D19 display
Product specification

Change record		
NO.	Description	Time
1	Release	Aug.13th.2021
2	Update some incorrect content	Oct.9th.2021
3	Add SOC interface	Oct.13th.2021

Content

I Product Introduction

1 Product name and model

LED display，model：D19 C5B/U5B

C CANBUS communication;
U UART communication;
5 main model;

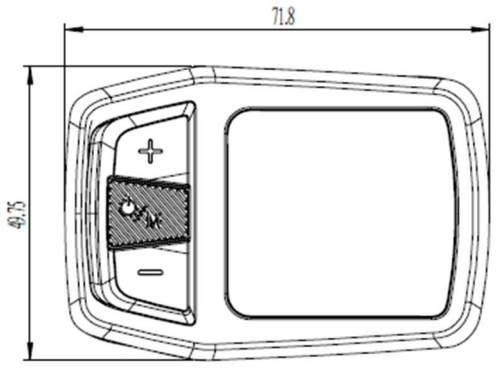
2 Product introduction

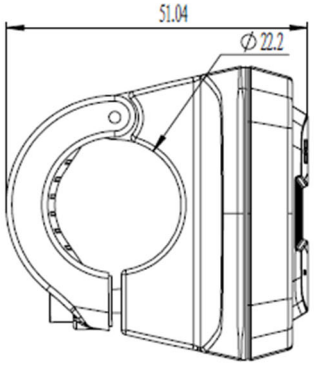
- The structure is simple and exquisite, and the appearance is beautiful and exquisite. Ultra high contrast LED screen
- Excellent outdoor design IP65 waterproof capability
- Waterproof head serial communication, convenient maintenance service
- Bluetooth is optional and can be used with mobile APP.

3 Scope of use

It is suitable for electric power assisted bicycles in accordance with EN15194 regulations and standards

4 Appearance and dimensions





II Product description

1 Specifications

① Power supply: DC 36V
② Rated working current: 35mA@36V
④ Screen specifications: LED display screen
⑤ C ommunication mode: UART/CANBUS
⑥ Operating temperature: -20°C ~ 60°C

⑦ Storage temperature: -20°C ~ 70°C
⑧ Waterproof grade: IP65
2 Function Overview
① Three buttons, convenient operation
Power key, + key, - key
② Metric/British system switching option
③ Speed display: Real-time speed (km/h)
④ Five power gear control: 1/2/3/4/5
⑤ Power indicator: Battery capacity indicator, and under voltage hint
⑥ Headlight indicator: Headlight switch status indicator (controller support)
⑦ Mileage display: TRIP, total mileage (ODO)
⑧ Connecting line communication interface, easy system maintenance, parameter setting
⑨ 6km/h help to implement the function
⑩ Fault code indication.

3 Installation Methods
①Open the instrument lock clamp, cover it on the left handlebar (standard handle tube specification: φ 22.2), adjust it to a position easy to operate, and use M4 to fix and tighten the hexagon socket screw. Maximum locking moment: 1N.m. * Instrument damage caused by excessive torque is not covered by warranty.
②Connect the instrument to the 5PIN plug-in and the controller butt plug-in as indicated.
4 Display Interface
4.1 Basic Interface
① Power gear: Power gear five grades, from low to high, respectively: 1/2/3/4/5. Another O indicates no power.
② Real-time speed: Display the current riding speed and unit;
③ Subtotal mileage: Display subtotal mileage and units, the maximum is 999.9;
④ power indicator: Display the number of battery capacity cells, under the state of under voltage icon box flashing;
⑤ Headlight indicator: When the headlight is turned on

4.2 Function interface
Full display screen when boot

After 1 second the whole picture disappears, the display enters the working state

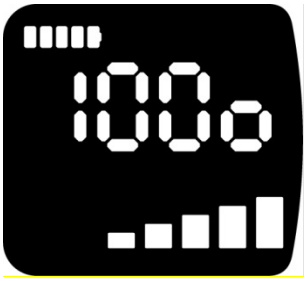
4.2.1 Short press the power button once to display cycling time: display cycling mileage.

4.2.2 Short press the power button once to display cycling time: display cycling mileage.

4.2.3 Press the power button once to display the cycling speed.

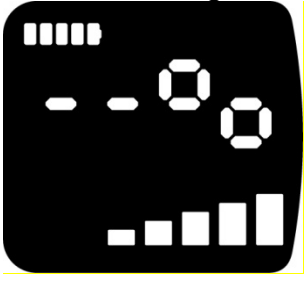
4.2.4 Short press power button once, shows the battery charge.

4.2.4.1 When SOC value is 100%，showing as below：



4.2.4.2 When SOC value is 0~99%，showing as below：

4.2.4.3 When the battery communication is disconnected, showing as below



4.2.5 When the speed is over 0 and last 5, if the interface show any one of ODO, Trip, SOC， will back to speed interface automatically. If the speed is 0, will remain in current interface.

