Yolin

User Manual for

E-bike Display

YL81C-A

Tianjin Yolin Technology Co., Ltd.

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1. Product name and model

Intelligent LCD display for e-bike; model: YL81C.

2. Specifications

- 36V/48V power supply
- Rated working current 15mA
- Maximum working current 30mA
- Leakage current at power-off <1uA
- Working current at the supply controller end 50mA
- Working temperature -20～60℃
- Storage temperature -30～70℃

3. Appearance and dimensions

Fig. 3-1 Picture of Display 81C

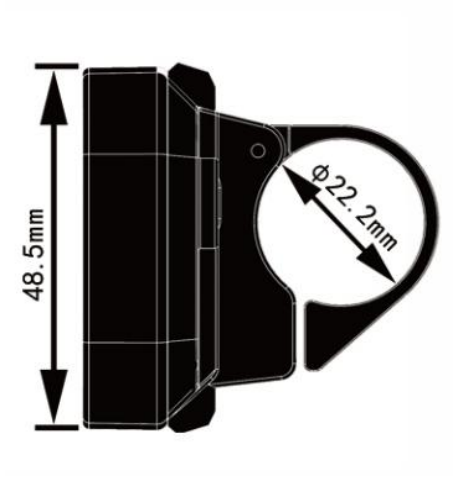


Fig. 3-2 Top View of Display 81C Dimensions

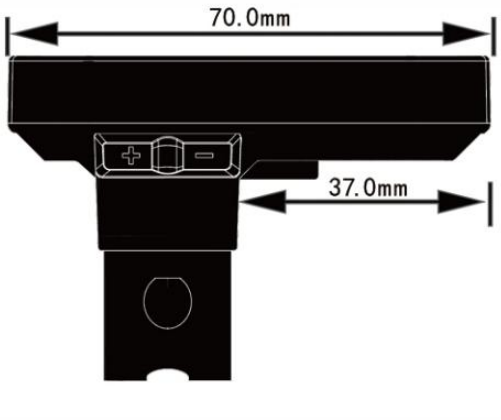


Fig. 3-3 Side View of Display 81C Dimensions

4. Function overview and functional area layout

4.1 Function overview

Display YL81C provides a variety of functions to meet the riding needs of users, including:

- Battery level indicator
- Assist level adjustment and indication (levels ECO, MID and HIGH)
- Speed indicator
- Distance indicator (including trip distance and ODO)
- Error code indicator

4.2 Functional area layout

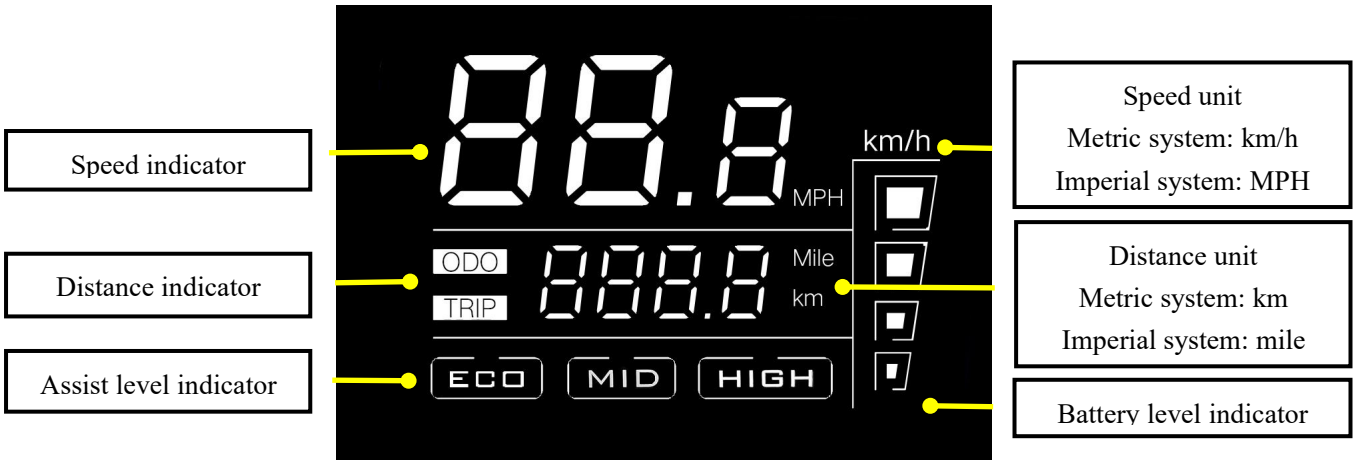


Fig. 4-1 Functional Area Layout Interface of Display YL81C

4.3 Button definitions

There are three buttons on the operating unit of display YL81C, i.e., the on/off button ⏻, plus button ＋ and minus button －.

