



YOSE POWER



DZ40 display Specification Manual

Product Name: LCD Display

Product Model: DZ40

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1. product introduction

1.1 product name and model

LCD Display, model: DZ40

1.2 product introduction

- ◇ Simple and thin, installed on the left, can be used with the middle display;
- ◇ High brightness white nixie tube;
- ◇ Waterproof level: IP65;
- ◇ UART communication interface is convenient for maintenance service

1.3 Scope of use

EN15194 electric bicycle

1.4 Appearance and size

The housing material of the product is ABS, and the upper housing window is made of brown PC with high hardness.



1.4.1 Display shape and size



1.5 Display coding rules



SW102 CS2C01B1010001

SW102 product model (this information is not included in bar-code information);

C-manufacturer code or production team code;

S2-product model code;

C01-indicates the number of weeks in the production year;

B-indicates the hardware version;

101-indicates the firmware version number;

0001-indicates the serial number of the product.

2. Product description

2.1 Specification parameters

- ① power supply: DC 24V/36V/48V
- ② rated current: 18mA/36V
- ③ shutdown leakage current: < 1uA;
- ④ Display is similar: white digital tube display
- ⑤ Communication mode: UART (default)
- ⑥ Working temperature:-20°C ~ 60°C
- ⑦ Storage temperature:-30°C ~ 80°C
- ⑧ Waterproof level: IP65

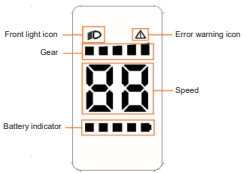
2.2 Function overview

- ① Four buttons, easy to operate
- ② Speed display: real-time speed
- ③ Gear control: default gear 0-5
- ④ Six-level battery indication: 1-5 battery levels and under-voltage prompt
- ⑤ Walk-assist function
- ⑥ Headlight indication: headlight status indication (supported by controller)
- ⑦ Fault code indication

2.3 Installation method

- ① Open the display locking clip, cover it on the left handlebar (standard handle pipe size: ϕ 22.2), adjust it to an easy-to-operate position, fix it with M3 inner hexagon and tighten the fixing screw. The locking torque is 0.8N.m. * display damage caused by excessive torque is not covered by warranty.
- ② Connect the display connecting 5pin plug-in with the controller docking connector as indicated.

2.4 Display interface



2.4.1 Turn on interface


Start up and display the character pen segment as a ticker, and then the pen segment will flash twice.

2.4.2 Riding interface





- ① gear indication: 0-5 gears, gear indication.
- ② Speed display: real-time speed display.
- ③ Power indicator: Level 6 power indicator: Level 1-5 power and under-voltage prompt (1 light flashes).

2.5 Key definition

Switch on/off:  function key: **M** adjustment key+ :upper part of display display area (explained by **Λ**), adjustment key-lower part of display display area (explained by **V**)

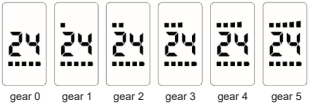
2.6 Function operation

2.6.1 On/Off

Keep the normal connection state between the display and the controller, press the  key for 2 seconds when the display is turned off, and the display will fully display the startup interface, then enter the basic interface normally and start working; Long press the  (2 seconds) in the power-on state to turn off the display. If the rider does not operate the display for 5 minutes (default) (and the speed is 0), the display will automatically turn off.

2.6.2 Power shift switching

Press the **Λ** key or the **V** key to switch the assist gear and change the assist mode. There are four modes: 0/ low/medium/high gear.



2.6.3 Assist in implementation

Press and hold the **V** button for 2 seconds, and then enter the boosting state. Release the **V** button and exit the boosting Implementation mode.

2.6.4 Headlights on (brightness switching)

Press and hold the **Λ** key for 1 second, then the headlights will turn on (with the support of the controller), the lamp icon will light up, and the brightness of the display lamp will decrease. Press and hold the **Λ** key again for 1 second, then the headlights will turn off and the display brightness will recover.



