GF302

MULTIFUNCTION THREE PHASE PORTABLE POWER & ENERGY CALIBRATOR

GF302 portable power& energy calibrator is suitable for power plant and power grid companies for the following function: measuring and testing department and instrumentation classes, national levels measuring and testing institutions, railway, petroleum, chemical industry and other large industrial and mining enterprises, scientific research units, etc. The core technology function with digital signal processor (DSP) and 16 high-speed digital converters composed of high precision work frequency communication terminal. The signal source is DSP and 16 high-speed digital-to-analog converters, it can control the sine wave and distortion wave signal source. It can be used as a concentration electrical laboratory.

Application

1. Universities;
2. Power plant;
3. Research institutes;
4. Electrical testing center;
5. Transducer manufacturers;
6. Panel meter manufacturers;
7. Power meter manufacturers;
8. Digital meter manufacturers;
9. Pointer meter manufacturers;
10. Railway electrical department;
11. ISO17025 Electrical laboratory;
12. Electricity power bureau & power company;
13. Power engineering commissioning company;
14. Electrical Department of industrial and mining enterprises;

Functions & Features

1. All kinds of electric measurement transducer can be tested, including AC/DC voltage transducer, AC/DC current transducer, frequency transducer, phase transducer, single/ three-phase AC active power transducer, three-phase reactive power transducers;

2. 6.4 inch big screen color display and English interface;
3. Testing AC sample device, RTU & measurement device error;
4. With USB port, it can connect computer for data management or controlled by PC;
5. For the software calibration, you don't need to open the case, it's stable and reliable;
6. With automatic failure detection function, shows fault part, the convenience users check line;
7. Test single-phase, three-phase electronic, mechanical watt-hour meter or energy meter/ kWh meter error;
8. As one voltage source, current source and power source with high precision and high stability standard resource;
9. Voltage output terminal with short circuit, current output terminal open protection and power amplifier overheating protection function;
10. The built-in electric measurement transducer, electric measurement instrument and meter instructions of verification program, fully automatic or semi-automatic for verification, and save 10000 group test data;
11. Check all kinds of electric measurement indicating meter, including AC/DC voltmeter, AC/DC ammeter, frequency meter, phase angle meter, single & three-phase ac active power meter, three-phase ac reactive power meter & synchronous meter etc;

Parameters

Electrical parameters	
Accuracy class	0.05%
Power supply	Single phase AC 220V±10% or 110V±10%, 50/60Hz
Communication port	USB, RS232
AC Voltage output	
Range(U1,U2,U3)	50V, 100V, 200V, 400V, 600V
Adjusting range	(0-120)% RG
Adjust fineness	0.005% RG, 0.01% RG, 0.1% RG, 1% RG, 10% RG
Accuracy	0.05% RG
Stability	0.01% / 1 min
Distortion	≤0.2% (non-capacitive load)
Load capacity	25VA
Output distortion degree	≤0.3% or (linear load)
AC Current output	
Range(I1,I2,I3)	0.5A, 1A, 2.5A, 5A, 10A, 20A
Adjusting range	(0-120)% RG
Adjust fineness	0.005% RG, 0.01% RG, 0.1% RG, 1% RG, 10% RG
Accuracy	0.05% RG
Stability	0.01%/1 min
Distortion	≤0.2% (non-capacitive load)

Electrical parameters - continued	
Load capacity	25VA
Output distortion degree	≤0.3% or (linear load)
AC Power output	
Accuracy	0.05% RG
Stability	0.01%/1min
Frequency	
Frequency range	45.000 - 65.000 Hz
Resolution	0.001 Hz
Accuracy	0.002 Hz
Power factor output	
Adjusting range	-1 ~ 0 ~ 1
Adjust fineness	0.0001
Accuracy	0.0005
Phase angle	
Scope	0°-359.99°
Resolution	0.01°
Accuracy	0.05°
Voltage/Current harmonic output	
Times	2-31st
Content	0-40%
Phase	0-359.999 degree
Configuration error	(10% RD + 0.1%), RD refers to the configuration value of harmonic contents
DC Voltage output	
Range	75mV, 75V, 150V, 300V, 500V, 1000V
Adjusting range	(0-120)% RG
Adjust fineness	0.005% RG, 0.01% RG, 0.1% RG, 1% RG, 10% RG
Accuracy	0.05% RG
Stability	0.01%/1min
Load capacity	25VA
DC Current output	
Range	0.5A, 1A, 2.5A, 5A, 10A, 20A
Adjusting range	(0-120)% RG
Adjust fineness	0.005% RG, 0.01% RG, 0.1% RG, 1% RG, 10% RG
Accuracy	0.05% RG
Stability	0.01%/1min
Load capacity	25VA

Electrical parameters - continued	
DC measurements	
DC voltage measurement range	0 to ±24V
DC current measurement range	0 to ±24mA
Measurement accuracy	0.01% RG
Watt-hour meter measuring the integrated error	
Active energy	0.05%
Reactive energy	0.1%
Standard	
Standard	JJG126-1995, JJG_597-2017, Q/GDW 1899-2013, DL/T1119-2009, DL/T630-1997, JJG124-2005; JJF1587-2016; IEC61010, IEC 61000, IEC 61326
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×H×D) (mm)	460x430x185
Weight (kg)	20
Environmental conditions	
Working temperature	0°C to 40°C
Storage conditions	-30°C to 60°C
Relative humidity	≤85%

(1) RG means range, the same as below;
(2) RD means the setted harmonic content, harmonic can be a single output, also multiple output.