

# GF102

## Portable Single Phase Energy Meter Testing Bench

The Portable Single Phase Energy Meter test bench is used for grid corporation of measurement and energy test center, management department of power supply bureau, national energy measurement of testing authorities, and also used to test each kind of single phase kWh meter of industries and mining enterprises as well as electric meter manufacturers. Meanwhile, the calibrator also can be used as one high precision standard power source, ac voltage source and current source.



### Features

1. Able to test basic error, shunt running, start, standard error automatically and manually in single-step of single phase, according to relative regulation of energy meter.
2. Able to do change test caused by voltage influence, frequency influence and harmonic influence.
3. Output of power source is speedy and stable, AC current output can reach 120A in maximum.  
Voltage, current and phase angle can be adjusted in improving the flexibility of power source.
4. Frequency of each impulse input port can reach 40Hz.
5. 7-inch TFT color display touch screen, English menu, simple and convenient operation, commonly used functions and current basic load point can be controlled in one button.
6. As 0.05% single phase power source, output 2-51 harmonics.
7. Impulse port of each meter position, external polarity can be set randomly, able to adapt kWh meter of impulse cascade and common-anode.

### Parameters

Electrical parameters	
Accuracy class	0.05%, 0.1%
Power Supply	One Phase AC 100-265V, frequency 50/60Hz.
AC Voltage Output	
Range	57.7V, 100V, 220V, 380V; max 500V
Adjustment range	(0-120)%RG <sup>(1)</sup>
Adjustment fineness	0.01%RG, 0.1%RG, 1%RG, 10%RG as optional.
Stability	0.01%/120s

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**Electrical parameters - continued**

Distortion	0.2% (Non-capacitive load)
Output load	max 25VA
Measuring accuracy	0.05%RG

**AC Current Output**

Range	200mA, 1A, 5A, 20A, 60A(100A) optional; max 120A
Adjustment range	(0-120)%RG
Adjustment fineness	0.01%RG, 0.1%RG, 1%RG, 10%RG as optional.
Stability	<0.01%/120s
Distortion	≤0.2% (Non-capacitive load)
Output load	max 50VA
Accuracy	0.05%RG

**Power Output**

Active power output stability	<0.01%RG/120s
Reactive power output stability	<0.02%RG/120s
Active power measuring accuracy	0.05%RG
Reactive power measuring accuracy	0.1%RG

**Phase Output**

Output adjustment range	0°-359.999°
Output adjustment fineness	10, 1, 0.1, 0.01 as optional.
Resolution	0.01°
Accuracy	0.05°

**Power Factor**

Adjustment range	-1 ~ 0 ~ 1
Resolution	0.0001
Measurement accuracy	0.0005

**Frequency Output**

Adjustment range	40Hz-70Hz
Output adjustment fineness	5Hz, 1Hz, 0.1Hz, 0.01Hz as optional.
Resolution	0.001Hz
Accuracy	0.005Hz

**Voltage /Current/Harmonic Setting**

Harmonic number	2-51times
Harmonic content	0-40%
Harmonic phase	0-359.99
Harmonic setting accuracy	(10%±0.1%)RD <sup>(2)</sup>

**Power Energy Measurement Error**

Active power energy	0.05%RG
Reactive power energy	0.1%RG

**Electrical parameters - continued**
**Power Pulse Output**

Power pulse type	active pulse, reactive pulse
Active power pulse output	5V, 10mA

**Power Pulse Input**

Energy pulse type	support active and reactive pulse, the highest frequency power pulse input is 180K.
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**Mechanical parameters**

Dimensions (WxDxH) (mm)	455x440x150
Weight (kg)	12

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

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

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