

the E-bike display

User's Manual

KD218

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Product name and Model

E-bike Intelligent LCD display

Model: KD218

Specifications

- 24V/36V/48V Power Supply
- Rated working current: 10mA
- The maximum working current: 30mA
- Off-state leakage current: <1μA
- Operating temperature: -20℃~ 60℃
- Storage temperature: -30℃~ 70℃

Appearance and Size

Product appearance and dimensional drawing (unit: mm)

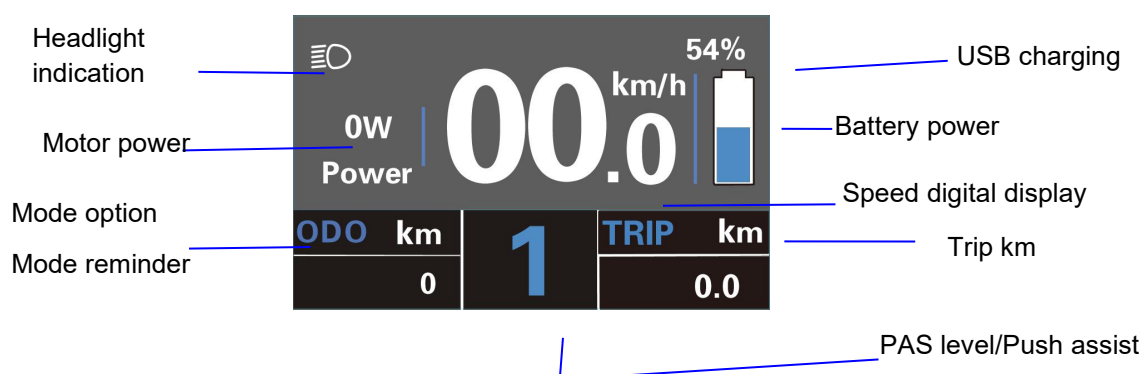


Function Summary

KD218 has many functions to meet the Users' needs. The indicating contents are as follows:

- Battery and battery percentage
- Motor Power
- assist-level
- Speed indication (incl. current speed, Max. speed and Ave. speed)
- ODO and trip distance
- The push-assist function
- Trip time
- 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

Functional Area Distribution:



General Operations

◆ Switching the E-bike System On/Off

Press the **ON/OFF** button to switch on E-bike system and provide the power supply for the controller. Likewise, hold the **ON/OFF** button for 2s again, the E-bike system will be switched off. The E-bike system no longer uses the battery power.

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

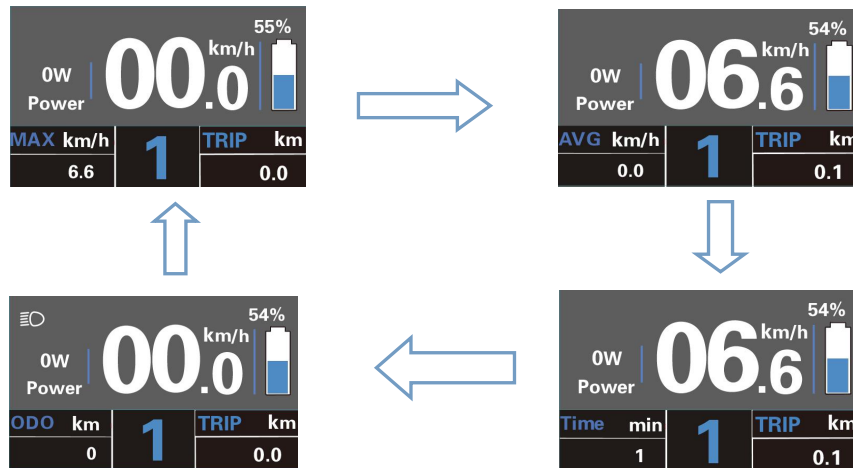
■ When E-bike is parked for more than 10 minutes, the E-bike system will be switched off automatically.

◆Display Interface

After switching on the E-bike system, the display will show Current Speed and Trip Distance by default.


