OWH80Q Series Four-Channel Programmable DC Power Supply

Quick Guide

■ OWH8080Q-2000

■ OWH8040Q-600F

■ OWH8020Q-1000F

(F stands for fanless model)

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

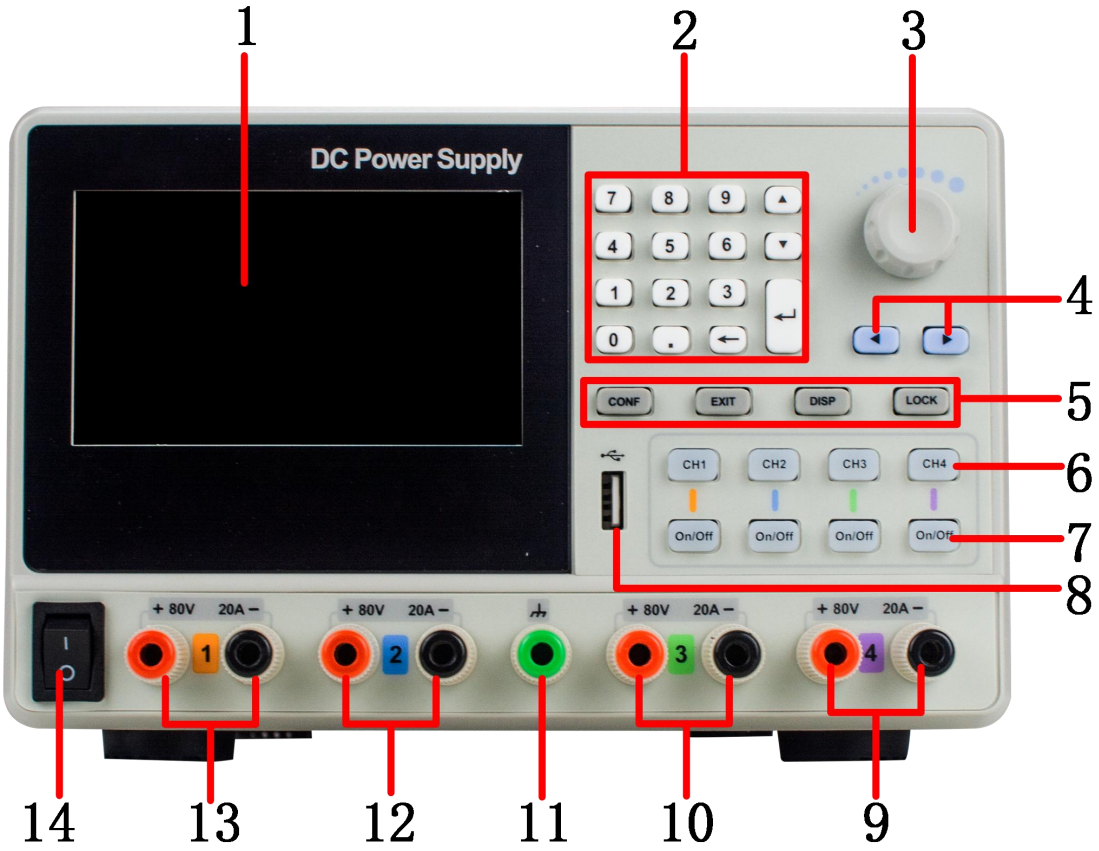


Figure 3- 1 Front panel overview

①	**Display Screen**	User interface display.
②	**Numeric keys area**	Parameter input, includes the numeric keys, decimal point and backspace key. **Up and down direction key:** Select sub menu. **Enter key:** Enter menu or confirm the parameter entered.
③	**Knob**	Select menu or change the value.
④	**Direction**	Set sub menu or move the cursor.

⑤	**Function keys**	**CONF** : Opens the configuration page for system function settings. **EXIT** : Exits to the previous screen. **DISP** : Switches between numerical output display and waveform display. **LOCK** : Short press this button to lock the panel keys. When locked, pressing any other key will have no effect. Hold this button for more than 5 seconds to unlock.
⑥	**Channel button**	CH1, CH2, CH3, CH4 channel button, press it to select this channel.
⑦	**On/Off button**	Press the On/Off button of the corresponding channel to turn the channel output on or off.
⑧	**USB Host port**	Connect as a "host device" with an external USB device, such as connect a USB disk to the instrument.
⑨	**CH4 output terminals**	Channel 4 output connectors.
⑩	**CH3 output terminals**	Channel 3 output connectors.
⑪	**Ground terminal**	Channel ground connector.
⑫	**CH2 output terminals**	Channel 2 output connectors.
⑬	**CH1 output terminals**	Channel 1 output connectors.
⑭	**Power button**	Turn on/off the instrument

Instructions for panel key indicator

ON/OFF key: Press the button, and the channel light and the button light will turn on.

