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Check

When you get a new VAT Voltage-Current Meter, we recommend that you follow the steps below to check the instrument.

1, Check the package

If the package is damaged, please keep the damaged packaging or cushioning material until the goods have been thoroughly inspected and the instrument has passed both electrical and mechanical tests. Due to damage caused by the transport, please contact the shipper and the carrier.,

2, Check the accessories

The contents of the attachment are described below. If the content does not match or the instrument is damaged, please contact the dealer or our company.

HOST:	
VAT display module	1 piece
VAT measurement module	1 piece

Accessories: data cable	1 piece
Accessories:temperature sensor	1 piece
Accessories:extension interface 2P line	1 piece
Accessories: manual (pdf)	1 piece

3, Check the whole machine

If the appearance of the instrument is found damaged, the instrument is not working properly, or it is failed to pass the performance test, please contact the dealer or our company.

4, Contact Us

If you have any problem or requirement when using our products or this manual, please contact JUNTEK.

E-mail: junce@junteks.com

Website: www.junteks.com

Chapter 1 Overview

1, The instrument profile

VAT series is a multi-function meter based on 2.4G wireless data transmission technology. It can measure miscellaneous parameters such as voltage, current, power, charge and discharge capacity, watt-hour、time, and temperature and with over-current protection Protection, under-voltage protection, and limited protection and other protection functions. The instrument can automatically identify the direction of the current, and the battery capacity can be monitored in real time, the instrument uses TFT LCD display, display information is comprehensive, user-friendly and better interaction.

2, The instrument features



3, Technical indicators

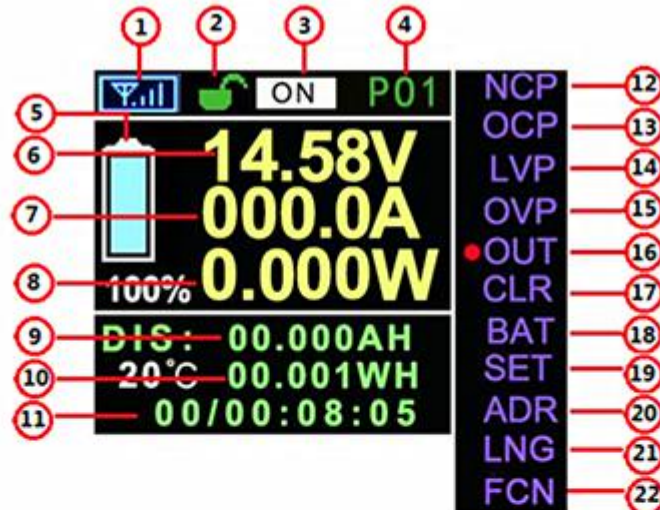
Model	VAT-1030	VAT-1050	VAT-1100	VAT-1200	VAT-1300	VAT-4300
Voltage measurement range	0~100V	0~100V	0~100V	0~100V	0~100V	0~400V
Voltage resolution	0.01V	0.01V	0.01V	0.01V	0.01V	0.1V
Current measurement range	0~30A	0~50A	0~100A	0~200A	0~300A	0~300A
Current resolution	0.01A	0.01A	0.1A	0.1A	0.1A	0.1A
Relay	Internal	External (optional)	External (optional)	External (optional)	External (optional)	External (optional)
Temperature measurement range	-20~120 °C					

Capacity display range	0%~100%
Power measurement range	0~200kW
Power resolution	0.001W
AH measurement range	0~2000kAH
Capacity resolution	0.001AH
Watt-hour measurement range	0~4000kWH
Watt-hour accuracy	0.001WH
Time measurement range	0 ~ 99 days
Time resolution	1 second
Communication channel range	A ~ Z (26 channels)
Communication channel range	01~99
Voltage accuracy	$\pm 2\% + 3$ words
Current accuracy	$\pm 5\% + 10$ words
Sampling rate	5 times / second
Communication distance	up to 10 meters
Measurement module power consumption	About 0.4W
Display module power consumption	0.5W
NCP	0 ~ 300A (negative over-current protection setting)
OCP	0 ~ 300A (positive over-current protection setting)
OVP	0 ~ 100V (over-voltage protection setting)
LVP	0 ~ 100V (under-voltage protection setting)
protection delay time	0 ~ 10s

Chapter II Instrument Description

1, Display instructions

1. The instrument is divided into two parts, including the display module and measurement module, the display interface in both Chinese and English, which can be set in the language settings.

