



DC40

VINKA Display User Manual

VERSION	1.0
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Product name and model

Name: Intelligent colored LCD for E-bike

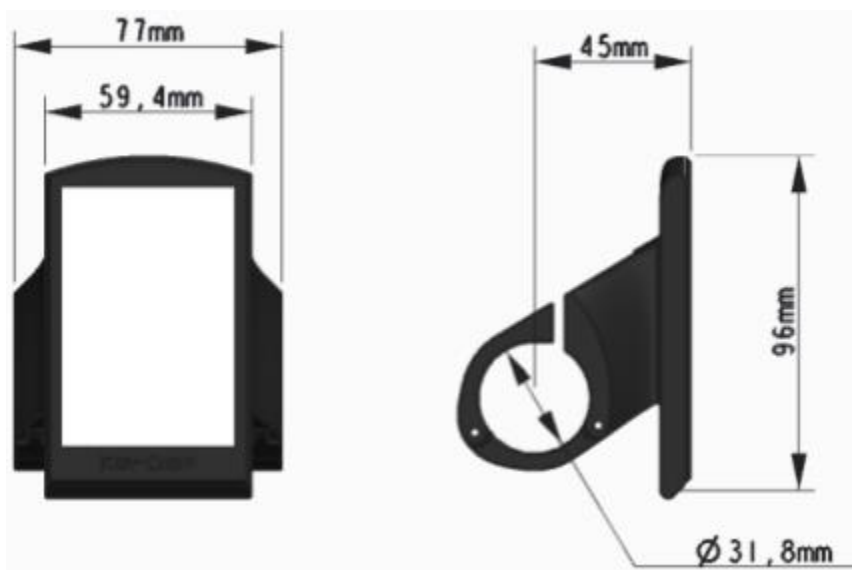
Model: KD986

Specifications

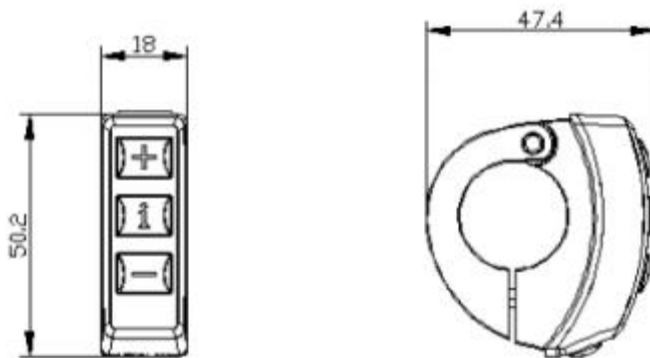
- 36V/48V Power Supply
- Rated working current: 50mA
- The maximum working current: 200mA
- Off-state leakage current: <math><1\mu\text{A}</math>
- Operating temperature: $-20^{\circ}\text{C}\sim 60^{\circ}\text{C}$
- Storage temperature: $-30^{\circ}\text{C}\sim 70^{\circ}\text{C}$

Appearance and Size

Display appearance and dimensional drawing (unit: mm)



Remote control appearance and dimensional drawing (unit: mm)



Function Summary

DC40 can provide a lot of functions to fit the Users needs. The indicating contents are as follows:

- Battery SOC indication
- Motor Power indication
- Assist-level indication and selection
- Speed indication (incl. running speed, Max. speed and Ave. speed)
- Odometer and trip distance
- The push-assistance control and indication
- Trip time indication
- Backlight On/Off
- Error code indication
- USB connection indicator
- Various Parameters Settings (e.g., wheel size, speed limit, voltage set, assistance level, controller limited current, password enable/change/disable, etc.)

General Operation

Switching the E-bike System On/Off

Briefly press the power button to switch on the E-bike system and start to power up the controller.

To hold the power button for 1 s again, the E-bike system will be switched off .The E-bike system no longer uses the battery power.

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

■When no use of the bike for 15 minutes, the E-bike system switches off automatically.


◆Display Interface

When display is on, the default cycling mode is ECO. Long press i button to switch the cycling modes between ECO, TOUR and BOOST.



Display Indication Interface

◆ Switching Push-assistance Mode On/Off

To activate the push-assistance function, first short press i button and keep holding the “-” button. After 1 s, The E-bike’s drive is activated at a uniform speed of 6 Km/h while the screen displays “”. The push-assistance function is switched off as soon as you release the “-” button on the operating unit .The E-bike system stops the power output immediately.



Push-assistance Mode

■ Push-assistance function may only be used when pushing the E-bike.

Be aware of danger of injury when the wheels of the E-bike do not have ground contact while using the push-assistance function.

