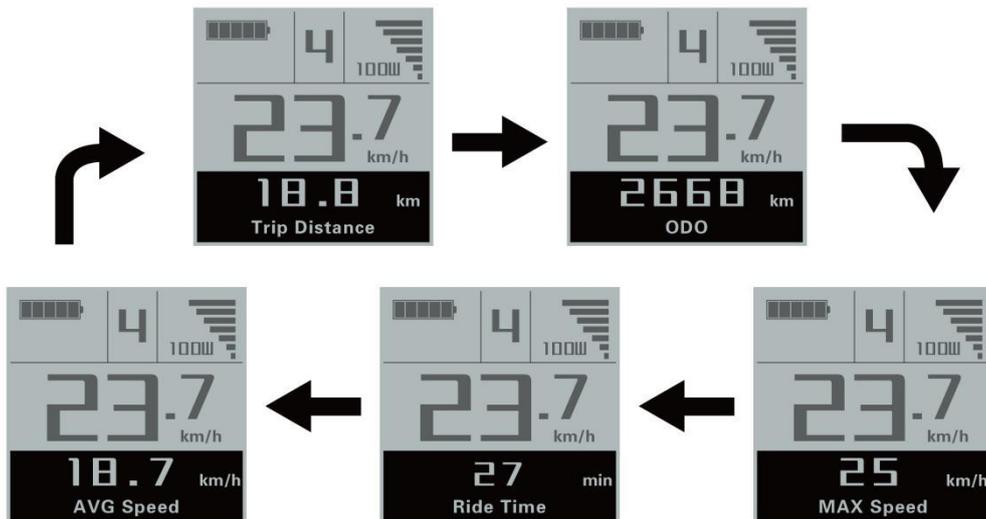
When E-bike system is switched off, the leakage current is less than 1 μ A.

■ When E-bike is parked for more than 10 minutes, the E-bike system will be switched off automatically.

◆ Display Interface

After switching on the E-bike system, the display will show Current Speed and Trip Distance by default. Press the “i” button will show more riding data as below:

Trip Distance (Km) → Total Distance (Km) → Max. Speed (Km/h) → Ave. Speed (Km/h) → Ride Time (Min.) .



Display interface

◆ Switching Push-assist Mode On/Off

To activate the push-assist function, keep holding “-” button. After 2s, The E-bike is activated to go at a uniform speed of 6 Km/h while the screen shows “”. The push-assist function is switched off as soon as you release the “-” button. The E-bike system stops power output immediately.



Push-assist Mode

■ Push-assist function may only be used while pushing the E-bike. Be aware of danger of injury when E-bike wheels do not have ground contact.

◆ Switching the Lighting On/Off

To switch on bike headlight, hold “” button for 2s. The display backlight brightness is automatically reduced. In the same way, hold the “” button for 2s, the bike headlight can be switched off while display backlight recover its brightness.



Switching the Lighting On/Off Interface

◆ Power Assist Level Selection

Press "+" or "-" button to change the E-bike system assist level and change the motor output power, The default assist level ranges from level “0” to level “5”, The output power is zero on Level “0”. Level “1” is the minimum power. Level “5” is the maximum power. When you reach “5”, press the "+" button again, the interface still shows “5”, and blinks at “5” to indicate the power highest. After the power downshift reaches “0”, press the "-" button again, the interface still shows “0” and blinks at “0” to indicate the power minimum. The default value is level “1”.



Assist Level Change Interface

◆ **Battery Indicator**

The five battery bars represent the capacity of the battery. The five battery bars are bright when the battery is in high voltage. When the battery is in low voltage, battery frame will flash at the frequency of 1HZ to give a notice that the battery needs to be recharged immediately.



Battery Indicator

◆ **Motor Power Indicator**

The power of the motor can be read via interface below by digits.



Motor Power Indication Interface

◆ USB connection indication (optional)

When a USB external device is inserted into display, the USB connection indication will be shown as follows:



USB Connection Indication Interface

◆ Error Code Indication

The components of the E-bike system are continuously and automatically monitored. When an error is detected, the respective error code is indicated in text indication area.