Press the “ON/OFF” button will show more riding data shown below:

Max. Speed (Km/h) → Avg. Speed (Km/h) → Trip Time (Min.) → ODO (km) → Max. Speed (Km/h)

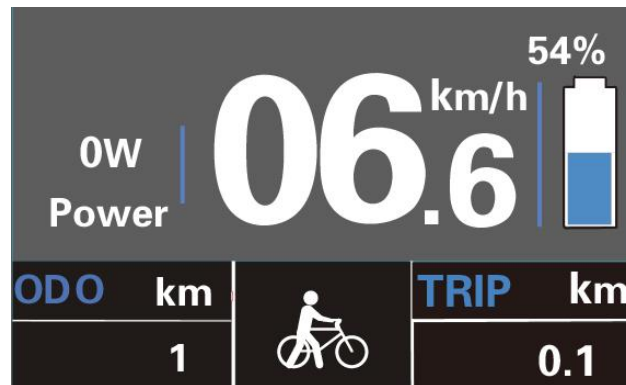


Display interface

◆Switching Push-assist Mode On/Off

To activate the push-assist function, keep holding “-” button. After 2 seconds, E-bike is activated to go at a uniform speed of 6 Km/h while the screen displays .

The push-assist function is switched off as soon as you release the “-” button. The E-bike system stops the power output immediately.

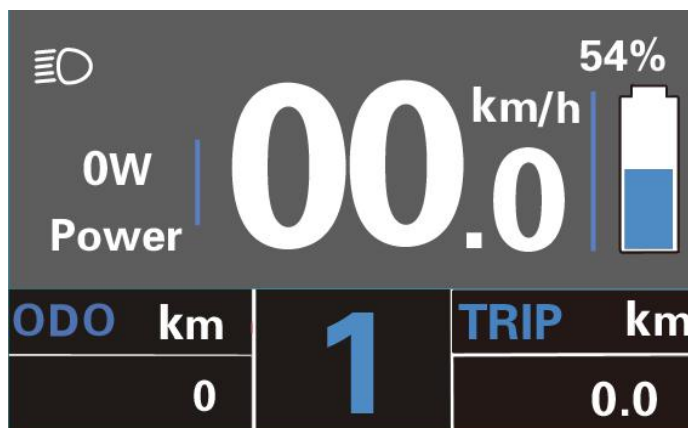


Push-assist mode

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

◆Switching the Lighting On/Off

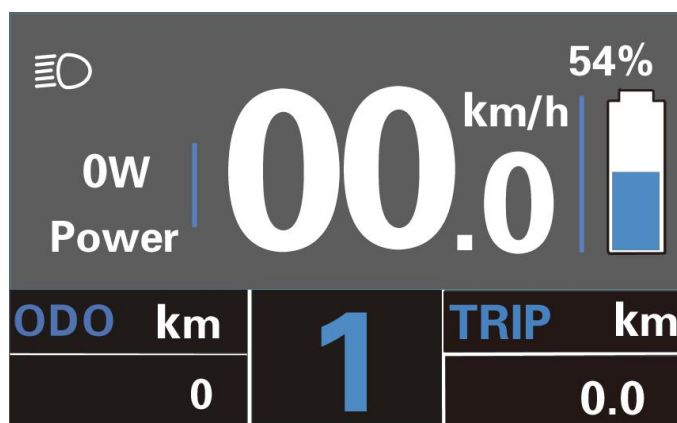
To switch on E-bike headlight, hold the “UP” button for 2s. The backlight brightness is automatically reduced. Likewise, press the “UP” button for 2s, the bike light can be switched off.



