IS GY-6 Series Battery Capacity Indicator Voltmeter Instruction Manual

Models: GY-6, GY-6A, GY-6D, GY-6H, GY-6S, GY-H5

1. Introduction

The IS GY-6 series battery capacity indicator voltmeter is a versatile instrument designed to quickly detect and display the capacity and voltage of various battery types. It is suitable for use with lithium-ion batteries, lead-acid batteries, and lithium iron phosphate batteries. This device is ideal for integration into instruments, measuring equipment, mobile portable devices, sweepers, balance cars, and battery-powered vehicles, providing essential battery status information.

This manual provides detailed instructions for the setup, operation, and maintenance of your GY-6 series battery capacity indicator voltmeter. Please read it thoroughly before use to ensure correct installation and optimal performance.

2. Safety Information

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Always handle electronic components with care. Ensure power is disconnected before making any wiring connections to prevent electrical shock or damage to the device and battery.

3. Key Features

- Adjustable battery type (Lead-acid, Lithium-ion, LiFePO4)
- Adjustable battery quantity (number of cells)
- Switchable display between percentage and voltage value
- Support for power-saving mode
- High-definition LCD display screen with green backlight
- Wide operating voltage range (DC 5V-105V, depending on model)

4. Specifications

General Specifications (Applicable to most GY-6 series models):

Parameter	Value
Product Name	Battery Capacity Indicator
Work Current	5mA
Display Type	HTN LCD Display Screen
Backlight Color	Green
Terminal Type	PH2.0mm-2P
Operating Temperature Range	-20℃ ~ 85℃
Working Humidity Range	5% - 100% RH
Cable Length	30cm

Model-Specific Parameters:

GY-6 v6.2 / GY-6A / GY-6D / GY-6S

- Measured Voltage: DC 5V-105V
- Lithium-ion Battery Quantity: 2pcs~28pcs (Rated voltage: 3.7V/cell)
- Lead-acid Battery Quantity: 1pcs (Rated voltage: 12V/24V/36V/48V/60V/72V/84V)
- LiFePO4 Battery Quantity: 2pcs~28pcs (Rated voltage: 3.2V/cell)
- Size (GY-6 v6.2): 53*26*15mm
- Size (GY-6A, GY-6S): 65*25*15mm
- Size (GY-6D): 63*33*15mm

GY-6 / GY-H5

- Measured Voltage: DC 5V-70V
- Lithium-ion Battery Quantity: 2pcs~17pcs (Rated voltage: 3.7V/cell)
- Lead-acid Battery Quantity: 1pcs (Rated voltage: 12V/24V/36V/48V)
- LiFePO4 Battery Quantity: 2pcs~17pcs (Rated voltage: 3.2V/cell)
- Size (GY-6): 65*25*15mm
- Size (GY-H5): 43*23*12mm

GY-6H

- Measured Voltage: DC 12V
- Lead-acid Battery Quantity: 1pcs (Rated voltage: 12V)
- Size: 62*33*15mm

For detailed battery set codes, please refer to the "Battery Set Code" table in the Operation section.

5. Package Contents

- 1x Battery Capacity Indicator Voltmeter (Specific model as purchased)
- 1x PH2.0mm-2P Cable

Some models may include mounting hardware (screws and nuts).


Battery Power Display




Battery capacity / Voltage
LCD
SET
Function
L03
Battery Type
P:Lead-acid battery. 1pcs Rated voltage 12V.
L:Lithium ion battery. 1pcs Rated voltage 3.2V.
F:Lithium iron phosphate battery. 1pcs Rated voltage 3.7V


GY-6 v6.2
GY-6
GY-6A
GY-6H
GY-6D
GY-6S
GY-H5
100%
98%
98%



Image: GY-6D Battery Capacity Indicator with included PH2.0mm-2P cable.

6. Setup and Wiring

Before connecting the indicator, ensure the battery is disconnected from any load or charger. Connect the PH2.0mm-2P cable to the indicator and then to your battery system according to the appropriate wiring method below.

