

Qingdao Magene Intelligence Technology Co., Ltd.

User Manual



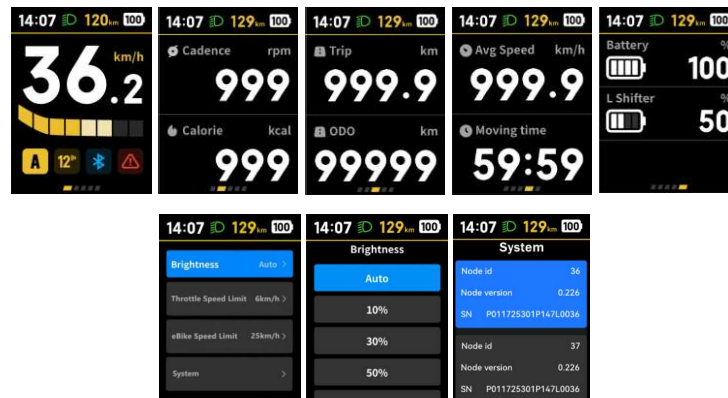
eBike Display
Model: DY12+DY30

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1. Display Introduction

● DY30



① Status Including: Time, Light, Range, Battery, Function Divider



- Time: Displays the current time of the device.
 - Default display: 24-hour format
 - Note: When the left turn signal or hazard light is turned on, the time display will be temporarily replaced by the turn signal icon, and will resume automatically after the light is turned off.
- Light Icon: Indicates the status of your vehicle's headlights.
 - Green icon: Low beam is turned on.
 - Blue icon: High beam is turned on.
 - If your vehicle does not have a high beam function, only the green low beam icon will be displayed when the headlight is turned on.
 - Note: The icon will be hidden when the headlight is off, and will light up immediately when the light is turned on.
- Range: Shows the estimated remaining riding distance based on your current riding mode and battery level.
 - The text color will change with different riding modes.
 - Note: When the assist mode is turned off (OFF), it will display "--". When the right turn signal or hazard light is turned on, the range display will be temporarily replaced by the turn signal icon, and will resume automatically after the light is turned off.
- Battery Capacity: It shows the percentage of battery.
 - Normal state: White display, showing the current battery percentage.
 - Charging state: The icon turns green and flashes. **100**
 - Low battery alert: Turns red when the battery is $\leq 20\%$, and a pop-up reminder will appear when the battery is $\leq 15\%$. **10**
 - If the battery communication is abnormal, it will display "--".
- Function Divider:
 - A clear dividing line that separates the status bar from the main riding data area
 - The color of the line will change with your current riding mode

- ② Home Page: Speed, Rider/Motor Power Ratio, Riding mode, Shift Gear, BLE Icon, Connected Devices Count Icon, Brake Icon, Error Icon



- Speed: Current Speed with the unit (km/h or mph) displayed next to it, Speed is default data

showing on the display when the display is power on 

- Rider/Motor Power Ratio: Power ratio between rider and motor, deep color is rider power, light color is motor color 

- Riding Mode: Shows the current assist mode you're using. There are 5 normal riding assist levels:

- A: AUTO mode 

- 1: ECO mode 

- 2: TOUR mode 

- 3: TURBO mode 

- OFF: Assist OFF mode 

- In addition, there are 2 special function modes:

- ◆ EV icon: Throttle function (pure electric assist mode) 

- ◆ Walk assist icon: Walk assistance function (push assist mode) 

- Different modes correspond to different levels of motor assist.

- Shift Gear: Displays your current gear position. The display style varies according to whether the device is equipped with automatic shifting function and the current shifting mode.

- Models NOT equipped with automatic shifting

- ◆ Only show the current gear number (e.g., 12) with a gear bar icon, no automatic shifting related icons or status will be displayed. 

- Manual shifting mode (for models with auto-shift function)

- ◆ Shows the current gear number (e.g., 12) with a gear bar icon, indicating you are manually controlling the gear. 

- Automatic shifting mode:

- ◆ The gear number is displayed with an "A" auto-shift icon, indicating the system is automatically adjusting gears for you. 

- BLE Icon: Appears when the display is connected to a mobile phone. 

- Connected Devices Count Icon: Displayed when wireless peripherals are connected, such as wireless buttons, power meter, etc. 

- If the number of connected devices exceeds 2, a number badge will appear at the bottom right of the icon. 