Turn off the lights (high brightness)
and turn on the lights (low brightness)

2.6.5 Electricity display

When the battery power is normal, the battery 5-segment LCD displays the power according to time and the outer frame lights up. When the battery is exhausted, the 5-segment LCD of the battery is completely extinguished and the outer frame flashes, so it needs to be charged immediately. The battery charge is shown as follows:



Battery charge (C) display correspondence table (charge indication can be adjusted according to requirements)

serial number	On-display (SOC)	Showed on the display	Voltage (24V)	Voltage (36V)	Voltage (48V)
1	C≤5%	Battery outer frame flashes	$U \leq 23.1$	$U \leq 33$	$U \leq 42.9$
2	$5\% < C \leq 15\%$	One grid	$23.1 < U \leq 24.5$	$33 < U \leq 34.7$	$42.9 < U \leq 45.1$
3	$15\% < C \leq 35\%$	Two-grid	$24.5 \leq U \leq 25.1$	$34.7 \leq U \leq 35.8$	$45.1 \leq U \leq 46.5$
4	$35\% < C \leq 55\%$	Three-grid	$25.1 \leq U \leq 25.6$	$35.8 \leq U \leq 36.7$	$46.5 \leq U \leq 47.5$
5	$55\% < C \leq 75\%$	Four-grid	$25.6 \leq U \leq 27$	$36.7 \leq U \leq 38.5$	$47.5 \leq U \leq 50.1$
6	$C \geq 75\%$	Five-grid	$U \geq 27$	$U \geq 38.5$	$U \geq 50.1$

2.7 User settings

Setting items: unit setting, * wheel diameter information, * speed limit information, * battery voltage, (* is a fixed display item, and no user setting option is provided)

2.7.1 Enter Settings

- ◇ Within 10 seconds of starting up, press and hold the **M** (2 seconds), and the system will enter the user setting interface. In this state, relevant parameters can be set and viewed.
- ◇ Long press the **M** (2 seconds) to exit and save the setting status.
- ◇ When the user sets the interface state, if it is not operated for 10 seconds, the display will return to the normal riding state without saving the parameter settings.
- ◇ In the user setting interface state, within the setting items, press **▲** / **▼** briefly to switch the setting contents.

2.7.2 unit setting

Enter the setting interface (default unit setting item: the first segment of gear flashes, and the fifth end is always on).

You can view the unit mode metric KM/ imperial m switch, and the factory default value is KM. (with 7-segment LED standard alphabet)



Metric system (KM) English system (MI)

2.7.3 Wheel diameter information

After entering the setting interface, press **▲** / **▼** briefly to switch the setting content to enter the wheel diameter information (the second section of the gear flashes and the fifth end is always on). Wheel diameter information can be viewed (700C is used instead of 7c, 27.5 is used instead of 27).



26inch



700C

2.7.4 Speed limit information

After entering the setting interface, press **▲ / ▼** briefly to switch the setting content to enter the wheel diameter information (the third section of the gear flashes and the fifth end is always on). You can view the speed limit information (the default speed limit is 25km/h).



The speed limit is 25 km/h

2.7.5 Battery voltage

After entering the setting interface, press the **▲ / ▼** briefly to switch the setting content to enter the battery voltage check (the fourth segment of the gear flashes and the fifth end is always on).The collected battery voltage information can be viewed (two digits indicate, decimal places are rounded off).



The voltage is 36V

2.8 fault information

2.8.1 Fault display

The fault icon and fault code are displayed, and the fault code flashes.



2.8.2 Definition of Fault Code

The fault code is obtained from the controller instruction.

Generally, the controller defines the meaning of error codes. The meter only defines ERROR 30 that cannot communicate.

Fault code	Fault description	Investigation and analysis
E30	Communication failure, the display can't receive data from the controller or the received data is wrong data.	1: Check whether TX and RX communication lines are connected correctly. 2: Check whether the harness and connector are loose or broken. 3: Check whether the display communication protocol matches

2.9 Wiring definition



Display outlet terminal



Connector



connect to the controller

Table 1 Standard connector wiring definition table

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

Note: Some products with waterproof plug-in, the user can not see the lead color in the harness.

3. Attention

- ◇ During use, pay attention to the safety of use, and do not plug and unplug the display under the condition of power supply;
- ◇ Try to avoid using in harsh environment, such as heavy rain, heavy snow and exposure.
- ◇ When the display cannot be used normally, it should be repaired as soon as possible.

