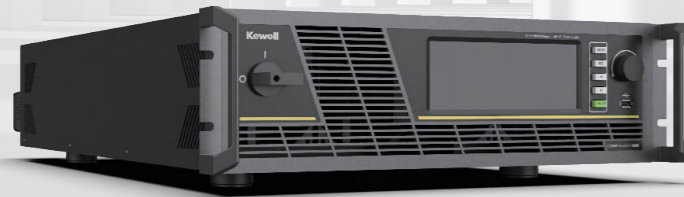


BI-DIRECTIONAL PROGRAMMABLE AC POWER SUPPLY

G6000 SERIES



The G6000P series is a four-quadrant AC power supply featuring high precision, high power density, and high dynamic performance. As a source, it supports adjustment of three phases separately, while having LIST/PLUSE/STEP and other programming functions to simulate the disturbance characteristics of grid voltage and frequency. It also has waveform editing, harmonic and inter-harmonic modes, able to simulate abnormal grid conditions and test the grid tolerance of the device under test (DUT). As a load, it has built-in AC load models to simulate different load characteristics.

Features

- | Automatic switching of the source-load function
- | AC electronic load
- | AC power output range: 0 ~ 18kVA
- | AC current output range: 0 ~ 90A
- | AC voltage output range: 0 ~ 450V (L-N)
- | Maximum DC voltage output: 650V
- | Parallel connection: up to 6 units
- | Single phase or three-phase output
- | Able to simulate instantaneous grid interruption of 1ms
- | Built-in waveforms: triangle, square, clipped sine, trapezoid, and sawtooth.
- | Harmonics and inter-harmonics superposition
- | Harmonics analyzer
- | Communication interfaces: RS232/LAN/USB/CAN/Digital IO/Analog IO
- | Protections: OVP, OCP, OPP

Model Selection

Model	Voltage	Current	Power	Resolution	Accuracy	Size
Pro						
G6000PG-18K-0450-0090	450V	90A	18kVA	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U
Ultra						
G6000UG-18K-0450-0090	450V	90A	18kVA	0.01V/0.01A	≤0.05%F.S./≤0.1% F.S.	3U

Normal
Fundamental,
Cost-effective

Pro
Fully-featured,
Multi-scenario

Ultra
Ultimate experience,
Lab testing-oriented

Version	Normal	Pro	Ultra
Features			
Four-quadrant	-	★	★
Unidirectional	★	-	-
AC	★	★	★
DC	-	★	★
AC+DC	-	★	★
List/Pulse/Step	★	★	★
Waveform editing	-	★	★
Harmonic mode	-	★	★
Inter-harmonic mode	-	★	★
Harmonic display	-	★	★
AC load	-	-	★

Note: "★" means Yes; "-" means not available.

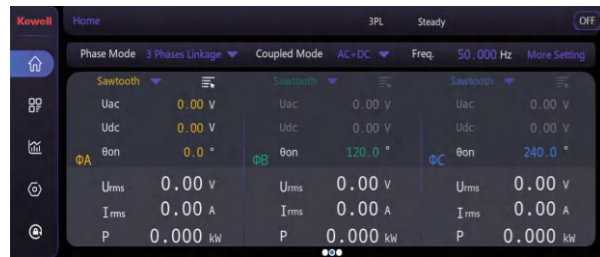
Product Applications

- | Simulating the voltage change in grid
- | Simulating the frequency change in grid
- | Simulating grid anomalies
- | LVRT/HVRT test
- | Testing PV energy storage
- | Testing on-board chargers
- | Simulating/Replacing AC power supply and load testing environment

