OWH67B Series Programmable Bidirectional DC Power Supply

Quick Guide

For product support, visit:www.owon.com.hk/download

※: The illustrations, interface, icons and characters in the user manual may be slightly different from the actual product. Please refer to the actual product.

General Warranty

We warrant that the product will be free from defects in materials and workmanship for a period of 2 years from the date of purchase of the product by the original purchaser from our company. The warranty period for accessories such as probes, battery is 12 months. This warranty only applies to the original purchaser and is not transferable to a third party.

If the product proves defective during the warranty period, we will either repair the defective product without charge for parts and labour, or will provide a replacement in exchange for the defective product. Parts, modules and replacement products used by our company for warranty work may be new or reconditioned like new. All replaced parts, modules and products become the property of our company.

In order to obtain service under this warranty, the customer must notify our company of the defect before the expiration of the warranty period. Customer shall be responsible for packaging and shipping the defective product to the designated service centre, a copy of the customers proof of purchase is also required.

This warranty shall not apply to any defect, failure or damage caused by improper use or improper or inadequate maintenance and care. We shall not be obligated to furnish service under this warranty a) to repair damage resulting from attempts by personnel other than our company representatives to install, repair or service the product; b) to repair damage resulting from improper use or connection to incompatible equipment; c) to repair any damage or malfunction caused by the use of not our supplies; or d) to service a product that has been modified or integrated with other products when the effect of such modification or integration increases the time or difficulty of servicing the product.

Please contact the nearest Sales and Service Offices for services.

Excepting the after-sales services provided in this summary or the applicable warranty statements, we will not offer any guarantee for maintenance definitely declared or hinted, including but not limited to the implied guarantee for marketability and special-purpose acceptability. We should not take any responsibilities for any indirect, special or consequent damages.

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1. General Safety Requirement

Before any operations, please read the following safety precautions to avoid any possible bodily injury and prevent this product or any other products connected from damage. In order to avoid any contingent danger, this product is only used within the range specified.

Only the qualified technicians can implement the maintenance.

To avoid Fire or Personal Injury:

Use Proper Power Cord. Use only the power cord supplied with the product and certified to use in your country.

Product Grounded. This instrument is grounded through the power cord grounding conductor. To avoid electric shock, the grounding conductor must be grounded. The product must be grounded properly before any connection with its input or output terminal.

Limit operation to the specified measurement category, voltage, or amperage ratings.

Check all Terminal Ratings. To avoid fire or shock hazard, check all ratings and markers on the instrument. Refer to the user's manual for more information about ratings before connecting the instrument. Do not exceed any of ratings defined in the following section.

Do not operate without covers. Do not operate the instrument with covers or panels removed.

Use Proper Fuse. Use only the specified type and rating fuse for this instrument.

Avoid exposed circuit. Do not touch exposed junctions and components when the instrument is powered.

Do not operate if in any doubt. If you suspect damage occurs to the instrument, have it inspected by qualified service personnel before further operations.

Use your instrument in a well-ventilated area. Inadequate ventilation may cause an increasing of temperature or damages to the instrument. Please keep the instrument well ventilated, and inspect the air outlet and the fan regularly.

Do not operate in wet conditions. To avoid short circuit inside the instrument or electric shock, never operate the instrument in a humid environment.

Do not operate in an explosive atmosphere. In order to avoid damages to the device or personal injuries, it is important to operate the device away from an explosive atmosphere.

Keep instrument surfaces clean and dry. To avoid the influence of dust or moisture in air, please keep the surface of device clean and dry.

2. Safety Terms and Symbols

Safety Terms

Terms in this Manual. The following terms may appear in this manual:



Warning: Warning indicates the conditions or practices that could result in injury or loss of life.



Caution: Caution indicates the conditions or practices that could result in damage to this product or other property.

Terms on the Product. The following terms may appear on this product:

Danger: It indicates an injury or hazard may immediately happen.

Warning: It indicates an injury or hazard may be accessible potentially.

Caution: It indicates a potential damage to the instrument or other property might occur.