- This icon is hidden when a phone is connected via Bluetooth.

- When hidden, you can check the number and status of connected wireless devices in the Peripheral Battery Page or in the mobile APP.

- Brake Icon: Lights up immediately when the brake lever is operated.

- Important: This icon will NOT be displayed at all if the vehicle is not equipped with power-

cutoff brake levers. 

➤ Error Icon

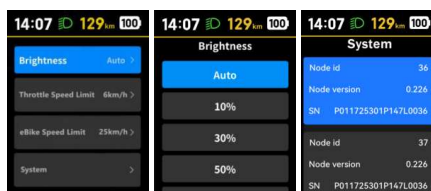
- Shows up when a system fault is detected. Hidden when there is no error. 

③ Data Page: Cadence, Calorie, Trip, ODO, Avg Speed, Moving Time, Peripheral Battery



- Cadence: Shows your real-time pedaling cadence, which is the number of pedal rotations per minute, in rpm.
- Calorie: Shows total calories burned during this ride, in kcal.
- Trip: Shows the distance of your current ride. It resets to 0 automatically when the display is powered off and restarted.
- ODO: Shows the total cumulative riding distance of your e-bike.
- Avg Speed: Shows the average speed of your current ride.
- Moving Time: Shows the total duration of your current ride, in HH:MM format. It resets to 0 when the display is powered off and restarted.
- Peripheral Battery: This page only displays the battery status of connected wireless peripherals. If no peripherals are connected, it will show the main vehicle battery status instead.
 - The battery icon turns red when the battery level is $\leq 20\%$ for all peripherals, to remind you of low power.

④ Setting Page: Screen Brightness, eBike/Throttle Speed Limit Setting, System



- Screen Brightness: It can select manually / automatically to switch screen brightness, as well as the percentage of screen brightness under manual switching
- eBike Speed Limit Setting: It can set the eBike speed limit
- Throttle Speed Limit Setting: It can set the throttle speed limit
- System: It can show eBike and component info

● DY12

4 LED, each LED includes cyan, white, yellow, green, blue, red 6 color, various functions and notice are represented by different LED lights with different colors and display combinations



2. Controlling Button Introduction

- **DY12**



Including: 3 Buttons, “+”, “-”, “M/⏻”

Operation: One button short pressing, one button long pressing

- **DY30**



A

Including: 1 button, “A”

Operation: One button short pressing, one button double-click

3. Function Introduction

- Display DY30 working with single display DY12



① Power On/Off

Power On: Long pressing DY12 “M/” 2s when the display is power off

Power Off: Long pressing DY12 “M/” 2s when the display is power on



② Riding Modes Switching Operation

Short pressing DY12 “M/” to loop switch riding mode

Riding Mode	DY12 LED Color / DY30 Mode Color	Remark
OFF	White/White	No Assist
A	Yellow/Yellow	Auto Assist
1	Green/Green	Lowest Assist Mode
2	Blue/Blue	Mid Assist Mode
3	Red/Red	Highest Assist Mode
WALK / Throttle	Current mode color/Purple	Walk Assist / Throttle

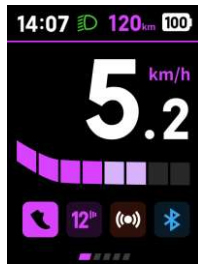
③ Data Page Switching

Short pressing DY30 “A” to loop switch riding data

14:07 120km 100 36.2 km/h A 12°	14:07 129km 100 Cadence rpm 999 Calorie kcal 999	14:07 129km 100 Trip km 999.9 ODO km 99999	14:07 129km 100 Avg Speed km/h 999.9 Moving time 59:59	14:07 129km 100 Battery % 100 L Shifter % 50
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④ Walk Assistance Operation

Pressing DY12 “-” 2s and hold it to start walk assistance mode, then release “-” to stop walk assistance mode



⑤ Shift Gear Switching

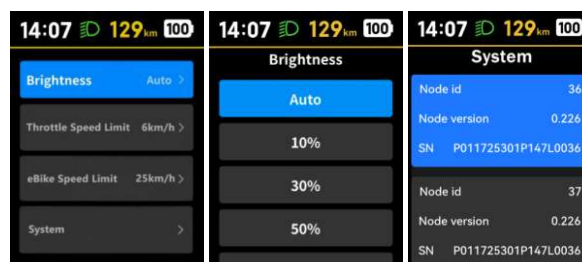
Short pressing DY12 “+/-” to switch shifting gear, short pressing “+” to switch to small freewheel;
Short pressing “-” to switch to big freewheel



