GF312B

Portable Three Phase Energy Meter Calibrator with Printer

GF312B portable three phase energy meter calibrator with printer is used to calibrate three phase, single phase, active and reactive energy meters error. And it also can be used as voltage, current and power meter to measure AC parameters of three phase power line. It can measure wave distortion factor and 2nd to 64nd harmonic wave. GF312B calibrator is used for grid corporation of measurement and energy test center, metrological service of power supply bureau, national energy measurement of testing authorities.

Features

1. Smart scanning head;
2. 6.4 inch TFT color LCD;
3. Display vector diagram;
4. Measure CT variable ratio;
5. Display waveform of U and I;
6. Store and query measured data;
7. Calculation of make-up electricity;
8. Print the data of calibration on site;
9. Software automatic calibration technology;
10. In-built 0.01% wide-range current transformer;
11. Check the wiring error of the electricity meter;
12. Analyze and display content of harmonic of U and I;
13. Voltage and current synchronous sampling technology;
14. Optional 5A, 20A, 100A, 500A, 1000A, 2000A , 3000A current clamp;

Functions

1. Measure frequency of power line;
2. Testing the error of metering integrated device;
3. Measure I (current) of three phase or single phase;
4. Measure phase angle between voltage and current;
5. Measure U (voltage) of three phase or single phase;
6. Measure power factor of three phase or single phase;

7. Measure active power of three phase or single phase;
8. Measure reactive power of three phase or single phase;
9. Measure apparent power of three phase or single phase;
10. Measure harmonics of voltage and current from 2 to 64nd;
11. Calibrate three phase, single phase, active or reactive meter error;
12. Testing three phase active or reactive electricity energy meter error;

Parameters

Electrical parameters	
Accuracy	0.05%, 0.1%, 0.2%
Power supply	220V ± 10% or 110V ± 10%, 50/60Hz ± 2Hz
Test Voltage	
Range	0V-600V
Error	±0.05% (30V-600V) or ±0.02% (30V-600V) ±0.1% (0.1V-30V)
Harmonic	2^{nd}-64^{st}
Test Current	
Range (direct connection)	1mA-12A
Error (direct connection)	±0.05% (10mA-12A) ±0.1% (1mA-10mA)
Range (Clamp CT)	1mA-3000A
Clamp on CTs Optional	5A, 20A, 100A, 200A, 500A, 1000A, 2000A, 3000A
Error (Clamp CT)	±0.2% (100mA-3000A) ±0.5% (10mA-100mA)
Harmonic	2^{nd}-64^{st}
Power measure error	
Active power (direct connection)	±0.05% (0.01A-12A) ±0.1% (0.001A-0.01A)
Reactive power (direct connection)	±0.1% (0.01A-12A)
Energy measure error	
Active energy (direct connection)	±0.05% (0.01A-12A) ±0.1% (0.001A-0.01A)
Reactive energy (direct connection)	±0.1% (0.01A-12A)
Phase angle	
Range	0° ~ 360°
Resolution	0.01°
Error	±0.02°

Electrical parameters - continued	
Frequency	
Range	45Hz-65Hz
Resolution	0.001Hz
Accuracy	0.002Hz
Power factor	
Range	-1 ~ 0 ~ 1
Resolution	0.0001
Error	0. 0005
Pulse output	
Energy constant	180000imp/kWh, 1800imp/kWh, 18imp/kWh
Pulse ratio	1:1
Output level	5V
Pulse input	
Input channel	2
Input level	5-24V
Input frequency	Max. 2MHz
Display	
Resolution	6.4”TFT (640×480)
Function	
Vector diagram	Yes
Waveform	Yes
Energy accumulation	Yes
CT ratio test	Yes
CT PT programmable	Yes
Self-calibration	Yes
Recorder check	Yes
Data storage	Yes
Keyboard	Yes
Communication port	RS232
Communication with PC	Yes
Mechanical parameters	
Dimensions (W×H×D) (mm)	390×200×160
Host Weight (kg)	3
Weight (including Accessories 3pcs 100A clamp CT) (	12
Environmental conditions	
Ambient temperature	-10°C to 50°C
Relative humidity	15%-95%
Environmental protection level	15%-95%

Standard	
Isolation protection	IEC 61010-1:2001
Energy measurement	IEC 60736
Reference standard	IEC 62052-11 IEC62053-21 IEC62053-22 & IEC62053-23 IEC61010-1:2001

Accessories