Switching the Lighting On/Off Interface

◆Assist Level Options

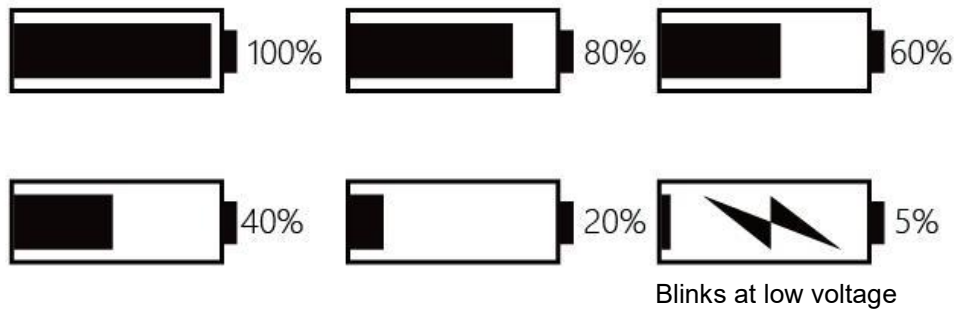
Press "+" or "-" button to switch the E-bike system assist level, change the motor output power. The default assist level ranges from level “0” to level “5”. The output power is zero on Level “0”. Level “1” is the minimum power. Level “5” is the maximum power. When you reach “5”, press the "+" button 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 Interface

◆ Battery Power Indicator

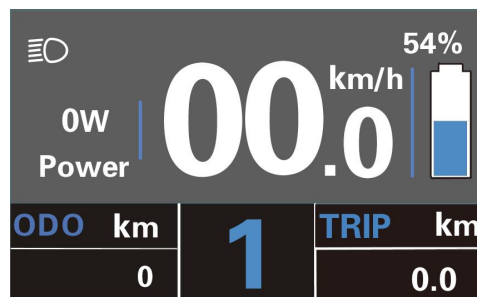
The five battery bars represent the capacity of the battery. The five battery bars bright when the battery is in full voltage. When the battery is in low voltage, battery frame will flash at the frequency of 1HZ to give a notice that the battery needs to be recharged immediately.



Battery Power Indicator

◆ Motor Power Indicator

The power of the motor is shown via digital display.



Motor Power 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.



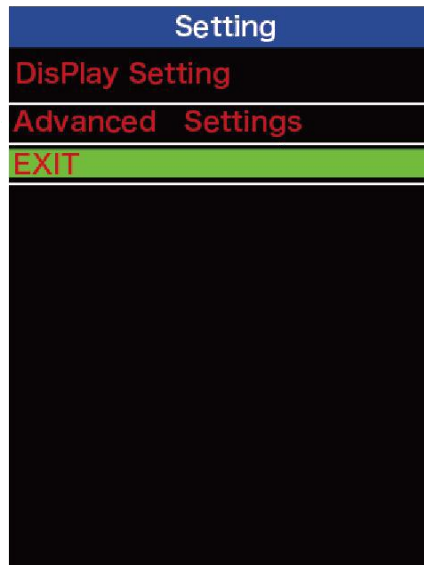
Error Code Indication

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

General Settings (DisPlay Setting)

Press the power button to switch on the display.

To access general settings (DisPlay Setting), hold both the “+” button and the “-” button simultaneously for 2s.



Setting interface

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

◆ Trip Distance Clearance

Trip Reset represents trip distance clearance setting.

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

To store a changed setting, press “i” button.

DisPlay Setting			DisPlay Setting	
TRIP Reset	NO	➔	TRIP Reset	YES!
Toggle Unit	Metric		Toggle Unit	Metric
Wheel	28Inch		Wheel	28Inch
Speed Limit	29Km/h		Speed Limit	29Km/h
Set Voltage	36-1		Set Voltage	36-1
Sensitivity	01		Sensitivity	01
BACK			BACK	

Trip Distance Clearance Settings Interface

◆ Unit km/mile Conversion

Toggle 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 move to other setting items.
The default value is “Metric (km)”.

DisPlay Setting	
TRIP Reset	NO
Toggle Unit	Metric
Wheel	28Inch
Speed Limit	29Km/h
Set Voltage	36-1
Sensitivity	01
BACK	

➔

DisPlay Setting	
TRIP Reset	NO
Toggle Unit	Imperial
Wheel	28Inch
Speed Limit	29Km/h
Set Voltage	36-1
Sensitivity	01
BACK	

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Interface

◆Wheel Diameter Settings

Wheel 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, display "OK" words prompt operation is completed. Then access the General Settings interface.