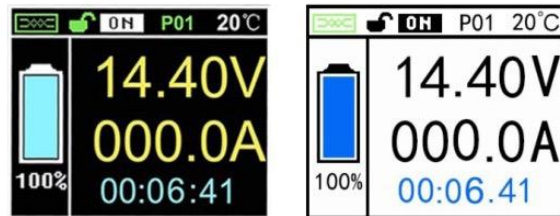


- | | | |
|--------------------------|-----------------------------------|---------------------------|
| ① Signal indication | ② Key lock | ⑬ Overcurrent protection |
| ③ Output status | ④ Address | ⑭ Undervoltage protection |
| ⑤ Electricity | ⑥ Voltage | ⑮ Overvoltage protection |
| ⑦ Current | ⑧ Power | ⑯ Output |
| ⑨ Capacity | ⑩ Watt hour | ⑰ Clear |
| ⑪ Time | ⑫ Negative overcurrent protection | ⑱ System settings |
| ⑬ Overcurrent protection | ⑭ Undervoltage protection | ⑲ Language settings |
| ⑮ Overvoltage protection | ⑯ Output | ⑳ Brightness settings |
| | | ㉑ Capacity settings |
| | | ㉒ Address setting |
| | | ㉓ Channel settings |

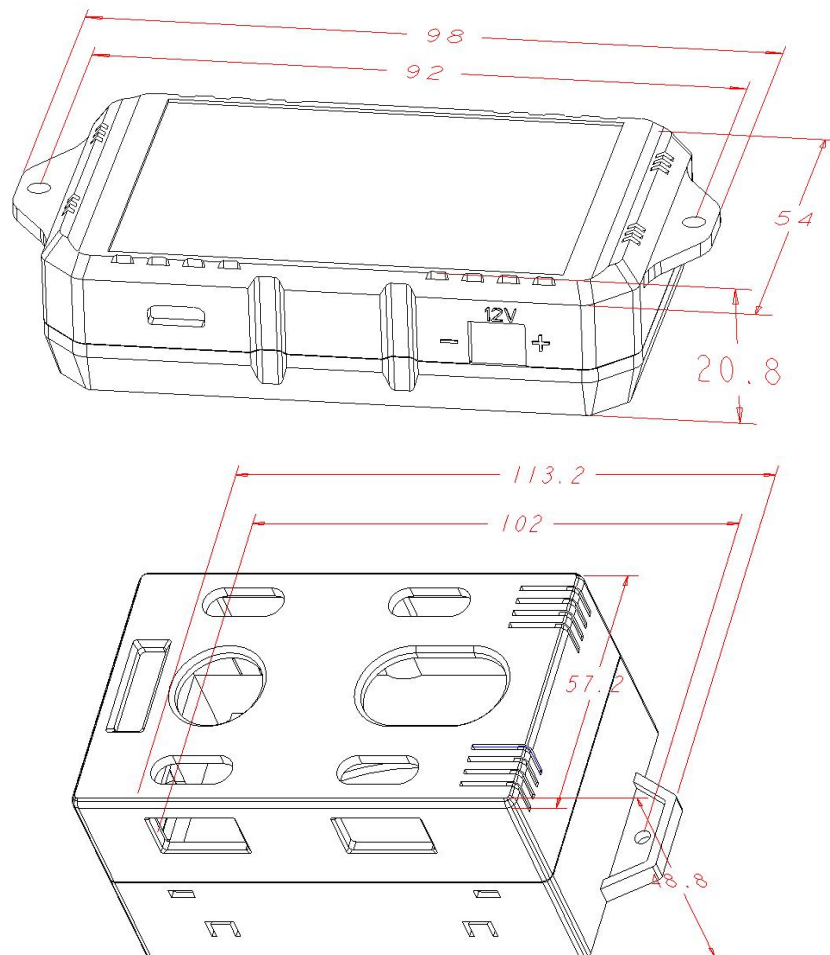
Main display panel interface

2. The large font interface:

The main parameters such as voltage and current are displayed in the large font interface for easy observation. After a few seconds, the main interface will automatically jump to the large font display interface, and the time can be set in the system settings. Reverse display interface easy to observe in the light, please read the "Operating Instructions" for details.



3. VAT series display module and measurement module size (in mm)

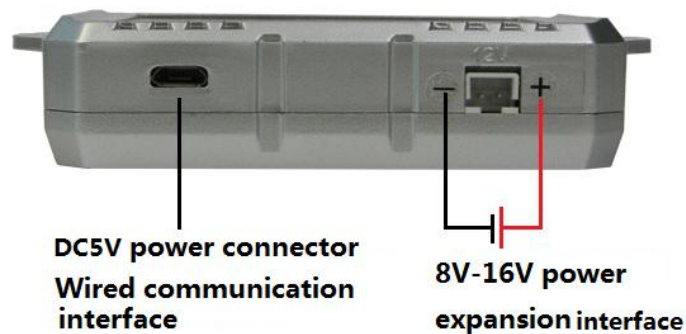


2, The display module and measurement module power wiring diagram

The instrument can be "wired communication" and "wireless communication"

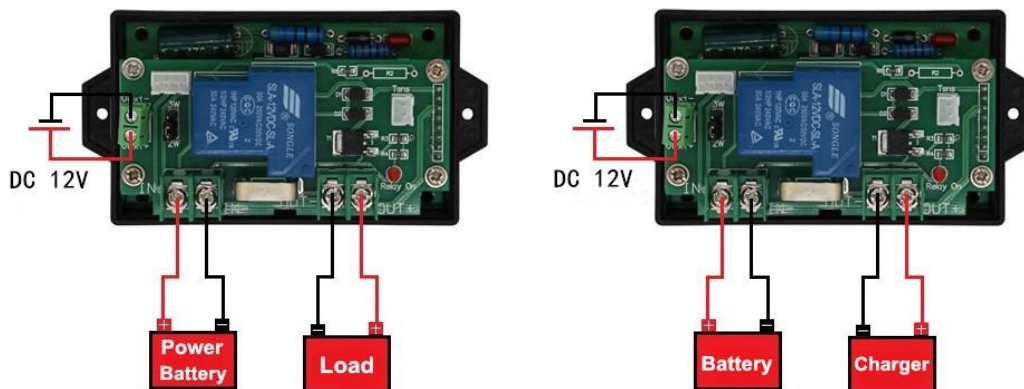
1. Display power supply wiring diagram is as follows:

When the display board is powered separately, there are two power supply interfaces, which are the USB 5V power supply interface and the 2P socket interface (8-16V) power supply.