◆ Switching the Lighting On/Off

To switch on the headlight, hold the + button for 1s. The backlight brightness is automatically reduced. Hold the + button for 1 s again, the lighting can be switched off.



Switching the Lighting On/Off Interface

◆ Assist Level Selection

Briefly press "+" or "-" button to switch between assistance levels so as to change the motor output power, The default assistance 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 SOC Indicator

The battery SOC is displayed by 5 segments in green color. When battery is in high voltage, all 5 segments are bright. When percentage is 0%, need to charge the battery immediately.



Battery SOC Indication Interface

◆ **Motor Power Indicator**

The power of the motor can be read via below interface, left yellow segments.



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**.



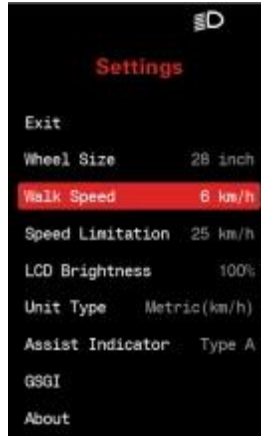
Error Code Indication

■ Have the display repaired when error code appears. Otherwise, you will not be able to ride the bike normally. Please always refer to an authorized dealer.

Settings

Hold the **On/Off** button to switch on the display.

To access Settings page, hold both the “i” button and the “-” button simultaneously for more than 1 s.



Setting interface

■ All the Settings operations are done to a stationary E-bike with no speed.

Wheel Size (European version is not configurable)

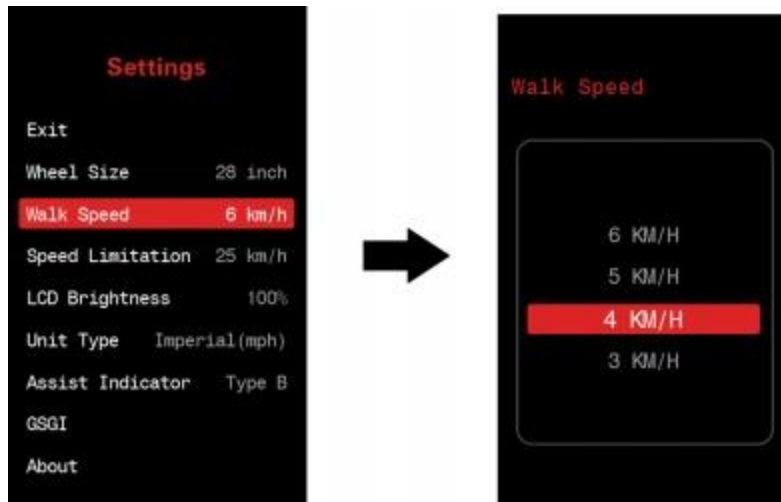
Wheel Size represents wheel diameter settings. Wheel size is reported by the controller .



“Wheel size” interface

◆ Walk speed

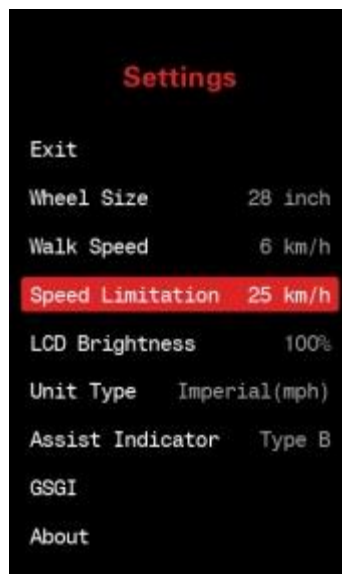
Walk Speed represents walk assistance speed settings. press the “+” button or the “-” button to choose the desired walk speed. Press “I” button to save a changed setting.



“Walk speed” interface

● Speed Limitation Settings

Speed Limitation represents the limited speed settings. When the current speed is faster than speed limit, the E-bike system will be switched off automatically. This speed limit value is set by controller and it is not changeable.

