

# VD03 intelligent display instrument

## Instructions



### Version information

version	Reviser	Date of revision	Modifications	remark
V1.1	Wen Yao	2024.11.1	first edition	
V1.2	Wen Yao	2024.11.4	The version number is modified	
V1.3	Wen Yao	2024.11.12	Requirements change and modification	
V1.4	Wei Yahui	2021.11.14	The menu parameters display Modify & BF Protocol Fault Code Update > Character Comparison Table	

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### **Concentrate:**

1. Due to the upgrade of the company's products, the display content of the product you get may be different from that in the manual, but it will not affect your normal use.

2. Do not plug and unplug with electricity, plugging and unplugging with live power may damage the electronic control accessories.

# Product Introduction

## 1. Name

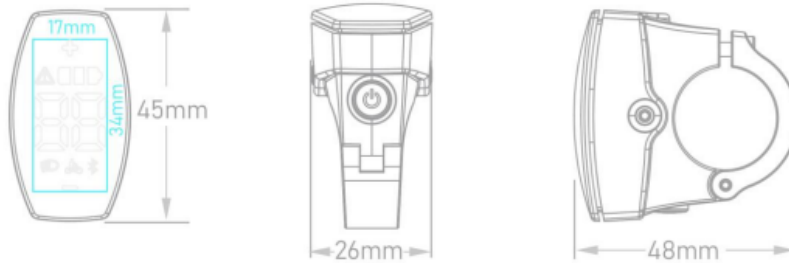
Smart Display Controller

## 2. Product model

VD03

## 3. Product appearance





### General Parameters

Dimensions	Length*Width*Height	26*45*48 (mm)
	Screen Size	17*34 (mm)
	Holder Diameter	22.2 (mm)
Connector	Type	M5 Waterproof Connector
	Length	20 cm
General Feature	Voltage	12V/24V/36V/48V/60V
	Working Temperature	-20 °C - +70 °C
	Ingress Protection Rating	IP67
	Weight	28g
	Communication Protocol	UART/CAN
Other Feature	Bluetooth	5.2 + BLE (Optional)
Certification	RoHS/CE/FCC	Support Customization

### Display Items

Current Speed
Error Code
Battery Capacity
Power-aided Shoving
Light
Bluetooth

### Parameters Setup

Gear setting
Unit Switch
Speed limit
Wheel Diameter
Battery Voltage Switch
Sleep Mode Timing
Data Reset
Password Setting

#### 4. The main interface is displayed



- ① Maintenance Reminder: Displays the maintenance reminder flag.
- ② Headlight display: shows the headlight on/off status, and displays the logo when the system headlight is on.
- ③ Power Prompt: Prompts real-time power level.
- ④ Real-time speed display: Displays the real-time speed value.
- ⑤ Bluetooth icon: Bluetooth on/off, status display, display logo after successfully connecting to the meter Bluetooth.
- ⑥ Boost Icon: The boost icon is displayed.

## 5. Button definition

The VD03 meter has 3 buttons. Including "power on and off key  $\phi$ ", "plus key +", "minus key -". The key definitions are shown in the figure below.



## 6. Routine operations

### ① Power on/off

After long press the "power on and off button  $\phi$ ", the instrument will work on the power on, and in the power on state, long press the "power on and off button  $\phi$ " to power off the system.

### ② Headlight switch

Turn on the light: Press and hold the "+" button when the light is off, the headlight logo on the screen will brighten, and the controller will be notified to turn on the light.

Turn off the lights: Press and hold the "+" button when the lights are on, the screen headlight logo will not disappear, but will be dimmed, and the controller

will be notified to turn off the lights at the same time.

### ③ Boost mode

Press and hold the "-" button when the vehicle body is stationary, and the static booster logo is displayed to indicate that it enters the boost, and the speed is 6km/h; Release the "-" key to exit the boost mode.

### ④ Switch between speed limit and no speed limit mode

The instrument defaults to the unrestricted speed mode (99km/h), and the lower button and the power button on the main interface are pressed together to switch to the speed limit mode (25km/h), and the prompt will flash three times after the switch is successful (switch the unrestricted speed again and flash three times).

### ⑤ Password reset

If you enter the wrong password 3 times, the password will be reset to the initial password 2020 (the interface shows that FF means that the reset has been successful)

## 7. Set up

### ① Unit menu

Double-click the power button to enter the settings, "plus and minus buttons" to switch to select the P1 unit menu, and short press the power to enter the switch U1 and U2. U1 (Metric), U2 (Imperial); Short press the power button to select the settings and return to the previous menu, and then double-click the power button to return to the main interface.

