

ENERGY METER CALIBRATION

GF312D1

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Three Phase Energy Meter Calibrator

The instrument is a precision AC energy meter testing instrument, mainly used to test three phase energy meter error on site and measure all 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. Measure 2-64 harmonic of U, I
15. Store and display measured data
16. Optional 5A, 20A, 100A, 500A, 1000A, 2000A, 3000A current clamp
17. Measure CT variable ratio
18. Measure the ratio or lag-angle of low-voltage transformer
19. Adopt 32 bit ARM processor, multi-channel 16 bit precision A/D convertor, high resolution TFT color LCD
20. 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
21. 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)

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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
Test voltage	
Range	0-480V
Error	±0.05% (30V-480V) ±0.1% (5V-30V)
Harmonic	2 nd -64 st
Test current	
Range (direct connection)	5mA-20A
Error (direct connection)	±0.05% (100mA-20A) ±0.1% (10mA-100mA)
Range (clamp CT)	10mA-3000A
Error (clamp CT)	±0.2% (100mA-100A) ±0.5% (100A-3000A)
Harmonic	2 nd -64 st
Power measure error	
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)
Phase angle	
Range	0°-360°
Resolution	0.01°
Error	±0.05°
Frequency	
Range	45-65Hz
Resolution	0.001Hz
Error	0.002Hz
Pulse input	
Input channel	2
Input level	5-24V
Input frequency	Max. 2MHz

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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)	245×162×60
Instrument Weight (kg)	1.8
Carry case dimensions (W×H×D) (mm)	450×320×185
Carry case (kg)	10.6

Environmental conditions

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