Here is the detail message of the error code in **Attached list 1**.



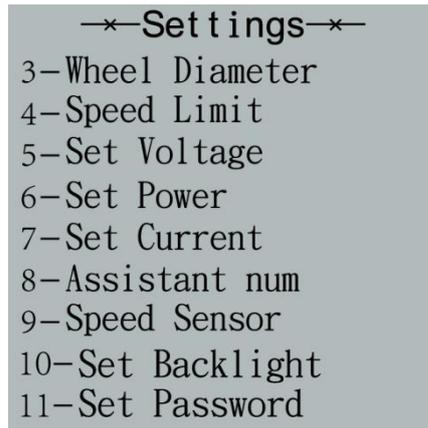
Error Code Indication

■ Make the display repaired when an error code appears. You are not able to ride the electric bike normally.

General Settings

Press the power button to switch on the display

To access general settings menu, hold both the “+” button and the “-” button simultaneously for 2s.



General settings interface

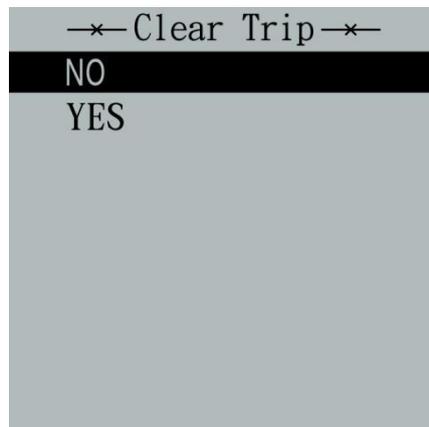
■ All the Settings are operated in the case of a parked bike

◆ Trip Distance Clearance

'Clear Trip' represents trip distance clearance setting.

To clear trip distance, press "+" button or "-" button to select the Yes or No. Yes represents clearing a single ride distance. No represents not clearing a single ride distance.

To store a changed setting, press the "i" button and then access General Settings interface.



Trip Distance Clearance Settings Interface

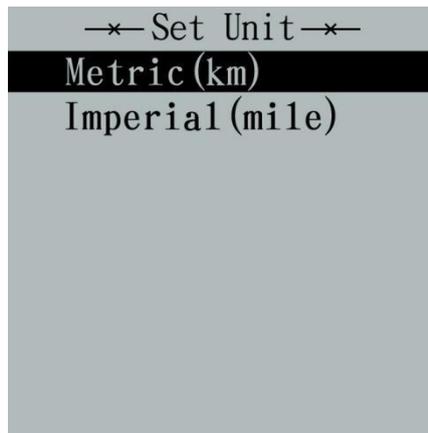
◆ Unit km/mile Conversion

'Set Unit' represents unit settings.

To convert unit, press the "+" button or the "-" button to choose the desired setting item, and then press the "i" button to confirm.

To store a changed setting, press the "i" button and then exit general settings.

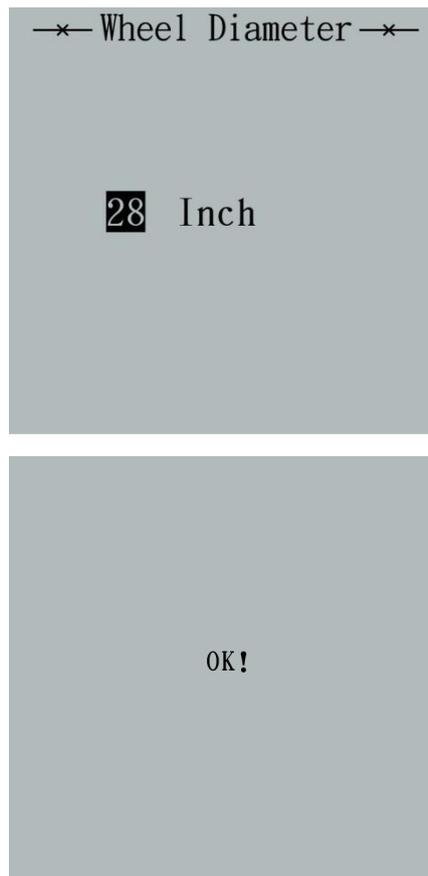
The default value is "Metric (km)".