5. General operation

5.1 Power on/off

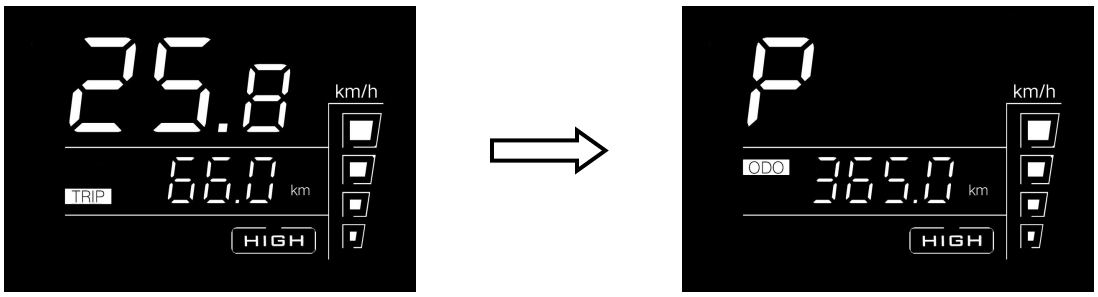
By pressing and holding the button ⏻, the display will start to work and the working power supply of the controller will be turned on. In the power-on state, by pressing and holding the button ⏻, your e-bike will be powered off. In the power-off state, the display will no longer use the battery power, and its leakage current will be less than 1uA.

■ If your e-bike is not used for more than 10 minutes, the display will be automatically powered off.

5.2 Display interface

After the display is turned on, the display will show the real-time speed (km/h) and the trip distance (km) by default. By pressing the button ⏻ , the information displayed will be switched between the trip distance (km) and the ODO (km). When the TRIP light is on, the trip distance is displayed; when the ODO light is on, the ODO is displayed.

When the ODO is displayed, by pressing the button ＋/－, no operations will be done. The assist level is in the parking status, and P will be displayed in the first numeric area of the speed value. When the distance reaches 9999 km, it will be automatically reset to zero.



Trip distance indicator **ODO**

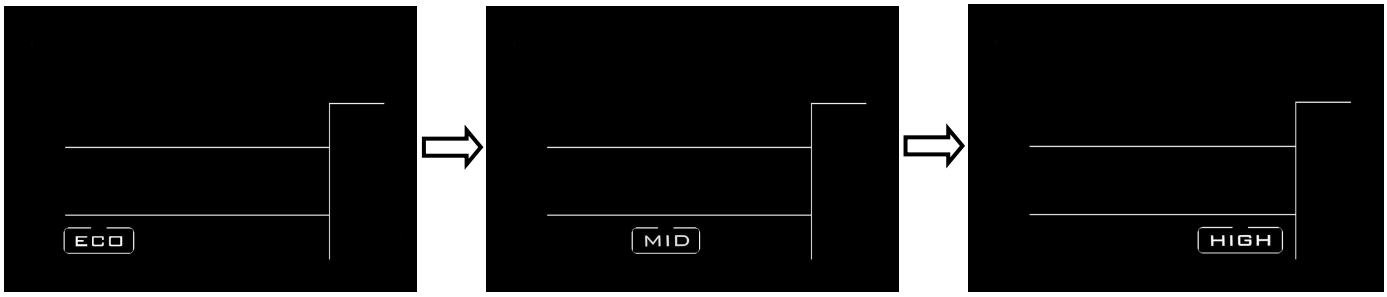
Fig. 5-1 Display Interface Switching

5.3 Headlight on/off

By pressing and holding the button ⊕, the controller will turn on the headlights and the display backlight will turn dark. By pressing and holding the button ⊕ again, the controller will turn off the headlights and the display backlight will resumes the luminance.

5.4 Assist level selection

When TRIP is shown, by pressing the button ⊕/⊖, the e-bike assist level will be switched to change the motor output power. There are three assist levels available: ECO, MID and HIGH.

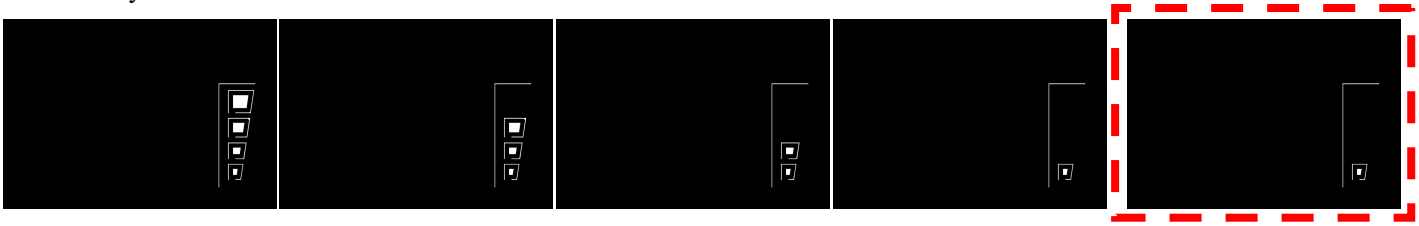


ECO indicator interface **MID indicator interface** **HIGH indicator interface**

Fig. 5-2 Assist Level Switching Interface

5.5 Battery level indicator

The battery level indicator consists of four segments. When the battery is fully charged, the four segments will be all on. In case of undervoltage, the last segment of the battery indicator will flash, which means the battery has to be charged immediately.



