

GF333

Multifunction Ac Dc Digital Meter Calibration Electrical Equipment

GF333 multifunction AC DC digital reference multimeter can be used as a calibration device standard meter in the laboratory, also as a testing calibrator in metrology testing center of grid corporation, power company and metrological department in power plant, national levels of metrological service, quality inspection departments, research institutes, tertiary institutions, industrial and mining enterprises, electric energy meter and electrical instrument production enterprises etc. The model GF333 high precision AC DC reference meter can test three phase ac voltage, current, phase angle, active power, reactive power, apparent power, energy, power factor, frequency and harmonic, also test DC voltage, DC current and DC power and transducer. The digital reference meter fully meet ISO17025 standard in the electrical laboratory.

Application

1. Power plant;
2. AMI design center;
3. Energy meter R & D;
4. Electrical laboratory;
5. Watt-hour meter factory;
6. Metrological service center;
7. Laboratories of power utilities;
8. ISO17025 electrical laboratory;
9. Electricity meter manufacturers;
10. Meter test bench integrated factory;
11. National Metrology and testing department;
12. Electricity power bureau & power company;
13. Electrical Department of industrial and mining enterprises;



Functions & Features

1. Transducer measurement;
2. Measure DC voltage and DC current;
3. Measure calibration device of the magnetic induction;
4. Measure calibration device of voltage, current, power stability;
5. Measure calibration device the standard deviation of estimate;
6. Measure the AC voltage, current 2-31 harmonic content and waveform distortion degree;
7. Measure the AC voltage, current, active power, reactive power, frequency, phase angle and power factor etc;
8. Measure active power energy error, reactive power energy error, the maximum output pulse frequency is to 2 MHz;
9. Measure the voltage of the calibration device three-phase symmetric degrees, the current of three three-phase symmetric degree;

10. High accuracy up to 0.02%;
11. Meet IEC60736 & IR46 & ANSI C12.20-2022 standard;
12. With RS232 interface, it can be controlled by PC operation;
13. Using 6.5 inch TFT color LCD screen, character display clear chart;
14. Measurement range widely from 0 to 1000V & 0 to 120A AC, 0 to 1000V & 0 to 36A DC;
15. Using the 32 bit DSP and 24 bit low power and high speed DAC consists of high accuracy AC collector;
16. Have the advantages of wide measuring range, high precision, stable and reliable operation, simple operation etc.

Parameters

Electrical parameters	
Accuracy class	0.02%, 0.05%
Power supply	AC 220 V \pm 10% or 110 V \pm 10%, 50/60Hz
Power consumption	<30VA
Warming-up time	<30min
Voltage measurement	
U1, U2, U3	6.25V, 12.5V, 25V, 50V, 100V, 200V, 400V, 800V (switch automatically), max 1000V
Range	(0-120%)RG
Resolution	0.01%RG
Accuracy	0.02%RD or 0.05%RD
Current measurement	
I1, I2, I3	0.25, 0.5, 1, 2.5, 5, 10, 25, 50, 100A (switch automatically)
Range	(0-120%)RG
Resolution	0.01%RG
Accuracy	0.02%RD or 0.05%RD
Power measurement	
Active accuracy	0.02%RD or 0.05%RD
Reactive accuracy	0.05%RD or 0.1%RD
Apparent accuracy	0.02%RD or 0.05%RD
Energy measurement	
Active accuracy	0.02%RD or 0.05%RD
Reactive accuracy	0.05%RD or 0.1%RD
Phase measurement	
Range	0.00°-359.99°
Resolution	0.001°
Accuracy	0.02° (voltage \geq 50V and current \geq 250mA)

Electrical parameters - continued
Frequency measurement

Range	45-65Hz
Resolution	0.001Hz
Accuracy	0.001Hz

Power Factor measurement

Range	-1.00000 ~ 0 ~ +1.00000
Resolution	0.0001
Accuracy	0.0005

Electric energy pulse output

Pulse constant range	1-2880000000
Output frequency of max. pulse	600 kHz
Load capacity	>2mA
Default pulse output frequency	10kHz-600kHz

Energy pulse Input

Input range of pulse constant	600-700000
Setting range of test pulse	1-999999999
Max. pulse receiving frequency	2MHz
Pulse input level	5V

Voltage/current harmonics measurement

Times	2-31
Error	0.05%
Distortion degree error	0.05%

Transducer measurement

DC voltage range	±1, ±5, ±10, ±20 V
Accuracy	0.01%
DC current range	±1, ±2.5, ±5, ±10, ±20mA
Accuracy	0.01%
Ripple error	1%

DC measurements (option)

DC voltage	50V, 100V, 200V, 400V, 800V (switch automatically), max 1
Range	(0 -120%) RG
Resolution	0.01% RG
Accuracy	0.02% RD
DC current	0.1A, 0.3A, 1A, 3A, 10A, 30 A (switch automatically)
Range	(0-120%) RG
Resolution	0.01% RG
Accuracy	0.02% RD

Electrical parameters - continued
Function

LCD Display	6.5 inch color display
Vector diagram	Yes
Waveform	Yes
Energy accumulation	Yes
Harmonics measurement	Yes
Distortion degree	Yes
Self-calibration	Yes
Data storage	Yes
Keys	Yes, 18pcs
PC software	Optional
Communication port	RS232

Standard

Standard	IEC 62053-21,22, 23; IEC 60736; IR46; ANSI C12.20-2022; JJG 597-2005; JJG596-2012; JJG 1085-2013; JJF 68-2019; DL/T 826-2002; DL/T 1478-2015; DL/T 448-2016
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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 (W×H×D) (mm)	440×360×160
Weight (kg)	10

Environmental conditions

Operating temperature	10°C to 30°C
Storage temperature	-20°C to 65°C
Relative humidity	≤85%
Influence of external fields	≤0.05 %/mT
Temperature coefficient	≤0.0005% /°C