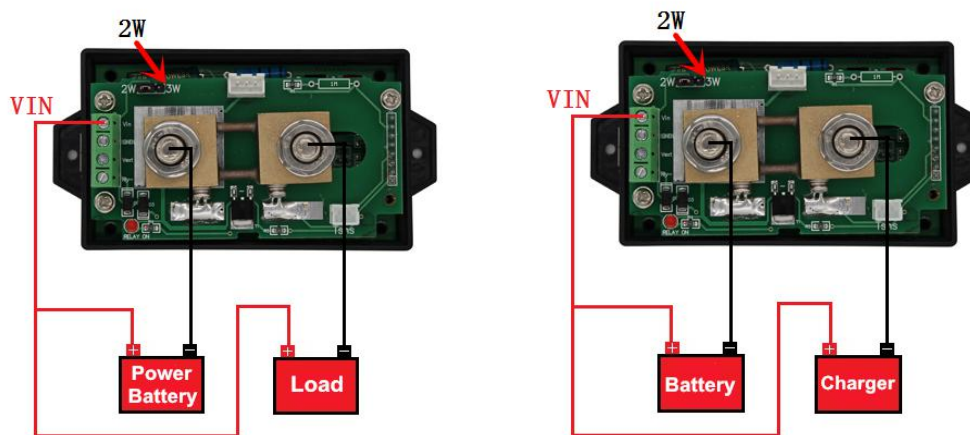
2. Measurement module wiring diagram is as follows:

2.1, VAT1030 wiring diagram:



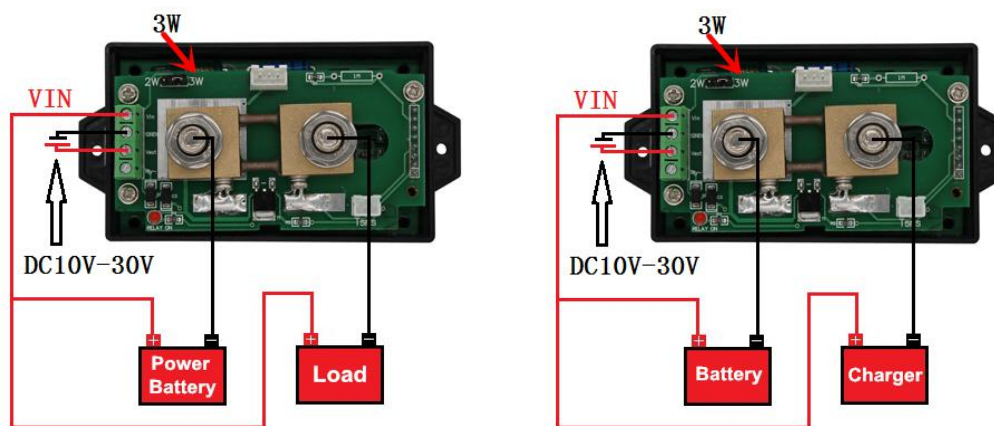
The wiring method on the left is applicable to the discharge measurement of the battery and the measurement of the DC circuit; the wiring method on the right is only applicable to the charge measurement of the battery.

2.2, wiring diagram of VAT1050, VAT1100, VAT1200, VAT1300 measuring voltage is 10-100V:



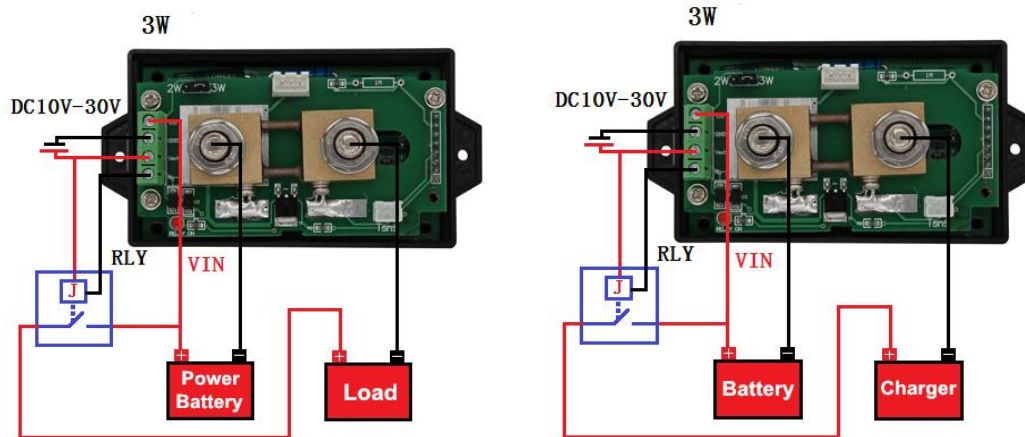
The above figure applies to VAT1050, VAT1100, VAT1200, VAT1300 measurement circuit voltage of 10-100V; attention at this time attention to the jumper cap to receive 2W, the left wiring method is suitable for battery discharge measurement and DC circuit measurement; The wiring method on the right is only suitable for charging the battery.