⑥ Function Of Setting Page

Double clicking DY30 “A” , it entries settings page, including screen brightness setting, eBike Speed Limit, Throttle Speed Limit, System, short pressing DY12 “+” and “-” to switch subpage, short pressing DY12 “M/” to entry subpage and confirm, short pressing DY30 “A” to return previous page and exit setting page

Notes: After some setting operation, there will be a pop-up window indicating that it needs restart eBike to take effect, short pressing DY30 “A” to exit pop-up window, then restart eBike



⑦ Light

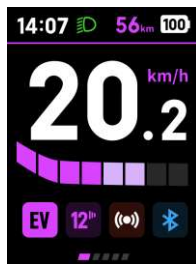
Auto light: The eBike is on auto light when every time cyclist power on the eBike, cyclist can close auto light function and switch to manual light function when pressing “+” 2s, and cyclist can power on/off light by pressing “+” 2s, once cyclist power off eBike and power on again, it will return to auto light automatically

Manual light: Long pressing “+” 2s to power on/off light when it isn’t on auto light function



⑧ Throttle Operation

When using throttle, eBike can go forward automatically without cyclist cycling



4. Error Code Definition

When there is fault in eBike system, DY12 all yellow and white LED are on and flash alternately, DY30 screen shows fault codes

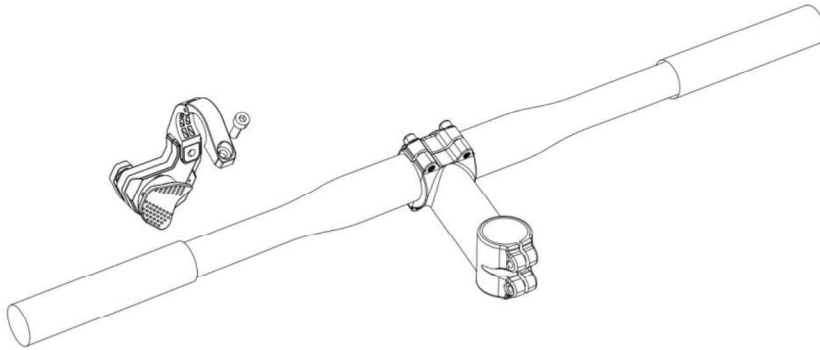
Error Code	Fault	Solution
101	Over Voltage	Trigger system protection. If it can be automatically restored, please ignore it. If it cannot be restored, please contact your purchase channel for after-sales service.
102	Low Voltage	Please charge the eBike. If the problem still cannot be solved, please contact your purchase channel for after-sales service
103	Phase current over current	Trigger system protection. If it can be automatically restored, please ignore it. If it occurs frequently, please contact your purchase channel for after-sales service.
105	Lack phase of motor	①Trigger system protection. If it can be automatically restored, please ignore this message. ②Please check the wiring harness between the motor and the controller. The issue may be caused by loose or disconnected plugs. ③If it cannot be restored, please contact the after-sales service of the purchasing channel.
106	Short circuit of motor	①Trigger system protection. If it can be automatically restored, please ignore this message. ②Please check the wiring harness between the motor and the controller. The issue may be caused by loose or disconnected plugs. ③If it cannot be restored, please contact the after-sales service of the purchasing channel.
107	Lock rotor of motor	Overload or exceeding climbing capacity, it resumed normal use after the load is removed or on level road.
108	Hall anomaly	①Trigger system protection. If it can be automatically restored, please ignore this message. ②Please check the wiring harness between the motor and the controller. The issue may be caused by loose or disconnected plugs. ③If it cannot be restored, please contact the after-sales service of the purchasing channel.
109	Controller over heat	Trigger over temperature protection. This failure occurs when it is in a state of long-time climbing and long-time overload, and it is eliminated after resuming normal use.
110	Throttle anomaly	①Check wiring harness between the throttle and controller. The issue may be caused by loose or disconnected plugs. ②If it cannot be restored, please contact the after-

