This description applies to VAC-1050A \ 1100A \ 1200A \ 1300A Four models

Summary

VAC1100A bi-color DC voltage meter can measure DC voltage, current, power, charge and discharge capacity, watt, time, and other physical quantities, parameters can be set overcurrent protection, overvoltage protection, undervoltage protection, limit protection and more species protection, the instrument is very suitable for use in electrical work process parameters voltage, current, watts, etc. to monitor, can also be used for battery charging and discharging process of monitoring capacity.

1、The display can be used between the header and measurement modules wireless transmission of data, reducing the cumbersome wiring, but also to avoid errors caused by line losses furthest communication distance is 10 meters, you can also use standard USB cable for wired communication , thanks to the 485 communication, the length of the line can be extended to 1200 m；

2、Bidirectional current detector for detecting the charging and discharging of the user can easily detect bidirectional current without changing the wiring;

3、Power and memory function, the display can be set off after the header memory before the power saving and Ah, watts and time, to facilitate observation and measurement, but the measurement before the power module need to click the OK button to save parameter;

4、Voltage, current, power, discharge capacity, and the time when the tile display simultaneously displays information fully clear;

5, With overcurrent, overvoltage, undervoltage, limit protection (extended relay time) and other functions;

6、When the number of security, and the time when the wattage clear function, does not affect the measurement;

7、Can be set up to address each individually, and with a view to display a plurality of measurement parameters measuring board;

8、The use of multiple machines simultaneously, the machine can be set individually for each channel to avoid mutual interference;

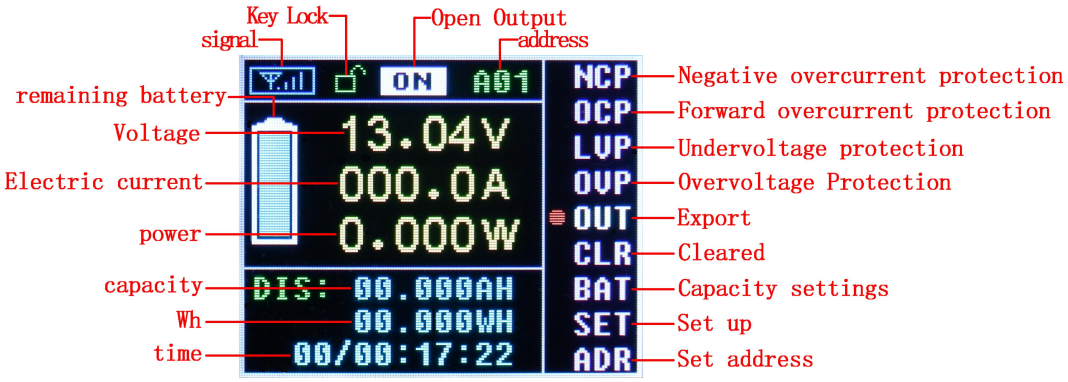
9、Wth a screen lock, time off, brightness adjustment and change the language display function;

Technical Specifications

Specification	Parameter	
Voltage measuring range	0.01~120V	
Voltage Accuracy	0.01V	
Voltage error	±1%+5 figures	
Current measurement range	VAC-1050A	0.01A-50A
	VAC-1100A	0.1A-100A
	VAC-1200A	0.1A-200A
	VAC-1300A	0.1A-300A
Current Accuracy	0.01A（VAC-1050A）0.1A（other)	
Current error	±2%+5 figures	
Power measurement range	0~200KW	
Capacity Measurement Range	0 ~2000KAH	
Watt measurement range	0~4000KWH	
Time Measurement Range	0~999Days	
Address Range	A01~A99	
Wireless channel setting range	A-Z	
Decimal display section will change automatically as data bits shift, for example, it displayed as Ann 00.000AH, when the display exceeds 100AH, the display becomes 000.00		
NCP(Negative overcurrent protection)	0~-300A	
OCP(Forward overcurrent protection)	0~300A	
OVP(Overvoltage Protection)	0~120V	
LVP(Undervoltage protection)	0~120V	
Time delay protection	0~10S	
Power measurement plate	0.4W/S	
Power consumption of the display panel	0.5W/S	
Sample Rate	5Times / s	
Communication distance	10 m single set of open land	
Display board size (mm)	79×43×52(mm)	
Measurement plate size (mm)	81×50×59 (mm)	

Instrument Description

This meter is a split structure, consists of two parts and the display panel measuring board. Figure 2-1 is a display board interface description for the instrument front panel in Figure 2-2, Figure 2-3 for the measurement instrument panels, two parts to transfer data via the wireless module, can also be wired to connect.