5 The key definitions

Sleep/wake up key: /M, adjust the gear key + key or – key

6 Functional operation

6.1 Sleep/Wake up

Keep the normal connection between the display and the controller, long press (2 seconds) or the sleep/wake button in the sleep state of the display, the display will wake up and enter the basic interface and start to work; Long press (2 seconds) or short press the sleep/wake button in the boot state to enter the sleep state.

6.2 Power gear switch

Press + key or - key to switch power gear and change power mode. There are five modes: 0 /1 /2 /3 /4/5. When the instrument is on, the default is 1, and 0 is displayed as no power mode. (Power gear selection interface is shown below)

Show 0 gear

Show 1 gear

Show 2 gear

Show 3 gear

Show 4 gear

Show 5 gear

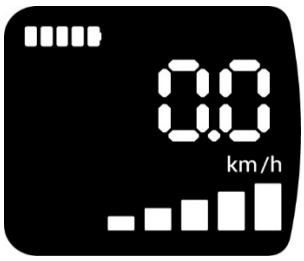
6.3 Assisted implementation model

Long press the down key, 3 seconds later, enter the state of power promotion, gear position display  , Release the minus key, that is, exit the assisted implementation mode. The interface for facilitating mode switching is shown below：

6.4 The headlight switch

Long press add button, 2 seconds later, the headlight is on (controller support is required), the instrument display interface, the headlight indicator icon lights up, long press add button again, 2 seconds later, the headlight off, the headlight indicator icon off. When the headlight turns on, the brightness of LEDs of instrument will become dim. When the head light turns off, the brightness of LEDs of instrument will back to normal.

Headlight power-on



Headlight power-off

6.5 Power display

The display of battery quantity is obtained from battery or controller and displayed. The display of battery quantity is divided into 1-5 grids.

The instrument gives priority to the use of battery to send SOC value.

When the connection of battery communication failed, power on the instrument, battery capacity indication will flicker 3s, then show the SOC.

Obtain electric quantity information from the controller, as shown below:

6.6 Function Setting Press the add/subtract key about 3s, at the same time to enter the setting state.
6.6.1 Press the power button once, and the instrument enters the setting state of metric/imperial units.

6.6.1.1 Press the plus or minus key to toggle metric/Inch unit Settings

Choose metric units

Choose imperial units

After selecting and setting the unit, long press the power button 3s to save and automatically return to the upper menu.
6.6.2 Press the minus key to adjust the meter display "PASS"

6.6.2.1 Press the power button and the display will display the state of "Input password". If the user wants to restore the factory Settings, the user needs to input the password "6262".

6.6.2.2 Press the plus or minus key to increase or decrease the number, press the power button once to jump to the next number setting, and so on

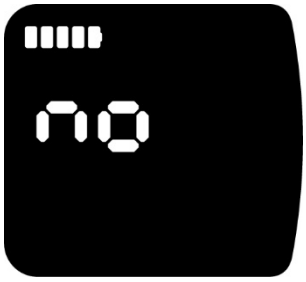
After entering the password "6262", press the power button once, the instrument will show“F|-T” .It means the instrument can restore factory setting. If you want to back to first-level menu, long press the add key and minus key 3s.

6.6.2.3.1 Long press the power button once and the display will enter the next-level menu. The instrument will display "ON". If you do not want to restore factory Settings, press the power button once and automatically return to the upper-level menu.

6.6.2.3.2 If you want to restore factory Settings, press the add key or the minus once, and the instrument will display "YES". Hold down the start key until it automatically returns to the upper level, indicating that factory Settings are successfully restored.

6.6.2.4 Press the add key and minus key 3s at the same time. Exit the secondary menu, return to first-level menu
6.6.3 Short press add key and minus key in the first-level menu interface, the instrument enters the data clearing setting state, press the power button once to enter the data clearing setting state.

6.6.3.1 Press the plus or minus key to determine whether to clear data



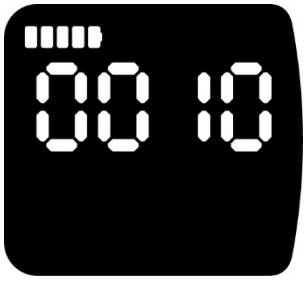
6.6.3.2 Press the power button once, and the instrument enters the state of clearing data, and the instrument displays "NO". If you do not want to clear data, long press the power button once to exit, and the data is not cleared.
6.6.3.3 Press the Add/Subtract key once and the instrument will display "YES". After long pressing the power button, the instrument will clear the data and return to the main interface automatically.

6.6.4 After the instrument enters “CL|-”, press the add key once, the instrument enters the setting state of sleep time, and the instrument displays "SLP", waiting 4s, the instrument will show current sleeping time automatically.

6.6.4.1 Press the power button once and the instrument enters the setting state of sleep time,

Select 5-minute sleep

6.6.4.2 Press the add key once, and the instrument displays as follows



Select 10-minute sleep

6.6.4.3 Press the add key once, and the instrument display is as follows

Select 15-minute sleep

6.6.4.4 Press the add key once, and the instrument displays as follows

Select 20-minute sleep

6.6.4.5 Press the add key once, and the instrument displays as follows

Choose 25-minute sleep

6.6.4.6 Press the add key once, and the instrument displays as follows

Select 30-minute sleep

After setting the sleep time, hold down the power button to save the Settings and return to the upper-level menu automatically.

