

## 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. 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 63th harmonic wave.



## Features

1. Three phase active or reactive electricity energy meter;
2. Calibrate three phase, single phase, active or reactive meter error;
3. Measure U(voltage) of three phase or single phase;
4. Measure I(current) of three phase or single phase;
5. Measure active power of three phase or single phase;
6. Measure reactive power of three phase or single phase;
7. Measure apparent power of three phase or single phase;
8. Measure power factor of three phase or single phase;
9. Measure phase angle between voltage and current;
10. Measure frequency of power line;
11. Display vector diagram;
12. Display waveform of U and I;
13. Analyze and display content of harmonic of U and I;
14. Store and look measured data;
15. Optional 5A, 20A, 100A, 500A, 1000A, 2000A , 3000A current clamp;
16. Measure CT variable ratio;
17. Print the data of measurement on site.



## Parameters

Electrical parameters	
Accuracy class	0.05, 0.1%, 0.2%
Power supply	220V $\pm$ 10% or 110V $\pm$ 10%, 50/60Hz $\pm$ 2Hz
Test Voltage	
Range	0V-600V

**Electrical parameters - continued**
**Test Voltage - continued**

Error	±0.05% (30V-600V) ±0.1% (5V-30V)
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Harmonic	2 <sup>nd</sup> -63 <sup>st</sup>
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**Test Current**

Range (direct connection)	20mA-20A
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Error (direct connection)	±0.05% (100mA-20A) ±0.1% (20mA-100mA)
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Range (Clamp CT)	10mA-3000A
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Error (Clamp CT)	±0.2% (100mA-3000A) ±0.5% (10mA-100mA)
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Harmonic	2 <sup>nd</sup> -63 <sup>st</sup>
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**Power measure error**

Active power (direct connection)	±0.05% (0.1A-20A) ±0.1% (0.02A-0.1A)
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Reactive power (direct connection)	±0.1% (0.1A-20A)
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**Energy measure error**

Active energy (direct connection)	±0.05% (0.1A-20A) ±0.1% (0.02A-0.1A)
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Reactive energy (direct connection)	±0.1% (0.1A-20A)
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**Phase angle**

Range	0° ~ 360°
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Resolution	0.01°
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Error	±0.05°
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**Frequency**

Range	45Hz-65Hz
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Resolution	0.001Hz
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Accuracy	0.005Hz
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**Power factor**

Range	-1 ~ 0 ~ 1
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Resolution	0.0001
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Error	0.0005
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**Pulse output**

Energy constant	180000imp/kWh, 1800imp/kWh, 18imp/kWh
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Pulse ratio	1:1
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Output level	5V
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### Electrical parameters - continued

#### Pulse input

Input channel	1
Input level	5-24V
Input frequency	Max. 2MHz

#### Display

Resolution	6" TFT (640×480)
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#### Function

Vector diagram	Yes
Waveform	Yes
Energy accumulation	Yes
Communication port	RS232
Communication with PC	Yes

### Mechanical parameters

Dimensions (W×H×D) (mm)	390×200×160
Host Weight (mm)	3
Weight (including Accessories 3pcs 100A clamp CT) (kg)	12

### Environmental conditions

Ambient temperature	-10°C to 40°C
Relative humidity	30%-85%