

GF3600

THREE PHASE AC/DC DIGITAL METER TEST BENCH

This model GF3600 AC/DC digital meter test bench is composed of programmable three phase AC standard power source, DC standard power source, 0.02% three phase multifunction reference standard multimeter, computer control management software. Every modular can be used independently. The technical index of meter test bench is compliance with national industry related standards and verification regulation. It can be used at power grid company, power supply company and power plants for measuring and testing power institutions, also it can be applied at railway, petroleum, chemical industry and mining enterprises etc.

Functions

1. Testing multimeter;
2. Testing RTU & AC sampler device;
3. Measuring the distortion factor;
4. User friendly menu guided operation;
5. Testing synchronous meter;
6. Energy dosing with built-in current source;
7. Automatic operation with PC control software;
8. Measuring mechanical meter and electric meter;
9. Testing frequency meter;
10. Testing single & three-phase active, reactive power meter;
11. Especially configured USB stick for storage of customer data;
12. Testing all kinds of AC/DC voltmeter and ammeter;
13. Measuring frequency, phase shift and power factor;
14. Testing all kinds of energy meter in 1P2W, 1P3W, 3P3W, 3P4W;
15. Power and energy measurements for active, reactive and apparent power;
16. Harmonic spectrum analysis for voltage and current up to the 31st order;
17. Vector diagram display and phase sequence indication on integrated colored screen
18. Testing all kinds of transducers (voltage transducer, current transducer, active & reactive power transducer, phase angle transducer, power factor transducer & frequency transducers etc) ;



Features

1. Download word test report;
2. Programmable and save test scheme;
3. Automatic failure detection function;
4. It can be set and measuring 2-31 times harmonic;
5. As high precision voltage source and current source;
6. Voltage range from 0-1050V, current range from 0 to 120A;
7. With 0.02% three phase multifunction AC/DC Reference standard meter;
8. Wide measuring range, high stability, high resolution, low distortion degree;
9. Automatic data rounding, various forms of certificate format, inquires and print convenient;
10. Automatic verification for watt-hour meters and transducers, semi-automatic verification for all kinds of digital meter error;
11. Modular design, multifunction AC/DC Reference standard meter, three phase AC standard power source and DC power source composition;

Parameters

Electrical parameters	
Accuracy class	0.02%, 0.05%
Power supply	AC 220V ± 10% or AC 110V ± 10%, 50/60Hz
AC Voltage output and measurement	
U1, U2, U3 Range	10V, 20V, 50V, 100V, 200V, 400V, 800V
Output range	(0-120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Output stability	0.01%/min
Distortion	≤0.2% (non-capacitive load)
Measurement accuracy	0.02%, 0.05%
Output load capability	50VA
Measurement resolution	≤5×10 ⁻⁵ RG
AC Current output and measurement	
I1, I2, I3 Range	0.1A, 0.25A, 0.5A, 1A, 2.5A, 5A, 10A, 25A, 50A, 100A
Output range	(0-120)% RG
Adjustment resolution	0.01% RG, 0.1% RG, 1% RG, 10% RG
Output stability	0.01%/min
Distortion	≤0.2% (non-capacitive load)
Measurement accuracy	0.02%, 0.05%

Electrical parameters - continued

Output load capability	100VA
Measurement resolution	$\leq 5 \times 10^{-5}$ RG
Power output and measurement	
Output stability	0.01%/1min
Active accuracy	0.02%, 0.05% RD (0.01A-100A, 30V-600V, PF ≥ 0.5 L or PF ≥ 0.8 C)
Reactive accuracy	0.1% RD (0.01A-100A, 30V-600V, PF ≥ 0.5)
Measurement resolution	$\leq 5 \times 10^{-5}$ RG
Energy measurement	
Active accuracy	0.02%, 0.05% RD (0.01A-100A, 30V-600V, PF ≥ 0.5 L or PF ≥ 0.8 C), 0.1% RD (0.05A-100A, 30V-600V PF ≥ 0.5 C)
Reactive accuracy	0.1% RD 0.05A-100A, 30V-600V PF ≥ 0.5
Setting range of test pulse No.	1-9999999
Max. frequency of receiving pulse	2MHz
Phase output and measurement	
Output range	0°-359.99°
Adjustment resolution	0.01°
Measurement accuracy	0.02°, 0.05°
Measurement resolution	0.001°
Power factor output and measurement	
Output range	-1 to 0 to +1
Measurement accuracy	0.0005
Measurement resolution	0.0001
Frequency output and measurement	
Output range	45-65Hz
Adjustment resolution	0.001Hz
Measurement accuracy	0.002Hz
Measurement resolution	0.001Hz
Harmonic	
Times	2 to 31
Resolution	0.1% (compared with fundamental wave)
Contents	0-40%
Phase	0°-359.99°
DC Voltage output	
Range	100mV, 300mV, 1V, 3V, 10V, 30V, 100V, 300V, 600V, 1000V
Setting range	0-1000V
Regulated step value	0.002% RG
Accuracy	0.03% RD + 0.02% RG

Electrical parameters - continued

Stability	0.01%RG/1min
Output load capability	25VA
Ripple wave and noise	0.1-100KHz
Output ≤ 100 V	Ripple wave ≤ 2 mVrms
Output > 100 V	Ripple wave ≤ 10 mVrms

DC Current output

Range	10 μ A, 30 μ A, 100 μ A, 300 μ A, 1mA, 3mA, 10mA, 30mA, 100mA, 300mA, 1 A, 3 A, 10 A, 30 A
Setting range	0-30A
Regulation resolution	$\leq 0.02\%$ RG
Accuracy	0.03% RD + 0.02% RG
Stability	0.01%RG/1min
Output load capability	30VA

Standard

Standard	JJG126-1995, JJG_597-2017, Q/GDW 1899-2013, DL/T1119-2009, DL/T630-1997, JJG124-2005; JJF1587-2016; IEC61010, IEC 61000, IEC 61326
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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

Mechanical parameters

Dimension (LxWxH) (mm)	1800x800x750
Weight (kg)	135

Environmental conditions

Operating temperature	0°C to 40°C
Storage conditions	-30°C to 60°C
Relative humidity	$\leq 85\%$

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

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