Mile and Kilometer Conversion Settings Interface

◆ Wheel Diameter Settings

'Wheel Diameter' represents wheel diameter settings. To change basic settings, press the "+" or the "-" button to increase or decrease until the desired value is displayed. The default value is 26 inch. To store a changed setting, press the "i" button to confirm and "OK" on display prompts for operation completed. Then access the General Settings interface.



Wheel Diameter Settings Interface

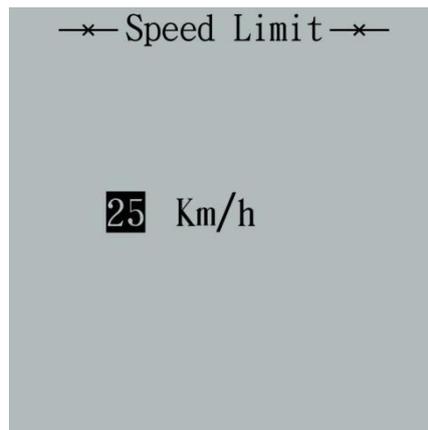
◆ Speed-limit Settings

The default value is 25Km/h.

'Speed Limit' represents the limited speed settings. When the current speed is faster than speed limit, the E-bike system will switch off automatically. Speed limit range is 12Km/h to 40Km/h.

To change basic settings, press the "+" or the "-" button to increase or decrease until the desired value is displayed. Press the "i" button to confirm and "OK" on display prompts for operation completed.

To store a changed setting and exit General Parameter Settings, hold the "i" button for 2s



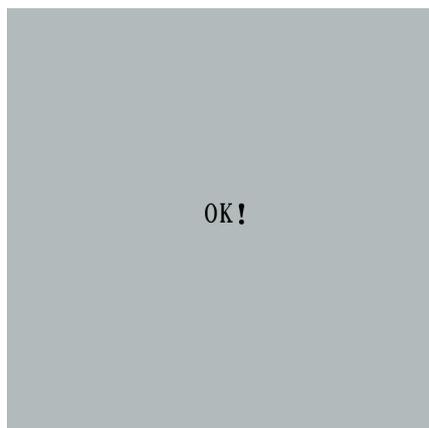
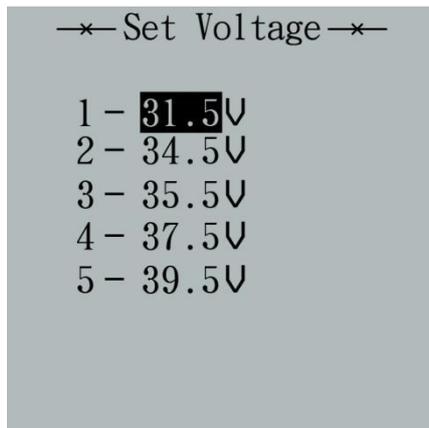
Speed Limit Settings Interface

◆ Battery Power Bar Settings

'Set Voltage' represents voltage settings. Each bar represents a voltage value. 5 bars voltage values must be entered one by one. For example, VOL 1 is first bar voltage value. The default value is 31.5V.

To set battery power bar, press the "+" or the "-" button to increase or decrease the number. To store a changed setting, press the "i" button and access the second bar,

You can set voltage values for other bars in the same way. After 5 bars voltage values are entered, hold the "i" button to confirm and then return to previous menu.



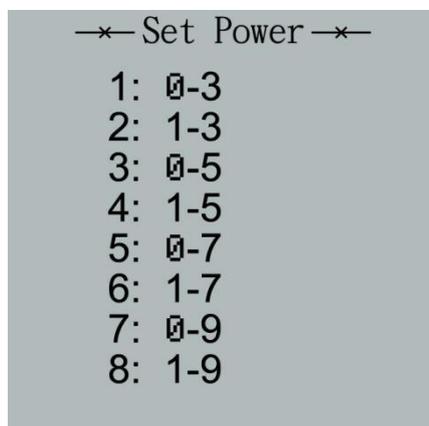
Battery Power Bar Settings Interface

◆Power Assist Level Settings

1. Assist-Level Mode Options

'Set Power' represents power assist level settings. There are 8 assist-level modes for your choice: 0-3, 1-3, 0-5, 1-5, 0-7, 1-7, 0-9, 1-9. The default value is 0-5.

