DR25

VINKA Display

User Manual

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1. Product name and model

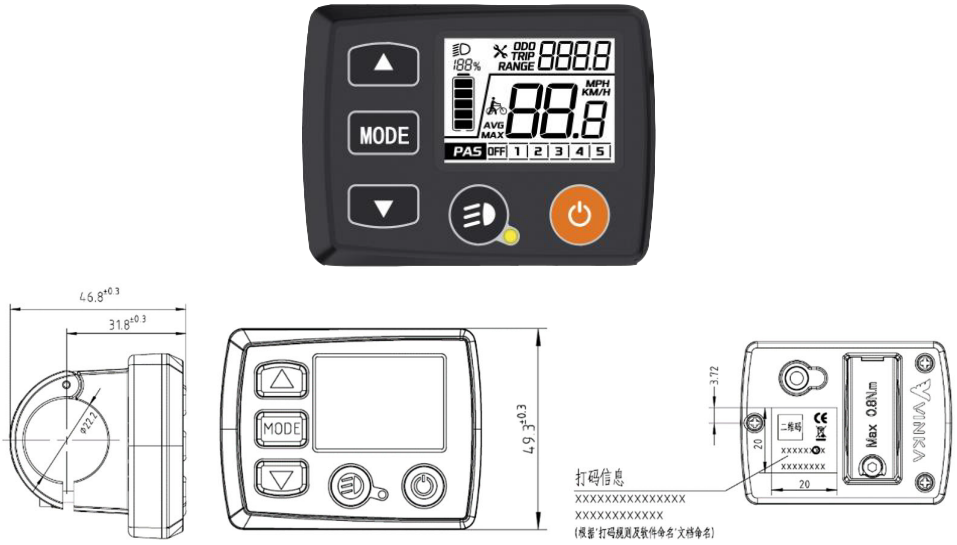
E-bike Intelligent LCD display
Model: DR25

2. Specifications

- 36V/48V Power Supply
- The maximum working current: 30mA
- Off-state leakage current: <1μA
- Operating temperature: -20℃~ 60℃
- Storage temperature: -30℃~ 80℃

3. Apperance and Size

Product appearance and dimensional drawing (unit: mm)

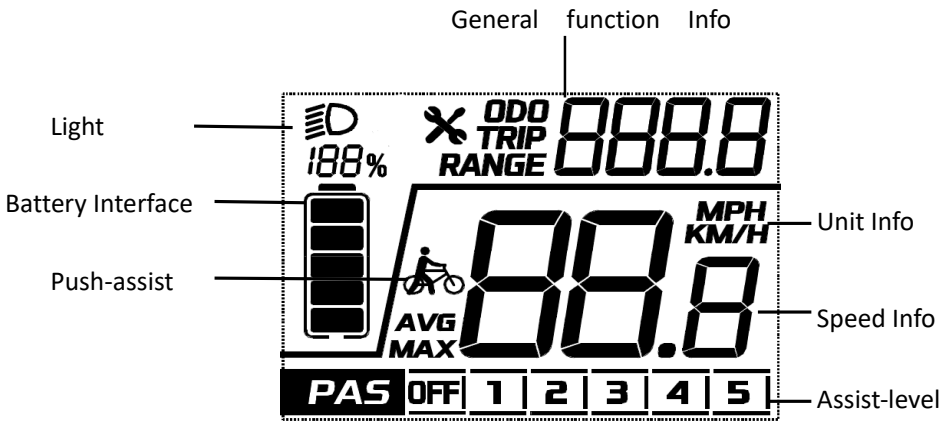


4. Function Summary

DR25 display has many functions to meet the user's needs. The indicating contents are as follows:

- Smart battery SOC, real-time voltage or percentage, optional
- Intelligent indication of Trip, ODO, RT speed, Max Speed, Avg Speed
- Assist level adjustment and indication
- Backlight control and lighting indicator
- The push-assist control and indication
- Error code indication
- Various Parameters Setting/Info (e.g. Unit toggling, wheel size info, speed limit info, assist level mode info etc.)

5. Function Area Distribution



Function Info

6. Button definition

There are five buttons on DR25 display: power button  , light button  , MODE button  , UP button  , DOWN button  . In this manual we use words “ON/OFF”, “Light” , ”MODE”, “UP”and “DOWN” to represent these 5 buttons.

7. Installation

DR25 can be mounted on the left side of handlebar close to its grip. Adjust the angle for a good screen view. Cut off the power before connecting the corresponding connectors between display and controller.

