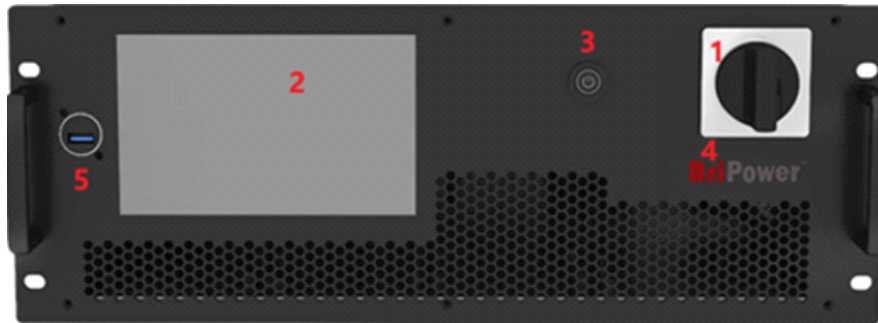


ZGX Series Quick Reference Guide

Hardware Architecture: Front & Rear Panel Interfaces

- Front Panel



1	Main Circuit Breaker	Clockwise to power on, counterclockwise to power off.
2	Touch Panel	Hosts the Linux-based GUI for local parameter deployment and real-time monitoring.
3	Power On Button/Indicator 1	Power ON Button: Activates PFC & DCDC circuits. Indicator 1: Input Status Indicator
4	Indicator 2	Indicator 2: Output Status Indicator
5	USB	It supports data transmission, system updates and mouse connection.

- LED Indicators (Indicator 1 and Indicator 2) Status Logic

The front panel of the ZGX Series power supply features two intuitive LED indicators (Indicator 1 for Input Stage, Indicator 2 for Output Stage). The system progresses logically from initial power-up to full operation:

Standby Mode (Flashing / OFF): Upon initial AC/DC grid connection, Indicator 1 flashes to show the system is initializing, while Indicator 2 remains OFF.

Normal Input Detected (Steady / Flashing): Once the input power stabilizes, Indicator 1 turns steady ON. Indicator 2 begins flashing, signaling that the system is ready and awaiting the output command.

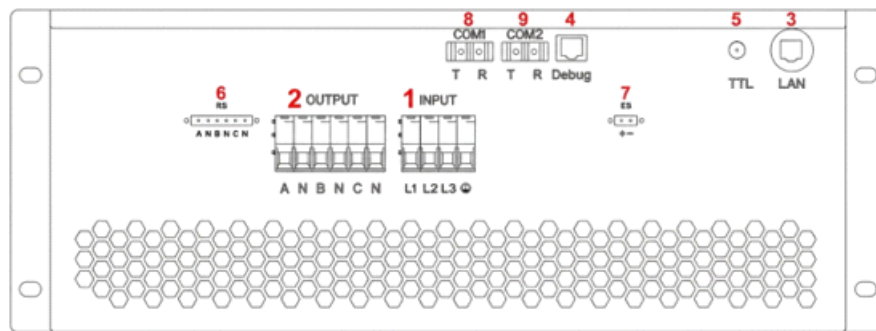
Normal Input & Output Active (Steady / Steady): When both indicators are steady ON, the system operates at full capacity with both input and output fully active and normal.

Fault State / System Alarm (OFF / Flashing): An abnormal combination where Indicator 1 is OFF but Indicator 2 flashes indicate a system fault or protection alarm.

- Use this table to rapidly assess the system state during field diagnostics:

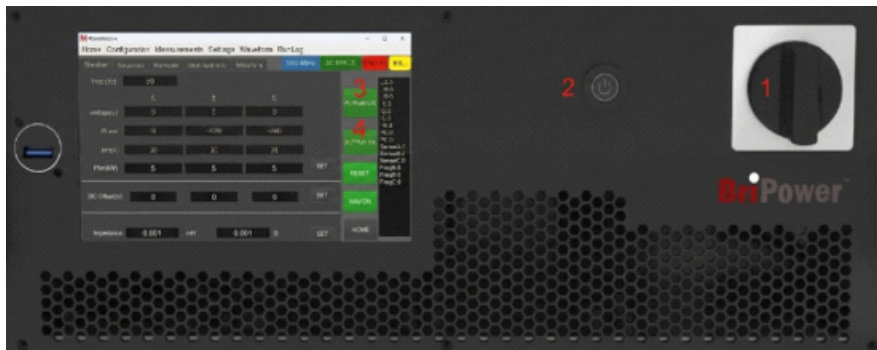
Indicator 1 (Input)	Indicator 2 (Output)	System State	Key Takeaway
Flashing	OFF	Standby Mode	System initializing
Steady ON	Flashing	Normal Input Detected	Input OK, ready for output
Steady ON	Steady ON	Input & Output Active	Fully operational (Normal)
OFF	Flashing	Fault State (Alarm)	Abnormal state / Check fault code

