

# D15 Manual

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# A. About the Manual

This Manual aims to help you to learn about installing and operating D15-MSUP display.

## **B. Appearance and size** Material and Color

D15-MSUP display using emerald green LED display, 3 button operation, light and beautiful appearance, and clear interface. Four-layer PCB, nylon buckle, ABS shell, the material of the shell allows normal use at temperatures from -20 °C to 60 °C, and can guarantee good mechanical properties.

### Illustration



**Pic** 2-1

## Diagram (mm)





# C. Product Functions

D15-MSUP display is an emerald green LED display. It can match the 24V/36V/48V battery with wide voltage and integrate the headlight switch function. This instrument communicates with the corresponding controller and battery by UART communication. The main functions of D15 are: (as shown in Pic 3-1 below)

- ♦ Light Status
- Pas Level
- Battery Capacity
- Error Code
- Walking Assistant



**Pic** 3-1

#### **Display Area**

When the display is turned on, there will be an LED marquee, which is very cool. The interface design and LED selection are clearly visible even in the sun; and it is not glaring, making people look comfortable. The refreshing design of the display interface and the unique design scheme make the customer more convenient to use. As shown in Pic 3-2 below:





# **D.** Bottom Definition

D15-MSUP equipped with 3 buttons. Including key, open key, minus key.



Pic 4

## **E.** Installation

Fix the display and bolt on the handlebar, adjust the proper angle of view, and screw on the bolt in an easy-to-manipulate position. Tighten the screws to complete the installation.



Insect bolt on the handlebar



Tighten the screws to complete the installation

# F. Operation

## 1. Switch on/off

Long press the key for 1 second, the display is turned on, there will be LED marquee when the power is turned on, the power assisted gear defaults to 1st gear, the right LED light will have corresponding battery power indication, and the instrument provides the controller working power. In the power on state, press and hold the key for 2 seconds to turn off the power system. In the off state, the meter no longer uses the battery's power supply, and the meter's leakage current is less than  $1\mu$ A. The operation process is as shown in Pic 6-1:





#### 2. Turning on/off the lights

In the power-on state, long press the button for 2 seconds and the headlights turn on; press and hold the button for 2 seconds to turn off the

headlights. As shown in Pic 6-2:

In the power-on state, long press the button for 2 seconds and the headlights turn on; press and hold the button for 2 seconds to turn off the headlights



**Pic** 6-2

#### 3. Pas level and Walking Assistant Mode

In the power-on state, the pas position is 5 segments of LED display. By adding and subtracting keys, the electric vehicle assist gear position is switched, and the motor output power is changed. The instrument output power range is 0-5 oas. (The pas range is adjustable, after starting. The power assist file defaults to 1 file), and the LEDs on the left side of the booster gear are displayed in order from bottom to top. Pressing and holding the minus button does not release, it will enter the walking assistant mode, at which point all the LEDs will flash. Release the minus button to exit the waking assistant mode and the pas LED stops flashing. (any pas level can be entered) The walking assistant mode and pas display are shown in Pic 6-3:



**Pic** 6-3

#### 4. Battery Capacity

The battery power is displayed in 5 segments. When the battery is fully charged, the right LED is fully illuminated; when the battery is under voltage, the right LED flashes and needs to be charged immediately. The battery level is displayed from bottom to top in increments. As shown in Pic 6-4:



The 5-segment LED display shows that the power is increased from bottom to top. When the battery is under voltage, the first LED on the right side flashes and needs to be charged immediately.

**Pic** 6-4

## 5. Error Code

When the electric vehicle's electronic control system fails, the meter LED will flash to display the error code. And stop normal work, only when the fault is eliminated can exit the fault display interface (even if the meter is turned off without troubleshooting, the instrument will not work normally after restarting the instrument), the error reason displayed is detailed in the attached error code list.

# G. Wire harness

D15-MSUP display is a 5-pin lead-out cable that is powered by a 24V/36V/48V battery voltage. The power supply is positive (red line) 2. ground (black line) 3. communication T (yellow line) 4. communication R (Green line) 5. Weak electric lock (blue line).



(5 pin)

## H. Q&A

Q: Cannot switch on

A: Please help to check the connection of the plugs

Q: How to understand the Error Code

A: Please check the error code list and contact with service

# I. Quality commitment and warranty coverage Warranty:

 In the event of failure caused by the quality of the product under normal use, the company will be responsible for the limited warranty during the warranty period. The warranty period of the product is calculated within 30 months from the production date

Exception:

The following conditions are not covered by the warranty

- 1. Unauthorized disassembly and modification.
- Failure or damage caused by misuse or incorrect installation or commissioning by the user or a third party.
- 3. The outer casing is scratched or the outer casing is damaged.
- 4. The display lead wire is scratched or broken.
- Failure or damage caused by irresistible (such as fire, earthquake, etc.) or natural disasters (such as lightning strikes).
- 6. The product is out of warranty.

# **Error Code**

Pas 2 LED flashing	Controller Phase cable over current
	error
Pas 3 LED flashing	Controller Bus cable over current error

Pas 2 & 3 LED both flashing	Controller HALL sensor error	
Pas 2 & 4 LED both flashing	Controller Over Heating	
Pas 2 & 3 & 4 LED both flashing	Controller Over Current	
Pas 2 & 5 LED both flashing	Controller Overvoltage or undervoltage	
	error	
Pas 2 & 3 & 4 & 5 LED both flashing	Communication Error	
Pas 2 & 3 & 5 LED both flashing	New regulation Error	
Pas 2 & 4 & 5 LED both flashing	Display MCU error	
Pas 3 & 4 LED both flashing	Motor temperature error	
Pas 3 & 4 & 5 LED both flashing	Walking Assistant or Power Switch error	
Pas 4 LED flashing	Breaker or throttle error	
Pas 4 & 5 LED both flashing	Other error	
Pas 5 LED flashing	Controller Communication Error	
If the Connected to the constrailer and the constrailer failer		

If the 5-core cable connected to the controller and the controller fails:

The meter cannot be turned on and the LED is not displayed. Possible cause:

The main power cord is not connected / the controller is out of phase.

The meter can be turned on, but it stops working after 3S. There may be a reason: any one of the green and yellow signal lines connected to the controller and the controller is open.