

OPERATING MANUAL

MHF120100P Voltage Meter

December 2015

Unpacking

When you get a new MHF120100P voltage meter, it is recommended that you follow these steps to inspect the instrument.

1. Check whether there is damage due to shipment.

Such as packing boxes or bubble bags to protect pad severely damaged, please retain until the machine and accessories passed the test.

2. Check the box in the article are complete.

Contents of the box are as follows.

If the content does not match or if the instrument is damaged, contact your dealer or the Company.

Host:

MHF120100P voltage meter 1 set.

Accessories: User Manual (pdf version) 1

3. Check the machine

Inspect the instrument is damaged, not working properly, or fails performance tests, please contact your dealer or the Company.

1 .Outline

1-1. The instrument Introduction

MHF120100P is a voltage meter can measure voltage, current, charge capacity, time, and other physical quantities of the new wireless voltage meter, but also can set parameters to achieve overvoltage protection, overcurrent protection, over power protection, overcharge protection and capacity a variety of protection limit protection. The instrument uses the measured data color LCD display information comprehensive and humane. This instrument is ideal for monitoring the output voltage and current, as well as the battery charge and discharge applications.

1-2. Main features

1. The wireless transmission data.
2. Voltage, current, charge capacity, the time display at the same time.
3. With an output shutdown function keys, flexible output is turned on or off.
4. Over-voltage, over-current, over-power, limited, overcharge protection.

1-3. Technical Specifications

Technical Specifications Table 1-1 MHF120100P

Items		Parameters
Input voltage	Self-powered	10V~120V
	External power supply	0~120V
Output Current		0~100A
Display mode		Color LCD
Display Resolution	Voltage	0.01V
	Current	0.01A
	Capacity	0.01AH
	Time	0.01H
Accuracy	Voltage	±1%+2
	Current	±2%+5
Measuring rate		5 times / sec.
Communication distance		10 m open to a single group
Protection type and setting range	OVP(Over Voltage Protection)	0.01V~120V
	OVP(Over Voltage Protection)	0.01W~9.99kW
	OCP(Over Current Protection)	0.01~100A
	OAH(battery over charge protection)	0.01AH~120AH
	OFT (overtime protection)	0.01H~99.9H
Dimensions (L × W × H)		79*43*52 (mm)
Mounting hole opening (mm)		76.5*39.2 (mm)

2 . Instrument Description

2-1. Panel

This instrument is split structure, consists of two parts instrumentation and power expansion board. Figure 2-1 shows the instrument panel, Figure 2-2 for the power expansion board, the two parts to pass data through the wireless module.

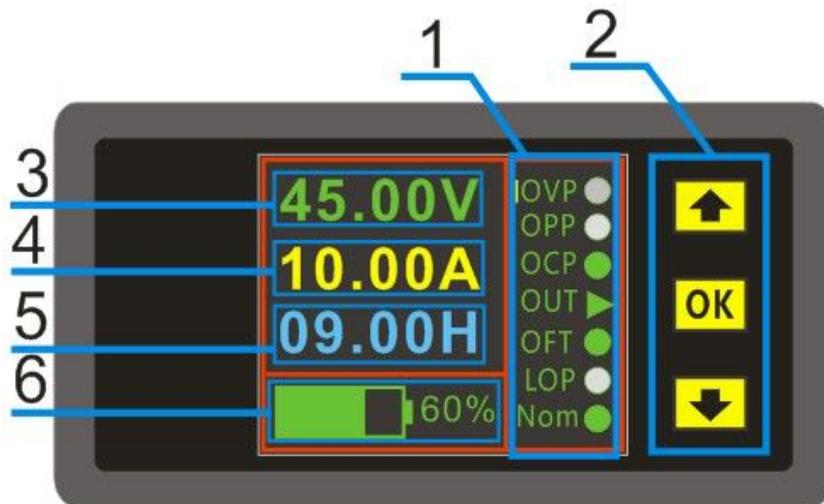


Figure 2-1 MHF120100P front panel

Grade	Explanation
1	Set parameter display area
2	Button
3	Voltage value
4	Current value
5	Time value
6	Capacity value

