

VLCD12 形液晶仪表

VLCD12 Display Instrument Operation Manual



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Summarize

Intelligent VLCD12 instrument is especially designed for electric bicycle. It's mainly used to control the power assist. And it can also show the energy of battery, measure the speed of electric bicycle, record the trip distance.

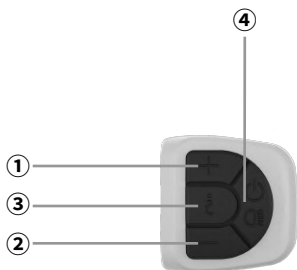
Specifications	
Type	VLCD12
Working Voltage	DC24-48V
Max Working Current	66ma 24V 40ma 48v
Display Type	40x4 segment LCD
Working Temperature	-20°C ~ 70°C
Outline Dimension	89.9mm × 59.8mm × 18.2mm(not include thickness of rest)

Installation

Instruments mounted on the handlebar, plug - ins output line (5 - pin push - male) and operate on the (5 - pin plug - female) On the plug.

Functions and Operations

Key Definitions



① Power Assist + Key

Used to add gear

② Power Assist - Key

Used to reduction gear and 6km/h power assist

③ Mode Key



For toggle mode

④ Power Key

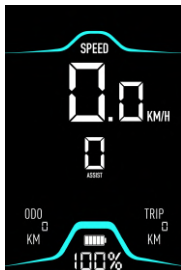
Used for switching and headlight

Main interface Functions and operations

Power On/Off

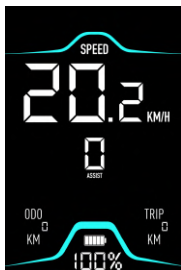
Press this  button to power on the LCD display, long pressing the  button for 4 seconds to power off. Automatically shut off without any operation in 5 minutes.

The startup interface is in state ODO, as shown in the figure below.



Vehicle Speed Display

Show current speed, unit KM/H and MPH can be chosen.



Battery Energy Indicator

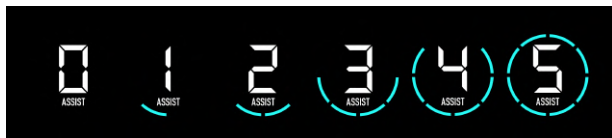
Five horizontal blocks show energy of battery. Each block 20 percents of electric energy.



Setting The Assistance Level

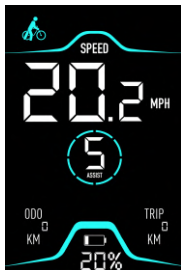
Press **+** or **-** button to switch 1-5 assist level. Level 1 is for the minimum power, level 5 is for the highest power.

Gear 0 is without assist function.





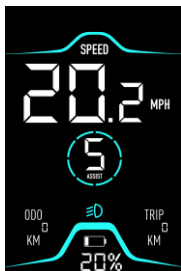
Switching the Push Assistance On/Off

To activate the push assistance, make sure the assistance level is 1 ~ 5. Press the **-** button and keep it pressed in 4 second.




Headlight Control

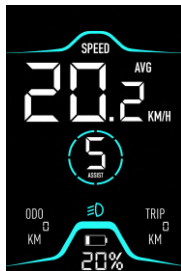
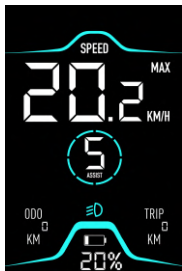
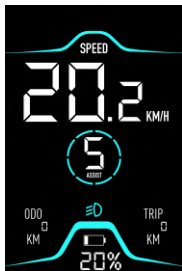
At startup, press the  button headlight light, Indicator lights up at the same time, press the  button backlight is off, Indicator is off.




Functions and operations of other interface

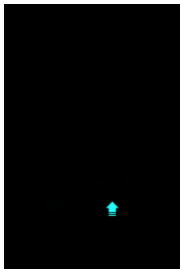
Switching the Speed Mode

There are 3 levels of mode (SPEED, MAX SPEED, AVG SPEED). Press this  button to switch the mode. Default is SPEED.



Entering the Firmware Mode

Press **+**, **-** and  buttons for 4 second to entering the firmware mode. The interface will only appear a firmware upgrade indicator.