3.1.2 Rear Panel

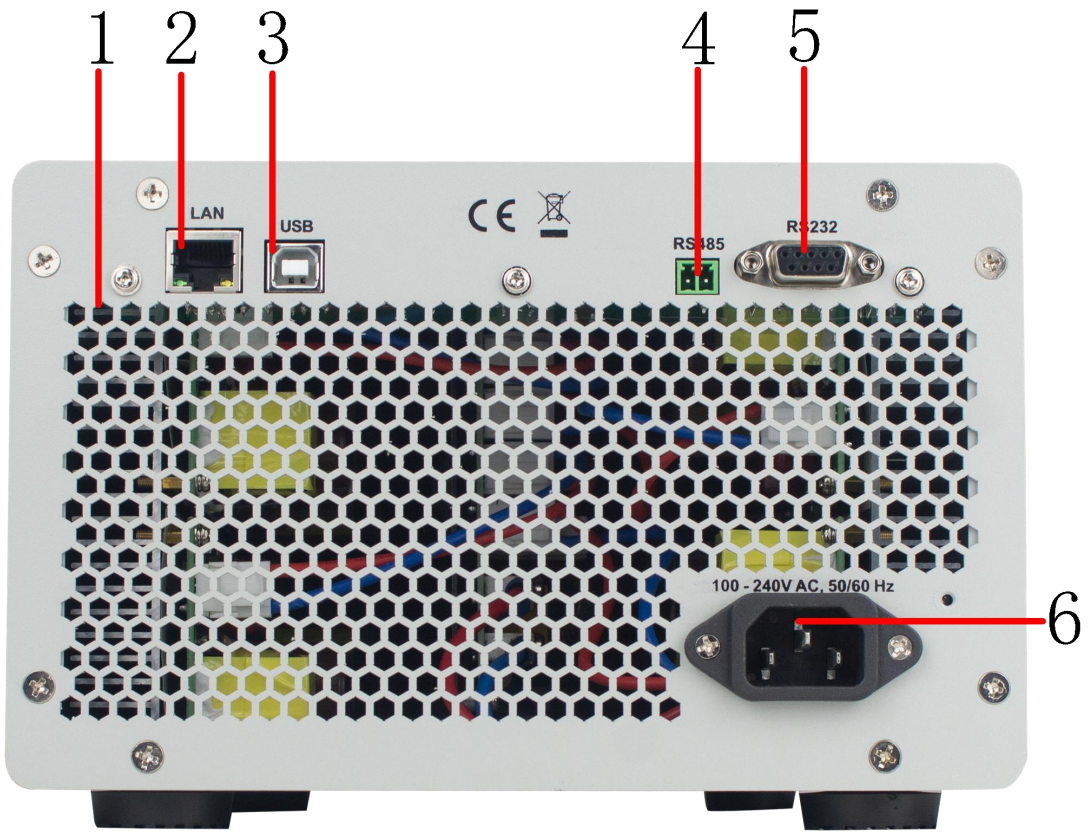


Figure 3- 2 Rear panel overview

①	**Fan Air Outlet**	Do not block the air outlet. Obstruction may cause inadequate internal cooling, leading to overheating and potential damage.
②	**LAN Port**	Ethernet communication interface for remote control. Connects the unit to a PC or network for remote operation.
③	**USB Serial Port**	USB communication port for connecting the device to a computer.
④	**RS485 Interface**	RS485 communication port.
⑤	**RS232 Interface**	RS232 communication port.
⑥	**AC Power Input Terminal**	AC power input interface, rated input current not exceeding 10A.