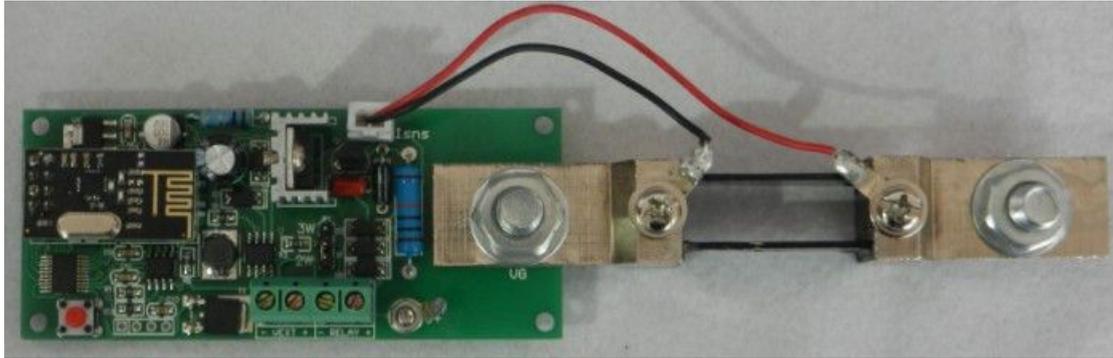
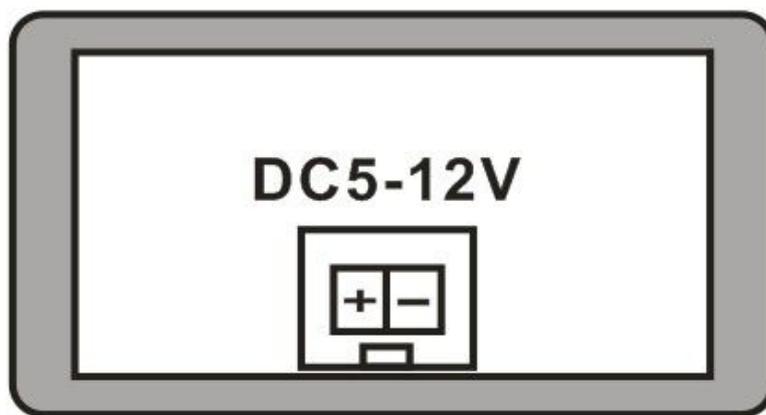


Figure 2-2 MHF120100P power expansion board

2-2. Wiring

When power expansion board wiring can choose their own way, or external power supply lines (not connected relays, then relay) wiring method for wiring. To carry out in accordance with the wiring diagram shown in the wiring connection, be careful not to reverse, then the wrong.

1.The display panel power supply wiring diagram, note the direction and power polarity gap



2.The power supply wiring diagram and method itself

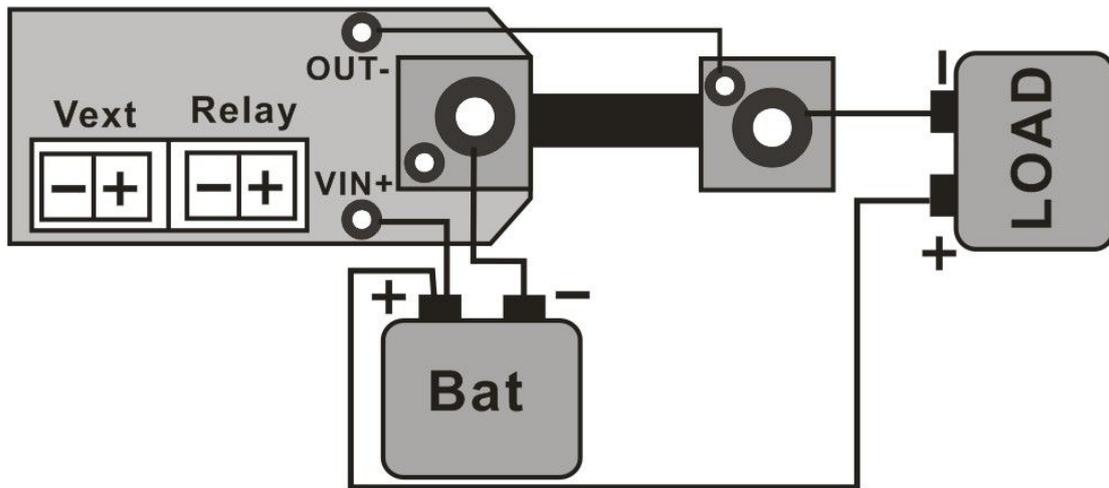


Figure 2-3 Two-wire wiring diagram

Power supply wiring method itself:

In accordance with the wiring diagram Wiring Wiring proceeds on the positive VIN + and load power expansion boards are connected to the upper left corner of the power of positive and negative power supply connected to the left side of the splitter and power expansion board mounting screws, negative load connected to the right end of the shunt screws, Vext and Relay without wiring, according to the wiring diagram shown in wiring wiring, pay attention to positive and negative, can not be reversed, then the wrong.