- Rear Panel



1	INPUT	Three-phase AC (L1/L2/L3/PE) or single-phase (L/N/PE) connection.
2	OUTPUT	AC/DC Output terminals (A/N/B/N/C/N) for the DUT.
3	LAN	Standard RJ45 port for remote host computer communication.
4	Debug	Factory Use Only: Unauthorized use for firmware/debugging is strictly prohibited.
5	TTL	Trigger Output; provides TTL signals synchronized with V/F transitions.
6	RS	Remote Sense: Compensates for cable voltage drops. Warning: If not used, MUST be deactivated via System menu to avoid unstable output or overvoltage alarms.
7	ES	External E-Stop: Safety +/- interface. Requires software activation via System -> External E-Stop.
8	COM1	Master-Slave interface for parallel system expansion.
9	COM2	Extension interface reserved for future functional upgrades.

ZGX Power Control Logic (Startup/Shutdown)



- **Main Circuit Breaker (Front Panel Rotary Knob -1):**

Rotated clockwise to ON to connect the primary AC input. This initializes the system into Standby Mode and loads the touchscreen GUI.

- **POWER ON (Physical Button -2 or Software Icon -3):**

Activated via the physical button on the front panel or the POWER ON button on the touchscreen control column. This operation starts the internal PFC and DC-DC circuits, preparing the device for active regulation.

- **OUTPUT ON (Software Icon -4 Only):**

Accessed exclusively through touchscreen software. Clicking OUTPUT ON closes the high-power output relays, officially delivering voltage and current to the output terminals.

Quick Operation Summary:

Main Breaker: System Boot & Standby.

POWER ON: Internal Circuit Activation.

OUTPUT ON: Final Power Delivery to Terminals.

GUI Navigation & Master Control Logic

The ZGX control logic is hierarchical: your selection at the HOME menu dictates the hardware topology (Source vs. Load) and available settings.

Operation Modes

- CV (Constant Voltage): Standard operation as a regulated AC or DC voltage source.
- CC (Constant Current): Configures the unit as a true current source for specialized testing.
- E-LOAD (Regenerative Load): The unit absorbs energy from a source and regenerates it back to the grid with >85% efficiency.

Configuration Variables

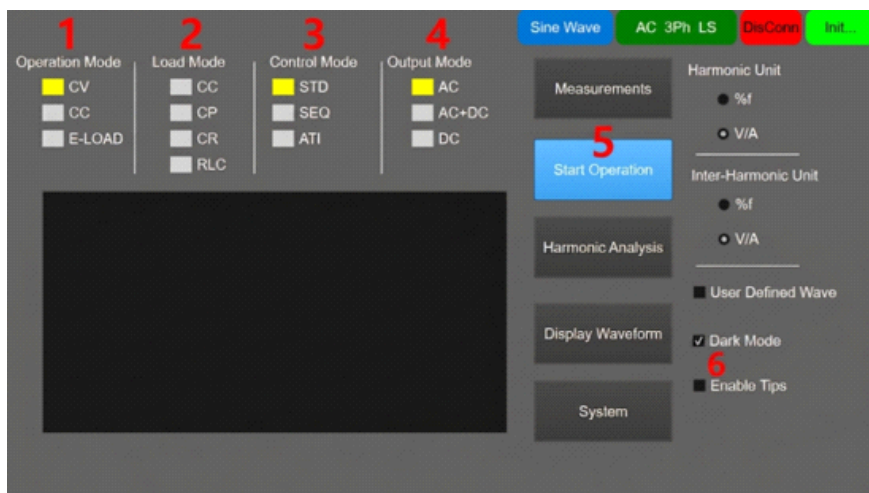
- Output Mode: Selection of AC, DC, or AC+DC (provides a DC offset to an AC waveform).
- Control Mode: Selection of STD (standard single-step output) or SEQ (multi-step waveform programming).

