

LCD Hall Effect Coulometer Current Voltage Power Electric Energy Meter Instructions

1. Functional Introductions

- 1.Measurement of Battery percentage and remaining battery AH number.
- 2.Measurement of DC bidirectional current and DC voltage.
- 3.Measurement of DC bidirectional power.
- 4.Measurement of DC bidirectional accumulative electric energy.
- 5.Over voltage alarm function, parameters can be set by yourself. (With alarm sound, alarm output CN2)
- 6.Low voltage alarm function, parameters can be set by yourself. (With alarm sound, alarm output CN2)
- 7.Over current alarm function, parameters can be set by yourself. (With alarm sound, alarm output CN2)
- 8.Low electricity alarm function, the electricity icon will flash constantly, prompting the user to charge. (With alarm sound, alarm output CN2).
- 9.Battery over temperature alarm function, parameters can be set by yourself. (With alarm sound, and the alarm output CN1 can be used to control the battery cooling fan. Note: All control output signals are weak signals, and the drive equipment needs to be amplified by the customer's external amplifier circuit for control.)
- 10.Store data when power off.
- 11.Hall sensor isolation type measurement,more safe and reliable, easy to install.

2.Installation and setting steps (please read this first)

1.Thread the sensor. All wires of the positive or negative terminal of the battery pass through the hole of the sensor. When the sensor measures the positive main line of the battery, the correct threading direction is that the side with the \oplus sign of the sensor faces the battery. When the sensor measures the negative main line of the battery, the correct threading direction is that the side with the \ominus sign of the sensor faces the battery .The correct wiring is that the discharge coulometer displays

positive current and the charge displays negative current, indicates that the sensor direction is correct. If not, it means that the direction of your sensor is reversed, and you should reverse the sensor.

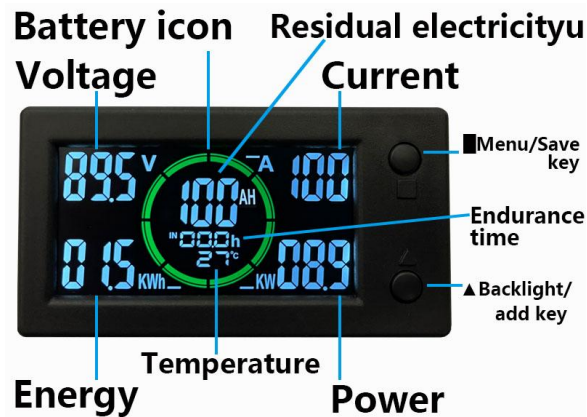
2.Power supply for coulometer. The black wire of the coulometer is connected to the negative pole of the battery, and the red and yellow wires are connected to the positive pole. (Note: When the battery voltage exceeds the range of DC5-120V, please refer to the three wire connection method).

3.Set parameters. The rated capacity “AH” and full charge voltage “FU” of the battery can be set automatically by automatic identification or manually.

(1). **Operation method of automatic battery capacity identification mode (recommended, this mode is simple):** disconnect the load after fully discharging, and long press \blacktriangle key for 5 seconds to reset the battery capacity and percentage. Then charge the battery. After fully charged, it will automatically identify the true capacity and display 100% full charge. (Note: If 100% is not displayed after full charge, you can manually top up the capacity by pressing the key of \blacksquare for 6 seconds when the charger is not unplugged.)

(2). **Operation method of battery capacity manual setting mode (this method needs to be used when the rated capacity and full charge voltage of the battery are known):** enter the menu to set the battery rated capacity “AH” and full charge voltage “FU”. After connecting the wires and setting the parameters, the coulometer will not display the battery capacity immediately. At this time, the battery icon and capacity are still empty, and the remaining power can be displayed normally only after the battery is fully charged. This requires special attention. If the power itself is full, you can also manually top up the capacity by pressing the \blacksquare key for 6 seconds.

3. LCD Panel and Key



4. Key Use Instructions

1. Backlight Control:

In standby display, short press “▲” key to switch the screen backlight mode to three modes: (1) Normally on mode. (2) In automatic mode, the backlight will flash for 2 times when switching, and the backlight will automatically light up when there is current, and it will automatically turn off after a period of delay when there is no current. (3) Turn off mode.