8. General Operation

- **Switching the E-bike System mode ON/OFF**

To switch on the E-bike system and provide the power supply to the controller, hold the ON/OFF button for 1s.

To switch off E-bike system, hold the ON/OFF button for 1s. The E-bike system no longer uses the battery power.

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

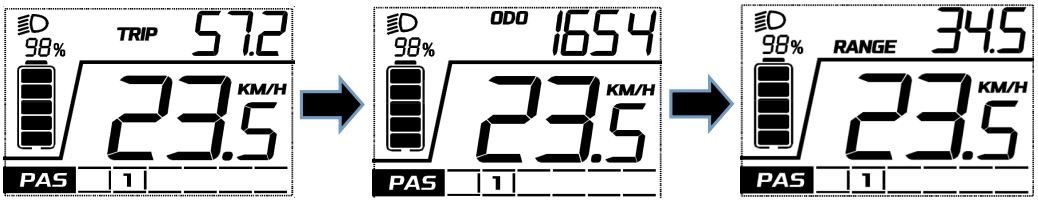
- **When the E-bike is parked for over 15 minutes, the E-bike system switches off automatically.**

- **Display Interface**

  After switching on the E-bike system, the display will show Real-time Speed and Trip Distance, ODO, battery SOC by default.

Press the “MODE” button and switch between:

TRIP(Km)→ODO(Km)→ RANGE(Km) →Trip (Km)

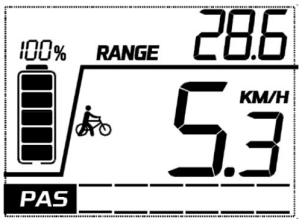


Display interface

◆ **Switching Push-assist Mode On/Off**

To activate the push-assistance function, short press MODE button and hold the **DOWN** button between 3S. E-bike is activated with a uniform speed of 6 km/h while the screen displays shown “ ”.

The push-assistance function will be switched off as soon as you release the **DOWN** button and ebike gets back to the status before the push-assistance is engaged.



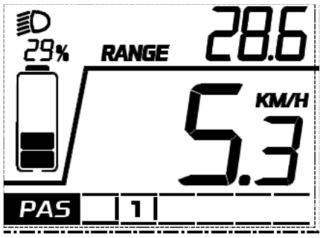
Push-assistance mode

■ **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 Lighting ON/OFF**

To switch on bike light, short press Light button. The lighting icon comes out and display backlight brightness is automatically reduced.

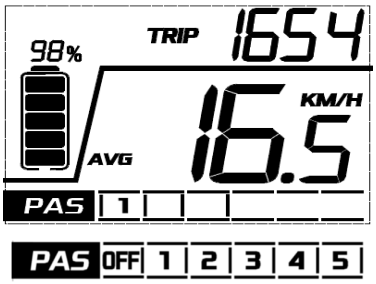
Likewise, short press the Light button again, the bike light switches off. The lighting icon is gone and display resumes backlight brightness.



Switching the Lighting Mode On/Off Interface

◆ **Assist Level Selection**

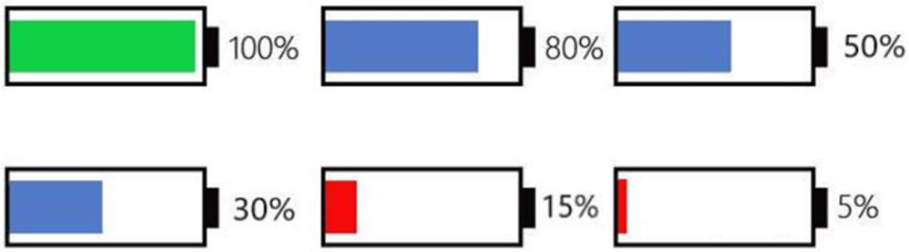
Press UP or DOWN button to switch between the assist levels and change the motor output power, The default assist level ranges from level “OFF” to level “5”, The output power is zero on Level “OFF”. Level “1” is the minimum power. Level “5” is the maximum power.



Assist Level Interface

◆ **Battery Indicator**

The default voltage of display battery is 36V. The segmented voltage values are 31.5V-32.5V-34.35V-36.03V-37.48V-39.46V.



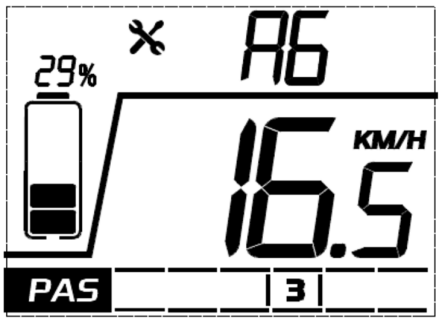
Battery SOC Indicator interface

◆ **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.

