

The eBike Display  
**Users Manual**

**KD31M**

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## Product name and model

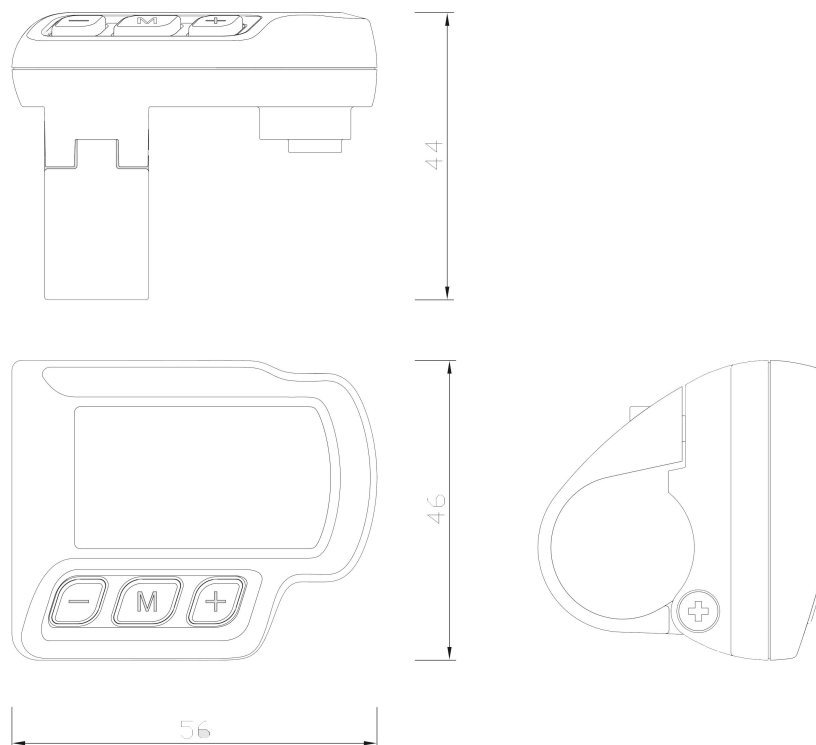
Intelligent digital display of eBike, model: KD31M.

## Specifications

- 24V/36V /48V Power Supply
- Rated working current: 10mA
- The maximum working current: 30mA
- Off leakage current: <1uA
- The supply controller working current: 50mA
- Operating temperature: -20 ~ 60 °C
- Storage temperature: -30 ~ 70 °C

## Appearance and Size

Display appearance and dimension figure (unit: mm)



## Function Summary

KD31M can provide a lot of functions to fit the users' needs. The indicating contents are as following:

- Smart Battery Indication
- Assistance-level Indication
- Running Speed Indication
- Trip distance and total distance
- The push-assistance function
- The Lighting On/Off
- Error Code indication
- Various Parameters Settings (e.g. wheel size, PAS level, etc.)
- Recover Default Setting

## Button Definition

There are three buttons ( **M** , **+** , **-** ) on the KD31M display that represent the following functions respectively **MODE**, **UP**, **DOWN**.

## Monitor Area



Monitor Area

## General Operation

### ◆Switching the eBike System On/Off

To switch on the eBike system, hold the **MODE** button for 2 s.

In the same way to hold **MODE** button for 2 s again, the eBike system will be switched off.

When switching off the eBike system, the leakage current is less than 1 uA.

■When parking the eBike for more than 10 minutes, the eBike system switches off automatically.

### ◆Displaying Interface

The display consists four displaying state interfaces, respectively is the Running Speed, Battery percentage, Trip distance and Total distance, the default value is Running Speed.

When the eBike is parked, briefly press the **MODE** button, the display can in turn circular display Battery percentage, Trip distance and Total distance, every state displays 2 s and then automatically returns to the Running Speed interface.

When the eBike is riding, press the **MODE** button, the display can in turn circular display Battery percentage and Trip distance, every state displays 2 s and then automatically returns to the Running Speed interface.

### ◆Switching Push-assistance mode On/Off

To access the push-assistance mode, hold the **DOWN** button for 2 s, the eBike will go on at a uniform speed of 6 Km/h, "P" is showed on the screen at the same time. The push-assistance function switches off as soon as you release the **DOWN** button.



Push-assistance mode

■ **Push-assistance function may only be used when pushing the eBike. Danger of injury when the wheels of the eBike do not have ground contact while using the push-assistance function.**

◆ **Switching the Lighting On/Off**

To switch on headlight of the eBike, hold the **UP** button for 2 s.  
In the same way to hold the **UP** button for 2 s again, the headlight will be switched off.

◆ **PAS Level Selection**

PAS Level indicates the output power of the motor. The default value is level “1”.

