# ET System EAC-4Q-GS

Bi-directional AC Source

- Single system from 30kVA to 500kVA and parallel up to 2MVA and above
- Bi-directional current flow, regenerative up to 100% of rated output power back to grid
- Galvanically isolated from the grid
- Independent three-phase output
- Voltage and frequency sequencing programming via GUI, slew rate can be programmed
- Up to 40th harmonic waveform generation
- Voltage drop simulation (LVRT for inverter test)
- ON and OFF output phase angle can be programmed
- Current limit can be programmed, output can be shorted for short circuit test
- Triger out, TTL signal output for voltage or frequency change
- LAN/RS485 interfaces (standard), RS232/Analog control interfaces (optional)
- Can be used for anti-islanding test in accordance with IEC62116-2008 (-62116 option)
- Regenerative AC load function (-LD option)
- Extend output frequency to DC (-DC option)
- Add single phase output (-1P option)
- Standard support 4 master-slave control(-MS option)
- TFT touch screen based on Windows system, can run full functional software as PC
- Emergency stop button in the front panel
- Indicator lights for operating status
- Remote sense
- Output contactor
- Switchable insulation monitoring
- Mod-bus/SCPI protocols
- CE conformity
- Customized voltage, current and power ranges
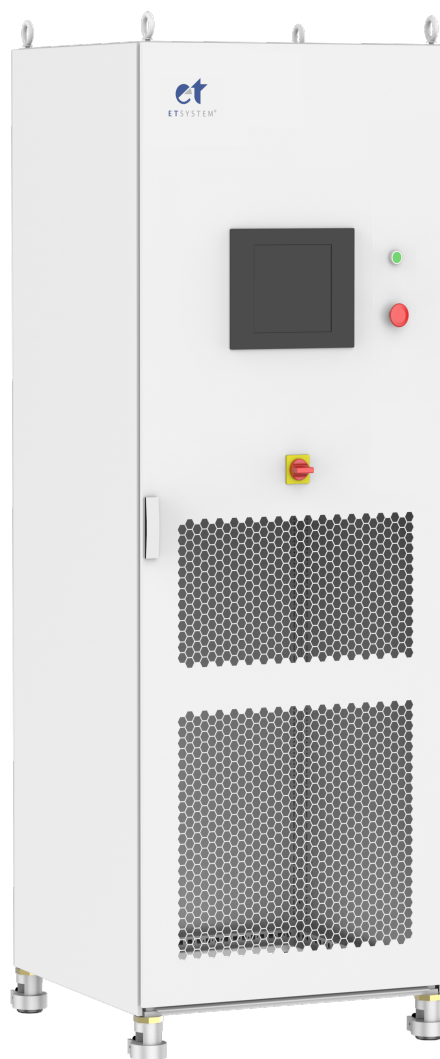
■ Re-generative AC Load

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.

■ Extends to DC output -DC option

EAC-4Q-GS can also be DC output, the frequency range will be DC~100Hz, in both source and sink modes. The DC voltage range is 420V (std), and accuracy is 0.2%FS. The output mode can be AC, DC, AC+DC.

■ IEC 62116-2008 Test

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.

■ Sequence Mode

Provides standard software that supports voltage and frequency sequence programming.
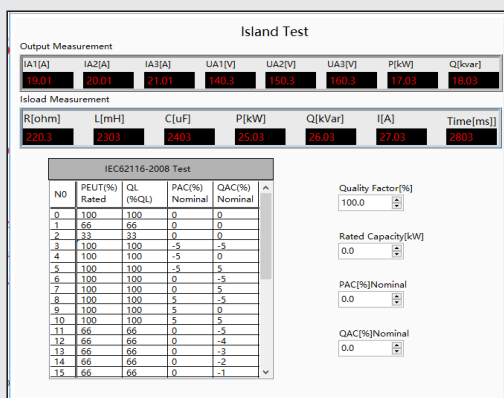
Can be used to simulate grid voltage variations, drops, surges and sags.