Wiring Methods:

The indicator can be wired in various configurations depending on your application. Below are three common methods:

Wiring Method 1: Direct Connection

Battery Set Code					
Code	Battery Type	Code	Battery Type	Code	Battery Type
L01	Unavailable	P01	12V Lead Acid Battery	F01	Unavailable
L02	2pcs Lithium Ion Battery	P02	24V Lead Acid Battery	F02	2pcs LiFePO4 Battery
L03	3pcs Lithium Ion Battery	P03	36V Lead Acid Battery	F03	3pcs LiFePO4 Battery
L04	4pcs Lithium Ion Battery	P04	48V Lead Acid Battery	F04	4pcs LiFePO4 Battery
L05	5pcs Lithium Ion Battery	P05	60V Lead Acid Battery	F05	5pcs LiFePO4 Battery
L06	6pcs Lithium Ion Battery	P06	72V Lead Acid Battery	F06	6pcs LiFePO4 Battery
L07	7pcs Lithium Ion Battery	P07	84V Lead Acid Battery	F07	7pcs LiFePO4 Battery
L08	8pcs Lithium Ion Battery	P08	Unavailable	F08	8pcs LiFePO4 Battery
L09	9pcs Lithium Ion Battery	P09	Unavailable	F09	9pcs LiFePO4 Battery
L10	10pcs Lithium Ion Battery	P10	Unavailable	F10	10pcs LiFePO4 Battery
L11	11pcs Lithium Ion Battery	P11	Unavailable	F11	11pcs LiFePO4 Battery
L12	12pcs Lithium Ion Battery	P12	Unavailable	F12	12pcs LiFePO4 Battery
L13	13pcs Lithium Ion Battery	P13	Unavailable	F13	13pcs LiFePO4 Battery
L14	14pcs Lithium Ion Battery	P14	Unavailable	F14	14pcs LiFePO4 Battery
L15	15pcs Lithium Ion Battery	P15	Unavailable	F15	15pcs LiFePO4 Battery
L16	16pcs Lithium Ion Battery	P16	Unavailable	F16	16pcs LiFePO4 Battery
L17	17pcs Lithium Ion Battery	P17	Unavailable	F17	17pcs LiFePO4 Battery
L18	18pcs Lithium Ion Battery	P18	Unavailable	F18	18pcs LiFePO4 Battery
L19	19pcs Lithium Ion Battery	P19	Unavailable	F19	19pcs LiFePO4 Battery
L20	20pcs Lithium Ion Battery	P20	Unavailable	F20	20pcs LiFePO4 Battery
L21	21pcs Lithium Ion Battery	P21	Unavailable	F21	21pcs LiFePO4 Battery
L22	22pcs Lithium Ion Battery	P22	Unavailable	F22	22pcs LiFePO4 Battery
L23	23pcs Lithium Ion Battery	P23	Unavailable	F23	23pcs LiFePO4 Battery
L24	24pcs Lithium Ion Battery	P24	Unavailable	F24	24pcs LiFePO4 Battery
L25	25pcs Lithium Ion Battery	P25	Unavailable	F25	25pcs LiFePO4 Battery
L26	26pcs Lithium Ion Battery	P26	Unavailable	F26	26pcs LiFePO4 Battery
L27	27pcs Lithium Ion Battery	P27	Unavailable	F27	27pcs LiFePO4 Battery
L28	28pcs Lithium Ion Battery	P28	Unavailable	F28	28pcs LiFePO4 Battery

Image: Wiring Method 1 - Direct connection of the indicator across the battery terminals, in parallel with the charger and load.

In this method, the indicator is connected directly across the battery terminals. This is suitable for applications where the indicator needs to continuously monitor the battery voltage and capacity.