Display Description Figure 2-1 VAC1100A

Figure 2-2

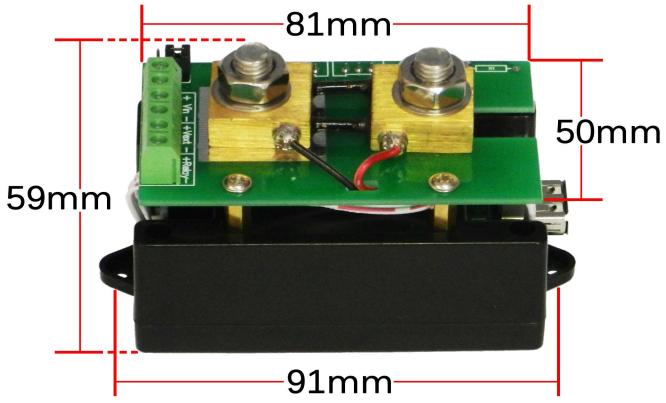
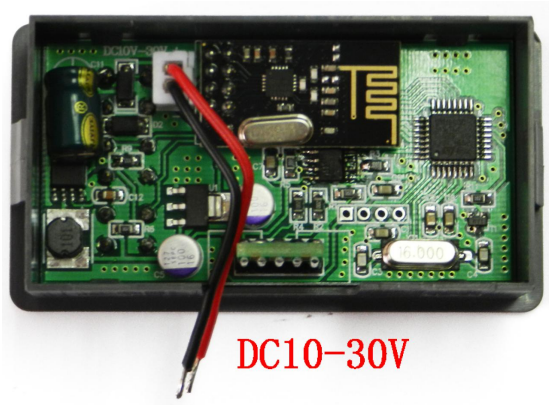


Figure 2-3

2、wiring

2.1、Display power meter wiring diagram

Display meter supply more flexible way, we can use the provided USB extension cable connected to the measuring module, you can put a USB extension cable to the 5V power adapter; open another display head back cover you can see a white socket also through this outlet to display meter supply, power supply voltage DC 10-30V;



2.2The power supply wiring diagram and method itself

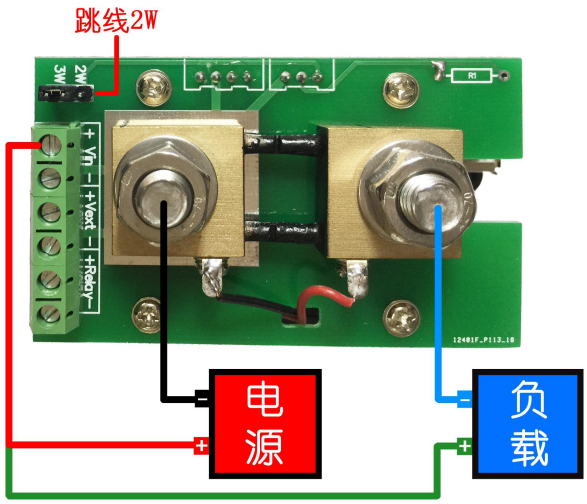


Figure 2-4 Two-wire wiring diagram

To carry out the wiring in accordance with wiring diagram wiring on the wiring shown in Figure 2-4, the positive VIN + and load measuring boards are connected to the power of positive and negative power supply connected to the measuring board shunt left large screws (small current can also be connected to VIN-), the negative electrode connected to the right end of the shunt large screw load, but also to simultaneously jumpers on "2W" place. Relay Vext and this time without wiring. Note that (as far as possible the negative electrode in contact with the brass shunts, which can reduce the error).

2.3The external power supply is not connected to the relay wiring diagram and method

