

GF3000

Multi-Positions Three Phase kWh Meter Test Bench

The GF3000 series test bench is applied in the measurement centre of grid company energy measurement department of power supply company and energy management utility, industrial enterprise and meter manufacturers.



Features

1. Equipped with 333(three phase multifunction reference meter)and 303 program-controlled three phase power source which can be separately used and are convenient for testing.
2. Operate automatically or manually Equipped with 333(three phase multifunction reference meter)and 303 program-controlled three phase power source which can be separately used and are convenient for testing.
4. Operate automatically or manually.
5. High accuracy, 6-digit display the energy relative errors are no more than 0.05%(0. 1%)within the measuring range.
6. High stability of power source which is up to 0.01%/100s and low distortion which is no more than 0.5%.
7. Wide current measuring range which can be automatically switched.
8. High resolution of voltage, current and power.
9. Self-check and perfect protection function.
10. Large LCD display and simple interface for operation.
11. With Multi-channel server.
12. Every meter position have error calculation/monitor.

Functions

1. Able to calibrate all kinds of electronic and inductive three phase kWh meter.
2. Able to perform automatic measurement like shunting, basic errors, standard deviation, and etc.
3. Able to test the error caused by voltage, current and harmonic affection.
4. Able to check the same type meters with different constants.
5. Able to print out all kinds of test reports with the standard forms.
6. Able to test voltage, current, active/reactive/apparent power, phase, power factor, frequency, and etc.
7. Able to display waveform of voltage and current able to set 2nd-51st harmonic of voltage and current, measure the waveform distortion and harmonic content, and display harmonic chart.
8. Equipped with RS232 communication port.

Parameters

Electrical parameters	
Accuracy	0.02%, 0.05%, 0.1%
Power Supply	AC 180-265V, or 3×220/380V±15%, frequency 50/60Hz.
AC Voltage Output	
Range(U1, U2, U3)	57.7V, 100V, 220V, 380V (max 480V)
Adjustment range	(0-120)%RG ⁽¹⁾
Adjustment fineness	0.01%RG, 0.1%RG, 1%RG, 10%RG as optional.
Stability	0.01%/120s
Distortion	0.3% (Non-capacitive load)
Output load	1500VA
Measuring accuracy	0.05%RG
AC Current Output	
Range(I1,I2,I3)	0.1A, 0.25A, 0.5A, 1A, 2.5A, 5A, 10A, 25A, 50A, 100A, 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	≤0.3% (Non-capacitive load)
Output load	1500VA
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

Electrical parameters - continued
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	0.002Hz

Voltage /Current/Harmonic Setting

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

Power Energy Measurement Error

Active power energy	0.05%RG or 0.02% RG
Reactive power energy	0.1%RG

Power Pulse Output

Power pulse type	active pulse, reactive pulse
Active power pulse output	5V, 10mA
Pulse output frequency	Max 50kHz

Power Pulse Input

Pulse constant set range	(1--599999999)/kwh
Energy pulse type	support active and reactive pulse, the highest frequency power pulse input is 10KHz.

Meter Position

Position	3, 6, 12, 20, 24, 40, 48pcs meter
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Standard

Standard	IEC 62053-21,22, 23; IEC 60736; ANSI C12.20-2002
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Mechanical parameters

Dimensions (mm)	Cabinet size: 800 * 600 * 1850mm (L * W * H). Bench size: 2400 * 760 * 1846mm (L * W * H).
Weight (kg)	About 135

Environmental conditions

Ambient temperature	0°C to +40°C
Relative humidity	35%-85%

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

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