Refer to detailed definition of the error codes in Attached list 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.

9. General Settings

Press the ON/OFF button to switch on the display.
To access Setting interface , hold both the “MODE” button and the “DOWN” button simultaneously for 1S.

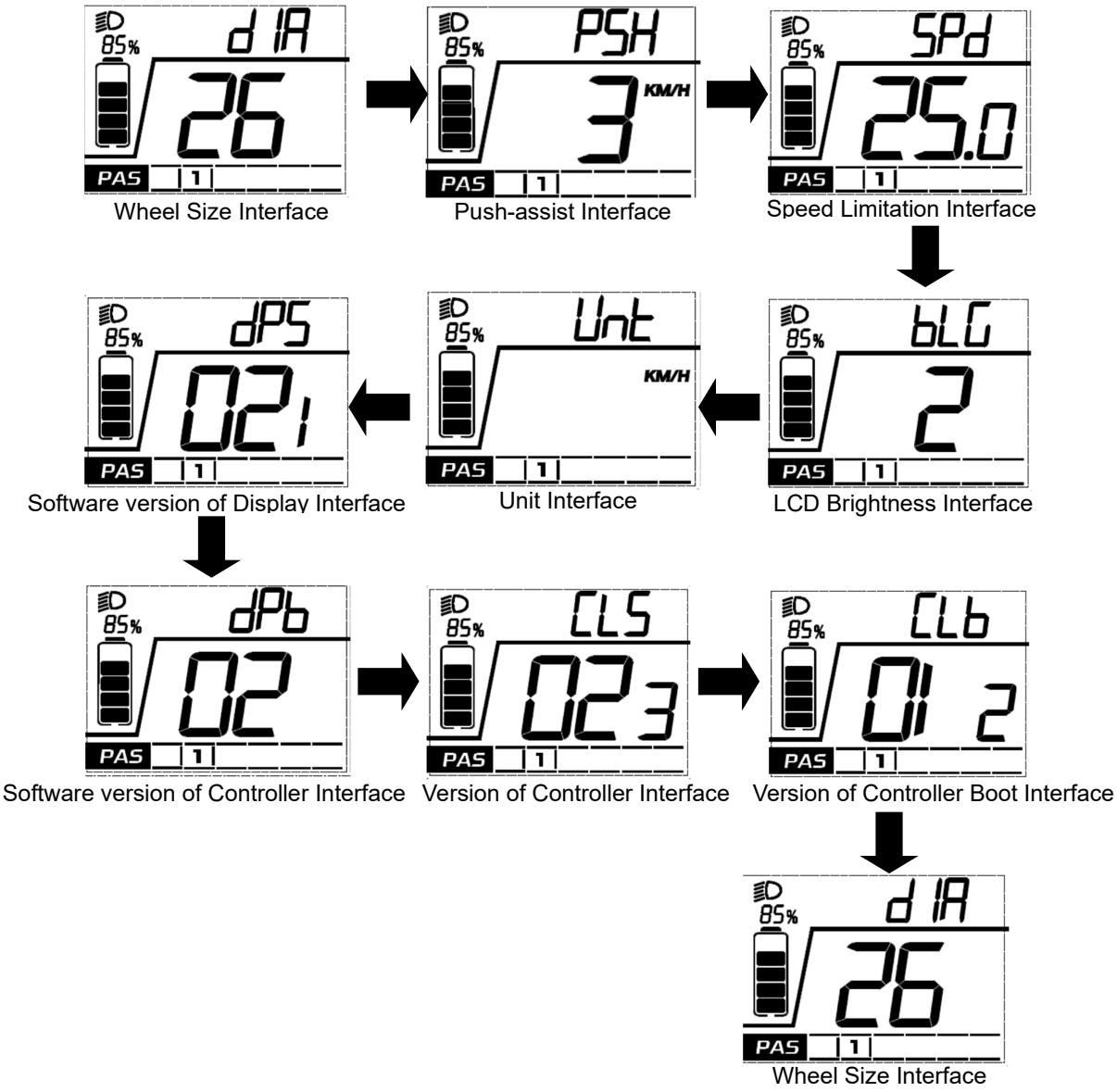
- **All the settings are implemented on a parked bike of no speed.**

◆ **Settings Interface**

In the power on state, long press the the MODE and DOWN button to enter the settings interface, and short press the UP or DOWN button to switch the setting interface. In any setting interface, short press the MODE button to enter the parameter editing state, and the corresponding parameters enter the flashing state. The flashing frequency is 1Hz. At this time, short press the UP or DOWN button to modify the parameters. Long press the MODE button to save and exit the editing state, and the parameters stop flashing. Press and hold the MODE button again to exit the setting interface and return to the main interface.