DisPlay Setting	
TRIP Reset	NO
Toggle Unit	Metric
Wheel	18Inch
Speed Limit	29Km/h
Set Voltage	36-1
Sensitivity	01
BACK	

➔

DisPlay Setting	
TRIP Reset	NO
Toggle Unit	Metric
Wheel	28Inch
Speed Limit	29Km/h
Set Voltage	36-1
Sensitivity	01
BACK	

Wheel diameter settings interface

◆Speed-limit Settings

The default value is 25Km/h.

Speed Limit represents the limit speed settings. When the current speed is faster than speed limit, the E-bike system will be switched 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, display "OK" words prompt operation is completed.

DisPlay Setting	
TRIP Reset	NO
Toggle Unit	Metric
Wheel	28Inch
Speed Limit	29Km/h
Set Voltage	36-1
Sensitivity	01
BACK	

➔

DisPlay Setting	
TRIP Reset	NO
Toggle Unit	Metric
Wheel	28Inch
Speed Limit	30Km/h
Set Voltage	36-1
Sensitivity	01
BACK	

Speed limit settings interface

◆ Battery Power Bar Settings

Set Voltage represents voltage value 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 and access the second bar, press “i” button.

In the same manner, after 5 bars voltage values are entered, hold the “i” button to confirm and then return to the previous menu.

DisPlay Setting			
TRIP Reset	NO		
Toggle Unit	Metric		
Wheel	28Inch		
Speed Limit	29Km/h		
Set Voltage	24-1		
Sensitivity	01		
BACK			



DisPlay Setting			
TRIP Reset	NO		
Toggle Unit	Metric		
Wheel	28Inch		
Speed Limit	29Km/h		
Set Voltage	36-1		
Sensitivity	01		
BACK			

Battery bar settings interface

◆ AL sensitivity

Sensitivity represents Ambient Light Sensor settings. The sensitivity value ranges from 1 to 5. The default value is 3. It can help with adjusting the screen brightness as per the ambient light conditions automatically. When you ride the bike at night or in a place where there is a lack of light, the display backlight and bike headlight will be turned on automatically.

Press **Sensitivity** and press **UP/DOWN** button to choose the desired sensitivity value.

DisPlay Setting			
TRIP Reset	NO		
Toggle Unit	Metric		
Wheel	28Inch		
Speed Limit	29Km/h		
Set Voltage	36-1		
Sensitivity	01		
BACK			



DisPlay Setting			
TRIP Reset	NO		
Toggle Unit	Metric		
Wheel	28Inch		
Speed Limit	29Km/h		
Set Voltage	36-1		
Sensitivity	02		
BACK			

Sensitivity settings interface

Advanced Settings

After General Settings (DisPlay Setting) is done, Press Back to return Setting page.

Press **UP** or **DOWN** button to choose Advanced Settings and press **"ON/OFF"** button to enter Advanced Settings page.

◆Power Assist Level Settings

Power Assist Level Options

Power Set represents power assist-level settings. In assist level settings, there are 8 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 "+" or "-" button to choose the desired mode and press the **"ON/OFF"** button to confirm and access PAS ratio settings automatically.

Advanced Settings	
Power Set	1-3
Current Limit	7A
Assistant Num	10
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	



Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	12
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	

PAS Assist level settings

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 range is "45-55 percent" for level "1", percentage value can be modified, and the default value is 50 percent.

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

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

Please refer to PAS ratio default values in **Attached list 2**.

Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	10
1 -	32%
2 -	61%
3 -	73%
4 -	85%
5 -	96%
	01
	-0-
	100%
	>

PAS ratio settings interface

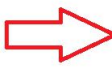
◆Controller Over-current Cut Settings

Current Limit 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.

Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	48
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	



Advanced Settings	
Power Set	0-5
Current Limit	12A
Assistant Num	48
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	

Current Limit settings interface

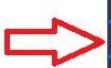
◆Power Assistant Sensor Settings

Assistant Num represents PAS sensitivity settings. The sensitivity value is “5” to “24”.

To change the sensitivity of PAS settings, press “+” or “-” button to choose the desired sensitivity values.

To store a changed setting, press the “ON/OFF” button.

Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	48
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	



Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	04
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	

PAS sensitivity settings interface

◆Speed Sensor

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 heads (the range is from 1 to 15).

To store a changed setting, hold the “ON/OFF” button and then return to previous menu.

Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	12
Speed sensor	01
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	



Advanced Settings	
Power Set	0-5
Current Limit	7A
Assistant Num	12
Speed sensor	12
Slow Start	-0-
LCD Luminance	100%
Password	>
BACK	

Speed sensor settings interface

◆Slow Start up Settings

Slow start represents slow start up settings. The range is “1-4”, “4” is the slowest. The default value is “1”.

To change slow start up settings, press the **UP/DOWN** button to choose the desired value.

To store a changed setting, press the **ON/OFF** button.

Hold **i** button for 2s to return to previous menu.

Advanced Settings		Advanced Settings	
Power Set	0-5	Power Set	0-5
Current Limit	7A	Current Limit	7A
Assistant Num	12	Assistant Num	12
Speed sensor	01	Speed sensor	08
Slow Start	-0-	Slow Start	-3-
LCD Luminance	50%	LCD Luminance	100%
Password	>	Password	>
BACK		BACK	

Slow start up settings interface

◆Backlight Brightness Settings

LCD Luminance represents backlight brightness. 100% is the highest brightness. The less the percentage is, the lower the backlight brightness is.

To modify the backlight brightness, press the “+” button or the “-” button to choose the desired percentage.

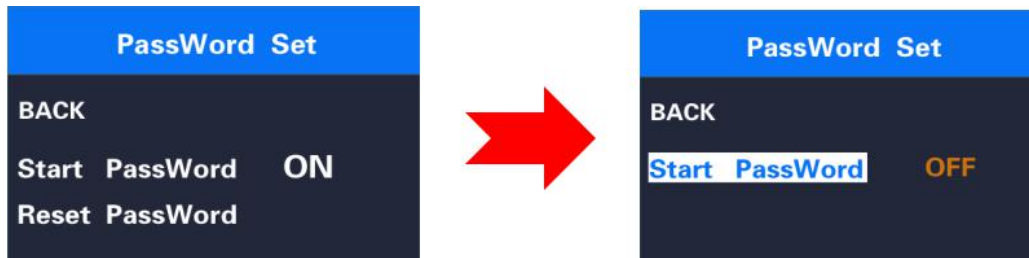
To store a changed setting, press the “i” button or long press **i** button and exit the advanced settings.

Advanced Settings		Advanced Settings	
Power Set	0-5	Power Set	0-5
Current Limit	7A	Current Limit	7A
Assistant Num	12	Assistant Num	12
Speed sensor	01	Speed sensor	01
Slow Start	-0-	Slow Start	-0-
LCD Luminance	50%	LCD Luminance	100%
Password	>	Password	>
BACK		BACK	

Backlight Brightness Settings Interface

◆Power-on password settings:

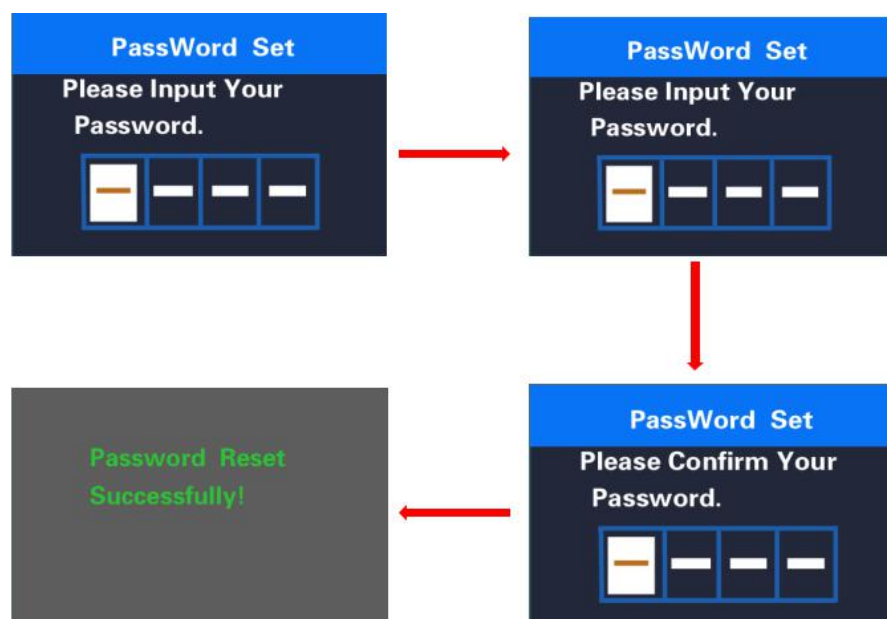
Press **UP** or **DOWN** button to choose 'Password' and press **ON/OFF** to confirm. Meanwhile press **UP/DOWN** button to choose 'Start Password' and press **ON/OFF** to confirm. Press **UP** or **DOWN** to shift from 'OFF' to 'ON'. Refer to below steps to toggle ON and OFF.