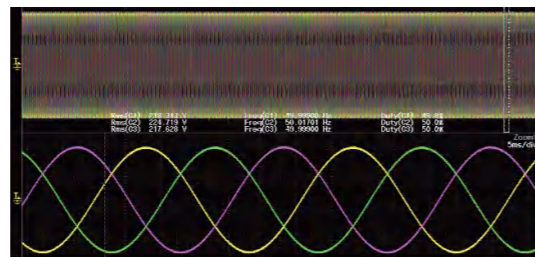
Product Functions

Sine Wave Mode

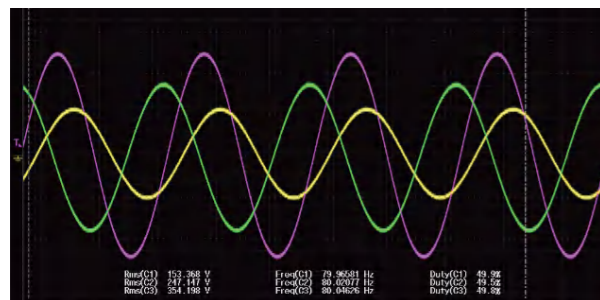
Users can set the voltage, phase, amplitude, and frequency of the output, minimum step size: 0.01V, 0.01Hz; the output mode can be three-phase linkage/three-phase independent/single phase.



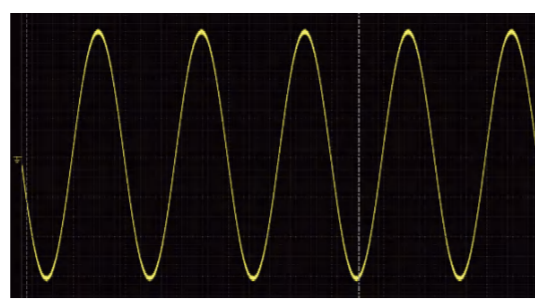
Sine wave mode



Three-phase linkage @220V, phase difference: 120°



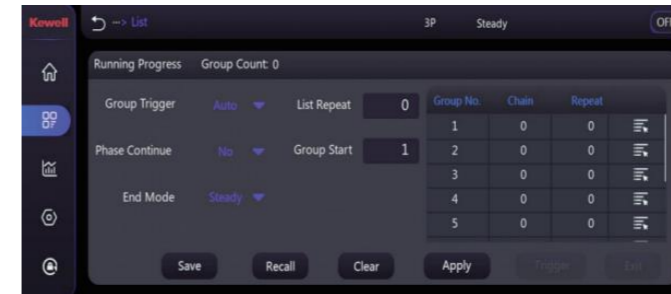
Three-phase independent @different amplitude
Phase A: 60°, Phase B: 200°, Phase C: 100°



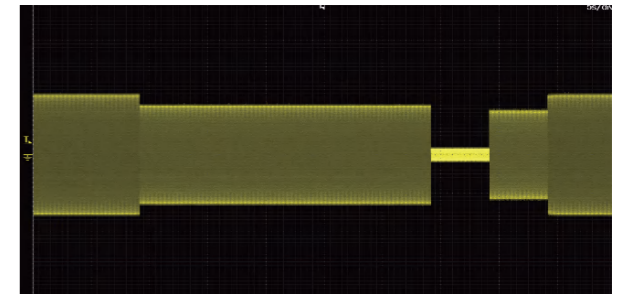
Single phase @220V

LIST/STEP/PULSE Mode

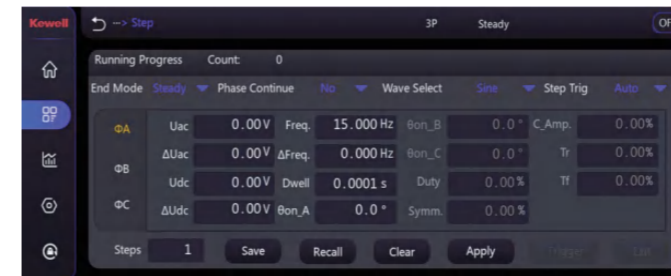
The G6000 series has multiple programming output modes such as LIST, STEP and PULSE. LIST mode supports editing of more complex test waveforms, with up to 10 groups of steps, each group having up to 20 sequences to be set. The steps can be set in cycle.