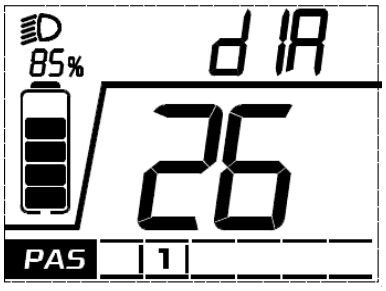
In the setting interface, short press the MODE button to enter the next menu, and long press the MODE button to return to the previous menu.

Short press the UP or DOWN button, and each interface will enter the setting and reading information status in the following order



- **Wheel Size settings**

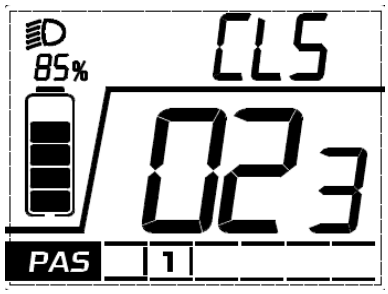
DIR represents wheel diameter.
The wheel size is only for your information, not settable.
Hold “MODE” button to return to home page.



Wheel Size Info

◆ **Software version of Controller**

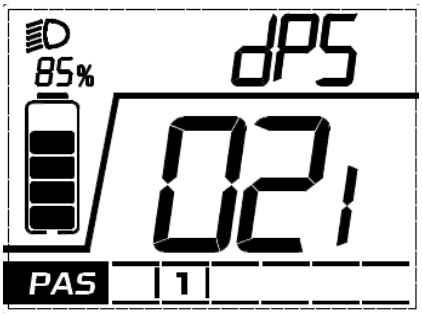
CLS represents the software version of controller. The software version of controller is uploaded by the controller, and the display can't be adjusted.



Software version of Controller Info

◆ **Software version of Display**

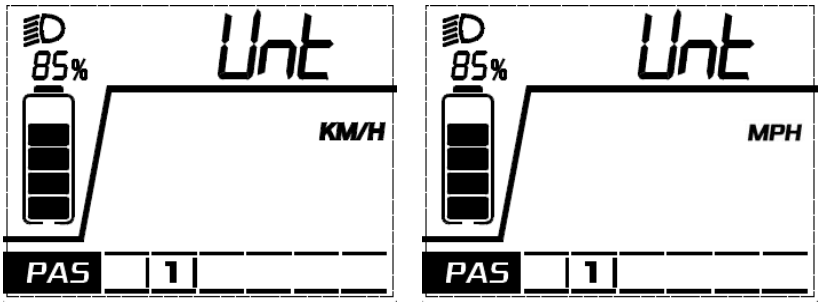
dPS represents the software version of display. The software version of diaplay is uploaded by the controller



Software version of Display Info

◆ **Toggle unit settings**

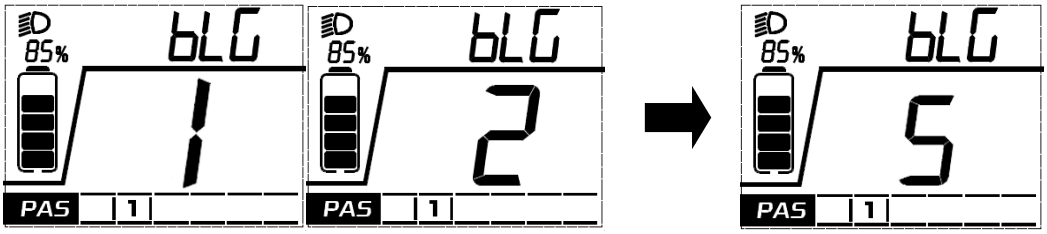
UNT represents change unit between Metric and Imperial . The default is "Metric" Short press the MODE button to enter the unit switching mode, short press the UP/DOWN to convert the speed and mileage units, long press the MODE button to confirm and exit the normal setting state.