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

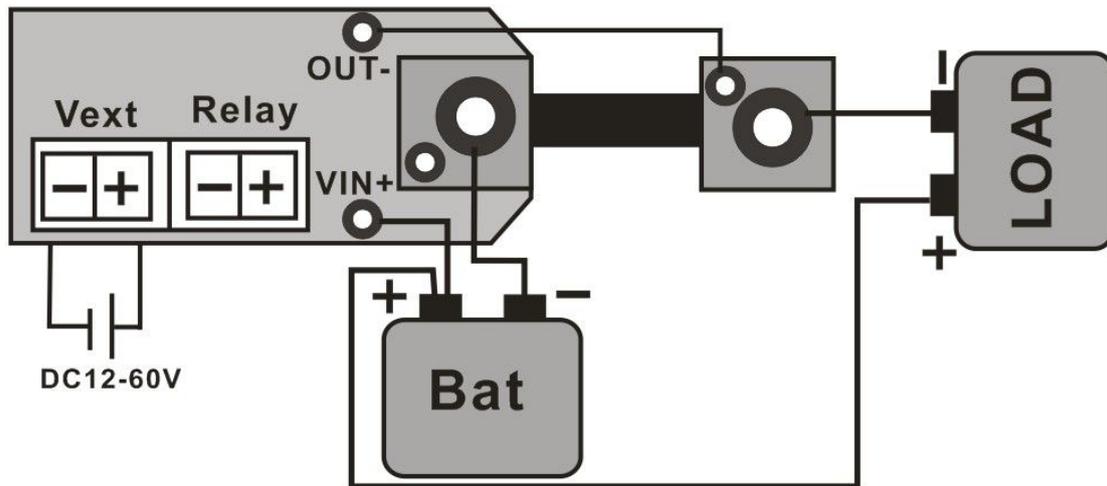


Figure 2-4 Three-wire is not connected relay wiring diagram

External power supply is not connected to the relay wiring methods:

In accordance with the wiring diagram Wiring Wiring proceeds on the positive VIN + and load power expansion boards are connected to the upper left corner of the power of positive and negative power supply connected to the left side of the splitter and power expansion board mounting screws, negative load connected to the right end of the shunt screws, Vext at the need for an external power supply for the instrument, external power supply voltage is DC12V - 60V, must be wired in accordance with the wiring diagram shown in the wiring, pay attention to positive and negative, can not be reversed , then the wrong.