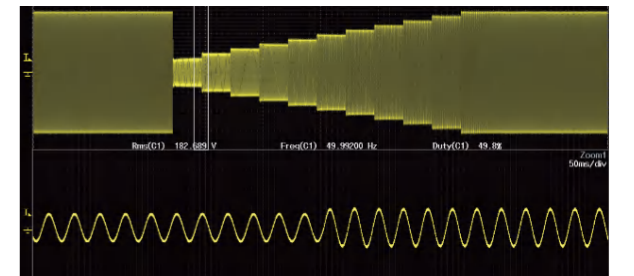
LIST mode



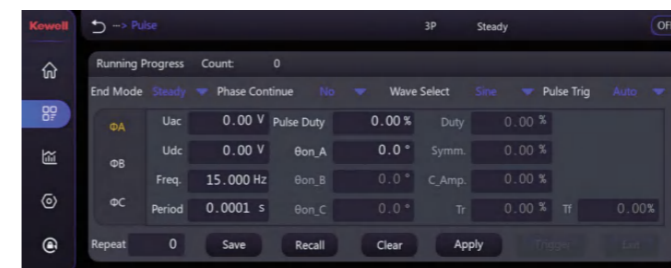
LIST mode @voltage: 220-180-20-160V step change



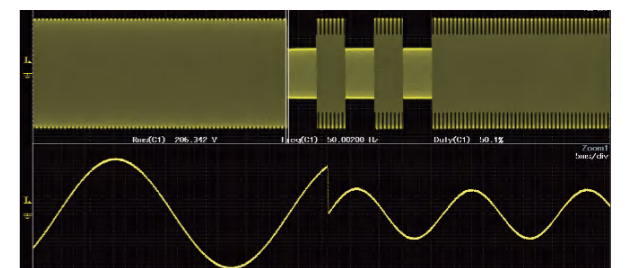
STEP mode



STEP mode @voltage: 50-220V, frequency: 45-65Hz,
gradient change in 10s



PULSE mode



PULSE mode @total cycle of 1s, pulse time: 50%,
pulse voltage: 100V, frequency: 100Hz

G6000 SERIES BI-DIRECTIONAL PROGRAMMABLE AC POWER SUPPLY

Users can also select high voltage ride through (HVRT), low voltage ride through (LVRT), and high and low voltage ride through combined test functions. The G6000 series supports single-phase, two-phase and three-phase ride through tests.

Voltage: 220V, ZVRT duration: 1ms, phase A drop phase angle: 180°

Voltage: 220V, phase A drop phase angle: 270° (ZVRT)

Nominal voltage: 220V, LVRT: 20%, HVRT: 130%, phase A drop phase angle: 0°

Harmonic & Inter-harmonic Mode

In harmonic superposition mode, users can set the harmonic amplitude of each voltage component to simulate abnormal grid environment and thereby test the grid withstand of the DUT. (2nd-100th harmonic superimposition, up to 99 kinds of harmonics to be superimposed simultaneously)

Harmonic mode

	N	%	θ (°)	N	%	θ (°)
ΦA	2	0.00	0.00	7	0.00	0.00
ΦB	3	0.00	0.00	8	0.00	0.00
ΦC	4	0.00	0.00	9	0.00	0.00
	5	0.00	0.00	10	0.00	0.00
	6	0.00	0.00	11	0.00	0.00

Fundamental wave @50Hz, 2nd-100th harmonics with a content of 5%-10%

Inter-harmonic mode

Inter-harmonic content: 10%, frequency start @200Hz, end @600Hz

Special Waves Mode

The G6000 series has different types of built-in waveforms including triangle, square, clipped sine wave, trapezoid, and sawtooth. Users may call a selected waveform via the software or the menu and display it on the LCD screen.

