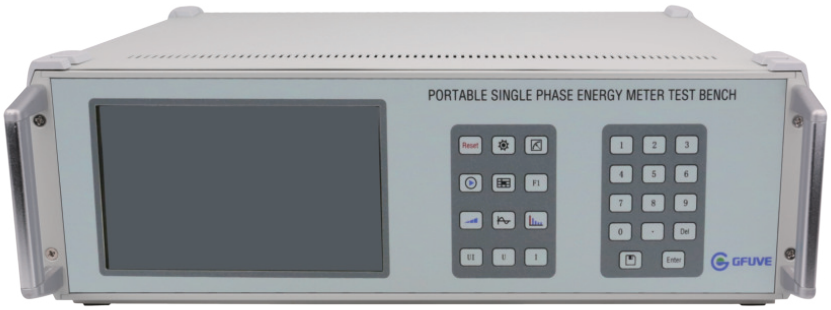
GF102

Portable Single Phase Energy Meter Test Bench

The GF102 series portable single phase energy meter test bench used to calibrate 1pc or 3pcs single phase energy meter or AC meter at same time. Adopt mature signal synthetic and power amplifier technology, high precision voltage source and current source output from 120A/600V, accuracy 0.02% or 0.05%. Widely used in lab and field, and then as single phase standard source. It is suite for electricity meter manufacturing enterprises, scientific research institutes, metrological service institutions, electricity power utilities etc. This model GF102 portable meter test bench have been used for more than eighty countries in the world. It is stable, reliable and high-precision, welcome to choose it!

Features



1. 3 channel voltage isolation ;
2. Accuracy class 0.02/0.05/0.1 ;
3. Test by automatic or manual ;
4. 7 inch TFT touch color screen ;
5. Start testing and creep testing ;
6. Test 3pcs meter synchronously ;
7. 0-120A, 0-600V,40-70Hz, 0-360.000 ;
8. Recorder 1000 sets energy meter data ;
9. Overload, short circuit, open circuit protection ;
10. Reference standard and power source integrated ;

Functions

1. Testing meter installations in 1P2W;
2. Testing single phase power meter;
3. Testing single phase power factor meter;
4. Measuring mechanical meter and electric meter error;
5. Power and energy measurements for active, reactive and apparent power;
6. Measuring frequency, phase shift and power factor;
7. Harmonic spectrum analysis for voltage and current up to the 63nd order;
8. Measuring the distortion factor;
9. Vector representation of the measuring values;
10. Energy dosing with built-in current source and voltage source;
11. Many plan auto test for energy meter error;
12. Multi load point setting output;

Parameters

Electrical parameters	
Accuracy class	0.02%, 0.05%, 0.1%
Power Supply	One Phase AC 100-265V, frequency 50/60Hz.
AC Voltage Output	
Range	57.7V, 100V, 220V, 380V; max 600V
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	0.1% (Non-capacitive load)
Output load	25VA or 50VA
Measuring accuracy	0.02%RG or 0.05%RG
AC Current Output	
Range	200mA, 1A, 5A, 20A, 100A; 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	≤0.1% (Non-capacitive load)
Output load	50VA or 100VA
Accuracy	0.02%RG or 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	0.02%RG or 0.05%RG
Reactive power measuring accuracy	0.05%RG or 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	0.02° or 0.05°
Power Factor	
Adjustment range	-1 ~ 0 ~ 1
Resolution	0.0001
Measurement accuracy	0. 0005
Frequency Output	
Adjustment range	40.000Hz-70.000Hz
Output adjustment fineness	5Hz, 1Hz, 0.1Hz, 0.01Hz as optional.
Resolution	0.001Hz
Accuracy	0.002Hz

Electrical parameters - continued	
Voltage /Current/Harmonic Setting	
Harmonic number	2-63times
Harmonic content	0-40%
Harmonic phase	0-359.99
Harmonic setting accuracy	(10%±0.1%)RD[(2)]
Power Energy Measurement Error	
Active power energy	0.02%RG or 0.05%RG
Reactive power energy	0.05%RG or 0.1%RG
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 200K.
Standard	
Standard	IEC 62053-21,22, 23; IEC 60736; IR46; ANSI C12.20-2002; JJG 597-2005; JJG596-2012; JJG 1085-2013; JJF 68-2019; DL/T 826-2002; DL/T 1478-2015; DL/T 448-2016
Safety	
Isolation protection	IEC 61010-1:2001
Measurement Category	300 V CAT III, 600 V CAT II
Degree of protection	IP20
Declaration of conformity	CE & CNAS certified
Functions	
LCD	7 inch touch TFT color LCD
Key	26pcs
Communication port	RS232 or USB
Register test	Yes
Programmable	Yes
Meter position	1pc or 3pcs
Data storage	1000groups
PC control software	Optional
Mechanical parameters	
Dimensions (W×D×H) (mm)	455x440x150
Weight (kg)	12

Environmental conditions	
Ambient temperature	-10°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.

Selection Guide

NO.	Accuracy	Voltage range	Current Range	Weight
1021201	0.1%	0-500V	0-120A	12KG
10212005	0.05%	0-500V	0-120A	12KG
10212002	0.02%	0-500V	0-120A	12KG
102241	0.1%	0-500V	0-24A	10.8KG
1022405	0.05%	0-500V	0-24A	10.8KG
1022402	0.02%	0-500V	0-24A	10.8KG
102121	0.1%	0-500V	0-12A	10KG
1021205	0.05%	0-500V	0-12A	10KG
1021202	0.02%	0-500V	0-12A	10KG
10261	0.1%	0-500V	0-6A	8KG
102605	0.05%	0-500V	0-6A	8KG
102602	0.02%	0-500V	0-6A	8KG