

GF6018A

Clamp Type Multimeter Calibrator

This GF6018A high precision multimeter calibrator is compliance with national verification regulation: JJG124-2005 "Ammeter, voltmeter, power meter and resistance meter verification rules" and related national standards. 0.05% single-phase standard AC/DC voltage and current source, can verify level 0.2 and the following AC/DC voltmeter, ammeter, frequency meter, resistance meter & clamp meter. The power source signals by using DSP and 16-bit high-speed A/D converters of controllable sine wave, the distorted wave signal source. It can as standard AC voltage and current source, also as standard DC voltage and current source. Multifunction calibrator GF6018A is designed as universal calibration tool for electrical calibration laboratories.

The GF6018A clamp type multimeter calibrator with RS-232 port, it can be connected with PC to control, become automatic verification system. It has precise interface and multi-functions including verification, storage and query. The GF6018A multimeter calibrator adopts color LCD screen, chart character display is clear, with high precision, stable and reliable, convenient operation and flexible characteristics. It fully meets ISO17025 laboratory standards and is a good ideal test equipment for electrical engineers.

Application

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



Features

1. The instrument stability 0.005%/min;
2. With 200A, 600A, 1000A calibration coil;
3. High precision 0.05% AC/DC voltage source & current source;
4. Voltage and current range 0-1050VAC/DC and 0-24A AC/0-22A DC;
5. It can be semi-automatic or manual inspection of analog multimeter, clamp type current meter;

6. Meeting ISO17025 electrical laboratory standard;
7. Because of light weight, this device is more suitable for field use;
8. With RS-232 interface, this calibrator is controlled by PC software(optional);
9. Automatic or manual inspection, and the results are processing and management;
10. Has a non-volatile memory, Storage 500groups of the test data, for access and upload;
11. With 1kHz, 5kHz, 10kHz, 50kHz, 100kHz, 200kHz, 1000kHz dot frequency square wave output;
12. Calibration all kinds of electric meter (voltmeter, ammeter, frequency meters, resistance meter) basic error;
13. Power amplifier working frequency range is 40Hz-1KHZ, has a good linear. Current amplifier is constant current source; voltage amplifier is constant voltage source;
14. The multi-product calibrator can be generated with 2-31 harmonic wave, harmonic number, order, amplitude and harmonic phase of fundamental wave can be programmed;

Parameters

Electrical parameters

Power supply	Single phase AC 220V±10% or 110V±10%, 50/60HzAC	
AC Voltage output		
range	200mV, 400mV, 2000mV, 4000mV, 20V, 100V, 200V, 500V, 1000V; max 1050V	
Range 20V-1000V	Accuracy	±(0.03%RD+0.02%FS)
	Stability	≤0.01% FS /60s
Range 200mV-4000mV	Accuracy	±(0.3%RD+0.2%FS)
	Stability	≤0.04% FS /60s
Load capacity	20VA	
Waveform distortion	≤0.3%	
Adjustable Range	0-120% FS (1000V not included)	
Fineness	5×10 ⁻⁵	
AC Current Output		
Range	2mA, 4mA, 20mA, 40mA, 0.2A, 0.5A, 2A, 5A, 10A, 20A; max 24A	
Range 0.2A-20A	Accuracy	±(0.03%RD+0.02%FS)
	Stability	≤0.01% FS /60s
Range 2mA-40mA	Accuracy	±(0.3%RD+0.2%FS)
	Stability	≤0.04% FS /60s
Load capacity	20VA	
Waveform distortion	≤0.3%	
Adjustable Range	0-120% FS	
Fineness	5×10 ⁻⁵	

Electrical parameters - continued
Frequency Output

Range	45-65Hz
Fineness	0.001Hz
Accuracy	0.002Hz

Harmonic Wave

Times	2-31
Extent	0-20%
Each harmonic phase fineness	0.01·N (N is harmonic order)

DC voltage output

Range	200mV, 400mV, 2000mV, 4000mV, 20V, 40V, 100V, 200V, 400V, 1000V; max 1050V
Load capacity	20W
Adjustable range	0-110% FS (1000V not included)
Adjustable fineness	5×10^{-5}
Stability	$\leq 0.01\% \text{ FS} / 60\text{s}$ (peak-peak value)
Accuracy	$\pm(0.03\% \text{RD} + 0.02\% \text{FS})$
Ripple wave	$\leq 1\% \text{ FS}$

DC current output

Range	20uA, 40uA, 200uA, 400uA, 2mA, 4mA, 20mA, 40mA, 0.2A, 1A, 2.5A, 5A, 10A, 20A; max 22A
Load capacity	20W
Adjustable Range	0-110% FS (1000V not included)
Adjustable Fineness	5×10^{-5}
Stability	$\leq 0.01\% \text{ FS} / 60\text{s}$ (peak-peak value)
Accuracy	$\pm(0.06\% \text{RD} + 0.04\% \text{FS})$
Ripple wave	$\leq 1\% \text{ FS}$

Resistance box

Range	10Ω, 20Ω, 50Ω, 100Ω, 200Ω, 500Ω, 1kΩ, 2kΩ, 5kΩ, 10 kΩ, 20kΩ, 50KΩ, 100kΩ, 200kΩ, 500kΩ, 1MΩ, 2MΩ, 5MΩ, 10MΩ, 20MΩ
Fineness	0.02%
Adjustable Range	0-100%FS
Accuracy	$\pm(0.3\% \text{RD} + 0.2\% \text{FS})$

Clamp meter range

200A	Accuracy	$\pm 0.2\%$
600A	Accuracy	$\pm 0.5\%$
1000A	Accuracy	$\pm 1\%$

Electrical parameters - continued
Dot frequency square wave output

Range	1kHz, 5kHz, 10kHz, 50kHz, 100kHz, 200kHz, 1000kHz
Square wave amplitude	4.5V
Setting accuracy	5×10^{-5}

Communication Port

Communication Port	RS232, USB
PC control software	Yes, Optional

Standard

Standard	JJG124-2005; JJF1587-2016; JJF 1075-2015; 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

Dimension (L×W×H) (mm)	440x360x160
Weight (kg)	12

Environmental conditions

Operating temperature	20°C±10°C
Storage conditions	-30°C to 60°C
Relative humidity	≤85%RH

(1) FS means range, the same as below;

(2) RD means the setted harmonic content, harmonic can be a single output, also multiple output.