Wiring Method 2: With Load Control Button

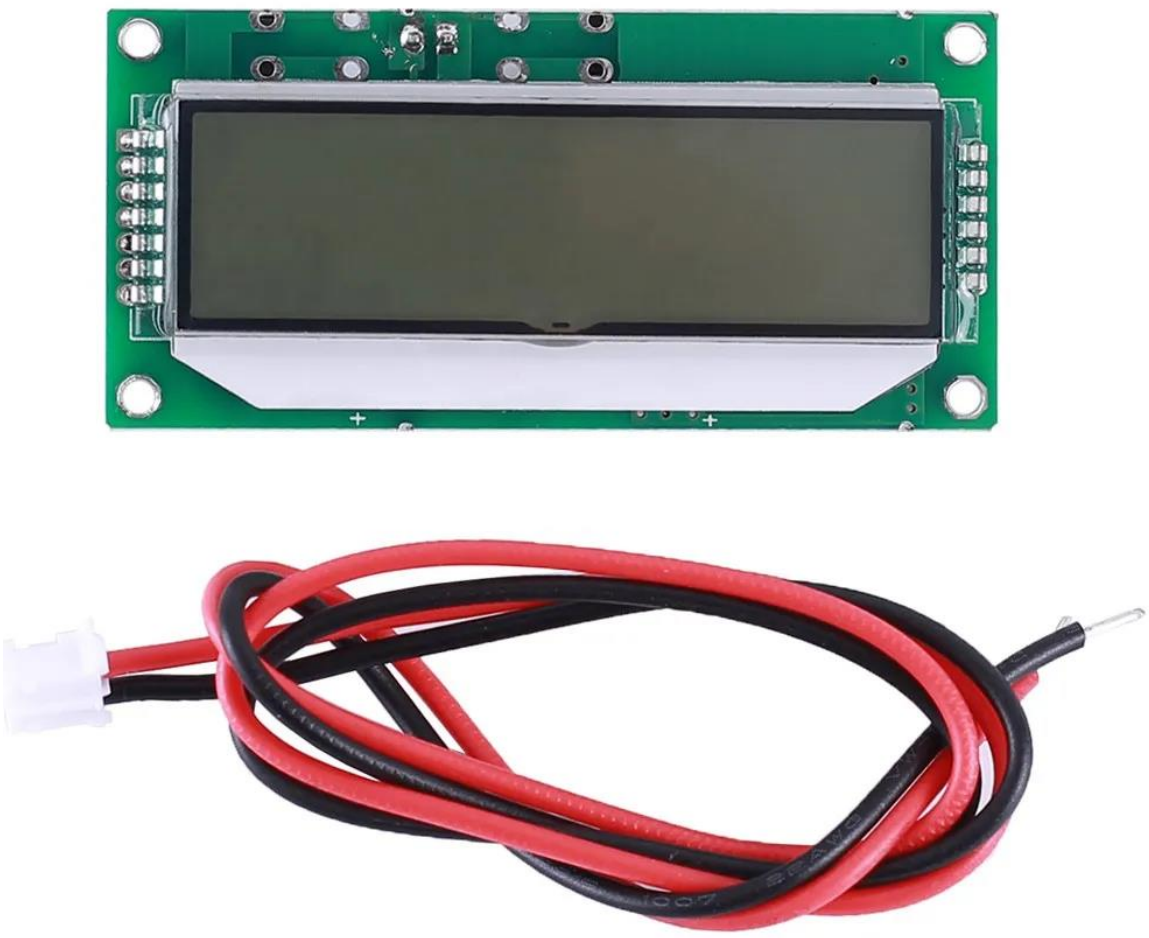
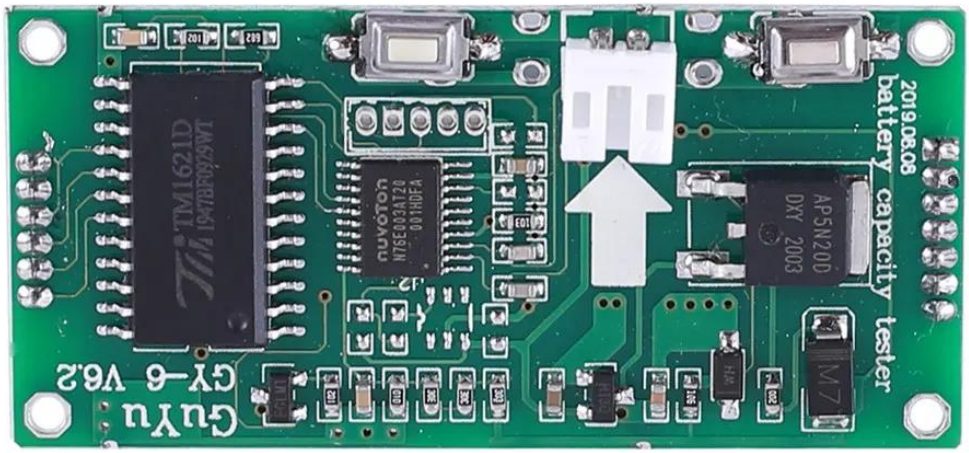


Image: Wiring Method 2 - Indicator connected directly, with a separate load control button.