The default power 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. Gearing to level “5” and then pressing the **UP** button, the interface shows “5” still and “5” flashing prompts top. Gearing to level “0” and then pressing the **DOWN** button, the interface shows “0” still and “0” flashing prompts low.

To change assistance level, press the **UP/DOWN** button to increase or decrease until the desired assistance level is displayed.



PAS Level selection interface

◆ **Battery Indication**

Battery indication is displayed by percentage.



Battery percentage display

◆ **Error Code Indication**

If there are errors about the electronic control system, the error code will appear automatically. Here is the message of the error code in **Attached list 1**.



Error Code Indication

## Trip Distance Clearance

To clear trip distance, hold both the **MODE** button and the **DOWN** button for 2 s.

When the eBike is parked, the display shows 0.0KM for 2 s and then returns to the interface of Running Speed automatically.

## General Parameter Settings

To access the General Parameter Settings state, hold both the **UP** and **DOWN** button for 2 s.

To access the corresponding settings page, press the **UP/DOWN** button to increase or decrease until the desired item is displayed, and then press the **MODE** button to confirm.

◆ **Wheel Diameter Settings**

Ld represents Wheel Diameter. Electable values are 16, 18, 20, 22, 24, 26, 700C and 28.

The default value is 26inch.

To change basic settings, press the **UP/DOWN** button to increase or decrease until desired value of wheel diameter is displayed.

To store a changed setting and access previous interface, press the **MODE** button.

To store a changed setting and exit General Parameter Settings interface, hold the **MODE** button for 2 s.



Wheel Diameter Setting Page

### ◆Speed-limit Settings

LS represents the limit speed settings. When the running speed is faster than limit speed, the eBike system will switch off automatically. Limit speed ranges from 12Km/h to 40Km/h. The default value is 25Km/h.

To store a changed setting and access previous interface, press the **MODE** button.

To store a changed setting and exit General Parameter Settings interface, hold the **MODE** button for 2 s.



Limit Speed Setting Page

### ◆Assistance Level Settings

In assistance level settings, there are 8 modes to select: 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 assistance level, press the **UP/DOWN** eBike button to increase or decrease until the desired setting is displayed.

To store the changed setting, press the **MODE** button.



PAS Mode Select Page

## Quality assurance and warranty scope

### I Warranty

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

### II Others

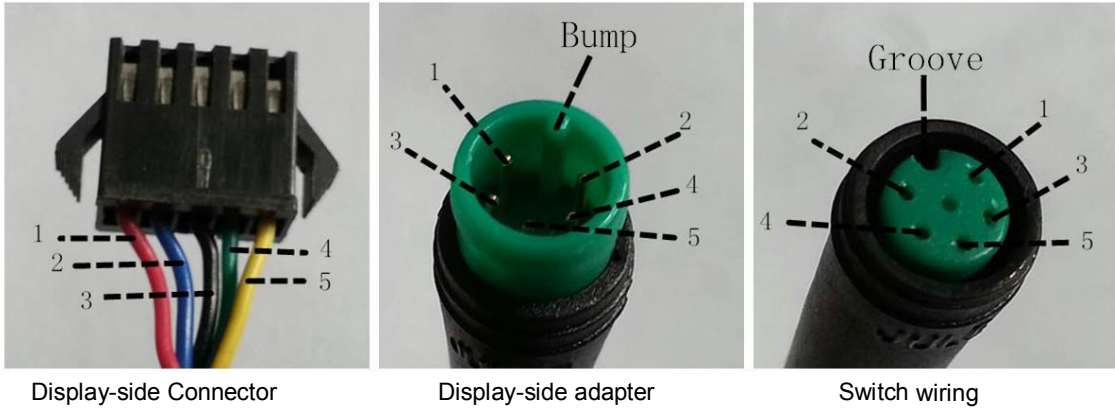
The following items do not belong to our warranty scope:

- 1) The display is demolished.
- 2) The damage 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) Beyond Warranty period.

6) The fault or damage of the display is caused by the force majeure (e.g. fire, earthquake, etc.).

## Connection layout

Connector line sequence



### Line sequence table

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

■Some wire use the water-proof connector, users are not able to see the inside color.

## Operation Cautions

Be care of the safety use. Don't attempt to release the connector when battery is on power.

- ◆ Try to avoid hitting.
- ◆ Do not modify system parameters to avoid parameters disorder
- ◆ Make the display repaired when error code appears.

### Attached list 1: Error code definition

Error Code	Definition
E21	Current Abnormality
E22	Throttle Abnormality
E23	Motor Abnormality
E24	Motor Hall Signal Abnormality
E25	Brake Abnormality
E30	Communication Abnormality