Safety Symbols

Symbols on the Product. The following symbol may appear on the product:



Hazardous Voltage



Refer to Manual



Protective Earth Terminal



Chassis Ground

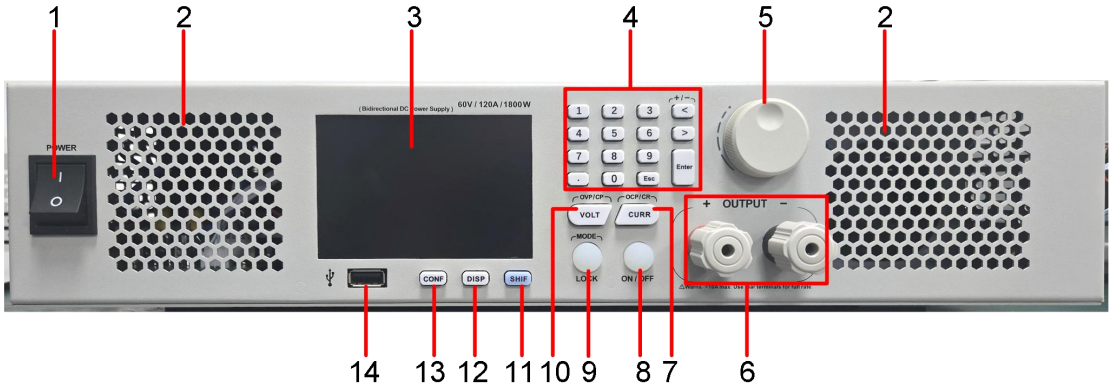


Public Ground

3. Quick Start

3.1 Front Panel and Interface

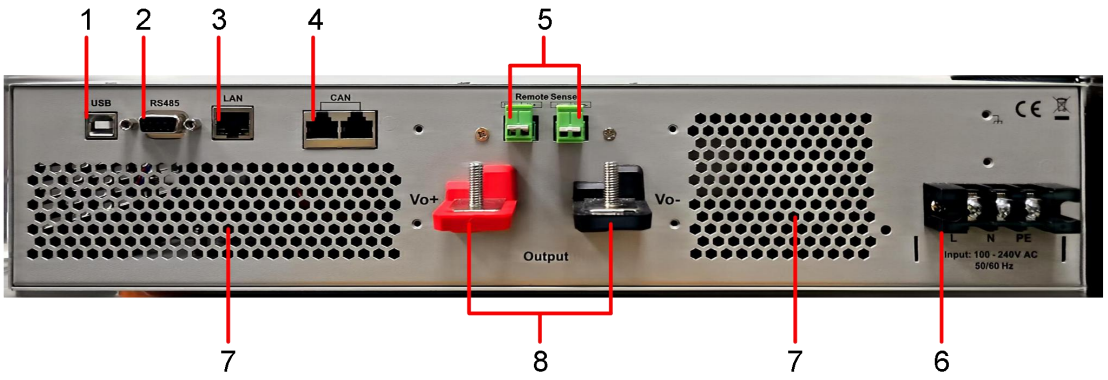
3.1.1 Front Panel



1	**Power button**	Turn on/off instrument.
2	**Fan**	Do not block the outlet of the fan, otherwise the internal heat dissipation of the machine will lead to excessive internal temperature.
3	**Display area**	TFT color screen display, output Settings and measurement results.
4	**0-9 and .** **Esc** **< >** **Enter**	Number and dot key:input number; Esc key: return to the previous page. < > Cursor movement key: Use to move the cursor left and right to the desired parameter position. SHIF+<: polarity switching. Enter: Confirm parameter setting.
5	**Knob**	Users can turn the knob to enter programming information or options.
6	**Output terminal**	Front panel output terminal.