Settings

Entering the Setting Mode

Press **i** and **⏻** buttons for 4 second to entering the setting mode. In the setting mode, press **+** buttons to switch the settings.

Setting the Wheel Size

Enter the setting mode and switch to page 1. Press **i** button to confirm setting.

Press **+** or **-** buttons to switch between 5 - 35 inch.

Press **i** to save.



Setting the Speed Limit

Enter the setting mode and switch to page 2. Press **i** button to confirm setting.

Press **+** or **-** buttons to switch between 10 - 60 km/h.

Press **i** to save.

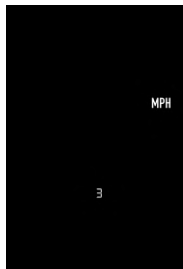
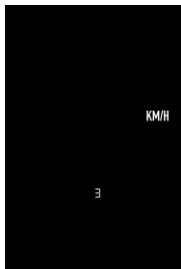


Vehicle Speed Unit Selection

Enter the setting mode and switch to page 3. Press **i** button to confirm setting.

Press **+** to switch KM/H or MPH.

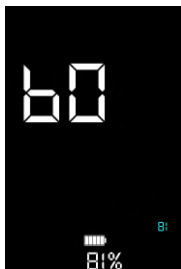
Press **i** to save.



Battery Information

Enter the setting mode and switch to page 4. Press **i** button to confirm setting.

Press **+** or **-** buttons to switch battery information.

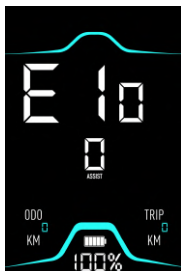


b0	Current Battery
b1	Cycle Time
b2	Temperature
b3	Remain Capacity (mAh)
b4	Full Capacity (mAh)

Error

Error code

Once the controller encounters an issue, the related error code will occur on panel.



The following table is a typical failure code for TS middle motor.

Error Code	Cause of Issue
E01	No error
E02	Temperature protection
E03	Short circuit protection
E04	Handlebar failure
E05	Motor phase loss
E06	Torque failure
E07	Stall failure
E08	Undervoltage
E09	Overpressure
E10	Hall failure

概述

VLCD12 型液晶仪表是专为电动自行车设计的，与本公司中置电机配套使用，主要用于测量电动自行车行驶速度和记录电动车行驶里程，电池电量显示及控制电机助力大小等等。

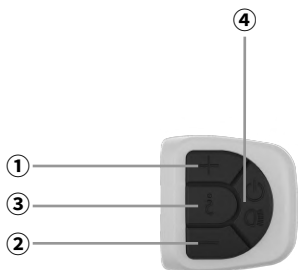
参数	
机型	VLCD12
工作电压范围	DC24-48V
最大工作电	66ma 24V 40ma 48v
显示类型	40x4 段式液晶显示
工作温度	-20°C ~ 70°C
外形尺寸	89.9mm × 59.8mm × 18.2mm(不包括固定件的高度)

安装

仪表安装在车把上，其输出线上的插件(5 芯快插公头)与操作器上的插件(5 芯快插母头)对插。

功能和操作

按键定义



① 助力 + 键

用于加档

② 助力 - 键

用于减档和 6km/h 助推

③ 模式键


用于切换模式

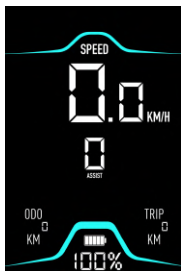
④ 电源键

用于开关机和背光

主界面功能和操作

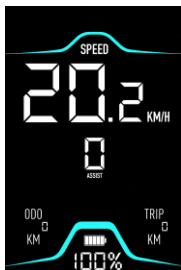
开机和关机

按一下  键开机,长按 2 秒关机,5 分钟不工作自动关机。
开机界面为 ODO 状态,如下图:



