

# VINKA EBIKE Display

## User Manual

### DR25



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## Product introduction

### 1.Product name and model

Product name: E-Bike intelligent LCD instrument

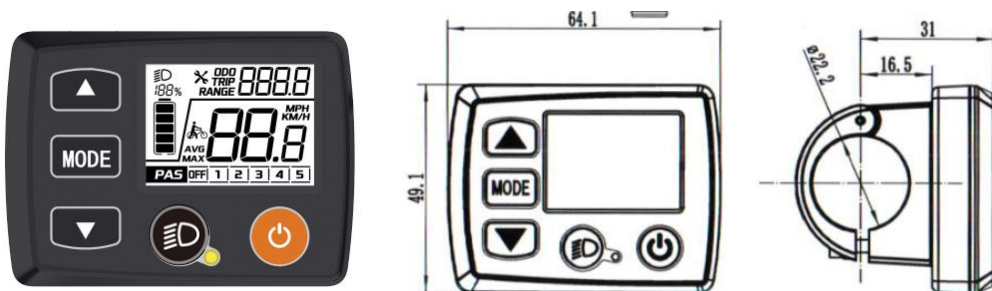
Product Model: DR25

### 2.Specifications

- Rated voltage: 36V/48V
- Rated working current: 12mA
- Off-state leakage current: <1uA
- Supply the operating current to the controller: 50mA
- Operating temperature: -20°C~ 60°C
- Storage temperature: -30°C~ 80°C

### 3.Appearance and Size

Display appearance and dimensional drawing (unit: mm)



## Function Summary And Key Definition

### 1.Function Area Distribution



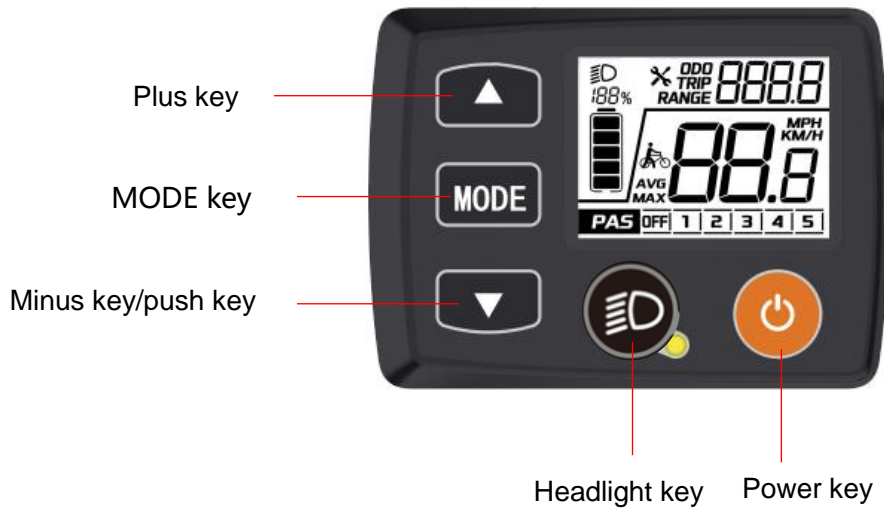
DR25 Functional Area Distribution

### 2.Function Summary

DR25 has many functions to meet the riders' needs. The indicating elements are as follows:

- Smart battery indication
- Speed indication (incl. Current speed, max. speed and avg. speed)
- ODO and Trip
- 6km/h push-assistance function
- Error code
- Bluetooth function is not optional, USB function is not optional

### 3.Button definition



DR25 instrument has 5 keys: power key, MODE key, plus key, headlight key, minus key/push key; The manual uses "ON/OFF", "i", "+", "Light" and "-" to indicate these five keys.

## General Operation

### 1. Switch ON/OFF

After long pressing the power button " ON/OFF ", the display starts to work and provides the working power of the controller. In the power on state, long press the power button " ON/OFF " to turn off the power of the e-bike. When E-bike system is switched off, the leakage current is less than 1  $\mu$ A.