		sales service of the purchasing channel.
111	Communication fault (Controller)	①Checking wiring harness between controller and display.The issue may be caused by loose or disconnected plugs. ②If it cannot be restored, please contact the after-sales service of the purchasing channel.
113	Communication fault (Digital torque sensor)	①Check wiring harness between the torque sensor and controller, it is probably caused by loose plug or disconnection. ②If it cannot be restored, please contact the after-sales service of the purchasing channel.
114	Abnormal motor speed	①Trigger system protection. If it can be automatically restored, please ignore this message. ②Please check the wiring harness between the motor and the controller. The issue may be caused by loose or disconnected plugs. ③If it cannot be restored, please contact the after-sales service of the purchasing channel.
001	Communication fault (Button)	①Checking wiring harness between controller and button. The issue may be caused by loose or disconnected plugs. ②If it cannot be restored, please contact the after-sales service of the purchasing channel.
002	Storage fault (Button)	Trigger system protection. If it can be automatically restored, please ignore it. If it cannot be restored, please contact your purchase channel for after-sales service.
003	“M 🔌” long pressing fault(20s) (Button)	①If it is caused by manual misoperation, it can resume normal after “M 🔌” button is released. ②If it cannot be restored, please contact the after-sales service of the purchasing channel.
201	Communication fault (Display)	①Checking wiring harness between controller and display. The issue may be caused by loose or disconnected plugs. ②If it cannot be restored, please contact the after-sales service of the purchasing channel.
202	Storage fault (Display)	Trigger system protection. If it can be automatically restored, please ignore it. If it cannot be restored, please contact your purchase channel for after-sales service.
301	Low Voltage (Electronic Shifting)	Trigger system protection. If it can be automatically restored, please ignore it. If it cannot be restored, please contact your purchase channel for after-sales service.
302	Motor block fault (Electronic Shifting)	Scenes such as chain stuck lead to eShift unable to pull the rear derailleur and the eShift motor unable to rotate. It resumes to normal use after such phenomena are eliminated. If it cannot be restored, please contact your purchase channel for after-sales service.

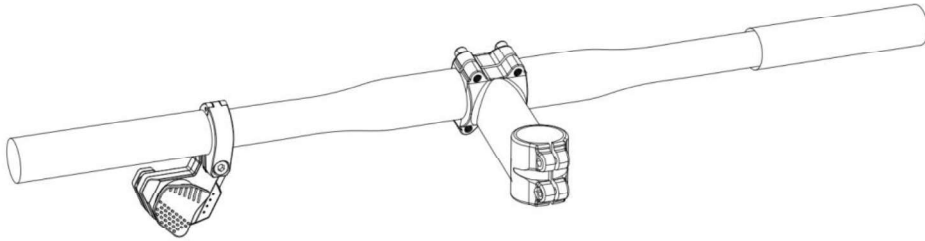
303	Magnetic Encoder fault (Electronic Shifting)	Trigger system protection. If it can be automatically restored, please ignore it. If it cannot be restored, please contact your purchase channel for after-sales service.
304	Power off offset warning (Electronic Shifting)	①Trigger system protection, if it does not affect riding, it can be ignored. ②If it affects riding, you can adjust the derailleur trim screw. ③If you still can't ride, please contact the after-sales service of the purchase channel.
401	Battery short circuit failure	①Turn off and staying 2 min to check discharge is recovery or not. ②After inserting the charger and activating it, removing the charger to check if the discharge is recovery or not. ③If it cannot be restored, store the battery separately and contact after-sales service.
402	Discharge overcurrent fault	Taking out battery, charging it and checking discharge recovery or not, if it doesn't recover, just checking cable and connector
403	Battery undervoltage fault	Checking the battery and charge it.If it cannot be restored, please contact your purchase channel for after-sales service
404	Over discharge temperature	Move eBike or battery to the normal temperature range. If it does not return to normal after one hour, please contact after-sales service.
405	Under discharge temperature	Move eBike or battery to the normal temperature range. If it does not return to normal after one hour, please contact after-sales service.
406	Charging overcurrent fault	Unplug the charger and wait for a period of time before charging again to confirm if it returns to normal. If it cannot be restored, please contact after-sales service.
407	Overvoltage fault	Please unplug the charger and confirm if the ride is normal. If it cannot be restored, please contact after-sales service.
408	Over charge temperature	Moving eBike or battery to the normal temperature range. Waiting around one hour for eBike or battery to recover normal temperature, checking charging function is ok or not. If it cannot be restored, please contact your purchase channel for after-sales service
409	Under charge temperature	Moving eBike or battery to the normal temperature range. Waiting around one hour for eBike or battery to recover normal temperature, checking charging function is ok or not. If it cannot be restored, please contact your purchase channel for after-sales service
410	Main Battery Communication Fault	Please check if the battery connection is secure, reinsert the battery and restart the vehicle. If the fault persists, please contact after-sales service.