This method is similar to Method 1, but includes a load control button in series with the load. The indicator remains directly connected to the battery.

Wiring Method 3: With Indicator Control Button



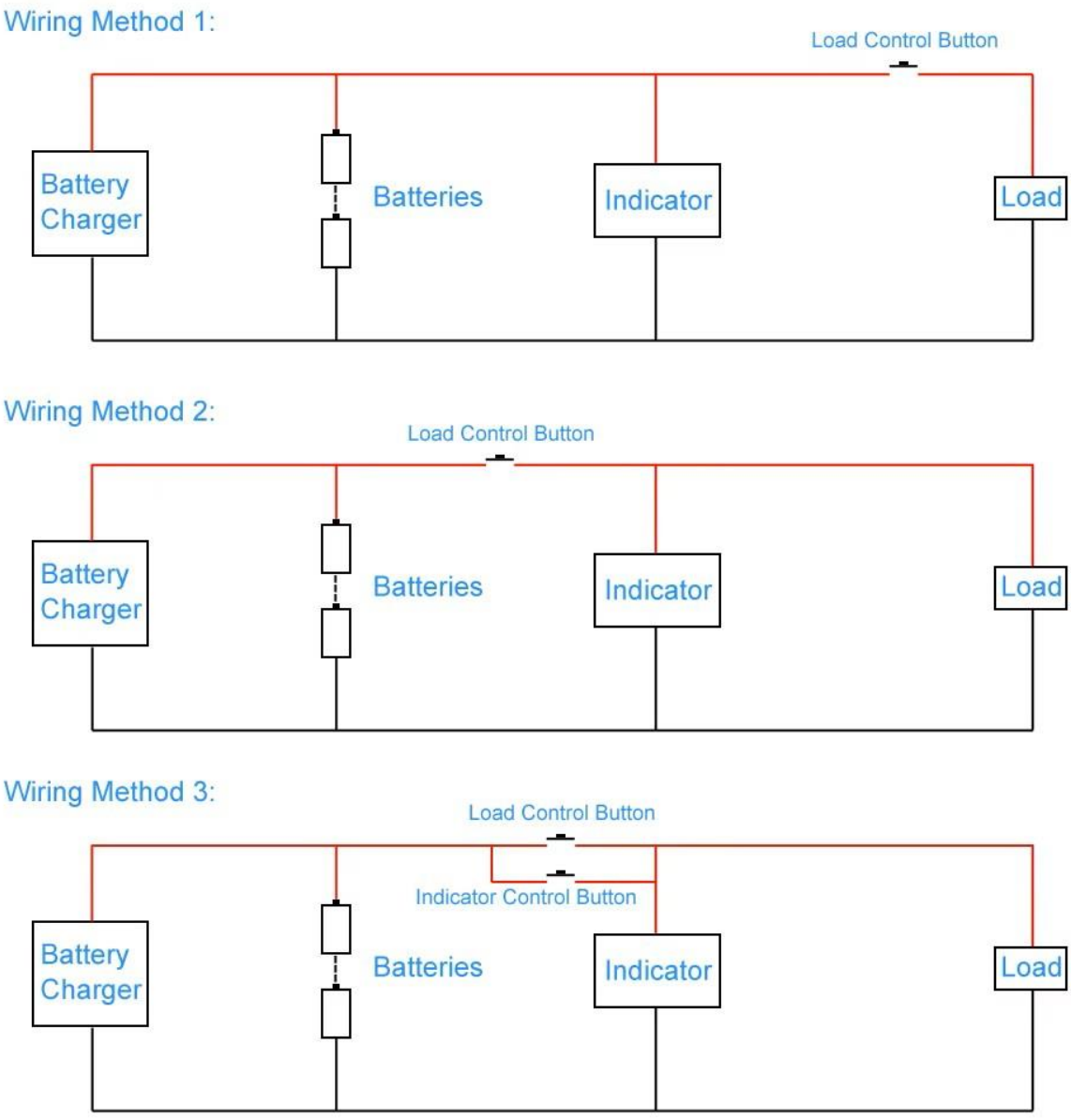


Image: Wiring Method 3 - Indicator and load both have independent control buttons.

In this configuration, both the load and the indicator have independent control buttons. This allows you to switch the indicator on or