Exceeding & Trustworthy

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Ainuo
—— 超越 · 信赖 ——
Exceeding & Trustworthy

Ainuo Instrument Co.,Ltd.

2022-2024 Product Catalogue

No.02000146 Lu Manufacturing ISO9001 Certificate, 2000 Edition High and New Technology Certificate

Ainuo

Jinan Company

COMPANY INTRODUCTION


Qingdao Company

20000⁺m²
Qingdao Industrial Park

12000⁺m²
Jinan Industrial Park

500⁺
Total employees

160⁺
R&D

1993
Since

Ainuo Instrument Company, established in 1993, is committed to the R&D and production of electrical measuring instruments and power supply equipment. The company has built two factories in Qingdao and Jinan, with automated production lines and dust-free workshops. The company has ISO9001 quality system certification, civil airport equipment applicable license and special industry R&D and production qualifications. Ainuo has been awarded the honorary titles of Shandong Province's famous trademark, high-tech enterprise, recognized enterprise technology center and patent star enterprise. Ainuo's products and services have gained the trust of outstanding customers at domestic and abroad, and have become involved in long term partnership with them.

Ainuo's main product offering includes: ***Electrical Safety Tester, Motor Test System, Power Analyzer, Programmable AC/DC Power Supply, Aircraft Ground Power Supply, AC and DC Electronic Load, etc.*** Its products are mainly used in: household appliances, computer and communications manufacturing industries, new energy vehicles, new energy, medical equipment industries, motors, switches Power supply and power electronics industry, aviation, aerospace and other special fields, as well as quality supervision, commodity inspection, metrology departments, universities, research institutes, laboratory and certification institutions, etc. Ainuo has more than 180 technical patents with independent intellectual property rights, 16 invention patents, and participated in the drafting of more than 10 national electrical safety standards.

Ainuo Instrument Company has always adhered to the concept of exceeding and trustworthy. The people of Ainuo view with great importance the corporate culture of customer focus, we continue to create value for our customers, constant improvement, to become the world's leading power electronics test solutions provider.

Ainuo

Company Qualification

Shandong Gazelle Enterprise

Shandong Province Recognized Enterprise Technology Center

High-tech Enterprise Certificate

CE Certificate

Quality Management System Certification -- Shandong Ainuo

Quality Management System Certificate -- Qingdao Ainuo

China Electrical Safety Product Standards That Ainuo Participated In Drafting

No	Electrical Safety Product Standards	Stard No.
1	China national standard - 《Earth Continuity tester》	GB/T28030-20011
2	China national standard - 《Withstanding Voltage tester》	GB/T32192-2015
3	China national standard - 《Leakage Current tester》	GB/T32191-2015
4	China eletrical industrial standard - 《General Standard of Insulation Resistance tester》	SJ/T11385-2008
5	China national calibration standard - 《Verification Regulation of Withstanding Voltage tester》	JJG 795-2016
6	China national calibration standard - 《Verification Regulation of Leakage Curernt tester》	JJG843-2007
7	China national calibration standard - 《Verification Regulation of Ground Bond Resistance tester》	JJG984-2004

Ainuo Product Catalogue

Safety Analyzer

AC Power Supply

DC Power Supply

Bidirectional DC Power Supply

Power Analyzer

Motor Test Scheme

Electronic Load

Intelligent Electrical Safety Comprehensive Analyzer
AN1640H(F)/AN1640B(F)/AN1651H(F)/AN1651B(F)

Efficient Electrical Safety Comprehensive Tester
AN9640H(F)\AN9651H(F)\AN9651H-C(F)

Electrical Safety Comprehensive Tester
AN9640B(F)\AN9651B(F)\AN9651F(F)

Three-phase Electrical Safety Comprehensive Tester
AN9651TH(F)

Multi-channel Intelligent Electrical Safety Analyzer
AN1635(F)/AN1636(F)/AN1637(F)/AN1638(F)/AN1632(F) Series

New Energy Vehicle Safety Analyzer
AN1662H(F)/AN1662SD(F)

Intelligent Electrical Safety Comprehensive Analyzer
AN1640H(F)/AN1640B(F)/AN1651H(F)/AN1651B(F)

- ★ **8-in-1:** ACW/DCW/IR/GB/LC/PW/ST/LN
- ★ **High precision:** 1% accuracy for safety Comprehensive analyzer, 0.2% accuracy for power
- ★ **High speed:** GB and ACW/DCW/IR in parallel, LC and PW in parallel
- ★ **Informatization:** Android platform, data storage, barcode recognition, MES connection

Product Introduction

This Ainuo AN1640(F)/AN1651(F) intelligent electrical safety comprehensive analyzer has new features such as intelligence, informatization, high speed, high precision, and multi-function, suitable for high-end lines of intelligent manufacturing with fast-pace, hybrid, automation, informatization and MES management.