## ② Gear menu

Double-click the power button to enter the settings, "plus and minus keys" to switch to select the P2 gear menu, short press the power to enter the default 05 gear, the gear range is: 03-05-09 gear adjustable. Short press the power button to select the settings and return to the previous menu, and then double-click the power button to return to the main interface.

## ③ Wheel diameter setting

Double-click the power button to enter the settings, "plus and minus keys" to switch to select the P3 wheel diameter menu, short press the power to enter the default is 26inch, range: 00-30inch; Short press the power button to select the settings and return to the previous menu, and then double-click the power button to return to the main interface.

## ④ Speed limit menu

Double-click the power button to enter the setting, "plus or minus key" to switch to select the P4 speed limit menu, short press the power to enter the default 99km/h, range: 00-99km; Short press the power button to select the settings and return to the previous menu, and then double-click the power button to return to the main interface.

## ⑤ Boot Password Menu (Initial Password 2020)

Double-click the power button to enter the settings, "plus and minus keys" to



switch to select the P5 boot password menu, short press the power to enter the default 00 (off), 01 (on); Short press the power button to select the settings and return to the previous menu, and then double-click the power button to return to the main interface.

#### ⑥ Change the boot password menu

Double-click the power button to enter the settings, switch the "plus and minus keys" to select P6 to modify the boot password menu, short press the power to enter the current old password (2020) first, and then enter the new password to modify it successfully. Short press the power button to select the settings and return to the previous menu, and then double-click the power button to return to the main interface.

Note: If you do not want to modify the modification interface, you can double-click the power button to return to the first-level interface

#### ⑦ Auto-shutdown menu

Double-click the power button to enter the setting, "plus and minus key" toggle to select the P7 automatic shutdown setting menu, short press the power to enter the default 05min, adjustable range: 00, 01-10, 30, 60min; 00 stands for no shutdown.

#### ⑧ Voltage level menu

Double-click the power button to enter the setting, "plus or minus key" to switch to select the P8 voltage level setting menu, short press the power to enter the default CON, voltage adjustable range: 36v-48v-52v.

⑨ bT bluetooth lock menu

Double-click the power button to enter the settings, "plus and minus buttons" to switch to select the bT Bluetooth lock menu, short press the power to enter the default 01 (Bluetooth lock on), 00 (Bluetooth lock off)

⑩ bU Bluetooth unlock range adjustment menu

Double-click the power button to enter the settings, "plus and minus buttons" to switch to select the bU Bluetooth unlock range adjustment menu, short press the power to enter the default 05, optional level range: 01-05.

Note: 01 is a short distance and 05 is a long distance, and the surrounding environment and Bluetooth signal strength will affect the distance test

⑪ BV Bluetooth version information menu

Double-click the power button to enter the settings, and you can check the Bluetooth version information: 002

⑫ dF factory reset menu

Double-click the power button to enter the settings, select "01" to restore

factory settings to "plus or minus keys", and select "00" not to restore.

⑬ VR Software Version Information Menu

Double-click the power button to enter the setting, and you can view the instrument version number information; Example: 00-b-08

00 customer code, b (octagon agreement), 08 (current version software number)

## Fault codes

序号	状态数 HEX	报错代码	含义
1	0X01	不显示	正常状态,
2	0X03	不显示	已刹车
3	0X04	Error 04	控制器上电检测转把信号电平大于启动电平
4	0X05	Error 05	转把信号与转把 GND 短路、转把信号与转把+5V 短路、转把 GND 断路
5	0X06	不显示	电池电压低于控制器低压保护阈值
6	0X07	Error 07	电池电压高于控制器低压保护阈值
7	0X08	Error 08	电机霍尔信号异常
8	0X09	Error 09	电机相线短路或断路
9	0X10	Error 10	电机温度达到保护阈值
10	0X11	Error 11	电机温度传感器异常
11	0X12	Error 12	电流传感器异常
12	0X13	不显示	电池内温度传感器异常
13	0X14	Error 14	控制器温度达到保护阈值
14	0X15	Error 15	控制器内温度传感器故障
14	0X21	Error 21	电池内&外置速度传感器异常
15	0X22	不显示（读电池信息时显示--）	控制器接收不到电池组 BMS 数据
16	0X23	不显示	大灯异常
17	0X24	不显示	大灯传感器异常
18	0X25	Error 25	力矩传感器力矩信号异常
19	0X26	Error 26	力矩传感器速度信号异常
20	0X30	Error 30	仪表接收不到控制器数据

## Character comparison table

A	b	c	d	E	F	G	H	I	J	K	L
M	n	o	P	q	r	S	t	U	v	W	X
Y	Z	1	2	3	4	5	6	7	8	9	0