4. The external power supply connected to the relay wiring diagram and method

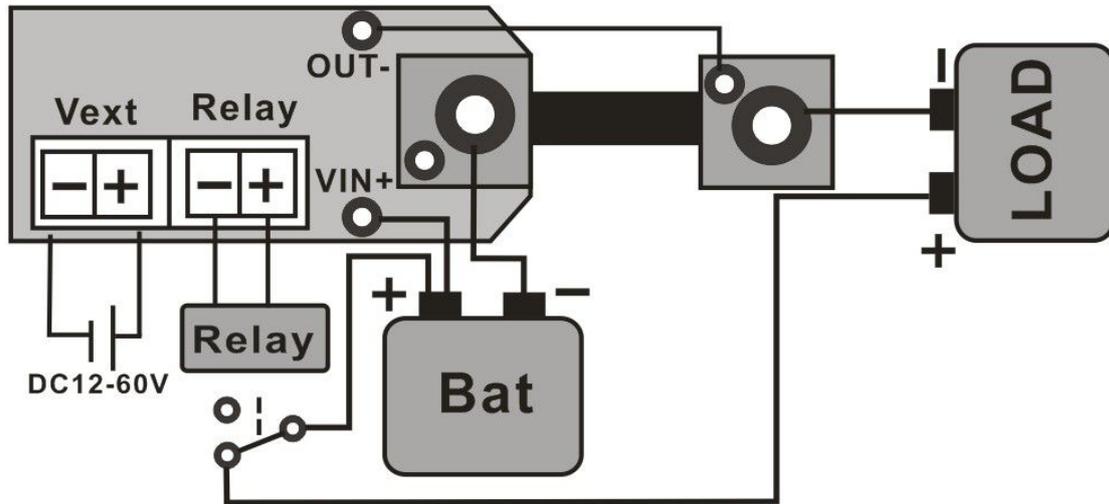


Figure 2-5 three-wire connection relay wiring diagram

5、

In accordance with the wiring diagram Wiring Wiring proceeds on the top left of the power expansion board V + connected to the power of positive and negative power supply connected to the left side of the splitter and power expansion board mounting screws, the load connected to the negative screw on the right side of the splitter, you need to connect the load between the positive and the positive power control terminal relay, Vext at the need for an external power supply for the instrument, external power supply voltage is DC12V - 60V, Relay pin point relay, the relay supply voltage is selected to match the external power supply voltage, according to the wiring diagram shown in wiring wiring, pay attention to positive and negative, can not be reversed, then the wrong.

Description: Relay need user-equipped, as standard without relay

3. Instructions

3-1.Wiring

3-2.

Select the appropriate wiring according to the measured voltage range, ensuring input voltage is within the tolerance range of the instrument.

Note: The self-supply input voltage range: 10V ~ 120V;
External power supply input voltage range: 0V ~ 120V.

3-3.OUTPUT

After power ,if picked up the relay by clicking the yellow button to move the cursor to the OUT point, click on the OK button to control the output, if the output OUT is displayed in green light is on, if the output OUT light gray shutdown, power status on the machine by default the last pre-shutdown state.

3-4.Protection feature set

If you want to open a certain protection, move the yellow cursor to the corresponding item and click the OK button will set the corresponding entry lights turn green if the protection is set to turn off the protection of gray. Must be set up before the open protect protection parameters, when determining the set parameters around long press the OK button for three seconds to enter the protection function parameters power settings page, and then increase or decrease the parameters set by regulation. After setting the parameters is complete click OK to return to the initial screen.

四、

Note: If not adjusted parameters into the adjustment page, you need to click, press once to click OK to return to the original page.

3-5.Protection Features

1."OVP" over voltage protection, if the value is set OVP and OVP protection option turned on, when the input voltage exceeds the voltage, the unit will automatically cut off the output, and the light from green to gray-OUT . Want to restore output shutdown protection, turn off protection options, return to normal output.

2."OPP" is OPP, OPP If you set the value, and opened the OPP protection options, when the output power exceeds the power, the machine will automatically cut off the

output, and the light from green to gray-OUT . Want to restore output shutdown protection, turn off protection options, return to normal output.

3."OCP" is OCP, OCP if the set value, and opened the OCP protection options, when the input current exceeds the set current, the machine will automatically cut off the output, and the light from green to gray-OUT . Want to restore output shutdown protection, turn off protection options, return to normal output.

4."OFT" overtime protection, if set OFT value, and opened the OFT protection options, when working hours working time exceeds the set power, the machine will automatically cut off the output, and the light from green to gray-OUT . Protection shutdown want to restore output, close protection options, return to normal output.

5."OAH" OAH if "OAH" set value, and opened the"OAH"protection options, when the cumulative AH value exceeds the set value, the machine will automatically cut off the output, and the light from green to gray-OUT . Protection shutdown want to restore output, close protection options, return to normal output.

6."Nom" is the wireless transmission of data to determine whether the normal indicator, if the light is green, indicating that wireless communication is normal, disconnect if the lamp is gray wireless communications. Elected in "Nom" option, and then click the power button board, "Nom" light turns orange panel is displayed. Then long press "Nom"key to enter the pairing settings, adjust to increase or decrease the parameter settings, set up after shaking hands with the power board Click the OK button to jump out value, the value is the factory have set, do not arbitrarily modified.

Care and maintenance

1. can not use more than the meter voltage and current range, otherwise it will damage the meter.

2. the positive and negative can not be reversed, reverse can not be measured correctly.

3. the working temperature of $-10 \sim 50 \text{ }^{\circ}\text{C}$, Storage temperature $-20 \sim 70 \text{ }^{\circ}\text{C}$, and the instrument is in a dry environment.

4. Do not attempt to disassemble the instrument, destroy the package will void the warranty. This instrument there are no user-serviceable parts, repairs may only repair outlets or by specifying returning factory.

5. Do not move the instrument to avoid severe irreparable damage to the internal circuit when the instrument is working properly.