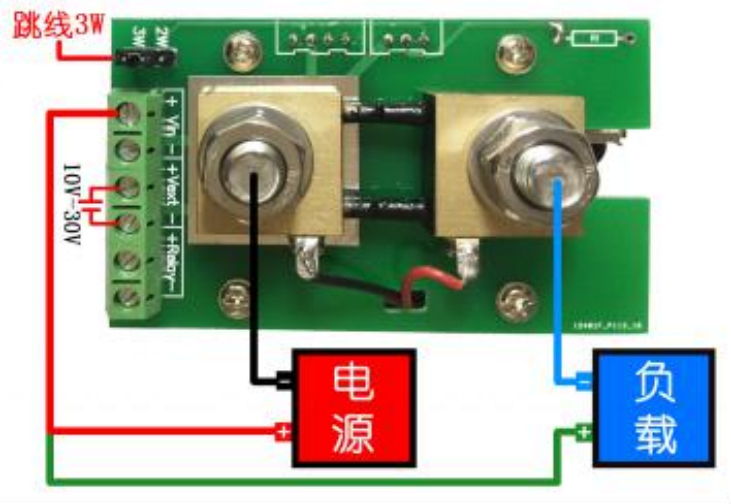


Figure 2-5 Three-wire relay wiring diagram is not connected

When wiring in accordance with wiring diagram on the wiring method for wiring shown in Figure 2-5, the positive VIN + terminal and the load measuring boards are connected to the power of positive, negative power supply connected to the measuring board shunt left large screws the load connected to the negative electrode of a large screw shunt right, but at the same time to jumpers on "3W" place. Vext at the need for an external power supply to power the instrument, the external power supply voltage is DC10V - 30V. Note that in accordance with the wiring schematic, not reverse, wrong.

2.4、The external power supply connected to the relay wiring diagram and method

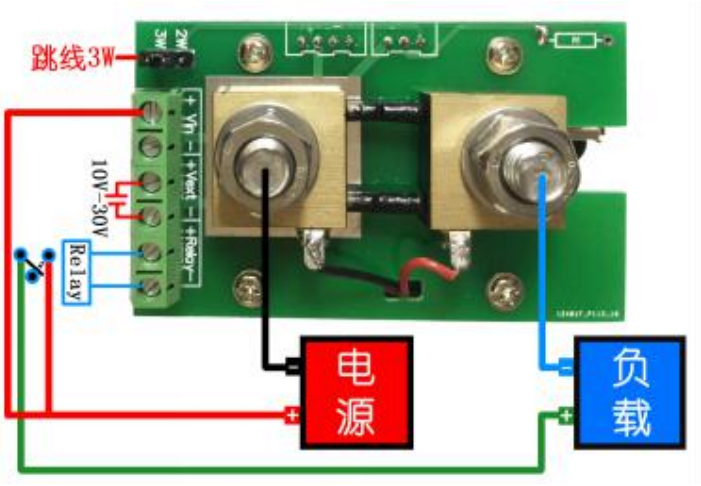


Figure 2-6 Three-wire connection Relay wiring diagram

To carry out the wiring in accordance with wiring diagram wiring on the wiring shown in Figure 2-6, the positive power supply connected to the measuring board V +, the negative power supply connected to the measuring board left shunt large screw, load connected to the negative on the right side of the splitter large screws, need to be connected between the anode and cathode of power load control terminal of the relay, Vext at the need for an external power supply to power the instrument, the external power supply voltage is DC10V - 30V, relay point cross relays, power relays voltage is selected to match the external power supply voltage.

Description: Relay users need their own equipment, standard without relay.

Instructions for use

3.1wiring

Select the appropriate wiring based on the measured voltage, ensure that the input voltage is within the tolerance range of the instrument.

NOTE: own input supply voltage range: 10V ~ 120V, 2W jumper inserted in place;

External power supply input voltage range: 0 ~ 120V, 3W jumper inserted in place;

3.2 communication

Before operation, please carefully check the wiring is correct, after power measurement plate red LED is lit, the display area signal indicating plate becomes the top left corner of the screen“  ”， If the connection is unsuccessful, the display“  ”， It is displayed in the case of a wired connection“”。

3.3The operation

The instrument display interface defaults to plain English, it is recommended to use domestic customers change the language display (described in detail in the special functions)

3.3.1、**OUT** output open, "OUT" is used to control the top of the screen "OFF / ON", "OFF" to close the representative of output, "ON" Open output. After the electric current and voltage table, the default state is "OFF", the red cursor to "OUT", press "OK" button, the top of the screen "OFF" turns "ON", while AH, WH, time measurement is enabled, bottom of the screen three data sets began to change. In the case of three-wire connection relay short press "0K" button, you can turn off the relay control and closing.

3.3.2、**NCP** negative overcurrent protection (Note: the forward discharge current, charge current is negative, automatic identification.) After the power button on the red cursor by pointing to "NCP", then press "OK" button, this when "NCP" backlight turns white small box below the corresponding screen will appear adjustable functional areas, namely enter the settings page, under construction by the key and set the value, press "OK" button to save the settings after the successful completion of (display panel enters the open method of each page are the same feature set, not go into details below).