Global Control Pillar (Right Sidebar)

- POWER ON/OFF: Controls the internal main circuit and grid-side Power Factor Correction (PFC).
- SET: CRITICAL. Parameters entered are only cached; they are NOT active until SET is clicked. This is the bridge between input and active control.
- OUTPUT ON/OFF: Controls the high-power output relays. OUTPUT ON must be engaged to energize the terminals.

RESET: Clears software alarms (soft faults) after the external physical cause (e.g., overload) has been resolved.

ZGX Power Control Logic (Startup/Shutdown)



Once the system enters the Home Screen, follow these steps to configure the modes and start the power output:

Basic Mode Configuration

- Step 1: Set the Operation Mode (Label 1) : Select the desired source or load mode based on your test requirements (e.g., CV / CC / E-LOAD).
- Step 2: Set the Load Mode (Label 2, Optional): Note: This is only required and configured when specific operation modes demand it (e.g., CC / CP / CR / RLC).

- Step 3: Set the Control Mode (Label 3): For Single-point setting: Select STD mode、 For List mode (Sequence): Select SEQ mode、 For Analog control: Select ATI mode.

- Step 4: Set the Output Mode (Label 4): Select the corresponding output type according to your wiring and testing specifications (AC / AC+DC / DC).

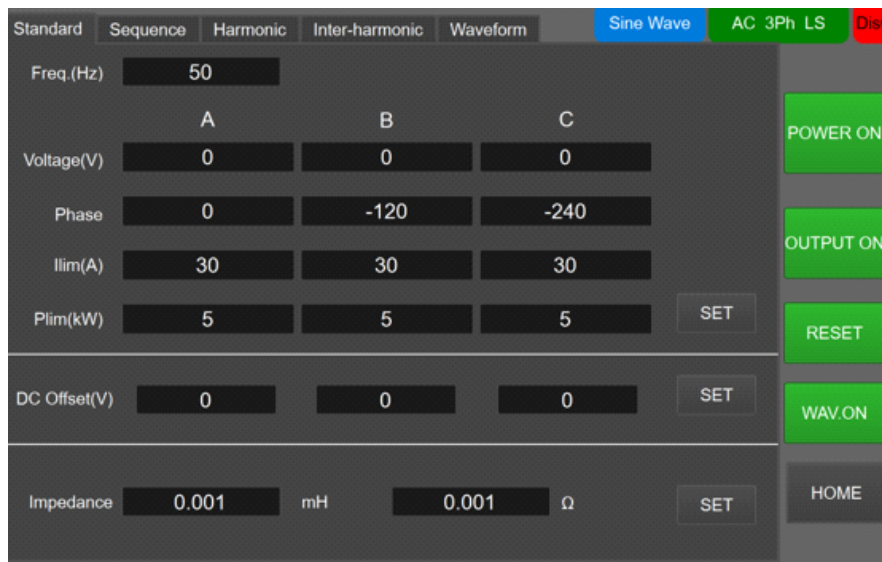
Enter Parameter Settings

- Step 5: Click Start Operation (Label 5): After finalizing the mode selections, click the blue [Start Operation] button on the right side of the screen. This will unlock and navigate you to the detailed parameter settings screen (where you can adjust specific values such as frequency, voltage, phase, current limits, etc.).

Enter Parameter Settings

- Quick Tip (Label 6): You can check the [Enable Tips] box in the bottom right corner at any time. Once enabled, the interface will provide real-time guidance to assist you through the operation steps.

Enable Power Output



- Step 6: Turn On Output: Once all values are SET, click the buttons on the right side in the following sequence:
[POWER ON] (Engages the PFC and DC/DC)
[OUTPUT ON] (Engages the outputs)

The power supply will now begin its power output according to your programmed parameters.

Remote Connectivity

For remote monitoring and control, follow this exact configuration path:

- 1) Connect the computer network port to the ZGX LAN port.
- 2) Computer IP: Set the workstation to a fixed IP of 192.168.0.11.
- 3) Device Network Parameters:
 - a) Default IP: 192.168.0.22
 - b) Port: 1024

For advanced programming and setting, consult the latest ZGX Series User Manual.