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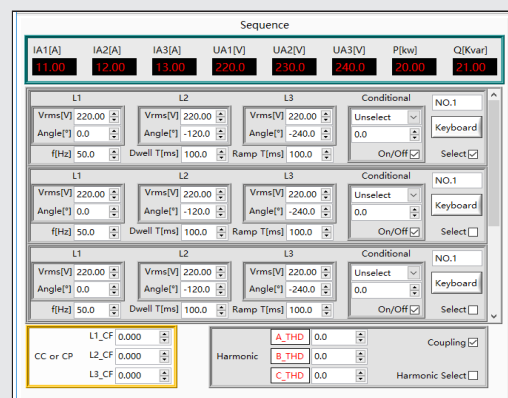
The voltage drop depth and time can be programmed.

ON and OFF output phase angle can be programmed.

Independent three-phase programming.

Anti-islanding Test


Sequence Mode

■ Constant Power Output

Highly customizable Output Power, Voltage and Current is available with the EAC-4Q-GS Series. Please consult us with your required specification for a customized offer. The customization is basically standard with all our units. We provide with every quote the customized specification.
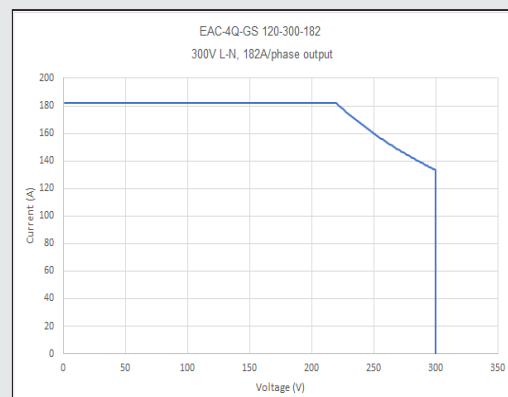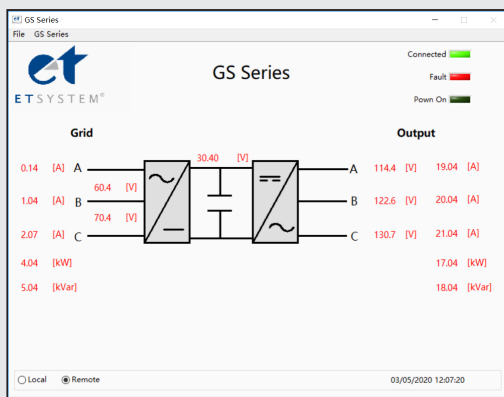
■ Graphical User Interface

GUI software is included, and is installed in front touch panel, which uses windows OS. The software provides following functions:

- Output settings and limits
- Sequence output settings
- Generate harmonic and inter-harmonic waveforms.
- Display measurements: voltage, current, power, etc.
- Capture, display and save output voltage and current waveforms.
- Display power source faults
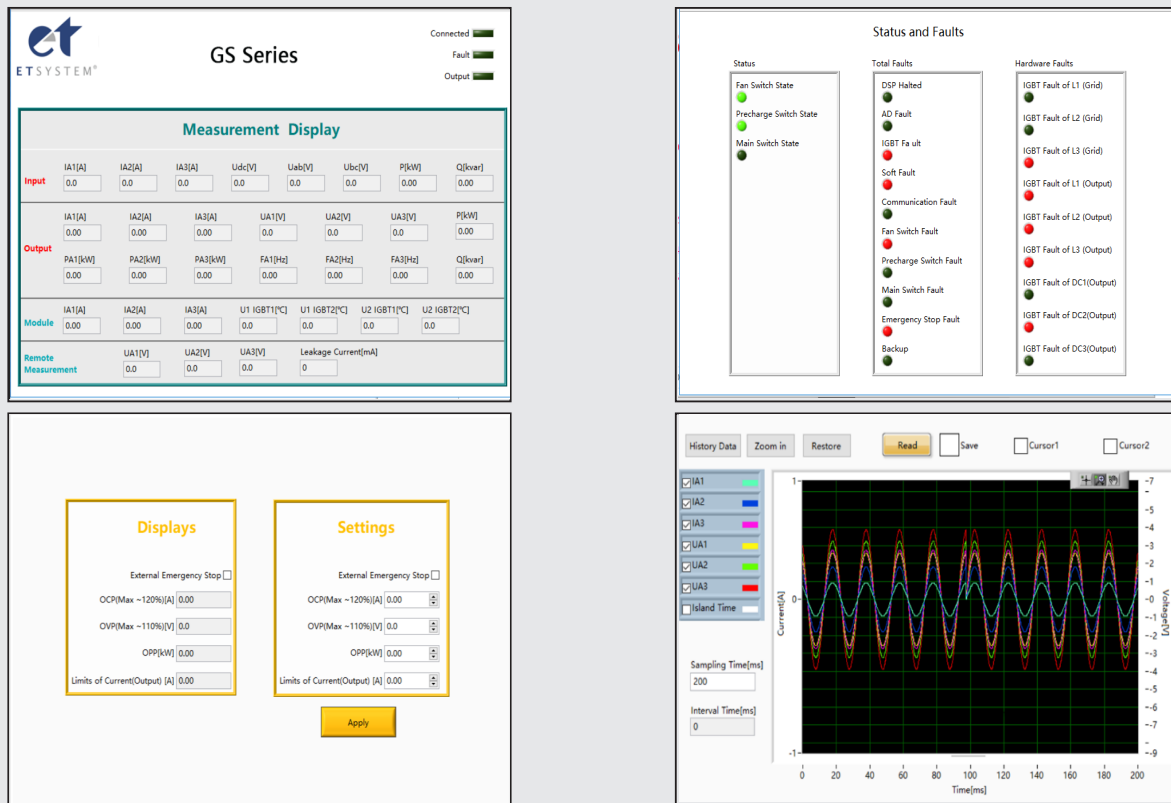

■ **Harmonic Programming**

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).

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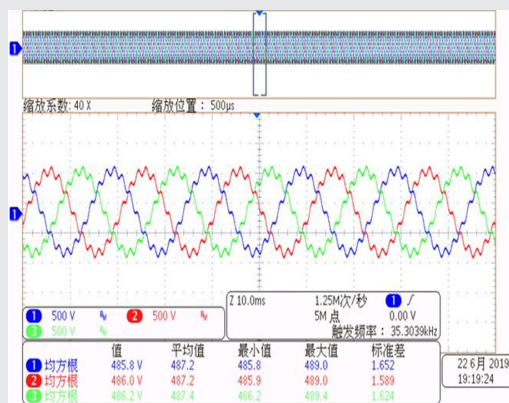
Harmonic
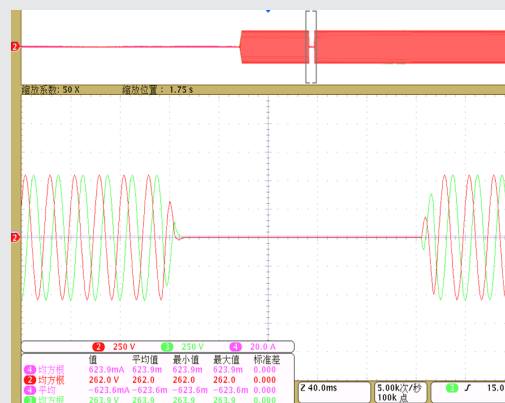
LVRT

■ Highly Customizable

The EAC-4Q-GS Series is highly customizable in Power, Voltage, Current and Frequency range to optimize to your application and budget. The source can be also configured with constant output characteristics defined by your application.

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.

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