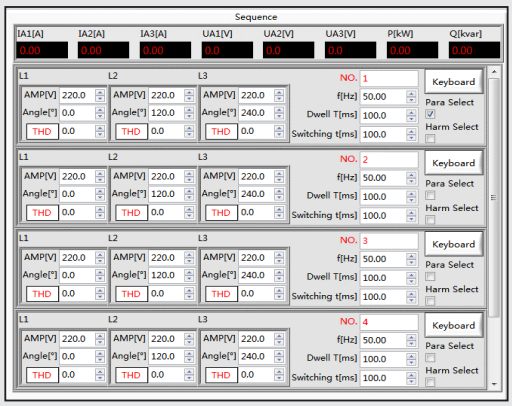
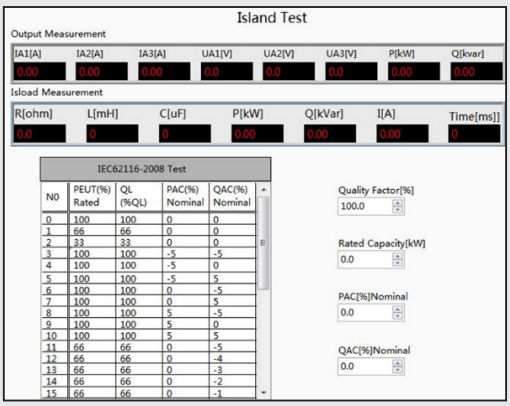
ET System

Bi-directional AC Source

- Single system from 30kVA to 500kVA and parallel up to 2MVA and above
- Galvanically isolated from the grid
- TFT touch display with simple menu navigation
- Emergency off in the front door
- Indicator lights for operating status
- Bi-directional current flow, regenerative up to 100% of rated output power back to grid
- Output voltage and phase angles can be adjusted per phase
- Sequence programming for output voltage, phase angle, harmonics and output frequency
- Independent three-phase output
- Supports LVRT testing of photovoltaic inverters (test carried out by seeing whether unit can stay connected during voltage drops)
- Can be used for anti-islanding test in accordance with IEC62116-2008 (-62116 option)
- LAN/RS485 interfaces (standard), RS232/Analog control interfaces (optional)
- Can be used to simulate power grid interference, such as: Voltage sag, Frequency shift and Three-phase unbalanced voltage.
- Regenerative AC load function (-LD option)
- Equipment of the same power can be connected in parallel, 4 units can be connected in parallel (standard). Master-Slave interface(-MS option)
- Remote sense
- Output contactor
- Switchable insulation monitoring
- Mod-bus/SCPI protocols



Sequence Mode



Anti-islanding Test

EAC-4Q-GS

30kVA ~ 2MVA,
Bi-directional Grid Simulator,
Meet the test application of distributed power generation products such as photovoltaic inverters.

Sequence Mode

Provides standard software that supports voltage and frequency sequence programming.

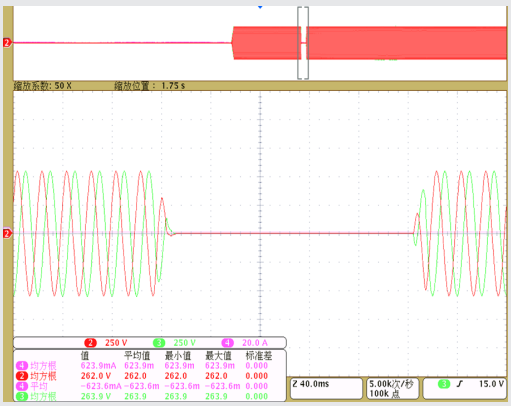
Can be used to simulate grid voltage variations, drops, surges and sags.

The change frequency can be set at any time during the test, and slew rate and duration can be programmed.

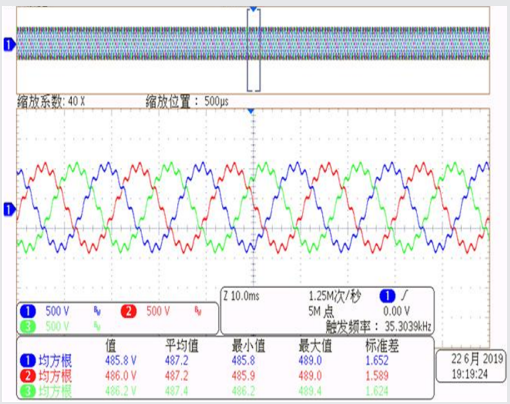
The voltage drop depth and time can be programmed.

ON and OFF output phase angle can be programmed.

Independent three-phase programming.