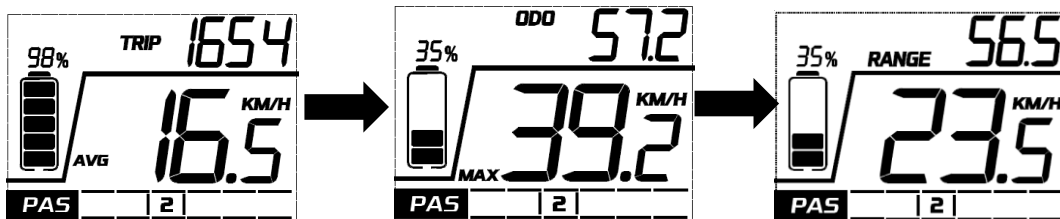
- ◆ When the E-bike is parked for approx 15 minutes, the E-bike system switches off automatically.

### 2. Display Interface

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

Press " i " button on the remote to switch between the indication functions below:

Trip Distance (Km)→ODO (Km) →RANGE (Km)

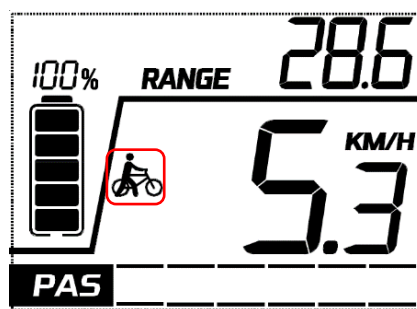


Display Interface

### 3. Switching Push-assist Mode On/Off

To activate the push-assistance function, press and hold the "-" button on the remote. After 1 seconds, the E-bike is activated to go at a uniform speed of 6 Km/h while the screen shows '🚲'.

The push-assistance function is switched off as soon as you release the "-" button. Releasing the "-" button will immediately stop the power output and return to the state before the push assistance.

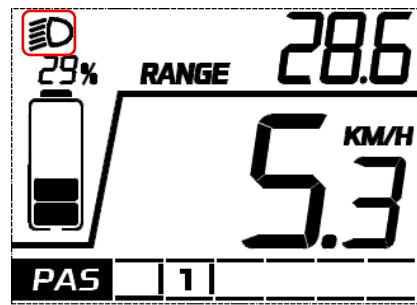


Push-assistance Mode

- ◆ Don't not use this function at the riding state

### 4. Switching Lighting ON/OFF

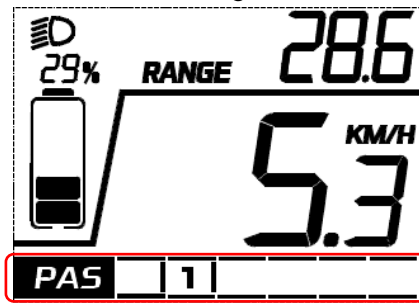
When the power is on normally and the display is turned on, press the "Light" button, turn on the headlight and display the headlight symbol show on the display, and reduce the brightness of the display backlight by 50%. When the headlight is on, press the "Light" button, turn off the headlight, the headlight symbol of the display disappears, and the brightness of the backlight is restored.



Switch the headlight On/Off Interface

## 5. Assist Level Interface

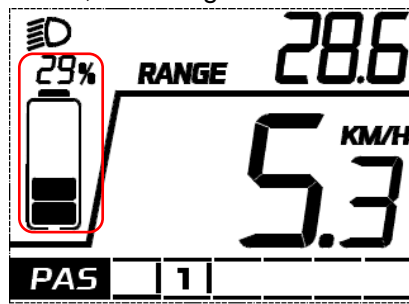
Short press the " + " or " - " button, switch the e-bike assist level, change the motor output power, the default output power range of the display is level 0-5, level 0 is stop power output, level 1 is the lowest power, level 5 is the highest power. When it reaches level 5, press the " + " button again, and the interface still shows 5. After the assist to reduce the gear reaches level 0, press the " - " button again, and the interface still displays 0.



Assist level interface

## 6. Battery Display

The five-segment battery power display, when the battery voltage is high, the five-segment LCD is on, and when the battery is undervoltage, the outer frame of the battery flashes at a frequency of 1HZ, indicating that it needs to be charged immediately.



Battery display interface






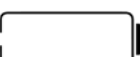
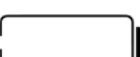
The default voltage of display battery is 36V.

The segmented voltage values are 30.5V-32.5V-34.35V-36.03V-37.48V-39.46V.