Full battery level indication **3-segment indication** **2-segment indication** **1-segment indication** **Undervoltage flashing**

Fig. 5-3 Battery Level Indicator Interface

5.6 Error code indicator

When a fault occurs in the electronic control system of your e-bike, the display will automatically indicate the error code in the distance area in the format of E0**. Detailed definitions of error codes are shown in **Schedule 1**.

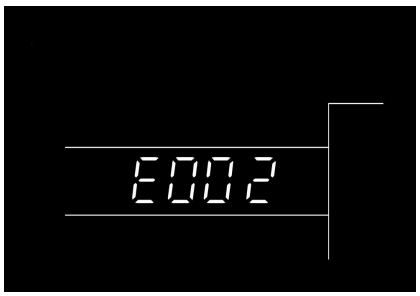


Fig. 5-4 Error Code Indicator Interface

■ When an error code appears on the display interface, please conduct troubleshooting in time. Otherwise, your e-bike will not work normally.

6. Quality commitments and warranty scope

6.1 Warranty information:

● For the faults caused by the quality of the product under normal use, the Company will be responsible for providing limited warranty during the warranty period.

● The warranty period of the product is within 12 months from delivery.

6.2 Non-warranty scope

● The enclosure is opened

● The connector is damaged

● The enclosure is scratched or damaged after delivery

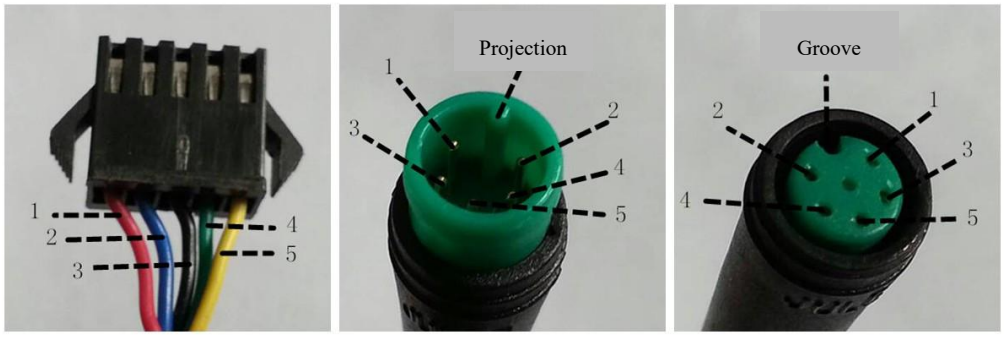
● The outgoing line of the display is scratched or broken

● Faults or damage caused by force majeure (such as fires, earthquakes, etc.) or natural disasters (such as lightning strikes, etc.)

● The warranty period has expired

7. Outgoing line connection diagram

7.1 Wiring sequence of standard connector



Connecting terminal to the controller | **Leading-out terminal of display** | **Connecting terminal**

Fig. 7-1 Outgoing Line Connection Diagram

Table 7-1 Wiring Sequence of Standard Connector

Standard wiring sequence	Standard wire color	Function
1	Red (VCC)	Power cord of display
2	Blue (Kp)	Power control line of controller
3	Black (GND)	Ground wire of display
4	Green (RX)	Data receiving line of display
5	Yellow (TX)	Data transmission line of display

■ The outgoing lines of some products adopt waterproof connectors, and users cannot see the outgoing line color inside the wire harnesses.

8. Considerations

Please use safely, and do not plug or unplug the display when it is powered on.

◆ Please avoid bumping as far as possible.

◆ Please do not alter the background parameter settings of the display at will, otherwise normal riding cannot be guaranteed.

◆If the display fails to work normally, it should be repaired as soon as possible.

◆ Due to product upgrades of the Company, part of the displayed contents or functions of the product you bought may be different from the manual, depending on the actual model.

Schedule 1 Error Code Definitions

Error codes for protocols YL-01 and YL-02:				
Error codes	Definition		Error codes	Definition
E001	Controller Abnormality		E004	Throttle Abnormality
E002	Communication Abnormality		E005	Brake Abnormality
E003	Motor Hall Signal Abnormality		E006	Motor Phase Abnormality
Error codes for protocols YL-05, KDS and YL-J:				
Error codes	Definition		Error codes	Definition
E021	Current Abnormality		E024	Motor Hall Signal Abnormality
E022	Throttle Abnormality		E025	Brake Abnormality
E023	Motor Phase Abnormality		E030	Communication Abnormality

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