

GF303DT

Electrical Three Phase Programmable Power Source

The GF303DT programmable three phase electrical power source is one economical three phase current source and voltage source, it can also be used to test class 1 to 2 energy meters. Choose the GF303DT electrical programmable power source when you need the low investment amount for calibrating secondary digital electrical meters, energy revenue meters and type test applications. The model GF303DT three phase power source is electric AC voltage, current and power calibrator for calibration of power meters, Ac power transducers, ammeter, voltmeter, phase angle meter, power factor 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 0.01 Hz. It have three channel current and three channel voltage independent output, any programmable setting, low phase shift, stability 0.05%/1min, and as standard three phase voltage source, three phase current source and three phase power source , is a affordable portable calibration tool in electrical laboratory. It has been widely used in more than 100 countries around the world, including electricity meter manufacturers, electrical measurement equipment R&D enterprises, power engineering service companies, electricity power utilities, electrical laboratory etc.

Features

1. Range switching automatically;
2. Waveform distortion degree is small;
3. Unique power amplification technology;
4. High-power power source, high stability;
5. Programmable output by professional users;
6. 1P2W, 1P3W, 3P3W, 3P4W testing type setting;
7. With RS232 interface, PC control Software optional;
8. Apply the 32 bit MPU + DSP + CPLD, powerful flexible;
9. Power supply widely single phase AC 85-265V 50/60Hz;
10. Three channel voltage and three channel current output;
11. Software calibration, operation simply, stable and reliable;
12. As a high-power current source, voltage source and power source;
13. 7-inch TFT color touch LCD display, English menu, operating simply;
14. Display of vector diagram, all parameters are displayed on one screen;
15. Over-current, over-voltage, over-heat, shorts-and-opens, overload protection;
16. Voltage & current output range widely from 0-120A/0-500V/40-70HZ/0-360.0°;
17. Hardware PID, fast response, the change of load will not cause output volatility;
18. Setting up and take the load regulation of voltage, current, phase shift, frequency and power factor etc;
19. Strong with load ability, capacitive load & resistance of composite type load or load and load regulation is higher than 0.01%;



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.

Parameters

Electrical parameters	
Accuracy class	0.2%, 0.5%, 1%
Power supply	Single phase AC 85-265 V, frequency 50/60 Hz
AC Voltage output	
Range (U1, U2, U3 phase)	3×(0-300V), 3×(0-380V), 3×(0-500V)
Adjust fineness	0.01% RG
Accuracy	0.2% RG, 0.5% RG
Stability	<0.05% RG/120s
Distortion degree	<0.5% (not capacitive load)
Output power	15VA, 25VA or 50VA
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)	3×(0-6A), 3×(0-12A), 3×(0-24A), 3×(0-50A), 3×(0-120A)
Adjustment range	(0-120)%RG
Adjust fineness	0.01% RG
Accuracy	0.2% RG, 0.5% RG
Stability	<0.05% RG/120s
Distortion degree	<0.5% (not capacitive load)
Output power	20VA, 50VA or 100VA
Full load regulation rate	0.01% RG
Full load regulation time	Less than 1mS
Long-term stability	± 60 PPM/year

Electrical parameters - continued
Power output

Accuracy	0.2% RG, 0.5% RG, 1%RG
Stability	0.05% RG/120s

Phase angle

Adjusting range	0.000°-359.999°
Output adjustment fineness	10, 1, 0.1, 0.01 as optional.
Resolution	0.1°
Accuracy	0.2°, 0.5°, 1°

Power factor

Adjusting range	-1 ~ 0 ~ +1
Resolution	0.001
Accuracy	0.005

Frequency

Adjusting range	40.00-70.00 Hz
Output adjustment fineness	5Hz, 1Hz, 0.1Hz, 0.01Hz as optional.
Resolution	0.01 Hz
Accuracy	0.02Hz
Temperature drift	± 0.5 PPM/°C
Long-term stability	± 4 PPM/year

Functions

Communication Port	RS232
Programmable controlled output	Yes
Key	30pcs
Voltage & current amplitude setting(Range)	0.01%, 0.1%, 1%, 10%
Testing point	0.5C, 0.5L, 0.8C, 0.8L, 1
Testing type	1P2W, 1P3W, 3P3W, 3P4W
LCD	7 inch TFT color touch display
PC control software	Optional

Standard

Standard	IEC 62053-21,22, 23; IEC 60736; ANSI C12.20-2002; JJG 597-2005; JJG596-2012; JJG 1085-2013; JJF 68-2019; DL/T826-2002; DL/T 1478-2015; DL/T 448-2016; JJG 51-1999; DL/T 2213.1-2021; GJB J 5857-2006; JJG6-2011; JJG70-2015;
----------	--

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 (W×D×H) (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
303DT120-0.2	0.2%	0-500V	0-120A	25KG
303DT120-0.5	0.5%	0-500V	0-120A	25KG
303DT120-1	1%	0-500V	0-120A	25KG
303DT50-0.2	0.2%	0-500V	0-50A	20KG
303DT50-0.5	0.5%	0-500V	0-50A	20KG
303DT50-1	1%	0-500V	0-50A	20KG
303DT24-0.2	0.2%	0-500V	0-24A	18KG
303DT2405	0.05%	0-500V	0-24A	18KG
303DT24-1	1%	0-500V	0-24A	18KG
303DT12-0.2	0.2%	0-500V	0-12A	15KG
303DT12-0.5	0.5%	0-500V	0-12A	15KG
303DT12-1	1%	0-500V	0-12A	15KG
303DT6-0.2	0.2%	0-500V	0-6A	12KG
303DT6-0.5	0.5%	0-500V	0-6A	12KG
303DT6-1	1%	0-500V	0-6A	12KG