GF6019D1

HIGH PRECISION DC POWER SOURCE FOR DC ENERGY METER

GF6019D1 high precision DC power source is a standard voltage and current source newly designed and developed by GFUVE GROUP. In order to meet the current requirement for DC energy meter verification in the market, it follows the international standards of DC energy meters, adopts the latest technology, and the main elements of the devices are all industrial-grade, which can support large current signals from 0 to 600 ADC, and the accuracy level is better than 0.05%; 0~1150V DC voltage output, the accuracy level is better than 0.05%; 0~5V DC voltage analog shunt output, the accuracy level is 0.05%, and supports the voltage and current output ripple superposition function, which can be used for the virtual load verification of the DC energy meter, the ripple interference test, or as a separate voltage standard source, current standard source, and DC power standard source.

The GF6019D1 DC power source adopts a 19-inch color TFT touch LCD screen, with a clear and simple interface, convenient operation and good visual effect. The core module adopts 32-bit high-speed DSP combined with adaptive Lagrangian interpolation algorithm to eliminate the hardware asynchronous error of DC ripple, and the waveform quantization adopts 32-bit dual modulation output technology to ensure high output accuracy. The device output has overcurrent and overheating protection, which is safe and reliable.

Features

1. Universities;
2. DC energy meter R & D;
3. Electrical testing center;
4. Transducer manufacturers;
5. Digital meter manufacturers;
6. Pointer meter manufacturers;
7. Railway electrical department;
8. ISO17025 Electrical laboratory;
9. DC panel meter manufacturers;
10. DC power meter manufacturers;
11. Electricity power bureau & power company;
12. National metrology and testing department;
13. Electrical Department of industrial and mining enterprises;

FEATURES

1. Support program by user;
2. DC current source and DC voltage source;
3. Testing EV DC charging pile;
4. Easy verification and analysis of DC meter;
5. DC power source integrated;
6. Adopting DSP+MCU processor technology;
7. Test by automatic or manual;
8. Testing all kinds of DC ammeter, DC voltmeter;
9. Wide range 0-600A/0-1150V;
10. Using software calibration, stable and reliable;
11. Start testing and creep testing;
12. Overload, short circuit, open circuit protection;
13. User friendly menu guided operation;
14. Testing all kinds of DC energy meter, DC power meter;
15. Built-in DC meter verification scheme;
16. Automatic operation without need of an external PC;
17. Recorder 10000 sets energy meter data;
18. 19 inch TFT touch screen, English display, easy to operate;
19. Multi-range, high precision 0.02%/0.05%;
20. Especially configured USB stick for storage of customer data;

Parameters

Electrical parameters	
Accuracy class	0.05%, 0.02%
Power supply	Single phase AC 220V±10% or 110 V±10%, 50/60 Hz
DC Voltage output	
Range	65V, 500V, 1000V; Small Signal: 4 mV≤Uo≤ 5 V
Adjustment range	(0-120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Accuracy	0.05% or 0.02%
Stability	0.01% RG / 1 min
Distortion degree	Better than 0.1% (not capacitive load)
Load Capacity	Max 50VA
Ripple	Frequency: 20~500Hz
Ripple contents	≤0.5%
Full load regulation rate	Less than 0.01% RG
Full load regulation time	Less than 10mS
Temperature drift	8 PPM/°C
Long-term stability	60 PPM/year
DC Current output	
Range	0.001A, 0.005A, 0.02A, 0.05A, 0.2A, 1A, 3A, 10A, 20A, 30A, 60A, 600A;
Adjustment range	(0-120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG

Electrical parameters - continued	
DC Current output - continued	
Accuracy	0.05% or 0.02%
Stability	0.01% RG/1 min
Distortion degree	Better than 0.1% (not capacitive load)
Load Capacity	max 1200VA
Ripple	Frequency: 20~600Hz
Ripple contents	≤1%
Full load regulation rate	Less than 0.01% RG
Full load regulation time	Less than 10mS
Temperature drift	8 PPM/°C
Long-term stability	60 PPM/year
DC Power output	
Accuracy	0.05%, 0.02%
Stability	0.01% RG / 1 min
Functions	
Communication Port	RS232, USB, 10/100M LAN
Programmable controlled	Yes
Key	19pcs
LCD	15 inch touch TFT color display
Energy accumulation	Optional
Energy pulse(input & output)	Optional
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; GB/T 33708-2017; JJG 842-2017; DL/T 1112-2017
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)	750x780x1250
Weight (kg)	150
Environmental conditions	
Operating temperature	-50°C to 50°C
Storage conditions	-30°C to 75°C
Relative humidity	≤85%