GF333BM

MODULAR THREE PHASE POWER & ENERGY REFERENCE STANDARD

The model GF333BM three phase reference meter is designed for one modular three phase multi-function reference standard meter, test three phase energy meters and single phase electricity meters, work in the laboratory or meter test bench, convenient for secondary development and Application. It can be as one of the most versatile high precision reference instruments. It can measure three phase voltage, current, frequency, phase angle, active power, reactive power, apparent power, energy etc parameter, accuracy 0.02% and measurement range wide from 0 to 600V and 1ma to 160A. This modular reference meter has been used many in meter test bench.

Application

1. AMI design center;
2. Electrical laboratory;
3. Energy meter R & D;
4. Watt-hour meter factory;
5. Colleges and Universities;
6. Metrological service center;
7. Laboratories of power utilities;
8. Electricity meter manufacturers
9. Meter test bench integrated factory;
10. National Metrology and testing department;

Features

1. With RS232 port;
2. 2-128th Harmonic analysis function;
3. Vector diagram function;
4. Testing type: 3P4W, 3P3W, 1P2W, 1P3W;
5. Small size and light weight;
6. Internal pulse input port, testing meter's error directly;
7. High accuracy up to 0.02% ;
8. Wide testing range: voltage 0V-600V, current 1mA-160A;
9. Waveform display function;
10. Modular design, embedded in the energy meter test system;
11. Energy accumulating function;
12. Testing mode: active power, reactive power, apparent power;
13. Applied to energy meter test bench;
14. Wide range 0.005% precision current transformer technology;

Parameters

Electrical parameters	
Accuracy	0.05%, 0.04%, 0.02%
Voltage supply	220V±10% or 110V±10%, 50/60Hz
Power consumption	15VA
Voltage measurement	
Range	0V-600V
Error	±0.02% (40V-600V), ±0.05% (5V-40V)
Display range	0.000000V-600.0000V
Harmonic	2^{nd}-128^{st}
Current measurement	
Range	1mA-60A; 1mA-120A; 1mA-160A; 1mA-200A
Error	±0.02% (0.1A-240A), ±0.05% (1mA-0.1A)
Display range	1.000000mA-240.0000A
Harmonic	2^{nd}-128^{st}
Power measurement	
Active power	±0.02% (0.1A-240A) ±0.05% (0.01A-0.1A) ±0.1% (0.001A-0.01A)
Reactive power	±0.05% (0.1A-240A), ±0.1% (0.001A-0.1A)
Apparent power	±0.05% (0.1A-240A), ±0.1% (0.001A-0.1A)
Energy error	
Active energy	±0.02% (0.1A-240A) ±0.05% (0.01A-0.1A) ±0.1% (0.001A-0.01A)
Reactive energy	±0.05% (0.1A-240A), ±0.1% (0.001A-0.1A)
Apparent energy	±0.05% (0.1A-240A), ±0.1% (0.001A-0.1A)
Phase measurement	
Range	0°-360°
Resolution	0.005°
Error	±0.02°
Display range	0.0001°-359.999°
Frequency measurement	
Range	40-70Hz
Display range	40.0000-70.0000
Resolution	0.0005Hz
Accuracy	0.001Hz

Electrical parameters - continued	
Power Factor measurement	
Range	-1.00000 ~ 0 ~ +1.00000
Resolution	0.0001
Accuracy	0.0005
Energy pulse	
High frequency output(CH)	25000Hz
Low frequency output(CL)	5000Hz
Pulse ratio	1:1
Output level	5V
Input level	5V
Input frequency	Max. 1MHz
Communication port	
Communication port	RS232
Standard	
Standard	IEC 62053-21,22, 23; IEC 60736; ANSI C12.20-2002; JJG 597-2005; JJG596-2012; JJG 1085-2013; JJF 68-2019; DL/T 826-2002; DL/T 1478-2015; DL/T 448-2016
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×H×D) (mm)	280×200×85
Weight (kg)	5
Environmental conditions	
Ambient temperature	-10°C to 45°C
Storage temperature	-20°C to 65°C
Relative humidity	10%-85%
Influence of external fields	≤0.05 %/mT
Temperature coefficient	≤0.0005% /℃