Power-on password input settings interface

◆Power-on password enable/disable

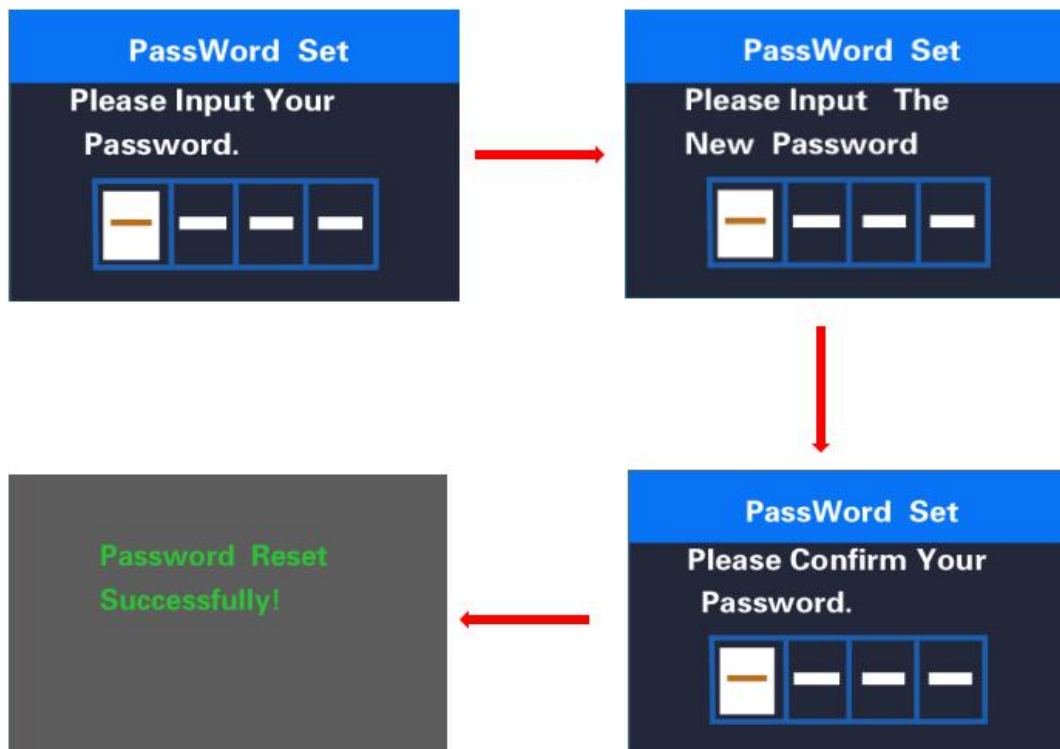
In "Start PassWord" interface, choose 'ON' and short press(less than 0.5S) **ON/OFF** to confirm. Meanwhile, display interface prompts for a password. Press **UP** or **DOWN** button to shift numbers from 0 to 9 and press ON/OFF to confirm and input the next digit. After the input is done, the interface will prompt for entering the password again. If two inputs are consistent, the system prompts that the password is set successfully. If two inputs are inconsistent, the first input is to be repeated and confirm the new password again. The interface will be redirected to original settings page 2 seconds after the password is set successfully. Hold **ON/OFF** button for more than 2 seconds to exit to the main page or by route 'BACK' → 'EXIT'. The operation steps are as follows:



Password enable/disable confirmation interface

◆Password Reset.