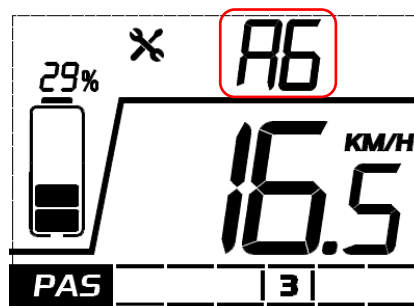
The percentage of remaining battery power and the corresponding battery power

ICONS are displayed as follows:

Battery percentage	Battery bar indicator	Detailed introduction
$80\% \leq \text{SOC}$		Show Full grids (5 bars)
$60\% \leq \text{SOC} < 80\%$		Show 4 bars
$40\% \leq \text{SOC} < 60\%$		Show 3 bars
$20\% \leq \text{SOC} < 40\%$		Show 2 bars
$10\% \leq \text{SOC} < 20\%$		Show 1 bar
$5\% \leq \text{SOC} < 10\%$		Show 0 bar
$0\% \leq \text{SOC} < 5\%$		Show 0 bar, and the battery symbol flashes at a frequency of 1HZ

## 7. Error Code Indication

When the e-bike electronic control system fails, the display will automatically display the error code, and the detailed error code is defined in Appendix 1.



Error Code Indication

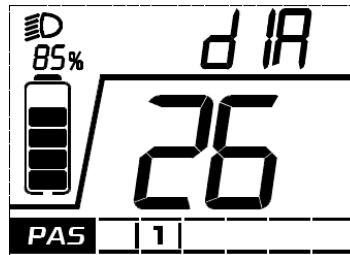
- ◆ Have the display inspected and repaired when an error code appears. Or else, you will not be able to ride the bike normally. Please always refer to an authorized bicycle dealer.

## General Settings

Press and hold the " i " and " - " buttons 1S and above at the same time to enter the general parameter setting state.

### 1. Wheel

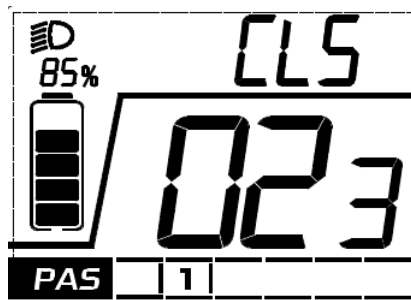
DIA stands for wheel size, The wheel size can be 16, 18, 20, 22, 24, 26, 700C/27.5, 28, 29. Short press the " + " or " - " button to select the corresponding wheel diameter of the vehicle to ensure the accuracy of the instrument speed display and mileage display. Press the " i " key to enter the wheel diameter setting interface, and then press " + " or " - " to adjust the wheel diameter.



Wheel Diameter Settings Interface

### 2. Controller Software Version Number

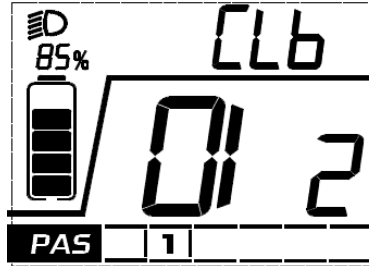
CLS represents the controller software version number. Go to the next setting interface with " + " or " - ".



Controller Software Version Number Interface

### 3. Controller BOOT Version Number

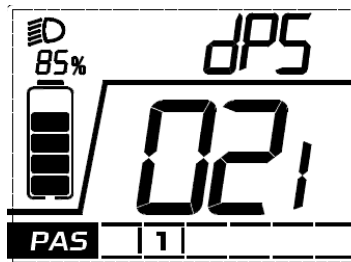
CLB represents the controller BOOT version number. Go to the next setting interface with "+" or "-".



Controller BOOT Version Number Interface

### 4. Display Software Version Number

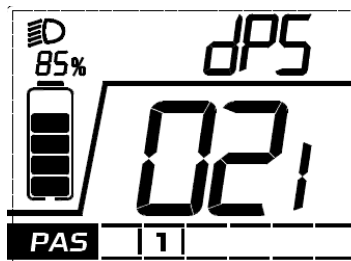
DPS represents the display software version number. Go to the next setting interface with "+" or "-".



