

GF313V2

Onsite Portable Three Phase Electronic Meter Test Set

GF313V2 onsite portable three phase electronic meter test set is the newest product produced by our company by widely visiting users and referring to the advantages of the same kind of products home and abroad. The measured part of the product adopts high speed A/D transmission to send DSP to conduct digital processing, which largely improves measured degree of accuracy and stability. Central processing part adopts 32-bit ARM embedded technology to make instrument interface novel, function abundant, operation distinct and easy, and performance steady. Class of accuracy: Class 0.1, 0.2 or 0.5, range from 3×120A/3×600V or 3×200A/3×600V, with comfort design, small size and light weight. The model GF313V2 three phase meter meter test set is suit for metrological service of electricity power utilities, industrial and mining enterprises and electric lab to field use.

Application

1. Power plant;
2. Electricity power utilities;
3. Metrological service center;
4. Power engineering company;
5. Distribution power corporation;
6. Electrical engineering service company;
7. Electricity power bureau & power company;
8. National Metrology and testing department;
9. Electrical Department of industrial and mining enterprises;



Features

1. Vector display;
2. Screenshot function;
3. 7 inch color TFT touch LCD;
4. Self adjusted clamp-on CTs;
5. Measurement for energy register;
6. Accuracy class: 0.1%, 0.2% or 0.5%;
7. RS232 port for PC software control;
8. USB and RS232 communication ports;
9. Measurement of clock error of energy meter;
10. Measurement of turn ratio & phase error for CT;
11. Large capacity storage device for mass memory;
12. Testing comprehensive error of measuring device;
13. Automatic temperature compensation technology;
14. Measurement of three phase energy meter errors;
15. 100A, 200A, 500A, 1000A, 2000A, 3000A clamp optional;
16. Measurement of single phase energy meter errors onsite;
17. Measurement voltage & current of harmonics of 2nd to 63rd;
18. Power supply (lithium battery)/ 85-265V AC /U1Un (40-450V);

19. Check wiring failures and calculation of electricity compensation;
20. Testing all kinds of mechanical and electronic energy meter error;
21. Measurement of U, I, P, Q, S, phase angle, power factor, frequency etc;
22. Input two pulse signal for master and slave meter synchronously calibration;
23. With smart optical sampler, suitable for electronic meters and mechanical energy meters;

Parameters

Electrical parameters	
Accuracy class	0.1%, 0.2%, 0.5%
Power Supply	External power, 85-265V, 45-65Hz Phase voltage supply 40-450V, 45-65Hz Li-Battery supply
Voltage measurement(U1, U2, U3, UN)	
Range	0-600V
Error	±0.1%(30-600V); ±0.05%(30-600V)
Harmonic	2 nd -63 rd
Input impedance range	245kΩ@ 250V; 10MΩ @5V
Stability	0.01%/minute
Long term stability	<100× 10E -6 /Year
Current measurement(Clamp CT - I1, I2, I3)	
Range (clamp CT)	0-5A, 0-20A, 0-120A, 0-200A, 0-500A, 0-1000A, 0-2000A, 0-3000A
Clamp on CTs Optional	5A, 20A, 100A, 200A, 500A, 1000A, 2000A, 3000A
Error	±0.1%, ±0.2% , ±0.5%
Harmonic	2 nd -63 rd
Clamp diameter	18mm
Input impedance range	0.04Ω@ 0.01A-120A or 0.02-200A
Stability	0.02%/minute
Long term stability	<100× 10E -6 /Year
Power measure error	
Active power	±0.1%, ±0.2% , ±0.5%
Reactive power	±0.2%, ±0.5%
Stability	0.02%/minute
Long term stability	<100× 10E -6 /Year
Energy measure error	
Active energy	±0.1%, ±0.2%, ±0.5%
Reactive energy	±0.2% , ±0.5%
Stability	0.02%/minute
Long term stability	<100× 10E -6 /Year
Phase angle	
Range	0°-360°
Resolution	0.01°
Error	±0.05°

Electrical parameters - continued
Frequency

Range	40Hz-70Hz
Resolution	0.0005Hz
Error	0.001Hz

Reference Meter

Measuring modes	2WA / 2WR / 2WAP 3WA / 3WR / 3WAP / 3WRCA / 3WRCA 4WA / 4WAb / 4WR / 4WRb / 4WAP / 4WAPb / 4WRC
Bandwidth	3000Hz
Sampling	16 bit 504 samplers/ period

Pulse output

Energy constant	25000
Pulse ratio	1:1
Output level	5V

Pulse input

Input channel	2
Input level	3-12V
Input frequency	Max. 2M Hz

Display

Resolution	800x480
LCD	7" TFT color touch

Function

Vector diagram	Yes
Waveform	Yes
Energy Register test	Yes
CT ratio test	Yes
CTPT programmable	Yes
Local parameter input	Yes
Wiring emulation	Yes
Self-calibration	Yes
Recorder check	Yes
Data storage	Yes
GPS	Optional
Data storage qty	10000
External extend memory	Yes
Screenshot	Yes
Communication port	USB/RS232/BT
Communication with PC	Yes
Upload data	Yes
External mini printer	Yes, Optional
External keyboard	Yes, 26pcs keys

Electrical parameters - continued
Safety

IP class according to DIN EN 60529	IP42
Declaration of conformity	CE & CNAS conform
Protection class according to DIN EN 61140	II
Overvoltage category voltage measurement	CAT III 600V
Overvoltage category current	CAT III 600V

Standard

Isolation protection	IEC 61010-1:2001
Energy measurement	IEC/EN 60736
Reference standard	IEC 62052-11 IEC62053-21 IEC62053-22 & IEC62053-23 IEC61010-1:2001

Mechanical parameters

Dimensions (W×H×D) (mm)	245×168×70
Weight (kg)	1.8
Portable box weight (kg)	7.8

Environmental conditions

Ambient temperature	-25°C to +50°C
Storage temperature	-30°C to +65°C
Relative humidity	30%-95%
Power Consumption	≤13VA

Standard Packing List

Item	Name	QTY
1	GF312V2 machine	1PC
2	P18 100A Clamp on ct(Max 120A)	3PCS
3	Scanning head	1PC
4	Energy pulse cable	1PC
5	Voltage Test cable	1SET
6	RS232 communication cable	1PC
7	Crocodile clip	4PCS
8	Operation Manual	1PC
9	Factory test certificate	1PC
10	Portable box	1PC
11	PC management software(U disk)	1PC

Current Clamp (Optional)

MODEL	Q8A2	Q13	P18	P50	P50
Appearance					
Range	5A	20A	200A	500A	1000A
MODEL	S50	Q125	S120	FQ-RCTA02	FQ-RCTA02
Appearance					
Range	1000A	2000A	3000A	3000A	6000A

Load (Optional)

MODEL	GF-5A-3P	GF-10A-3P
Range	5A Load	10A Load

Accessory