2.3, VAT4300 measurement voltage is 0-400V and VAT1050, VAT1100, VAT1200, VAT1300 measurement voltage is 0-100V wiring diagram:



The figure above applies to batteries or circuits where the VAT4300 measures 0-400V and VAT1050, VAT1100, VAT1200, and VAT1300 to 0-100V; at this time, note that the jumper cap must be connected to 3W and need to use a 10-30V. The DC voltage supplies power to the measurement module; the wiring method on the left is suitable for the discharge measurement of the battery and the measurement of the DC circuit; the wiring method on the right is only suitable for the charge measurement of the battery.

2.4, VAT1050, VAT1100, VAT1200, VAT1300 and VAT4300 external relay wiring diagram;






The wiring method on the left is applicable to the discharge measurement of the battery and the measurement of the DC circuit; the wiring method on the right is only applicable to the charge measurement of the battery. When selecting the relay, pay attention to the relay's contact can withstand the maximum current in the circuit, such as the current in the test current is 80A, then select the relay, you must select the contact current can withstand 100A relay, the relay supply voltage can choose 12V or 24V When the 12V relay is selected, the external power supply voltage must be set to 12V, which is the same as the relay supply voltage.

Chapter III Operating Instructions

1, The communication connection

Before operation, please carefully check the wiring is correct, The connection status is displayed on the top of the screen.

-
- “” Wireless communication connection is successful
 - “” Wired communication connection is successful
 - “” Communication connection failed or not connected
-

2, The operating instructions

Item	Introduction
“OUT”	This item can control the output status. Parameters will be saved when set to OFF.Shutdown require relay coordination
“NCP”	This item can set Negative over-current protection.Press “OK”can change the value, The function will be turned off when set to 0. (The protection function requires the cooperation of the relay)
“OCP”	This item can set Positive over-current protection.Press “OK”can change the value, The function will be turned off when set to 0. (The protection function requires the cooperation of the relay)
“LVP”	This item can set low-voltage protection.Press “OK”can change the value, The function will be turned off when set to 0. (The protection function requires the cooperation of the relay)
“OVP”	This item can set over-voltage protection.Press “OK”can change the value, The function will be turned off when set to 0. (The protection function requires the cooperation of the relay)
“CLR”	This item can clear AH 、 WH and time value immediately , Real-time battery capacity will be set to 100%.
“BAT”	This item can set the total battery capacity and real-time battery capacity.
“SET”	This function can set some configurations of the instrument.
“ADR”	This item can set the Communication address.
“LNG”	This item can set the communication address.
“FCH”	This item can set the communication channel.
“BRI”	This item can set the display brightness.

Note: Leave the cursor at the "ADR" position and long press "DOWN" key for 3 seconds to switch to the "LNG" option.

Chapter IV After-sales service

- ◆ Product quality problems (non-human caused) in 30 days, unconditional return policy
- ◆ The company promises to provide a lifetime warranty for its products, and does not collect any maintenance fees within one year. It only pays for the return shipping costs. After one year, the buyer must bear the return shipping costs.
- ◆ If one of the following conditions is not covered by the warranty: more than three packs of limited time; failing to comply with the requirements of the product manual or due to improper use (burning, fluid, or breakage); disassembling and repairing without permission, upgrades, etc. cause abnormal functions; damage caused by force majeure.

More detailed wiring diagram