车速显示

显示实际骑行速度,单位公制和英制(KM/H, MPH)可选。



电池电量显示

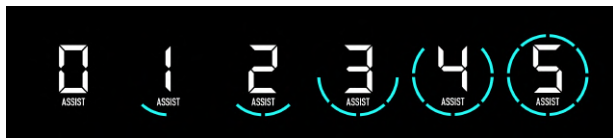
采用横向六段显示，每段约 15%电量。



助力比选择

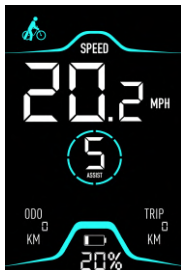
按下 **+** 或者 **-** 键切换 1-5 助力档位。档位 1 为最小助力，档位 5 为最大助力。

档位 0 为无助力。





推车模式选择

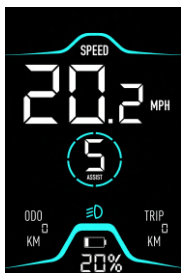
开启推车模式时，请确认助力档位处于 1~5 档。长按 **-** 按钮4秒打开推车模式。



车灯控制


在开机的情况下，按下  键，车灯打开，并且屏幕上的灯光指示灯点亮。

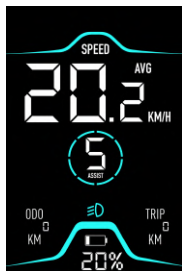
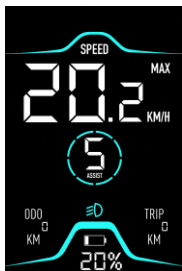
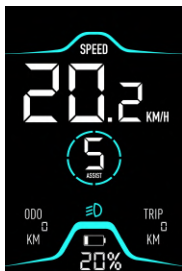
再按一下  键，车灯熄灭，并且屏幕上的的灯光指示灯熄灭。




其它界面的功能和操作

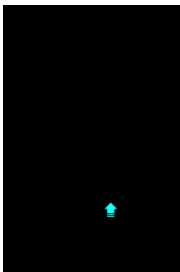
切换速度显示

有三种速度模式（速度，最大速度，平均速度），按下  按钮进行切换速度模式。默认为速度。






进入固件模式

同时按下 **+**, **-** 和  按钮并保持 4 秒以进入固件模式。进入固件模式后屏幕上会显示固件升级指示灯。






设置


进入设置模式

按下  和  按钮 4 秒以进入设置模式。在设置模式内，按下  按键来切换设置内容。

设置轮径


进入设置模式后切换至第 1 页，按下  按钮确认设置。



按下  或  按钮进行选择，轮径范围在 5 - 35 寸。


按下  后保存设置。



设置最高车速



进入设置模式后切换至第 2 页，按下  按钮确认设置。

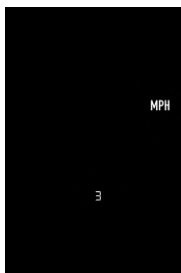
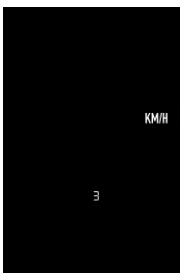
按下  或  按钮进行选择，最高车速范围在 10 - 60 km/h。

按下  后保存设置。




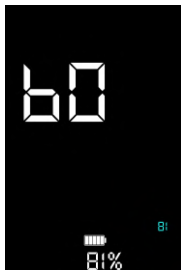
设置车速单位

进入设置模式后切换至第 3 页，按下  按钮确认设置。
按下 **+** 或 **-** 按钮进行选择，最高车速范围在 10 - 60 km/h。
按下  后保存设置。



查看电池信息

进入设置模式后切换至第 4 页，按下  按钮确认设置。
按下 **+** 或 **-** 按钮进行切换电池信息显示。

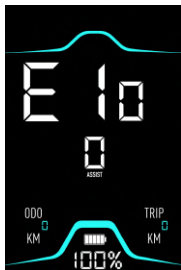


b0	当前电量
b1	循环次数
b2	电池温度
b3	剩余容量 (mAh)
b4	充满容量 (mAh)

错误

错误代码

一旦控制器有故障会在屏幕上显示当前故障代码。



下表为典型的匹配同盛中置电机时的故障显示代码

错误代码	故障原因
E01	无故障
E02	温度保护
E03	短路保护
E04	转把故障
E05	电机缺相
E06	力矩故障
E07	堵转故障
E08	欠压
E09	过压
E10	霍尔故障