

# GF312D

## Handheld Three Phase Energy Meter Field Calibrator

*GF312D handheld three phase energy meter field calibrator is a precision AC energy meter testing instrument, mainly used to test three phase energy meter error on site and measure various of AC parameters.*

### Features

1. Three phase active or reactive electricity energy meter
2. Calibrate three phase, single phase, and 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 display measured data;
15. Optional 5A, 20A, 100A, 500A, 1000A, 2000A, 3000A current clamp;
16. Measure CT variable ratio;
17. Measure the ratio or lag-angle of low-voltage transformer.
18. Adopt 32 bit ARM processor, multi-channel 16 bit precision A/D convertor, high resolution TFT color LCD;
19. Inner equipped with 0.01% wide-range current transformer and can be equipped with various type current clamps, wide range of measurement and high veracity.
20. Low consumption circuit design, high energy Li batter supply, intellectual power management software, which make the instrument can continuously work up to 10 hours.



### Parameters

Electrical parameters	
Accuracy class	0.05%, 0.1%
Resolution	6" TFT (640×480)

Архангельск (8182)63-90-72  
 Астана (7172)727-132  
 Астрахань (8512)99-46-04  
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 Белгород (4722)40-23-64  
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**Electrical parameters - continued**

Power supply	220V±10%, 50/60Hz Li-polymer battery (size (mm): 110x51x16, nominal output voltage: 7.2V, capacity: 5000mAh) Power line supply (U1, UN), 85V-265V 50/60Hz
Communication port	RS232
<b>Test voltage</b>	
Range	5-480V
Error	±0.05% (30V-480V) ±0.1% (5V-30V)
Harmonic	2 <sup>nd</sup> -63 <sup>st</sup>
<b>Test current</b>	
Range (direct connection)	5mA-20A
Error (direct connection)	±0.05% (100mA-20A) ±0.1% (10mA-100mA)
Range (clamp CT)	10mA-3000A
Error (camp CT)	±0.2% (100mA-100A) ±0.5% (100A-3000A)
Harmonic	2 <sup>nd</sup> -63 <sup>st</sup>
<b>Power measure error</b>	
Active power (direct connection)	±0.05% (0.1A-20A) ±0.1% (0.01A-0.1A)
Reactive power (direct connection)	±0.1% (0.1A-20A)
Energy measure error	
Active energy (direct connection)	±0.05% (0.1A-20A) ±0.1% (0.01A-0.1A)
Reactive energy (direct connection)	±0.1% (0.1A-20A)
<b>Phase angle</b>	
Range	0°-360°
Resolution	0.01°
Error	±0.05°
<b>Frequency</b>	
Range	45-65Hz
Resolution	0.001Hz
Error	0.002Hz
<b>Pulse input</b>	
Input channel	2
Input level	5-24V
Input frequency	Max. 2MHz

**Electrical parameters - continued**
**Pulse output**

Energy constant	180000imp/kWh, 1800imp/kWh, 180imp/kWh
Pulse ratio	1:1
Output level	5V

**Function**

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

**Mechanical parameters**

Instrument dimensions (W×H×D) (mm)	220×138×61
Instrument Weight (kg)	1.7
Carry case dimensions (W×H×D) (mm)	450×320×185
Carry case (kg)	8.5

**Environmental conditions**

Ambient temperature	-10°C to 55°C
Relative humidity	15%-85%

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