LVRT



Harmonic

Harmonic Programming

Harmonics waveforms of EAC-4Q-GS series can be programmed by specifying amplitude and phase up to 40th harmonics. The user can directly set the harmonic components in the graphical user interface to simulate the grid voltage of different harmonics in the real environment, so as to understand the influence of harmonic components on the power output.

Voltage drop simulation(LVRT for PV inverter)

When the power grid fails and the voltage drops, the distributed power generation equipment is required to have a low voltage/zero voltage ride-through capability to maintain a normal output for a period of time. According to the degree of voltage drop, a certain reactive power can be supplied to the power grid to support the power grid to return to a normal state. The EAC-4Q-GS series provides hardware and software support for low-voltage/zero-voltage ride-through testing of distributed power generation equipment (sequence mode establishes ride-through conditions).

IEC 62116-2008 Test [1]

EAC-4Q-GS series with -62116 option integrates power grid simulator and AC electronic load for anti-island testing. During operation, the user does not need to calculate and set the specific values of R, l and C, only needs to directly set the test parameters such as QL, PAC and QAC according to the test standard IEC 62116-2008, and the power system will display the equivalent R, L and C setting values.

Re-generative AC Load [2]

Constant current CC and constant power CP modes are available to adjust load current or power, phase angle can be set from 90°to -90° simulating the voltage and current conditions under inductive and capacitive loads. The rectifier mode can be used to simulate non-linear loads, CF parameters can be set through the interface.
EAC-4Q-GS can be calibrated for source mode or load mode. The voltage and current accuracy will be out of specification if works in un-calibrated mode. For example, if GS is calibrated for source mode, while used as load, the accuracy will NOT be as good as the output specification.

[1] In old versions, the option named -RLC. This option is different from setting R, L, C load, so it is renamed to -62116.

[2] In old versions, -LD included the function to set the R, L, and C values independently. Since this function cannot be provided with other functions at the same time, this function has been deleted.

Model Configuration

EAC-4Q-GS	AAA	-BBB	-CCC	-DDD	/EEE
Series Models	Power, kVA	Voltage(L-N), V	Current(per phase), A	Option	Input configuration

Options

-232	RS232 program interface
-ATI	Analog control interface
-LD	Regenerative AC load function
-62116	Hardware＆Software for IEC 62116-2008 test
-DC	Extend output frequency to DC-100Hz
-1P	Add single phase output
-MS	Master-Slave interface

AC Input Configuration

3 x 208 V (L-L) ±10 %

3 x 230 V (L-L) ±10 %

3 x 380 V (L-L) ±10 %

3 x 400 V (L-L) ±10 %

3 x 480 V (L-L) ±10 %

Specification

Model	GS 30	GS 60	GS 120	GS 250	GS 500
Input Voltage	3P+N+PE, 380 VLL ±10 %				
Frequency	47 – 63 Hz				
Efficiency	≥90 %				
Power Factor	0.95				
Output Power	30kVA	60kVA	120kVA	250kVA	500kVA
Output Voltage Range	300V L-N（std）				
Voltage Resolution	0.1V				
Voltage Accuracy	0.5%FS				
THD	<1% （Resistive Load）				
Load Regulation	0.2%FS				
Line Regulation	0.1%FS				
Output Current Range	46A/ph	91A/ph	182A/ph	379A/ph	758A/ph
Current Resolution	0.1A				
Current Accuracy	0.3%FS				
Frequency range	30~100Hz				
Frequency Resolution	0.01Hz				
Frequency Accuracy	±0.05%FS				
Phase output	Phase B/C relative to phase A, 0.0~360.0°				
Phase Accuracy	<1.2° (@50 Hz)				
Harmonic Generation	Up to 40th				
Protection	OVP, OCP, OTP				
Cooling	Forced Air Cooling				
Regulatory	CE Conformity				
Temperature	Operating: 0~40°C Storage: -20~85°C				
Operating Humidity	20-90%RH (None Condensing)				
Measurement	List of all type measurements done				
Power Accuracy	0.5%FS				
AC Voltage Accuracy	0.5%FS				
AC Current Accuracy	0.3%FS				
Frequency Accuracy	0.05%FS				
Phase Accuracy	<1.2° (@50 Hz)				
Dimension (W*D*H mm)	800*800*1900	800*800*2100	2*800*800*2200	2*900*900*2200	4*900*900*2200
Weight (kg)	<800	<1000	<1700	<2500	<5000

Note: 1. Specifications are subject to change without notice.

2. Specifications are warranted over an ambient temperature range of 25°± 5° C.

3. Customized power/voltage/current output is available.