Triangle wave @phase A-220V, 50% symmetry

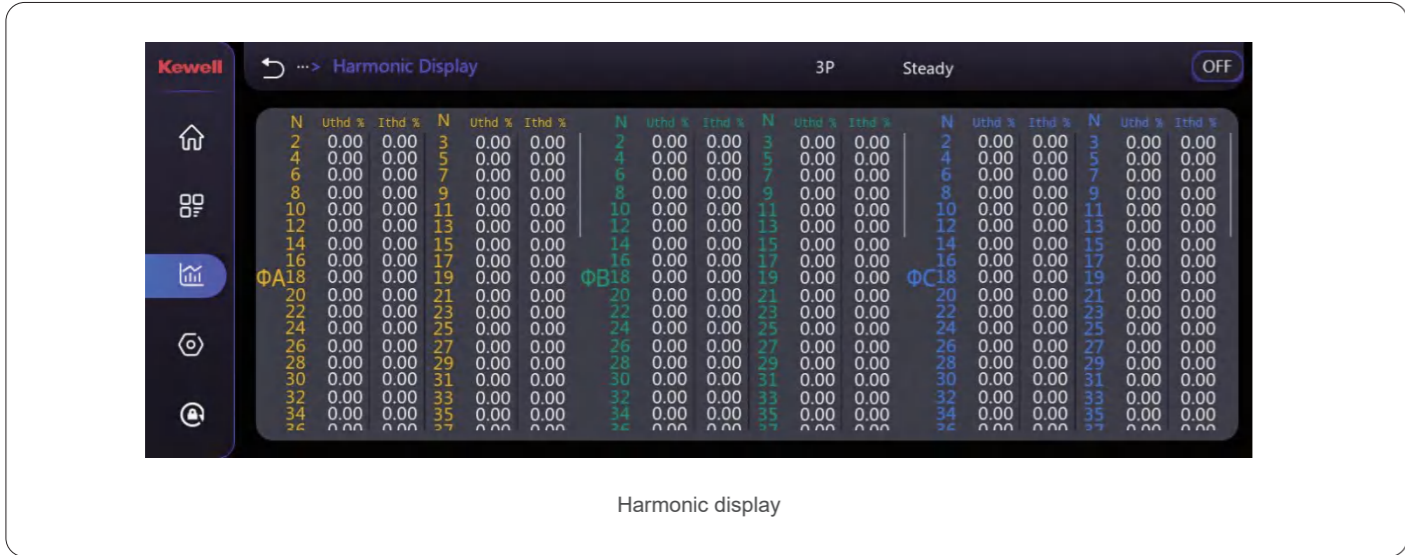
Square wave @phase A-220V, 50% duty cycle

Sawtooth @phase A-220V

G6000 SERIES BI-DIRECTIONAL PROGRAMMABLE AC POWER SUPPLY

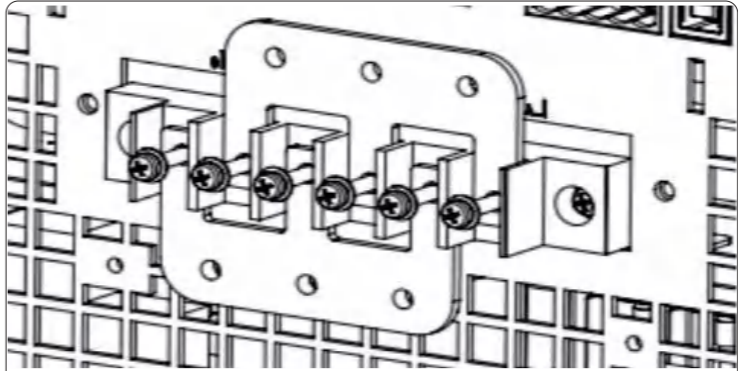
Harmonic Display

The G6000 series features harmonic analysis function that covers voltage harmonic measurements and current harmonic measurements. In harmonic mode, it tests voltage and current THD and the phase difference between harmonics and fundamental wave. In addition, it supports multiple harmonic measurements and display of the results in a list in an intuitive way.