2. Clear Current:

In standby display, long press “▲” key about 2 seconds can clear current, (Note: The load must be empty when clear)

3. Restore The Factory Value Of Current And Voltage:

In standby display, long press “▲” key about 10 seconds can restore the factory value of current and voltage

4. Clear Electric Energy:

In standby display, long press “■” key about 2 seconds can clear electric energy.

5. Manually top up or reset the battery capacity AH:

In standby display, long press the “■” key for 5 seconds to top up the battery capacity. Long press ▲ for 5 seconds to clear the battery capacity.

5. Setting Parameters:

Method for entering the setting menu: In standby mode, long press the key “■” for 10 seconds (or short press the key “■” for more than 5 times in 2 seconds) to enter the menu. After entering the menu, short press the key “■” to switch the menus in sequence as follows:

【1】 “AH XXX. X” the menu of battery rated capacity setting. (Parameters must be set)

【2】 “FU XXX. X” the menu of full power automatically filled voltage setting. When the battery voltage is more than this value for more than 5 seconds, the coulometer will automatically reset the battery capacity to 100%.

【3】 “CU XXX. X” the menu of power failure voltage. When the battery voltage is less than this value for more than 5 seconds, the coulometer will automatically clear the battery capacity 0%.

【4】 “HU XXX. X” the menu of high voltage alarm setting. (With alarm sound, alarm CN2 output low level)

【5】 “LU XXX. X” the menu of low voltage alarm setting. (With alarm sound, alarm CN2 output low level)

【6】 “HA XXX. X” the menu of high current alarm setting. (With alarm sound, alarm CN2 output low level)

【7】 “LP XXX. X” the menu of low battery alarm setting. (With alarm sound, alarm CN2 output low level)

【8】 “HC XXX. X” the menu of high temperature alarm setting. (With alarm sound, alarm CN1 output low level)

【9】 “AP XXX. X” the menu of switching of power display mode. 0001 shows “AH” value of battery power, 0002 shows “%” value of battery power, 0003 is to display battery “AH” value and “%” value in turn.

【10】 “AC XXX. X” the menu of current automatic reset value setting. When the current is stable and less than this value for more than 15 seconds, the current zero will be automatically cleared.

【11】 “AA XXX. X” is the current calibration function. (Note: Generally, calibration is not allowed. The manufacturer has calibrated it before delivery.)

【12】 “AU XXX. X” is the voltage calibration function. (Note: Generally, calibration is not allowed. The manufacturer has calibrated it before delivery.)

(Note: If it is unlucky to be calibrated incorrectly, press “▲” key for more than 10 seconds to restore the current voltage calibration value to the factory calibration value.)

Battery rated capacity setting: (1) In standby display, short press ■ key, will switch to the menu “AH XXX.X” .

(2) The first digit of the menu parameter will flicker, short press ▲ key at this time digit will increasing one. When the button is not operated within five seconds, it will automatically jump to the next number to flicker. and you short press ▲ key digit will also increasing one. And the like to set up four numbers.

(3) After set up four numbers, Long press ■ key about three seconds (Note: it is not short press) and then release the key can save the parameters. When to save success the screen will flicker two times.

For example: When you want to set the battery rated capacity to be 20AH. You should set this menu parameter of “AH 020.0” , and long press ■ key to save parameter is finish.

The battery is full of the highest electric voltage setting: (1) In standby display, short press ■ key, and switch to the menu “FU XXX.X”.

(2) The first digit of the menu parameter will flicker, short press ▲ key at this time digit will increasing one. When the button is not operated within five seconds, it will automatically jump to the next number to flicker. and you short press ▲ key digit will also increasing one. And the like to set up four numbers.