Display Software Version Number Interface

### 5. Display BOOT Version Number

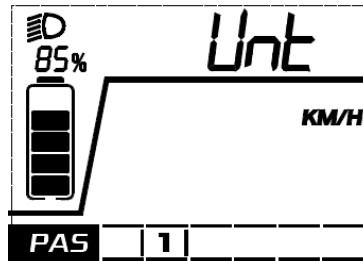
DPB represents the display BOOT version number. Go to the next setting interface with "+" or "-".



Display BOOT Version Number Interface

## 6. Unit

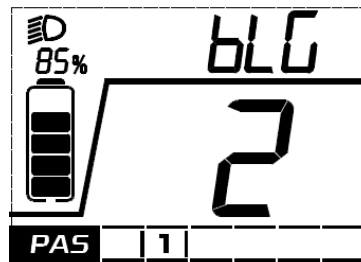
UNT means imperial and metric unit conversion, short press the "i" key to enter the setting, you can select "km/h" (km/h) / "mph" (miles) through the "+" or "-" button, long press the "i" button to save and exit to the metric imperial conversion interface. Go to the next setting interface with "+" or "-".



Unit Setting Interface

## 7. Backlight

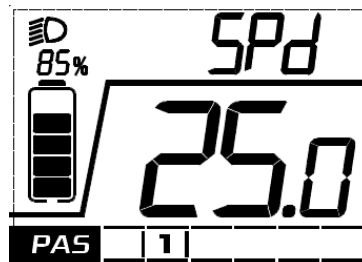
BLG means backlight brightness setting, short press the "i" key to enter the setting, you can set the backlight brightness level through the "+" or "-" button, the setting range is: "5-4-3-2-1" 5 levels of brightness, 5 corresponds to the highest brightness, 1 corresponds to the lowest brightness. Press and hold the "i" button to confirm and exit the backlight brightness setting. Go to the next setting interface with "+" or "-".



Backlight brightness setting interface

## 8. Speed Limit

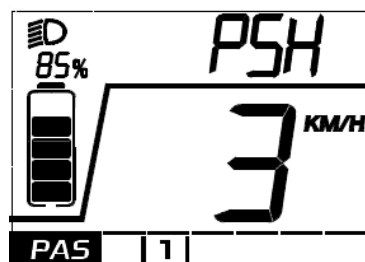
The maximum speed can be selected from 5Km/h to 46Km/h. Press " + " or " - " to add/subtract. The maximum cycling speed of the instrument factory is uploaded by the controller. Press" + " or " - " to increase or decrease the speed limit value until the required speed limit value is displayed; Hold the " i " key for more than 1 second to confirm and exit the setting state.



Speed limited setting interface

## 9. Push Assistance Speed

PSH means to implement the speed limited setting, short press the " i " key to enter the setting, you can help implement the speed limit through the " + " or " - " button setting, the setting range is: "6-3km/h", long press the " i " button to save and exit the implementation of the speed limit configuration. Go to the next setting interface with" + " or " - ".



Push assistance speed limited setting

## Installation

DR25 meter is mounted on the left handlebar. Adjust the angle for a good screen view. Cut off the power before connecting the corresponding connectors between the display and controller.

## 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 cases do not belong to warranty scope:***

1. The display is demolished.
2. The damage of the display is caused by wrong installation or operation.
3. The shell of the display is broken after the display is out of the factory.
4. The cable 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.).

### Warnings:

1. Use the display with caution. Don't attempt to disconnect or link the connector when battery is power on.
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 universal version for VINKA DR25 display. Software specific, features of this display may be different. Please always refer to the actual version.***

### Attached list 1: Error code definition

Error code	Definition
90	Torque Zero Error
11	Torque Out Range
92	Torque Sensor Fault
13	Gear Sensor Error
15	Speed Sensor Error
18	Cadence Error
20	PCB Over-Temp Warning
A1	PCB Over-Temp Error
22	PCB Sensor Fault
25	Motor Over-Temp Warning
A6	Motor Over-Temp Error
A7	Flash Error
80	Communication Lost
32	LORA Communication Lost
01	Communication CRC Error
40	Motor EST Error
41	Motor Over-Peak Current
C2	Motor Loss Phase
43	Motor Over DC Current
D0	Battery Over Voltage
51	Battery Low Voltage
52	Battery Over Current
E0	Battery Version Error
E5	Display Version Error
F1	Display MOSFET short-circuited
F2	UP key is stuck
F3	- key is stuck