

GF111D

500A 1000V 0.02% DC Reference Energy Meter

The model GF111D high precision DC reference energy meter are used in electric power, metrology, military industry, manufacturing and scientific research institutes and other DC measurement fields or laboratories. Characteristic features of the GF111D are its wide measuring range, high accuracy and high tolerance to unwanted external influences. Its voltage range from 0 to 1200V, current range from 0 to 600A, DC reference standard of accuracy 0.02% or 0.01%. The GF111D DC reference standard offers high functionality combined with an excellent menu guided operation via built-in keyboards and colored 8 inch color touch LCD-display. It can automatically test DC energy meter error, energy accumulation, error of time of day. It have been used many by ISO17025 electrical lab in the world.

Functions

1. User friendly menu guided operation;
2. As high precision DC reference standard;
3. DC electric energy accumulation function;
4. Easy verification and analysis of DC meter;
5. Testing all kinds of DC ammeter, DC voltmeter;
6. Statistical U & I of maximum and minimum values;
7. Automatic operation without need of an external PC;
8. Testing all kinds of DC energy meter, DC power meter;



Features

1. 0-600A/0-1200V;
2. 8 inch TFT touch screen;
3. Accuracy 0.02% or 0.01%;
4. Using 24bit A/D sampling technology;
5. Recorder 10000 sets energy meter data;
6. Electrical isolation between U and I channels;
7. Programmable multi-plan for testing DC meter;
8. ISO17025 electrical metrology laboratory standard;

Parameters

Electrical parameters

Accuracy	0.05%, 0.02%, 0.01%
Power Supply	One Phase AC 180-265V, or 85-135V, frequency 50/60Hz.
Power consumption	20VA
DC Voltage Measurement	
Range	10mV, 100mV, 1V, 10V, 30V, 100V, 300V, 1000V (max
Accuracy	$\pm(0.012\%RD+0.008\%RG)$

Electrical parameters - continued
DC Current Measurement

Range	0.7mA, 3.5mA, 14mA, 35mA, 140mA, 700mA, 1A, 2A, 5A, 10A, 20A, 50A, 100A, 500A (max 600A)
Accuracy	$\pm(0.012\%RD+0.008\%RG)$

DC Power Measurement

Power accuracy	$\pm 0.02\%$, 0.01%
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DC Power Energy Measurement Error

power energy	$\pm 0.02\%$, 0.01%
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Power Pulse Output

Power Pulse Output	20KHz
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Power Pulse Input

Energy pulse input	20KHz
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Function

LCD Display	8 inch 800x600 touch TFT
Energy accumulation	Yes
Self-calibration	Yes
Data storage	Yes
Pulse input cable	Yes
Pulse output cable	Yes
Pulse optical sampler	Optional
PC software	Optional
Communication port	USB, RS232, 10/100M LAN

Standard

Standard	IEC 62053-21,22, 23, 41 Ed.1; IEC 60736; ANSI C12.20-2002; JIG-842-2017; JIG596-2012; JIG 1085-2013; JJF 68-2019;
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Safety

Isolation protection	IEC 61010-1:2001
Measurement Category	300 V CAT III, 600 V CAT II
Degree of protection	IP40
Declaration of conformity	CE & CNAS certified

Mechanical parameters

Dimensions (WxDxH) (mm)	400x440x290
Weight (kg)	12

Environmental conditions

Ambient temperature	-10°C to +40°C
Storage temperature	-20°C to +65°C
Relative humidity	10%-85%
Temperature coefficient	$\leq 0.0005\% / ^\circ\text{C}$
Influence of external fields	$\leq 0.05\% / \text{mT}$

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

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