Standard Accessories

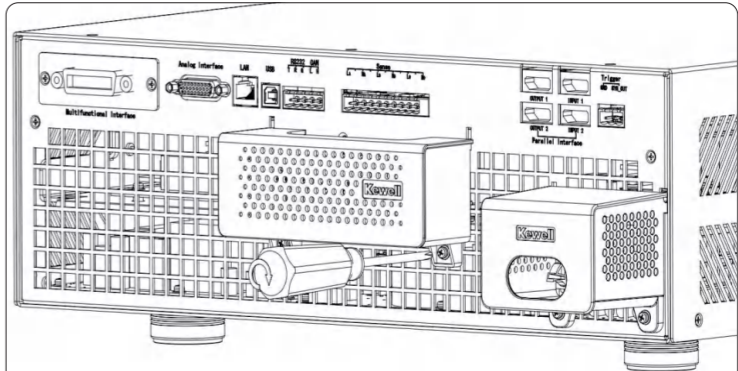
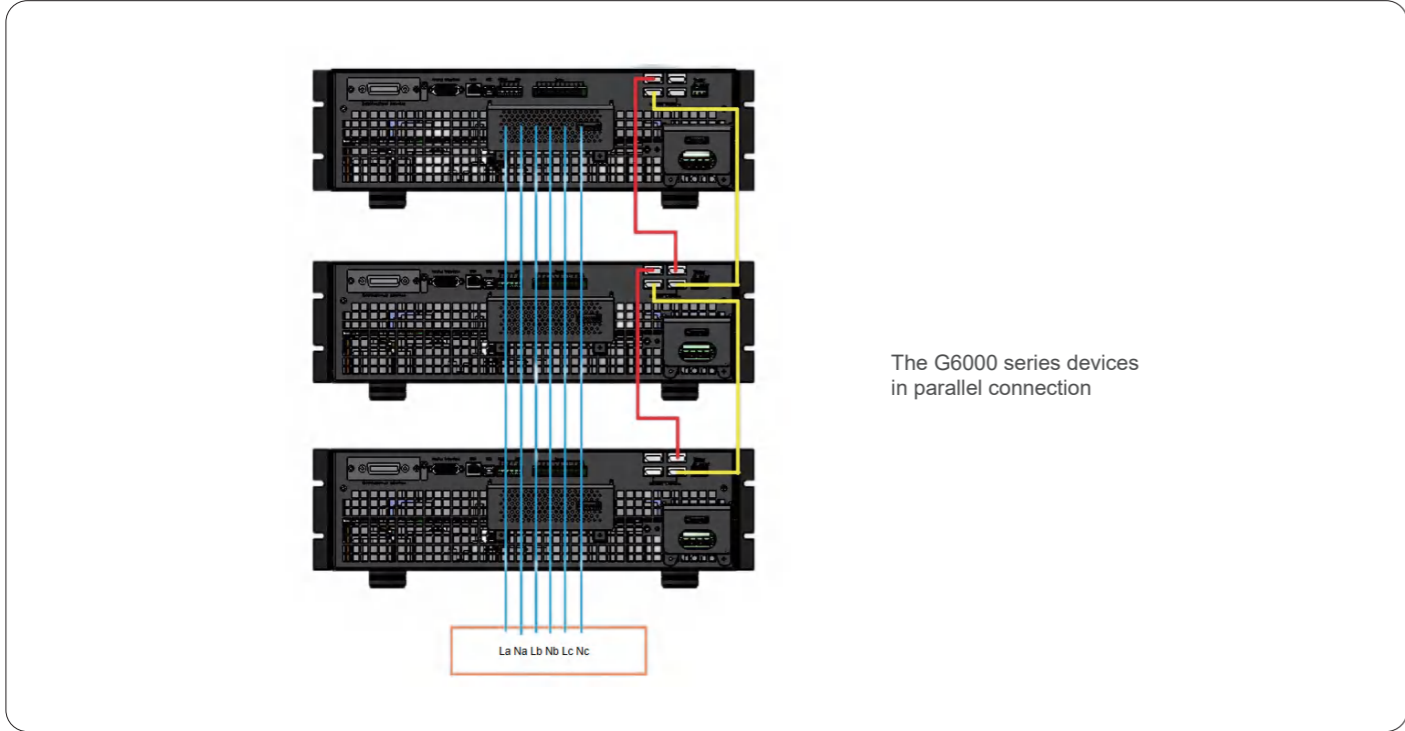
1 set of AC power supply, 1 set of handles, 1 * USB stick (32G), 1 * Ethernet cable (3m), 1 * AC input protective cover, 1 * AC output protective cover, 2 * parallel connection cable, 2 * short-circuiting copper busbar



Copper busbar for short-circuiting

Parallel Connection

Parallel connection of multiple G6000 series units provides higher current and larger power output.



AC protective covers