

GF303D

Portable Three Phase Ac Voltage And Current Source

The GF303D electrical three phase precision power source can also be used to type test 0.1% to 2% energy meters. Choose the GF303D electrical three phase power source when you need the highest accuracy available for calibrating secondary standard meters, energy revenue meters and type test applications. The model GF303D three phase power source is electric AC voltage, current and power calibrator for calibration of power meters, power transducers, power quality analyzer, current meter, voltage meter and generally all kinds of power measuring devices. AC voltage, current, power functions have calibrated phase shift in frequency range from 40 Hz to 70Hz with resolution as good as 0.001 Hz. It have three channel voltage and three phase current independent output, any programmable setting, low phase shift, high stability 0.01%/1min, as standard three phase voltage source, three phase current source, three phase power source and harmonic source, is a high precision portable calibration tool in electrical laboratory. It can set 3P4W, 3P3W, 1P3W, 1P2W type, forward and reverse outputs, active power and reactive power output.

Features

1. Phase shift from 0-360.000°;
2. Range switching automatically;
3. Programmable by professional users;
4. High accuracy 0.02%, 0.05%, 0.1% optional;
5. 120A can output continuously for a long time;
6. With RS232 interface, PC control software optional;
7. Apply the 32bit MPU + DSP + CPLD, powerful flexible;
8. Display of vector diagram, Symbols according to IEC387;
9. Three channel voltage and three channel current output;
10. Software calibration, simple operation, stable and reliable;
11. As a high-power current source, voltage source and power source;
12. Voltage & current output range widely from 0-120A/0-600V/40-70HZ;
13. High-power power source, high stability, waveform distortion degree is small;
14. Big touch screen, 7-inch TFT color LCD display, English menu, operating simply;
15. Hardware PID, fast response, the change of load will not cause output volatility;
16. Setting up and take the load regulation of voltage, current, phase angle, frequency and power factor etc;
17. Over-current, over-voltage, over-heat, shorts-and-opens, overload protection, failure detection automatically;
18. Setting 2-63times harmonics of amplitude and phase, and it can be added to the base wave in every harmonic output;
19. Strong with load ability, capacitive load & resistance of composite type load or load and load regulation is higher than 0.01%;
20. Industrial frequency waves as high as 5000points/cycle, signal output without filter, precise output waveform, the harmonic output precision, harmonic distortion degree is small;



Application

1. Universities;
2. Energy meter R & D;
3. AMI Research institutes;
4. Electrical testing center;
5. Transducer manufacturers;
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. Phase angle meter manufacturers;
14. Measurement and control device factory;
15. Electricity power bureau & power company;
16. Power engineering commissioning company;
17. Manufacturer of reactive power compensation device;
18. Electrical Department of industrial and mining enterprises;

Parameters

Electrical parameters	
Accuracy class	0.02%, 0.05%, 0.1%
Power supply	Single phase AC 85-265 V, frequency 50/60 Hz
AC Voltage output	
Range (U1, U2, U3 phase)	57.7V/100V/220V/380V; range switch automatically(Max
Adjust fineness	0.01% RG
Accuracy	0.02% RG, 0.05% RG
Stability	<0.01% RG/120s
Distortion degree	<0.3% (not capacitive load)
Output power	25VA, 50VA or 100VA
Full load regulation rate	0.01% RG
Full load regulation time	Less than 1mS
Long-term stability	± 60 PPM/year
AC Current output	
Range (I1, I2, I3 phase)	0.2A, 1A, 5A, 20A, 100A; range switch automatically
Adjustment range	(0-120)%RG
Adjust fineness	0.01% RG
Accuracy	0.02% RG, 0.05% RG
Stability	<0.01% RG/120s
Distortion degree	<0.3% (not capacitive load)
Output power	50VA, 100VA or 200VA
Full load regulation rate	0.01% RG
Full load regulation time	Less than 1mS
Long-term stability	± 60 PPM/year
Power output	
Accuracy	0.02% RG, 0.05% RG
Stability	0.01% RG/120s

Electrical parameters - continued
Phase angle

Adjusting range	0.000°-359.999°
Output adjustment fineness	10, 1, 0.1, 0.01 as optional.
Resolution	0.001°
Accuracy	0.02° or 0.05°

Power factor

Adjusting range	-1 ~ 0 ~ +1
Resolution	0.0001
Accuracy	0.0005

Frequency

Adjusting range	40.000-70.000 Hz
Output adjustment fineness	5Hz, 1Hz, 0.1Hz, 0.01Hz as optional.
Resolution	0.001 Hz
Accuracy	0.002Hz
Temperature drift	±0.5 PPM/°C
Long-term stability	±4 PPM/year

Harmonic accuracy

Harmonic number	2-63times
Harmonic content	0-40%
Harmonic phase	0°-359.99°
Harmonic phase accuracy	<0.01°
Harmonic set accuracy	0.1% (relative to the base wave ratings)

Functions

Communication Port	RS232
Programmable controlled	Yes
Harmonic	Yes
Wiring mode	3P4W, 3P3W, 1P3W, 1P2W
Key	30pcs
LCD	7 inch TFT color touch display
PC control software	Optional

Standard

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;
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Electrical parameters - continued
Safety

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 (WxDxH) (mm)	500x600x175
Weight (kg)	12, 15, 18, 20, 25

Environmental conditions

Working temperature	0°C to 50°C
Storage condition	-30°C to -60°C
Relative humidity	≤ 85%

Selection Guide

NO.	Accuracy	Voltage range	Current Range	Weight
303D1201	0.1%	0-500V	0-120A	25KG
303D12005	0.05%	0-500V	0-120A	25KG
303D12002	0.02%	0-500V	0-120A	25KG
303D501	0.1%	0-500V	0-50A	20KG
303D5005	0.05%	0-500V	0-50A	20KG
303D5002	0.02%	0-500V	0-50A	20KG
303D241	0.1%	0-500V	0-24A	18KG
303D2405	0.05%	0-500V	0-24A	18KG
303D2402	0.02%	0-500V	0-24A	18KG
303D121	0.1%	0-380V	0-12A	15KG
303D1205	0.05%	0-380V	0-12A	15KG
303D1202	0.02%	0-380V	0-12A	15KG
303D61	0.1%	0-380V	0-6A	12KG
303D605	0.05%	0-380V	0-6A	12KG
303D602	0.02%	0-380V	0-6A	12KG