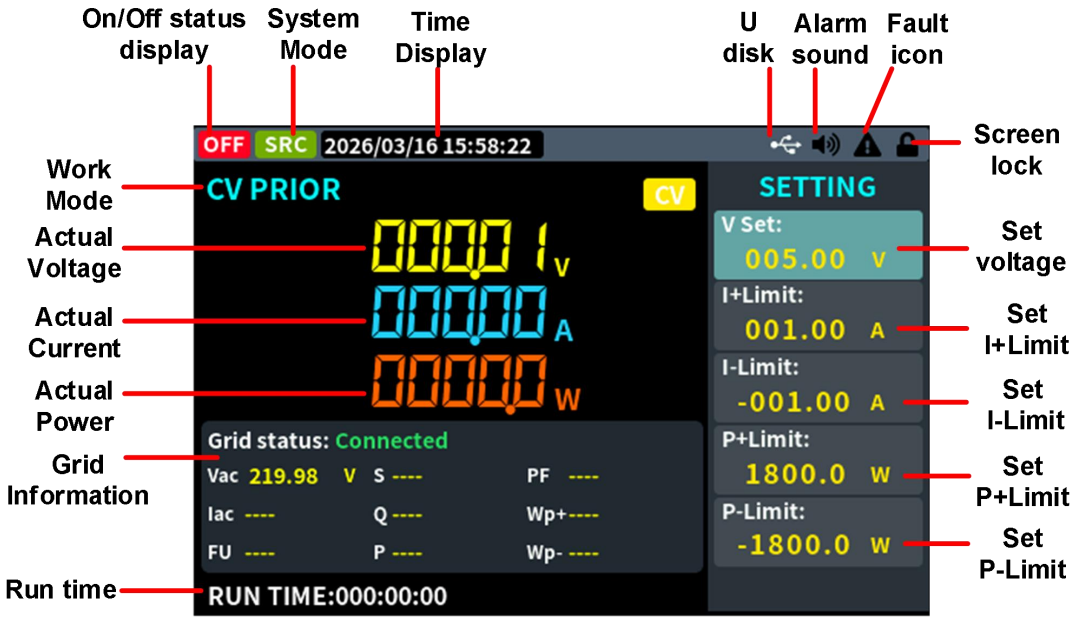
7	**CURR**	Current setting key: press it to enter the current setting mode, at the same time, user can input current value by numeric box or knob. SHIF+CURR: quick setting for OCP. In electronic load mode, the CURR key is used for CC mode setting, while SHIFT + CURR is used for CR mode setting.
8	**ON/OFF**	Control the output status: ON or OFF.
9	**LOCK**	Press and hold the lock; during remote control, long press to return to local operation mode.
10	**VOLT**	Voltage setting key: press it to enter the voltage setting mode, at the same time, user can input voltage value by numeric box or knob. SHIF+VOLT: quick setting for OVP. In LIST mode, this button is defined as the manual trigger button. In electronic load mode, the VOLT key is used for CV mode setting, while SHIFT + CURR is used for CP mode setting.
11	**SHIF**	Reuse function keys.
12	**DISP**	Switch between output curve and value display.
13	**CONF**	Switch the page into configure page, to set up various functions.
14	**USB**	USB data interface.

3.1.2 Rear Panel



1	**USB terminal**	The computer can be connected through the USB port.
2	**RS485 interface**	The computer can be connected through the RS485 port.
3	**LAN interface**	Ethernet remote communication controller can be connected to a computer through this interface for remote operation.
4	**CAN interface**	Multiple parallel machines can be made through the CAN port.
5	**Remote compensation**	DC power supply remote sense terminals: Connect these terminals to the load side to compensate for voltage drop on the power cables. Ensure that Vsen+ is connected to the positive output (+) and Vsen- is connected to the negative output (–). Do not reverse the polarity or leave them floating.
6	**AC Power connection terminal**	Power cord input AC power, from this connection terminal to the input terminal.
7	**Fan**	Do not block the outlet of the fan, otherwise the internal heat dissipation of the machine will lead to excessive internal temperature.
8	**DC output terminal**	DC power supply rear panel output terminals.

3.1.3 User Interface



Status Icon

Icon	Description
	The panel keys are locked
	Panel USB data cable is transmitting
	Enable beeper
	A failure alarm

3.2 General Inspection

After you get a new DC power supply, it is recommended that you should make a check on the instrument according to the following steps:

1. **Check whether there is any damage caused by transportation.**
   If it is found that the packaging carton or the foamed plastic protection cushion has suffered serious damage, do not throw it away first till the complete device and its accessories succeed in the electrical and mechanical property tests.
2. **Check the Accessories.**
   The supplied accessories have been already described in Appendix A:

Accessories of this manual. You can check whether there is any loss of accessories with reference to this description. If it is found that there is any accessory lost or damaged, please get in touch with our distributor responsible for this service or our local offices.