To change the mode of assist-level, press the "+" or the "-" button to choose the desired mode and press the "i" button to confirm, then access PAS ratio settings automatically.



PAS Mode Option Interface

2. PAS Ratio Settings

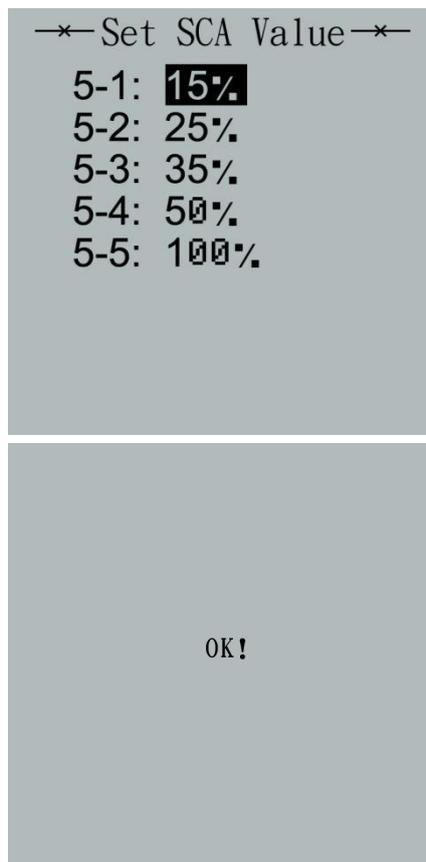
To change the value of PAS ratio, press the "+" button or "-" button to choose the desired value, and then press the "i" button to confirm

For example, the ratio range is "45-55 percent" for level "1", ratio value can be changed and the default value is 50 percent.

To store a modified setting, press the "i" button and move to next PAS level ratio settings.

After all PAS ratios are input, hold the "i" button for 2s to confirm and then return to previous menu.

For PAS ratio default values, please refer to **Attached list 2**.



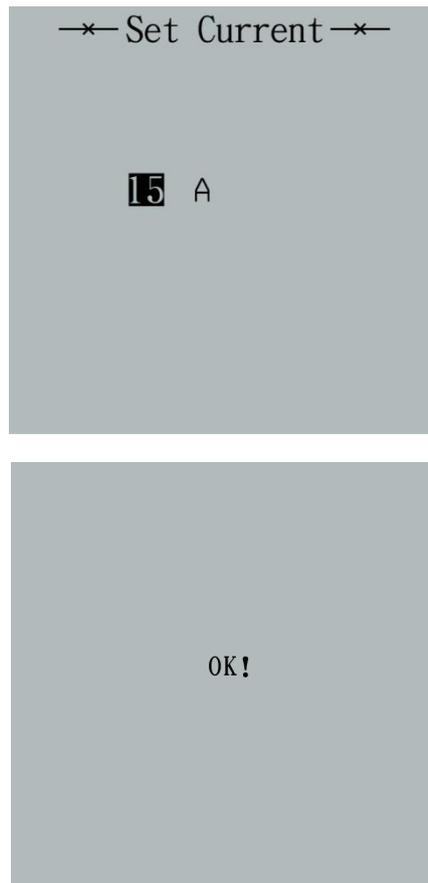
PAS Ratio Settings Interface

◆ Controller Over-current Cut Settings

'Set Current' represents controller over-current cut settings. The current value can be changed from 7.0A to 25.0A.

To change basic settings, press the "+" or the "-" button to increase or decrease the value of the current.

To store a changed setting, hold the "i" button and then return to previous menu.