3.3.3、 **OCP** is positive over-current protection, OVP overvoltage protection, LVP is undervoltage protection, operation above.

3.3.4、 **CLR** WH, clear function of time, the red cursor to "CLR" after press "OK" key is pressed,

WH bottom of the screen, time becomes zero.

3.3.5、**BAT** set battery capacity and real capacity setting function, this feature is turned on, press "OK" button "to set the battery capacity" and "real-time capacity setting" cycle back and forth between.

(1) Setting the battery capacity, turn on "BAT", will appear at the bottom of the screen "Setting the battery capacity (range: 0 ~ 6500AH)", then you can set the capacity value up and down keys, set finished press "OK "button to save.

(2) real-time capacity setting function, open the "BAT", press "OK" button to switch to the "real-time capacity setting" function, the arrow keys can be set in real time by a percentage of capacity.

Charging mode:

After entering BAT we set about this battery capacity value, we assume that the value of the battery capacity is about 10AH, then set there 80% of capacity, the remaining 80% of the capacity charge note also need to go to 20% of capacity, according to click OK to exit, we see that is displayed CHG: 002.00A, said they still need rushed 2AH, and this value increases over time is constantly decreasing, the number of real-time display also need to be fully charged, if the electric charge into the 2AH rechargeable'll go over it, the value will continue to decrease to a negative value, a negative value indicates more charge back into energy;

Discharge mode:

After entering BAT we set about this battery capacity value, we assume that the battery capacity value of approximately 10AH, then set there 80% of capacity, the remaining 80% of capacity legend has put out 20% of capacity; click OK to exit, we see that is displayed DIS: 002.00AH, said it had put out out 2AH, and this value increases over time is constantly increasing, real-time display how much capacity has been put out, if the release of further capacity of more than 10AH discharge, then again, this value will continue to increase.

3.3.6、**SET** power on default settings, time delay relay level, off-screen time. After entering the SET function setting page, press "OK" button will cycle back and forth between the four functions, which can be changed by the state of each function up and down keys.

When the red cursor to the SET position, the press the OK button you can restore the factory settings.

(1) set the default boot, after entering the page, built up and down, change the default status is "ON", the voltage on the meter automatically after power is turned AH (capacity), WH (watt), H time

measurement function.

(2) time delay setting range is 0 ~ 10S, this function is mainly to cater for the various protection functions, for example: set the delay time for the 2S, open the "OVP" function, set a protection voltage of 30V, a instant voltage higher than 30V, and this high voltage for less than 2S, the circuit will not be protected, if sustained over a 2S is greater than the voltage 30V, the protection function is activated, while the top of the screen "ON" backlight turns red and displays "OVP".

(3) relays level setting, when set to H, Relay port output high, the relay contact normally closed contact when set to L Relay output low, the relay take long to open contacts.

(4) off-screen time is set, the range is 0 ~ 60S, 10S, for example to set the time, press "OK" to save, another 10S screen will automatically turn off, press any key can be re-opened.

3.3.7、**ADR** address setting function and addresses different measuring boards viewing.

(1) In a wired connection status enter the settings page, you can change the screen up and down keys above the address "A01" value, the address can be set in the range of A01 ~ A99, if at this time to A02, and then press the OK button, the explanation for this measurement panel address is set to A02.

(2) in a wireless state to enter the "ADR" settings page, the value up and down to build change the address "A01", and press "OK" to build, you can view the parameters of the different addresses measurement plate, thus achieving a display view a plurality of function parameters measuring board.

3.4、special features

By the red arrow keys move the cursor to "ADR" after a long press the button, it is possible to call up special functions.

1, **LNG** Set language feature, move the red cursor to "LNG", short press the OK button to enter the settings page (enter the settings page methods of operation are the same behind not go into details), up and down to build can change the current status, "CHN" on behalf of Chinese show, "ENG" for English display after setting, press "OK" button to save.

2, **FCH** channel setting function, this function must be operated in a wired connection, otherwise invalid. After multiple machines at the same time, in order to avoid interference, you can turn this feature, enter the function settings page, adjust up and down keys to set the parameters, the channel ranges from A-Z, and then press "OK" button to save.

3, **BRI** screen brightness settings, go to the settings page function, brightness, brightness of the screen is divided into 15 grades by adjusting the up and down keys, after setting press "OK" button

to save.

4, when the red cursor to "OUT" place, press "OK" button to lock the screen, the screen above the lock-like signs vary, and turns red if you want to open after locking, press the "OK" button open.