

GF302D1

Three Phase Portable Energy Meter Test System

The GF302D1 three phase portable energy meter test system consists of an integrated three phase current source (up to 500V/120A or 500V/20A) and built-in three-phase electronic reference standard of accuracy class 0.05%. Characteristic features of the GF302D1 are its wide measuring range, high accuracy and high tolerance to unwanted external influences. The portable meter test system offers high functionality combined with an excellent menu guided operation via built-in keyboards and colored 7" touch LCD-display. Voltage & current harmonics output from 2 to 63 times. This model portable meter test system can be programmable by PC, automatic generation of energy meter error test report- Excel file.

Functions

1. Testing phase angle meter;
2. Testing ammeter and voltmeter;
3. Measuring the distortion factor;
4. Calibration of power meter error;
5. User friendly menu guided operation;
6. Energy dosing with built-in current source;
7. Measuring mechanical meter and electric meter;
8. Measuring frequency, phase shift and power factor;
9. Easy verification and analysis of meter installations;
10. Automatic operation without need of an external PC;
11. Especially configured USB stick for storage of customer data;
12. Testing all kinds of energy meter in 1P2W, 1P3W, 3P3W, 3P4W;
13. Harmonic spectrum analysis for voltage and current up to the 63rd order;
14. Power and energy measurements for active, reactive and apparent power;
15. Vector diagram display and phase sequence indication on integrated colored screen;



Features

1. Accuracy class 0.05;
2. Weight light 12.8Kg;
3. 7 inch TFT touch screen;
4. With smart optical sampler;
5. Test by automatic or manual;
6. Start testing and creep testing ;
7. 0-120A/0-500V/40-70Hz/0-360.000;
8. Recorder 500 sets energy meter data;
9. Overload, short circuit, open circuit protection;
10. Power factor setting from -1.00000 to 1.00000;
11. Reference standard and current source integrated ;

Parameters

Electrical parameters	
Accuracy	0.05%, 0.1%
Power Supply	One Phase AC 100-265V, frequency 50/60Hz.
AC Voltage Measurement	
Range(U1,U2,U3)	0-500V; 0-380V; 0-300V;
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	each phase 25VA
Accuracy	0.05%RG or 0.02%RG
AC Current Output	
Range(I1,I2,I3)	0-6A; 0-12A; 0-20A; 0-50A; 0-120A;
Adjustment range	(0-100)%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)
Max Output load	20VA, 50VA, 100VA;
Accuracy	0.05%RG
Power Measurement	
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	0.02°
Power Factor	
Adjustment range	-1 ~ 0 ~ 1
Resolution	0.0001
Measurement accuracy	0.0005
Frequency Measurement	
Range	40Hz-70Hz
Resolution	0.001Hz
Accuracy	0.002Hz

Electrical parameters - continued	
Voltage /Current/Harmonic Measurement	
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	0.05%RG
Reactive power energy	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. programmable.
LCD	
Display	7 inch touch color TFT
Communication Port	
Communication Port	RS232, USB2.0
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	IP42
Declaration of conformity	CE & CNAS certified
Mechanical parameters	
Dimensions (W×D×H) (mm)	495x390x195
Weight (kg)	12.8
Environmental conditions	
Ambient temperature	-10°C to +50°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
302D112001	0.1%	0-500V	0-120A	22KG
302D1120005	0.05%	0-500V	0-120A	22KG
302D15001	0.1%	0-500V	0-50A	18KG
302D150005	0.05%	0-500V	0-50A	18KG
302D12001	0.1%	0-500V	0-20A	15.8KG
302D120005	0.05%	0-500V	0-20A	15.8KG
302D11201	0.1%	0-380V	0-12A	12.8KG
302D112005	0.05%	0-380V	0-12A	12.8KG
302D1601	0.1%	0-300V	0-6A	8KG
302D16005	0.05%	0-300V	0-6A	8KG