3.1.3 User Interface

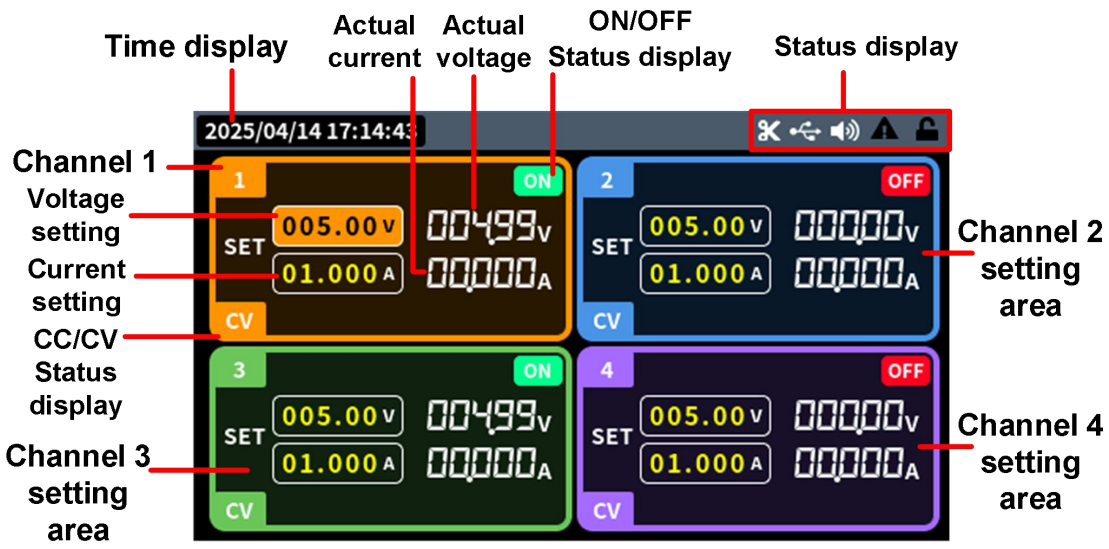


Figure 3- 3 User Interface

Status Icon

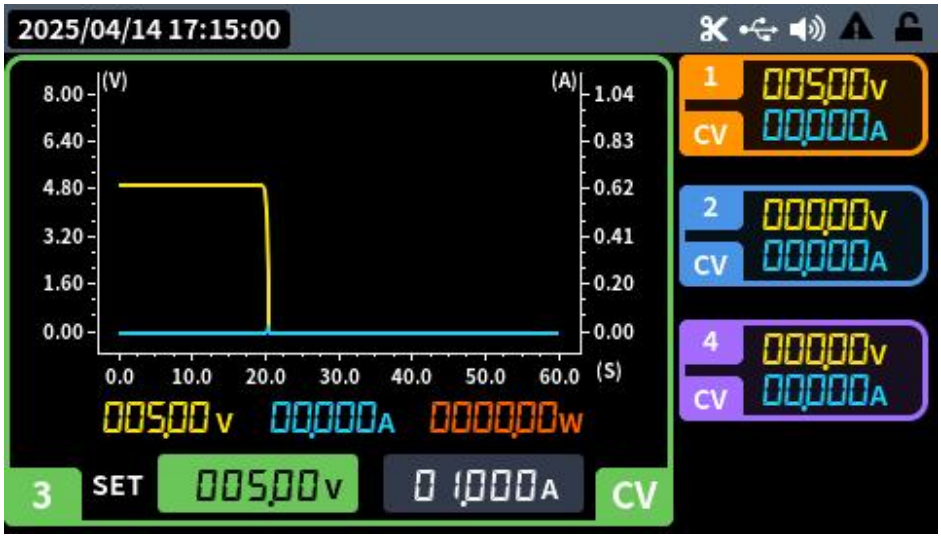
Icon	Description
	USB drive screenshot indicator (Hold down the number key "0" for 3 seconds to save the current screen to the USB drive)
	The front panel USB port has a USB drive or other storage media connected to it.
	Enable beeper
	Alarm Indicator: Red - Fault; Gray - Normal
	The panel buttons are locked state

Note:

- In CC/CV mode, pressing the CH1, CH2, CH3, CH4 buttons allows you to switch to the single-channel display main interface.



- In CC/CV or LIST mode, pressing the **DISP** button switches to the waveform display interface.



3.2 General Inspection

After you get a new 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.

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

3.4 Output Inspection

Output verification ensures that the instrument reaches its rated output value and can correctly execute front panel operations.

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 input voltage is within the specified range.
   - Check if the power is connected properly.
   - Restart the instrument after the steps above.
2. **The output is abnormal**
   - Check if the output voltage is set to 0V. If so, set it to other value.
   - Check if the output current is set to 0A. If so, set it to other value.
   - When in programmable output status, check if there is any voltage/current value is set to 0. If so, set it to other value.
   - Check if the upper right corner  indicator light is on. If it is lit, the device is either in remote control mode or the screen is locked. To unlock, disconnect the remote connection or press and hold the **LOCK** button. After unlocking, check again if there is any output.

If you encounter any other issues, please try restarting. If the product still does not function properly, please contact us so we can assist you.

5. Appendix

5.1 Appendix A: Accessories

(The accessories subject to final delivery.)

Standard Accessories:



Power Cord



User Manual



USB Cable

Options Accessories:



Banana plug to crocodile clip test leads

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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