3. **Check the Complete Instrument.**
   If it is found that there is damage on the first appearance of the instrument, or the instrument cannot work normally, or fails in the performance test, please get in touch with our distributor responsible for this business or our local offices. If there is damage to the instrument caused by the transportation, please keep the package. With the transportation department or our distributor responsible for this business informed about it, a repairing or replacement of the instrument will be arranged by us.

3.3 Power-on Inspection

(1) Connect the instrument to an AC power source using the power cord supplied with the accessory.



Warning:

To prevent electric shock, make sure the instrument is properly grounded.

Before wiring, ensure that the power supply voltage matches the rated input voltage of this instrument. During wiring, make sure the power is off and no hazardous voltage exists at the terminals.

(2) Press the **power button** on the front panel and the startup screen will be displayed on the screen.

3.4 Output Inspection

Output inspection is to ensure that the instrument can achieve its rated outputs and properly respond to operation from the front panel.



Warning:

Please verify the voltage withstand and polarity requirements of the instrument’s output terminals and remote sensing connections. Do not reverse the +/-

connections or exceed the rated output voltage, as improper operation may result in fatal injury or equipment damage.

3.4.1 Voltage Output Inspection

The following steps verify basic voltage functions without load:

(1) When the instrument is under no load, select a channel and ensure the output current setting for this channel is not at zero.

(2) Turn on the channel output, then ensure the channel is in Constant Voltage output mode.

(3) Set some different voltage values on this channel; check if the actual voltage value displayed is close to the set voltage value, and also that the actual current value displayed is nearly to zero.

(4) Check if the output voltage can be adjusted from zero to the maximum rating.

3.4.2 Current Output Inspection

The following steps check basic current functions to directly short the output two terminals:

(1) Starting up.

(2) Connect a short across (+) and (-) output terminals with an insulated test lead on this channel. Use a wire size sufficient to handle the maximum current.

(3) Set the output voltage to the maximum rating on this channel.

(4) Turn on the channel output. Ensure the channel you used is in Constant Current output mode.

(5) Set some different current values on this channel; check if the actual current value displayed is close to the set current value, and to check if the actual voltage value displayed is nearly zero.

(6) Check that if the output current can be adjusted from zero to the maximum rating.

(7) Turn off the channel output and remove the short circuit from the output terminals.

4. Troubleshooting

1. **The instrument is powered on but no display. Please following the steps:**

   - Check if the power is connected properly.
   - Check if the fuse which is below the AC Power socket is used appropriately and in good condition (the cover can be pried open with a straight screwdriver).
   - Restart the instrument after the steps above.
   - If the problem still exists, please contact our customer service.

5. Appendix

5.1 Appendix A: Accessories

(The accessories subject to final delivery.)
Note: Due to differences in models, the accessories included may vary. Please refer to the actual items received.

Standard



Power Cord



Quick Guide



USB Cable



Remote sense terminals



AC terminal protective cover

Optional



Banana plug to alligator clip cable



L-shaped fixed bracket



DC terminal protective cover

5.2 Appendix B: General Care and Cleaning

General Care

Do not store or leave the instrument where the liquid crystal display could be exposed to direct sunlight for long periods of time.

Caution: To avoid any damage to the instrument, do not exposed it to any sprays, liquids, or solvents.

Cleaning

Inspect the instrument as often as operating conditions require. To clean the instrument exterior, perform the following steps:

1. Wipe the dust from the instrument surface with a soft cloth. Take care not to scratch the transparent LCD protection screen when cleaning.

2. Disconnect power before cleaning your instrument. Clean the instrument with a damp soft cloth (not dripping with water). It is recommended to clean with soft detergent or fresh water. To avoid damage to the instrument, do not use any corrosive chemical cleaning agents.



Warning:

Before re-applying power, ensure that the instrument is completely dry, avoiding any electric shock or electrical short circuit resulting from moisture.

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