off separately from the main load, which can be useful for power saving or specific monitoring needs.

Important: Always ensure correct polarity when connecting the wires (red to positive, black to negative) to avoid damage to the device.

7. Operation

The GY-6 series indicator features a simple interface with LCD, SET, and Function buttons for configuration and display control.

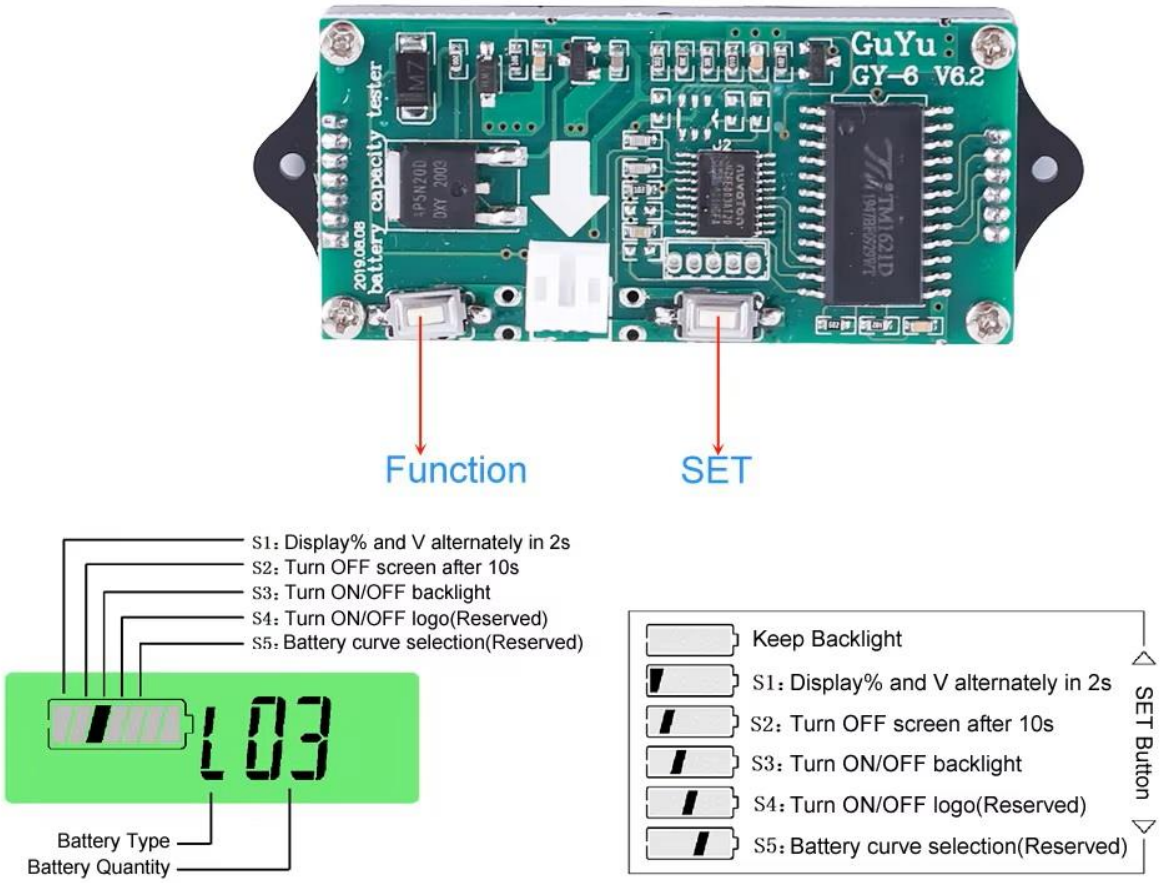
7.1. Setting Battery Type and Quantity:

1. **Step 1: Enter Setup Mode:** Keep the SET button pressed.
2. **Step 2: Connect to Battery:** While holding SET, connect the indicator to the battery. The device will enter the setup interface.
3. **Step 3: Select Battery Type:** Short press the SET button to cycle through battery types:
    - **P**: Lead-acid battery
    - **L**: Lithium-ion battery
    - **F**: Lithium iron phosphate battery (LiFePO4)
4. **Step 4: Select Battery Quantity:** After selecting the battery type, short press the Function button to switch to the battery quantity setting.
5. **Step 5: Adjust Quantity:** Short press the SET button to increase the battery quantity. Short press the Function button to decrease the battery quantity.
6. **Step 6: Enter System Set Mode:** Keep the Function button pressed to enter the system set mode.
7. **Step 7: System Settings (Optional):** Short press the SET button to switch between system modes:
    - **S-1**: Display percentage (%) and voltage (V) alternately every 2 seconds.
    - **S-2**: Turn OFF screen after 10 seconds.
    - **S-3**: Turn ON/OFF backlight.
    - **S-4**: Turn ON/OFF logo (Reserved).
    - **S-5**: Battery curve selection (Reserved).
8. **Step 8: Enable/Disable System Function:** Short press the Function button to turn ON/OFF the selected system function (from Step 7).
9. **Step 9: Save Parameters:** Remove power from the indicator to save the configured parameters.

10. **Step 10: Re-power:** Reconnect power. The indicator will now display the battery capacity percentage or voltage according to your settings.

Note:

- The battery type and number of batteries must be selected correctly; otherwise, the measurement results will be inaccurate.
- Please read the use manual and description before use.



Battery Type:

P:Lead-acid battery. 1pcs Rated voltage 12V.

L:Lithium ion battery 1pcs Rated voltage 3.2V

F:Lithium iron phosphate battery. 1pcs Rated voltage 3.7V

Image: Front and back view of the indicator with button functions and setting options.

7.2. Display Modes:

After initial setup, short press the Function button to switch between displaying battery capacity percentage, battery voltage, or alternating between both. You can also use this button to turn the screen OFF.

7.3. Battery Set Code Table:

Use this table to determine the correct code for your battery type and quantity during the setup process.



Image: Comprehensive table for selecting battery type and quantity codes.

8. User Tips

- For accurate readings, always ensure the correct battery type (Lead-acid, Lithium-ion, LiFePO4) and quantity (number of cells or voltage) are set in the device. Incorrect settings will lead to inaccurate capacity and voltage displays.
- If the display seems dim or unresponsive, check the wiring connections and ensure the battery has sufficient charge to power the indicator.
- Utilize the power-saving mode (S-2 setting) if continuous display is not required, to conserve battery life of the main power source.

9. Troubleshooting

Problem	Possible Cause	Solution
No display / Screen blank	No power, incorrect wiring, or battery too low.	Check power connections and polarity. Ensure battery voltage is within the indicator's operating range.
Inaccurate capacity/voltage readings	Incorrect battery type or quantity set.	Re-enter setup mode and verify the battery type (P, L, F) and quantity (number of cells/voltage) are correctly configured according to your battery.
Display flickering	Unstable power supply or loose connection.	Check all wiring connections for secure contact. Ensure the power source is stable.

10. Maintenance

- Keep the device clean and dry. Avoid exposure to moisture, dust, and extreme temperatures.
- Do not use harsh chemicals or abrasive cleaners on the display or casing. Use a soft, dry cloth for cleaning.
- Store the indicator in a cool, dry place when not in use for extended periods.

11. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the seller's policy or contact the point of purchase. Keep your purchase receipt as proof of purchase.

A PDF version of the manual is available for download: GY18226.pdf

12. Statement of Compliance

⚠ WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.