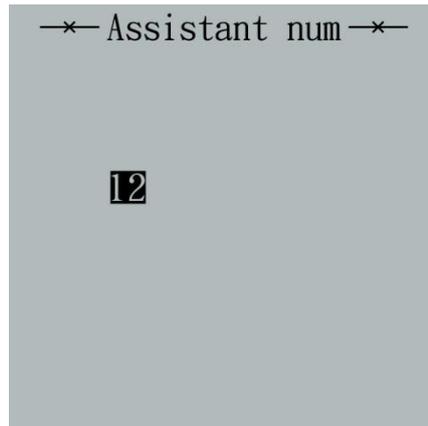
Current Settings Interface

◆ Power Assist Sensor Settings

'Assistant num' represents PAS sensitivity settings. The sensitivity value is "5" to "24".

To store a changed setting, press the "i" button and then access the general settings.

To change the sensitivity of PAS sensor, press "+" or "-" button to select sensitivity value.



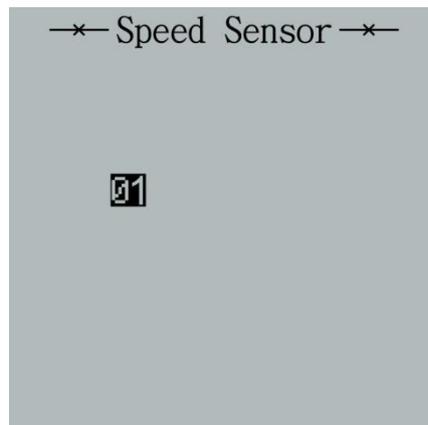
PAS Sensitivity Settings

◆ Speed Sensor Settings (optional)

'Speed Sensor' represents speed sensor settings. The default value is 1

To change speed sensor settings, press the "+" or the "-" button to select the quantity of magnet head (the range is from 1 to 15).

To store a changed setting, hold the "i" button and then return to previous menu.



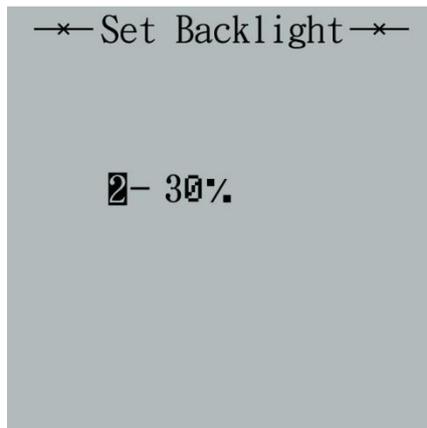
Speed Sensor Selection

◆ Backlight Contrast Settings

'Set Backlight' represents backlight contrast settings. Level "1" is the low brightness; Level "5" is high brightness. The default level is "1".

To modify the backlight brightness, press the "+" button or the "-" button to choose the desired setting brightness level.

To store a changed setting, press the "i" button and then access the General settings interface.

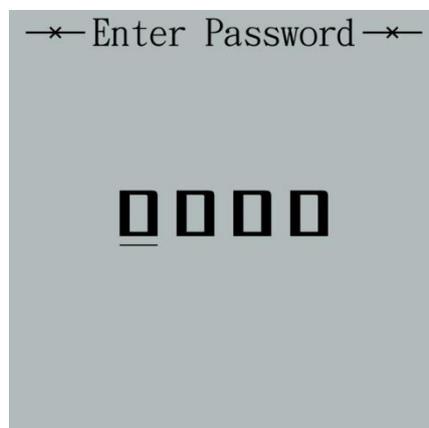


Backlight Brightness Settings Interface

◆ Power-on Password Settings

Password Settings on the screen means **power-on** password settings. The default password is 1212.

To access the power-on password settings, press the “+” or the “-” button to modify the value and then press the “i” button to confirm digit one by one until the correct 4-digit password is completed, and then press the “i” button to access power-on password enable settings interface, otherwise stay still in the password input state.



Enter Password Interface

◆ Power-on Password Disable/Enable

To change power-on password enable/disable settings, press the “+” or the “-” button to choose. Disable means not require a power-on password. Enable means a power-on password is required.

If select Enable, press the “i” button and then access power-on password modify interface, otherwise exit the power-on password settings interface.

The default value is Enable Password.



Set Password Interface

◆Power-on Password Change

When the display shows Password Set, Enter Password 0000, to set new power-on password, press the “+” or the “-” button to modify the value and then press the “i” button to confirm digit one by one until the new 4-digit password is completed.