Toggle unit settings

- **LCD Brightness**

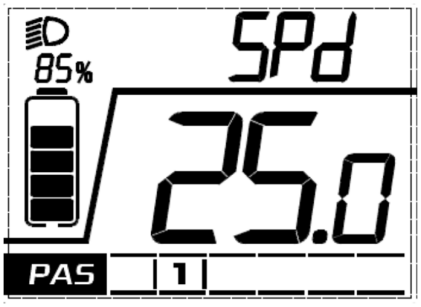
  BLG represents Backlight level settings. The settable range is Level 1, Level 2 , Level 3 , Level 4 , Level 5. Level 1 is the darkest, Level 3 is standard and Level 5 is the brightest. The default value is decided by the controller when the display leaves factory. Press UP/DOWN to change the brightness levels. Hold the ON/OFF button to confirm and exit the settings.



Brightness settings

- **Speed Limitation Info**

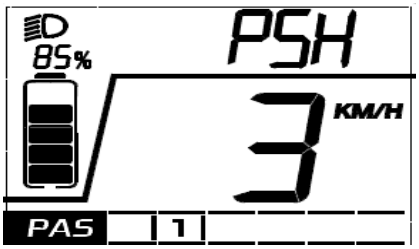
  Speed limitation value is just for your information, not settable



Speed Limitation Info

- **Push-assistance**

  PSH represents push-assistance. The selectable range of push-assist setting value is between 3km / h and 6km / h. short press the UP/DOWN button to set up / down. The maximum riding speed of the display is uploaded by the controller. Press the UP/DOWN button to increase or decrease the speed limit value until the required speed limit value is displayed; Long press the MODE button for more than 1s to confirm and exit the setting state.



Push-assistance Info

- **TRIP clear function**

  In TRIP mode and Trip is not 0, press the UP and DOWN buttons at the same time for more than 1 second to clear the trip data information.

- **Exit settings**

  In personalized parameter settings interface, Short press the MODE button is to confirm the input.

  Hold the MODE button is to store the settings.

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.

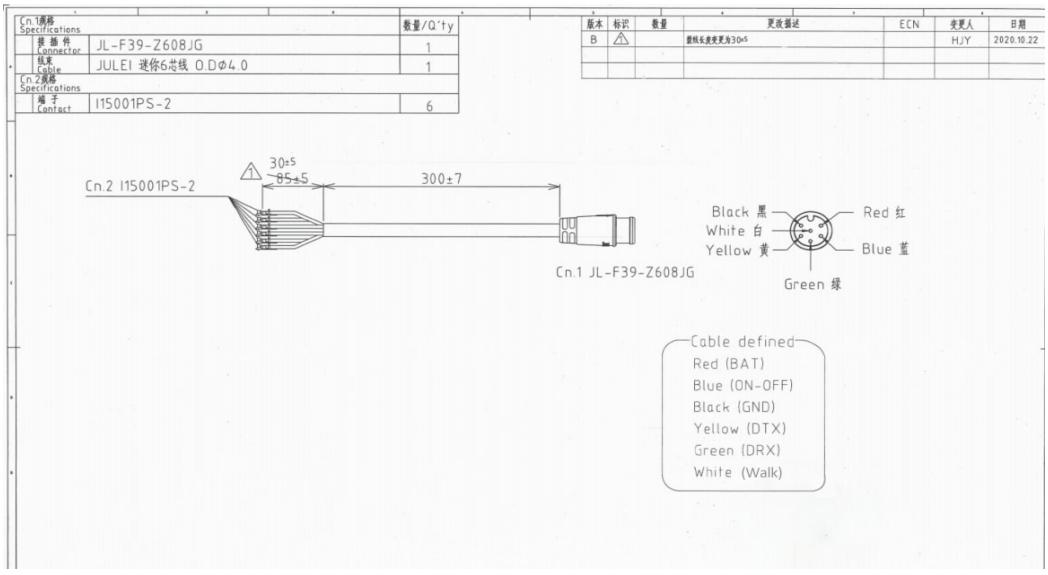
4) The cable of the display is broken.

5) Beyond warranty period.

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

Connection Layout

①Outlet diagram that comes with the display



Wire sequence table

Wire serial	Code	Function
1	BAT	Battery power wire
2	GND	Ground wire
3	DTX	Data transmission wire of the display
4	DRX	Data receiving wire of the display
5	ON-OFF	Controller power control wire
6	Walk	Push control wire

■ **displays have wire connection with water-proof connectors, users can not see the pin wire colors.**

Warnings:

1. Use the display with caution. Don't attempt to release 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 error code appears.

■*This manual instruction is a universal version for VINKA DR25 display. Software specific, versions of this display may be different. Please always refer to* an 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

Attached list 2: Display character corresponding function

	Character	Definition
1		Wheel Size
2		SoftWare of Controller
3		Controller boot version
4		Software of Display
5		Toggle Unit settings
6		Brightness Level
7		Speed Limitation
8		Push-assistance Speed