5. Mounting Instruction

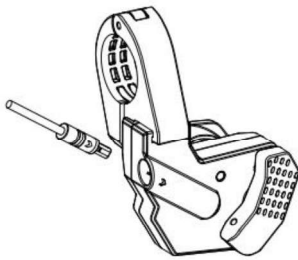
- DY12



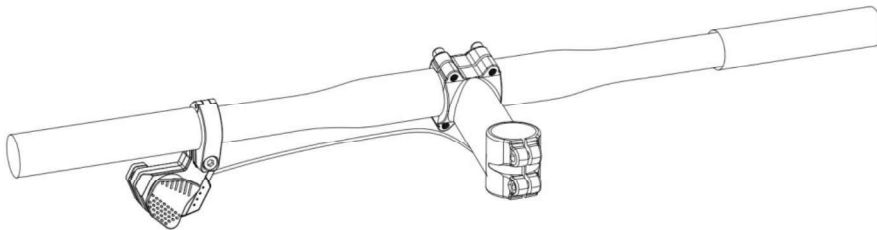
① Fixing DY12 on the left or right side of the handlebar and tightening the screws



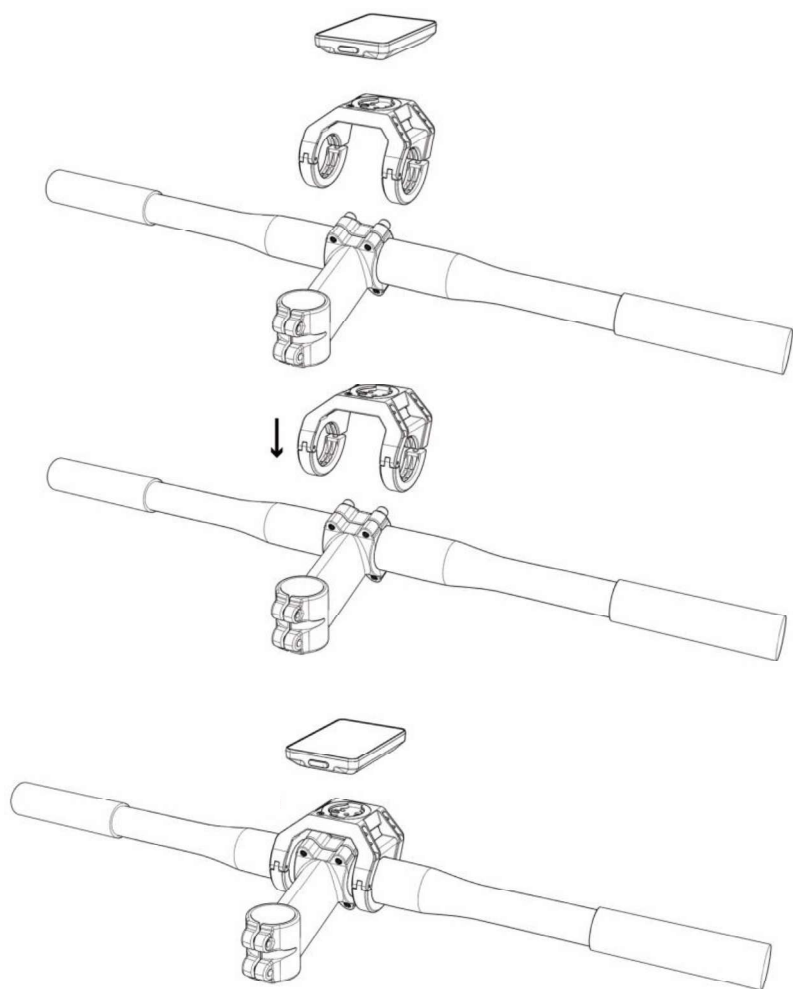
② Inserting the connector into DY12 according to the connector indicator of controller and DY12 back side indicator



③ Finishing Mounting



- DY30



② Rotating the display on the support and finish mounting