6.6.5 After the instrument enters “SLP”, press the add key once, the instrument enters the display of wheel diameter specification and size, and the instrument displays "dIR". Waiting for 4s, the instrument will show the wheel diameter specification and size automatically.

6.6.5.1 Short press the power button once, the instrument displays the wheel diameter specification size matched by the system

6.6.6 Under any interface of the first-level menu, press the add key and minus key 3s at the same time, return to the main interface.

6.6 Fault Information

The instrument can warn the vehicle fault and display the fault code on the instrument interface when the fault is detected. The following information is displayed:

Attached table: UART error code definition table

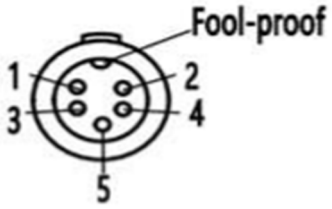
21	The bus current is abnormal
22	Handle is abnormal
23	Abnormal Braking
24	Hall signal of the motor is abnormal
25	Phase current is abnormal
26	Under voltage fault
28	Euro standard fault
30	The instrument communication is faulty
31	The power switch is faulty
32	Implementation failure
33	The microprocessor is faulty. The voltage reference is faulty
If the 5 core wires connecting the instrument and the controller are faulty: The instrument cannot be turned on and the LCD screen is not displayed. Possible cause: The main power cable is improperly connected or the controller is out of phase.	

Attached table: CANBUS error code definition table

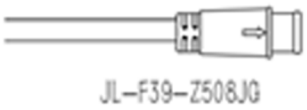
Fault Code	Fault Description	Fault remove
01	Controller phase overcurrent fault	Restart the system. If the fault persists, contact the authorized dealer for warranty.
02	Controller bus overcurrent Fault	Restart the system or replace the controller. If the fault persists, contact the authorized dealer

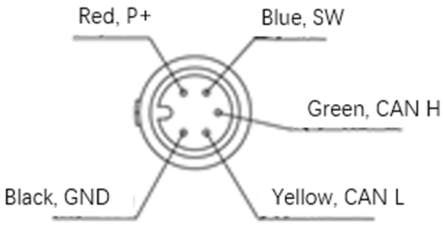
		for warranty.
03	Controller HALL Fault	Check whether the cable is properly connected. If the fault persists, contact the authorized dealer.
05	Controller temperature Fault	If the fault persists, contact the authorized dealer for warranty.
30	Instrument communication fault	Check whether the instrument is properly connected. If the fault persists, replace the instrument, controller, or extension cable.
31-50	Controller New European standard Fault	Reconnect the controller, update the software, or replace the controller.
60	Display MCU failure or voltage reference failure	replace the display
06	Motor temperature fault	Check whether the motor is overloaded by stopping and restarting to see whether the error code disappears. If the fault still exists, please seek help from the authorized dealer.
20	Push, power switch fault	Check whether the key is stuck. If it is stuck, replace the instrument.
04	Brake failure, handle failure	Check the brake line, or before the system starts, whether the brake is restored.
08	Controller communication Fault	Check whether the controller is properly connected. If the fault persists after the controller is connected again, replace the instrument or controller or extension cable.
09	Controller overvoltage or under voltage	Check the battery voltage

7 Cable Connection Definition



connector model	JULET JL-F-Z509AG				
Pin NO.	1	2	3	4	5
Color	Red	Blue	Black	Green	Yellow
Definition	VCC	LOCK	GND	RX	TX





III Points for attention

In the process of use, pay attention to the use of safety, do not plug and unplug the instrument under the power working state;

Try to avoid use in harsh environment, heavy rain, snow, exposure to the sun.

When the instrument cannot be used normally, it should be repaired as soon as possible.

Reserve the permission to change the specification

IV、Frequently asked Questions and answers

Q: Why can't you turn it on?
A: Check whether the contact between the instrument wiring harness and the connector of the controller is reliable.
Q: How to deal with the fault code displayed on the meter?
A: first, find the corresponding problem according to the error code displayed. If you can't solve the problem by yourself, go to the repair point of electric car repair in time.

V、Quality commitment and warranty scope

Warranty Information:

1. During the warranty period, the company will be responsible for providing limited warranty for the faults caused by product quality problems under normal use.

2. The warranty period of the products shall be 30 months from the date of purchase of our instruments.

Release clause:

The following conditions are not covered by the warranty

1）Dismantling and refitting without authorization.

2）The fault or damage is caused by misuse or incorrect installation and debugging by the user or a third party.

3）The outer shell of the instrument is scratched or damaged after leaving the factory.

4）The instrument lead wire is scratched or broken.

5）Failure or damage caused by force majeure (such as fire, earthquake, etc.) or natural disasters (such as lightning

strike, etc.).

6）The product is beyond the warranty period.

VI、Version information

The instrument software version used in some vehicles may be different from this manual, the actual version shall prevail.