GF3021

Portable Multifunction Instrument Calibrator

GF3021 Portable Multifunction Instrument 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.

Features

1. All kinds of electric measurement transducer can be checked, including AC/DC voltage transducer, AC/DC current transducer, frequency transducer, phase transducer, single/ three-phase AC active power transducer, and 3-phase reactive power transducers.
2. Check all kinds of electric measurement indicating meter, including AC/DC voltmeter, AC/DC ammeter, frequency meter, phase meter, single three-phase ac active power meter, three-phase ac reactive power meter, synchronous meter, etc.
3. Test single-phase, three-phase electronic, mechanical watt-hour meter or energy meter/ kWh meter error.
4. Calibrate AC sample device, RTU, measurement device error.
5. The built-in electric measurement transducer, electric measurement instrument and meter instructions of verification procedures, can fully automatic or semi-automatic for verification, and save 1000 group check data.
6. It can be used as voltage source, current source and power source with high precision, and it is a high stability standard resource.
7. 8-inch big screen color display and English interface.
8. For the software calibration, you don't need to open the case, it's stable and reliable.
9. Voltage output terminal with short circuit, current output terminal open protection and power amplifier overheating protection function.
10. With automatic failure detection function, shows fault part, the convenience users check line.
11. With USB port, it can connect computer for data management or controlled by PC.

Parameters

Electrical parameters	
Accuracy class	0.05%, 0.1%
Power supply	Single phase AC 220V±10% or 110V±10%, 50/60Hz
Communication port	USB, RS232, RS485, LAN
AC Voltage output	
Range(U1,U2,U3)	50V, 100V, 200V, 400V, 600V
Adjustment range	(0 - 120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Stability	0.01% /1min
Distortion	≤0.2% (non-capacitive load)
Max. output load	25VA for each phase
Accuracy	0.05% RG
AC Current output	
Range(I1,I2,I3)	0.5A, 1A, 2.5A, 5A, 10A, 20A
Adjustment range	(0 - 120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Stability	0.01% /1min
Distortion	≤0.2% (non-capacitive load)
Max. output load	25VA for each phase
Accuracy	0.05% RG
AC Power output	
Active output stability	0.01%RG/1min
Reactive output stability	0.02%RG/1min
Active accuracy	0.05% RG
Reactive accuracy	0.1% RG
Frequency output	
Adjustment range	45-65Hz
Adjustment resolution	1Hz, 0.1Hz, 0.01Hz and 0.001Hz
Resolution	0.001Hz
Accuracy	0.002Hz
Power factor output	
Adjustment range	-1 to 0 to +1
Adjustment resolution	0.0001
Resolution	0.0005
Phase output	
Adjustment range	0°-359.999°
Adjustment resolution	10°, 1°, 0.1°, 0.01°
Resolution	0.001°

Electrical parameters - continued	
Phase output	
Accuracy	0.05°
Harmonic configuration	
Times	2 to 31
Content	0-40%
Phase	0°-359.999°
Configuration error	(10% RD + 0.1%), RD refers to the configuration value of harmonic contents
DC Voltage output	
Range	75mV, 75 V, 150 V, 300 V, 500V, 1000 V
Adjustment range	(0-120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Stability	0.01% RG / 1 min
Distorting	≤0.2% (non-capacitive load)
Output load	25VA
Accuracy	0.05% RG
Ripple contents	≤1%
DC Current output	
Range	0.5 A,1A, 2.5 A, 5 A, 10A, 20 A
Adjustment range	(0-120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Stability	0.01% RG / 1min
Distortion	≤ 0.2% (non-capacitive load)
Output load	25VA
Accuracy	0.05% RG
Ripple contents	≤1%
Energy Error	
Active error	0.05% RG
Reactive error	0.1% RG
DC Input Voltage Measurement	
Range	0 to ±20V
Measurement range	(0-120)% RG
Accuracy	0.01% RG
Resolution	0.001% RG
DC Input Current Measurement	
Range	0-20mA
Measurement range	(0-120)% RG
Accuracy	0.01% RG

Electrical parameters - continued	
DC Input Current Measurement - continued	
Resolution	0.001% RG
Mechanical parameters	
Dimensions (W×H×D) (mm)	460x430x185
Weight (kg)	20
Environmental conditions	
Working temperature	0°C to 40°C
Relative humidity	≤85%