

## GF303

### Program-Controlled Three Phase Standard Power Source

*GF303 Program-controlled three phase AC standard power source is a high precision three phase AC standard current source and AC standard voltage source. According to DL/T 2213.1-2021 AC standard power source Part 1:General requirements. It is suitable for power department, metrology department, quality control department, research units, institutions of higher learning, electric energy meter, power distribution terminals, power supply management, load control, power quality, reactive power compensation device and the production of enterprise etc.*

### Application

1. Universities;
2. Energy meter R & D;
3. Energy meter factory;
4. Electrical testing center;
5. AMI Research institutes;
6. National Metrology center;
7. Panel meter manufacturers;
8. Power meter manufacturers;
9. Digital meter manufacturers;
10. Pointer meter manufacturers;
11. Railway electrical department;
12. ISO17025 Electrical laboratory;
13. Measurement and control device factory;
14. Electricity power bureau & power company;
15. Power engineering commissioning company;
16. Manufacturer of reactive power compensation device;
17. Electrical Department of industrial and mining enterprises;



### Features

1. To set up and take the load regulation of voltage, current, phase angle, frequency and power factor;
2. It can be used as AC current source, AC voltage source or standard power source;
3. Setting 2-63 times of the amplitude and phase harmonics, and it can be added to the base wave in every harmonic output;
4. Frequency value is adjustable (AB and phase C) from 40Hz to 65Hz;
5. 40Hz to 400Hz version optional;
6. Voltage, current output range widely, big power, high stability;
7. Waveform distortion degree is small;

8. Strong with load ability, but it can take capacitive, sensibility, resistance of composite type load or load and load regulation is higher than 0.01%;
9. Apply the 32 bit MPU + DSP + FPGA, powerful flexible;
10. Using hardware PID, fast response, the change of load will not cause output volatility;
11. Industrial frequency waves as high as 50000 sampling points per cycle, signal output without filter, precise output waveform, the harmonic output precision, harmonic distortion degree is small;
12. Range switching automatically;
13. Using software self-calibration, simple operation, stable and reliable;
14. Have big screen, 8.4 inch TFT LCD display, Chinese or English interface, operating simply;
15. Have perfect over-current, over-voltage, heat, a shorts-and-opens, overload protection, failure detection automatically;
16. With RS232 interface, and PC connection;
17. Meeting ISO17025 electrical laboratory standard;
18. Taking place machine software, it can be output through the PC software program.

## Parameters

Electrical parameters	
Accuracy class	0.05%, 0.1%
Power supply	Single phase AC 85V-265V, 50/60 Hz
AC Voltage output	
Range (U1, U2, U3 phase)	57.7V/100V/220V/380V, switch automatically (max 420V)
Adjustment resolution	0.01%, 0.1%, 1%, 10%,
Accuracy	0.05% RG
Stability	0.005% RG/1min
Distortion degree	better than 0.1% (not capacitive load)
Load Capacity	25VA
Full load regulation rate	Less than 0.01% RG
Full load regulation time	Less than 1mS
Temperature drift	8 PPM / °C
Long-term stability	60 PPM/year
AC Current output	
Range (I1, I2, I3 phase)	0.1/0.25A/0.5A/1A/5A/10A/20A, switch automatically
Adjustment resolution	0.01%, 0.1%, 1%, 10%,
Accuracy	0.05% RG
Stability	0.005% RG/1min
Distortion degree	better than 0.1% (not capacitive load)
Load capacity	25VA
Full load regulation rate	Less than 0.01% RG
Full load regulation time	Less than 1mS
Temperature drift	8 PPM/°C
Long-term stability	60 PPM/year

<b>Electrical parameters- continued</b>	
<b>Power output</b>	
Active power accuracy	0.05%
Reactive power accuracy	0.1%
Stability	0.005% RG/1min
<b>Phase</b>	
Range	0°-359.99°
Adjustment resolution	0.01°, 0.1°, 1°, 10°
Accuracy	0.03° or 0.05°
<b>Power factor</b>	
Adjusting range	-1.00000 to 0 to +1.00000
Resolution	0.0001
Accuracy	0.0005
<b>Frequency</b>	
Range	40-65Hz or 40-400Hz (option)
Adjustment resolution	0.001Hz, 0.01Hz, 0.1Hz, 1Hz
Accuracy	0.002Hz
Temperature drift	0.5PPM/°C
Long-term stability	4 PPM/year
<b>Harmonic</b>	
Harmonic times	2-63
Adjustment resolution	0.1% (compared with fundamental wave)
<b>Harmonic content (compared with fundamental wave)</b>	
Voltage	≤40%
Current	≤40%
Phase	0°-360°
<b>Capacitive load capacity</b>	
0 - 280 V	1uF
280 - 420 V	0.6uF
<b>Functions</b>	
Communication Port	RS232
Programmable controlled	Yes
Harmonic	Yes
Wiring mode	3P4W, 3P3W, 1P2W
Key	40pcs
LCD	8.4 inch TFT color touch display
PC control software	Optional
<b>Standard</b>	
Standard	IEC 62053-21,22, 23; IEC 60736; ANSI C12.20-2002; JIG 597-2005; JIG596-2012; JIG 1085-2013; JJF 68-2019; DL/T 826-2002; DL/T 1478-2015; DL/T 448-2016; JIG 51-1999; DL/T 2213.1-2021; GJB J 5857-2006; JIG6-2011; JIG70-2015;

Electrical parameters- continued	
<b>Safety</b>	
Isolation protection	IEC 61010-1:2001
Measurement Category	300 V CAT III, 600 V CAT II
Degree of protection	IP20
Declaration of conformity	CE & CNAS certified
Mechanical parameters	
Dimensions (W×D×H) (mm)	450x380x160
Weight (kg)	18
Environmental conditions	
Working temperature	0°C to 50°C
Storage conditions	-30°C to 60°C
Relative humidity	≤85%

## Selection Guide

No.	Accuracy	Voltage range	Current range	Weight	Remark
303061	0.1%	0-300V	0-6A	12KG	
3030605	0.05%	0-300V	0-6A	12KG	
303121	0.1%	0-420V	0-12A	13.5KG	
3031205	0.05%	0-420V	0-12A	13.5KG	
303201	0.1%	0-420V	0-20A	18KG	
3032005	0.05%	0-420V	0-20A	18KG	
303H061	0.1%	0-300V	0-6A	15KG	XP system
303H0605	0.05%	0-300V	0-6A	15KG	XP system
303H121	0.1%	0-420V	0-12A	18KG	XP system
303H1205	0.05%	0-420V	0-12A	18KG	XP system
303H201	0.1%	0-420V	0-20A	20KG	XP system
303H2005	0.05%	0-420V	0-20A	20KG	XP system