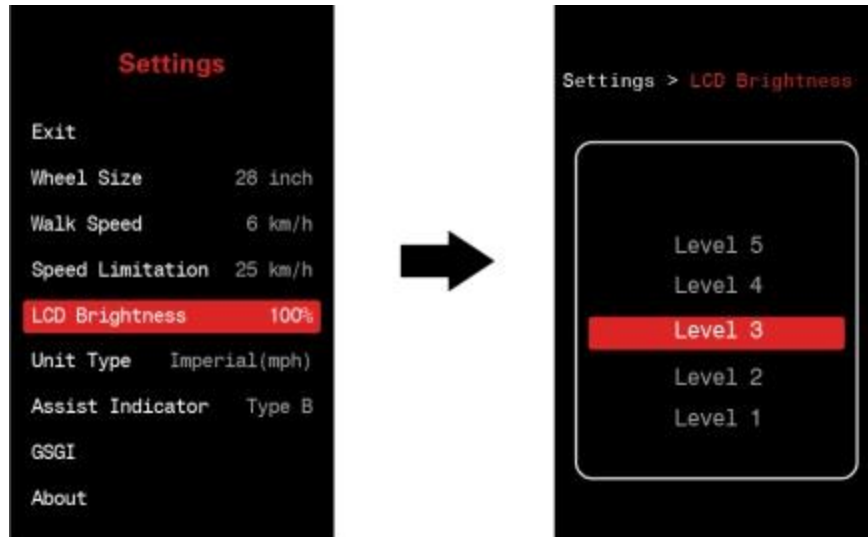


“Speed limitation” interface

LCD brightness

LCD brightness represents backlight brightness settings. Level 5 is the highest brightness. Level 1 is the lowest brightness. To change the backlight brightness, press the “+” button or the “-” button to choose the desired level.

To store a changed setting, briefly press the “i” button to confirm.



“LCD brightness” interface

Unit type

Unit type represents toggling units between mph and km/h

To toggle the unit, press the “+” button or the “-” button to choose the desired unit and press the “i” button to confirm. The default unit is “Metric (km)”.



“Unit type” interface

◆ Assist indicator

Assist Indicator represents assist level settings.

Type C: level 0~5, 6 assist levels, press +/- to change the assist level.

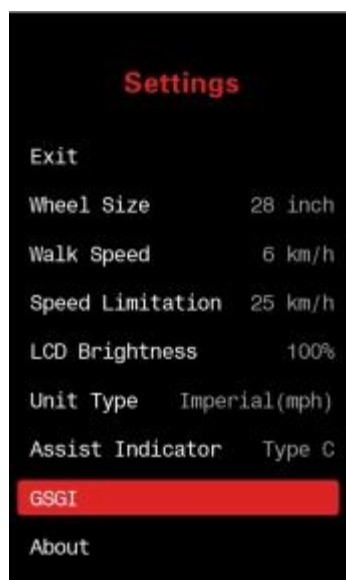


“Assist indicator” interface

◆ GSGI function:

GSGI means gear shifting calibrations, mainly for CALIB FD and CALIB RDIGH

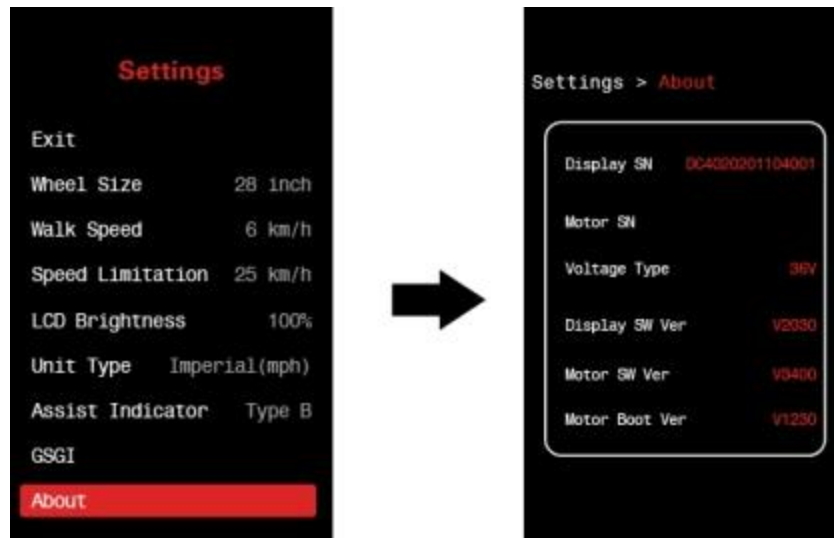
GSGI gear shifting sensor can identify gear position and provide shift reminder to ensure that riders have efficient and comfortable riding conditions.



“GSGI” interface

◆About:

It is for checking the display and motor information, such as the display serial number, voltage type ect..



“About” interface

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.

Warnings:

- Use the display with caution. Don't attempt to release or link the connector when battery is on.
- Try to avoid hitting the display.
- Don't modify system parameters to avoid parameter disorder.
- Make the display repaired when error code appears.

This manual instruction is a universal version for **DISPLAY DC40. Some versions of this display may be different from specification to specification as to the software. 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