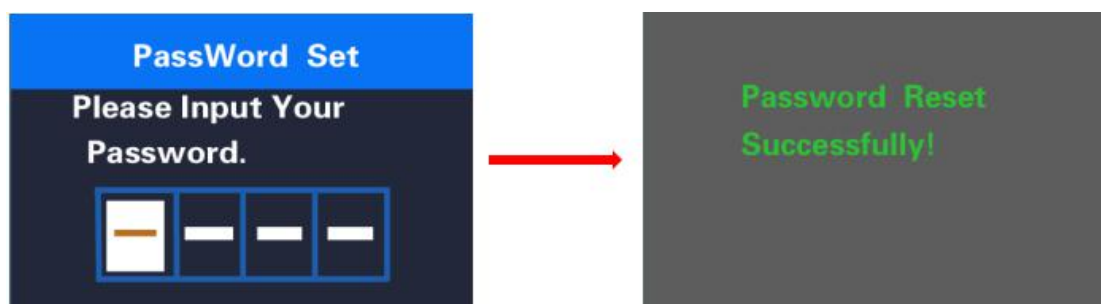
When password is enabled, 'Reset password' will add to Password interface. Press(less than 0.5s) **UP/DOWN** button to choose 'Reset Password' and press(less than 0.5s) **ON/OFF** to confirm. Meanwhile, the interface prompts for current password input. The display will be powered off automatically when the password is entered incorrectly after 10 inputs. When a correct password is input, the interface prompts for a new password. Then follow the operations of setting a new password. The interface will be redirected to original settings page 2 seconds after the password is reset successfully. Hold **ON/OFF** button for more than 2 seconds to exit to the main page or by route 'BACK' → 'EXIT'. The operation steps are as follows:



Password reset interface

◆ Password Disable

In “Start PassWord” interface, choose ‘OFF’ and short press (less than 0.5S) **ON/OFF** to confirm. Meanwhile, display interface prompts for a password. The display will be powered off automatically when the same password is entered incorrectly after 10 inputs. When a correct password is input, the display will give a prompt of ‘password function disabled’. After 2 seconds, the interface will be redirected to original settings page. Hold **ON/OFF** button for more than 2 seconds to exit to the main page or by route ‘BACK’ → ‘EXIT’. The operation steps are as follows:



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

Quality Assurance and Warranty Scope

I Warranty

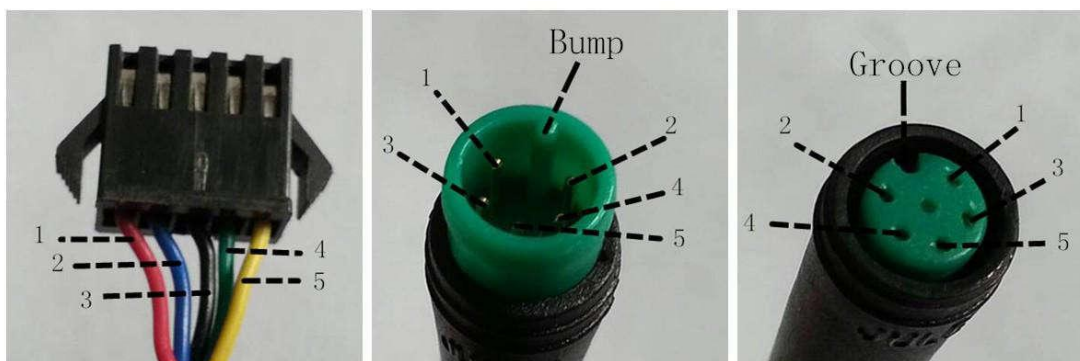
- (1) The warranty will be valid only for products used in normal usage conditions.
- (2) The warranty is valid for 24 months after the shipment or delivery to customers

II 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't see the color of wires in the harness.

Warnings:

1. Use the display with caution. Don't attempt to release 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 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%