To store the new power-on password, hold the “i” button for 2s and then exit settings.

When you switch on the E-bike system next time, the display will show P1, 0000 and input the new password to power on.



Change Password Interface

◆Exit Settings

In the settings state, press the “i” button (short than 2s) is to confirm the input. Hold the “i” button (for more than 2s) is to store the settings, and then exit the current settings. Hold the “-” button is to cancel the operation but not storing settings data, and then return to previous menu.

■If there is no operations in one minute, the display will exit the settings state.

Quality Assurance and Warranty Scope

I Warranty

- (1) The warranty will be valid only for products used in normal usage conditions.
- (2) The warranty is valid for 24 months after the shipment or delivery to the customer.

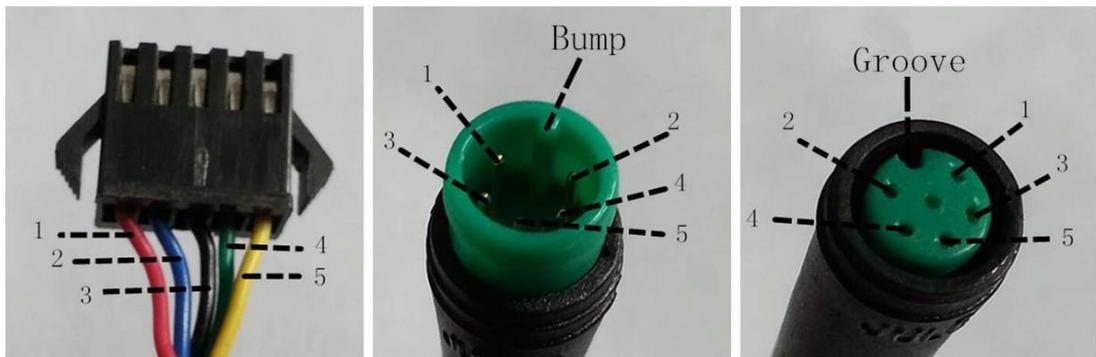
II Others

The following cases do not belong to our warranty scope.

- 1、The display is demolished.
- 2、The damage of the display is caused by wrong installation or operation.
- 3、Shell of the display is broken when the display is out of the factory.
- 4、Wire of the display is broken.
- 5、The fault or damage of the display is caused by the force majeure (e.g., fire, earthquake, etc.).
- 6、Beyond Warranty period.

Connection Layout

Connector wire sequence



Connector to controller

Display end

connection wire end to display end

Wire sequence table

Wire	Color	Function
1	Red (VCC)	+
2	Blue (K)	Lock
3	Black (GND)	-
4	Green (RX)	RX
5	Yellow (TX)	TX

■ Some products have wire connection with water-proof connectors, users can not see the color of wires in the harness.

Warnings:

1. Use the display with caution. Don't attempt to disconnect or link the connector when battery is on power.
2. Try to avoid hitting the display.
3. Don't modify system parameters to avoid parameter disorder.
4. Make the display repaired when an error code appears.

■ THIS MANUAL INSTRUCTION IS A GENERAL-PURPOSE VERSION. SOME OF THE VERSIONS FOR THE DISPLAY SOFTWARE WILL BE DIFFERENT FROM SPECIFICATION TO SPECIFICATION. PLEASE ALWAYS REFER TO AN ACTUAL VERSION

Attached list 1: Error code definition

Error code	Definition
21	Current Abnormality
22	Throttle Abnormality
23	Motor Phase Abnormality
24	Motor Hall Signal Abnormality
25	Brake Abnormality
30	Communication Abnormality

Attached list 2: PAS ratio default value table

Level PAS level mode	1	2	3	4	5	6	7	8	9
0-3/1-3	50%	74%	92%	—	—	—	—	—	—
0-5/ 1-5	50%	61%	73%	85%	96%	—	—	—	—
0-7/ 1-7	40%	50%	60%	70%	80%	90%	96%	—	—
0-9/ 1-9	25%	34%	43%	52%	61%	70%	79%	88%	96%