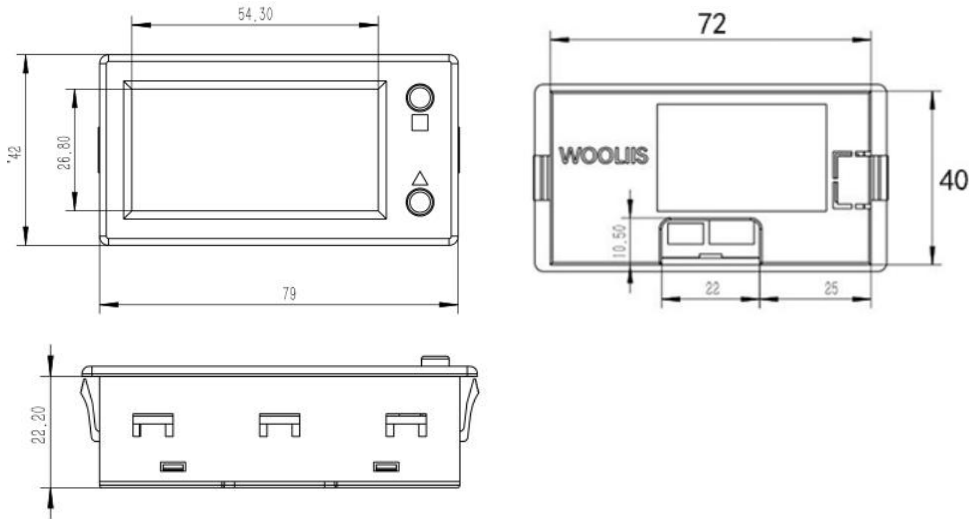
(3) After set up four numbers, Long press ■ key about three seconds (Note: it is not short press) and then release the key can save the parameters. When to save success the screen will flicker two times. (Note: This voltage is suggested to be set to 0.2V less than the Coulomb’s voltage when the battery is full and has not pulled out the charger.)

And the like you could setting the parameters of “HU XXX. X” “LU XXX. X” “HA XXX.X” (Not: This three parameters of the factory default is “000.0” , the factory default is to close this item’s alarm function.)

4.Hall Effect Coulometer Technical Parameter

Hall Effect Coulometer Technical Parameter				
Model	WLS-MVA050	WLS-MVA100	WLS-MVA200	WLS-MVA400
Current Test Range	0~50A	0~100A	0~200A	0~400A
Current Resolution	0.1A	0.1A	0.1A	0.2A
Power Supply Voltage Range	DC5~90V			
Voltage Test Range	DC0~300V			
Voltage Resolution	0.1V			
Capacity Test Range	0~999AH			
Power Test Range	0~999KW			
Electric Energy Test Range	0~999KWH			
Temperature	-50 ° C~125 ° C			
Measuring Accuracy:	+ - 1%			
Slotting Size Of Panel Installation	76.0mm * 40.5mm			
Diameter Size Of Sensor Hole	Φ20mm			
Working Current	When the backlight is open: 25MA. When the backlight is closed: 4MA.			

5. Coulometer Mechanical Size Diagram



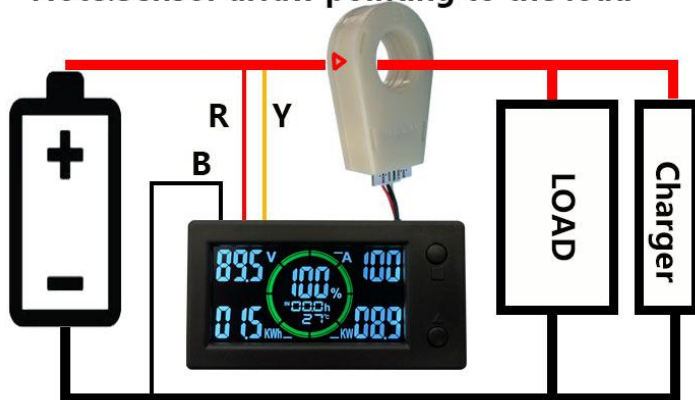
6. Wiring Instructions

There are three wires in the head of the table, as follows:

- 【1】 The black wire is connected to the battery negative pole.
- 【2】 The Red wire connection power supply positive pole.
- 【3】 The Yellow wire is connected to the battery positive pole.

When the measured voltage range is DC5~120V, the red and yellow wires are connected in parallel to the battery positive pole. As follows:

Note: Sensor arrow pointing to the load



When the measured voltage range is over DC5~120V, we should look for another power supply for Coulometer. As follows:

Note: Sensor arrow pointing to the load



7. Precautions For Use

- 【1】 The battery discharge ,coulomb shows display positive current. The battery charge ,coulomb shows display negative current. If not, the direction of the sensor is wrong. You should turn the direction of the sensor to another direction.
- 【2】 The newly installed Coulomb needs to clean up the current at an empty load.
- 【3】 The rated capacity of the battery and the maximum electric voltage of the battery must be set up. The newly installed Coulomb needs to charge the battery to full after setting up the parameters, then residual battery power can be displayed normally.

Manufacturer: Wooliis Electronic Devices Co., Ltd.

Website: www.wooliis.com

E-mail: wooliis@msn.cn

TEL: 0086-020-62277036