In addition to eight-in-one testing, this product has rich optional functions for sub-sectors, including automatic multi-stage power judgment, smart lamp switching test, LN phase sequence detection, 100mA withstand voltage test, 64A ground bond resistance test, 500W/6kW/10kW testing power supply, U.S. standard testing power supply, LC and PW uninterruptible power supply test, etc.

This series of products can meet the safety standard testing requirements of various electrical products such as household appliances, energy-saving lamps, medical equipment, information equipment, audio and video equipment, laboratory equipment, and charging piles.

This series of products have a barcode scanning interface for automatic identification of product barcode and specifications, automatic call of the test program, scanning the code and starting automatically, and packing and storing the test data.

This series of products have functions of data management, local storage of test data, data query, statistics and export; real-time transmission of test data, active upload, query upload, breakpoint resume, etc.; and downloading test programs from the server.

Optional connection with MES through WIFI, LAN, RS232 and other interfaces, various MES interfaces.

Features

High reliability

- 13 draft units who participated in drafting of national standards and verification regulations for safety comprehensive analyzers;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Strict electromagnetic environment, load conditions, endurance test verification;
- Electric shock protection, arc detection, open circuit detection, slow rise and down;
- 1% accuracy for safety comprehensive analyzer, 0.2% accuracy for power.

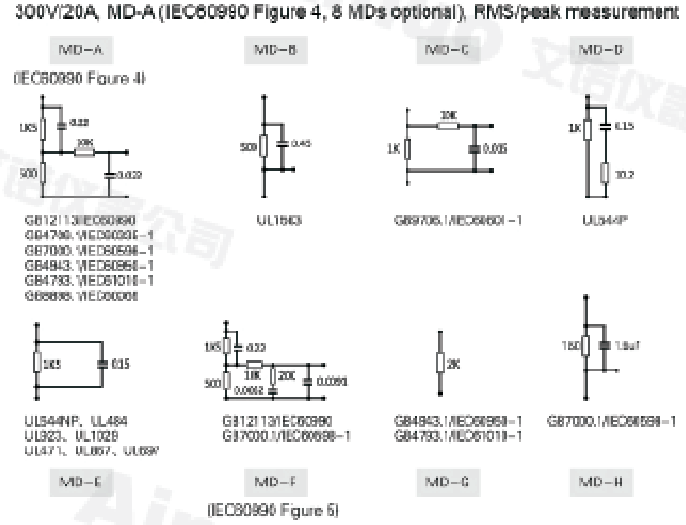
High speed

- Fast measurement and control: 0.5s step fast test, self-starting of first item after GB;
- Parallel test: GB and ACW/DCW/IR in parallel, LC and PW in parallel;
- Dual output: dual-station, dual output, intelligent parallel.

Intelligent

- Intelligent platform: Android operating system, informatization without additional PC;
- Barcode management: barcode scanning and recognition, program matching, scan to start;
- Data management: test data storage, query, export, program file copy;
- Connection with MES: LAN\WIFI interface, MES connection for various database;
- Convenient: 10" touch screen, guide via multimedia, online technical services.

Specifications

Model	AN1640H(F)	AN1640B(F)	AN1651H(F)	AN1651B(F)
AC withstand voltage (ACW)	5kVac/40mA (optional 5kVac/100mA)			
DC withstand voltage (DCW)	6kVdc/10mA			
Insulation resistance (IR)	2.5kVdc/50GΩ			
Ground Bond resistance (GB)	32Aac/600mΩ (optional 64A)			
Leakage Current (LC)/ Touch Current(TC)	300V/20A, MD-A (IEC60990 Figure 4, 8 MDs optional), RMS/peak measurement 			
Power test (PW)	300V/20A/6kW (optional 40A)			
Start-up test (ST)	300V/20A			
Loop test (LN) (Optional)	Low voltage DC constant current test/999Ω			
Parallel	GB and ACW/DCW /IR in parallel, LC and PW in parallel	Non-parallel	GB and ACW/DCW /IR in parallel, LC and PW in parallel	Non-parallel
Interface	Android system, 10" touch screen, RS232\LAN\WIFI\PLC\USB			
Load power supply	Optional built-in 500VA variable frequency power supply or external power supply		Built-in 6kVA variable frequency power supply	
Dimensions	426×177×550 (W×H×D, mm)		483×1365×600 (W×H×D, mm)	

Efficient Electrical Safety Comprehensive Tester AN9640H(F)/AN9651H(F)/AN9651H-C(F)

- ★ **7-in-1**: ACW/DCW/IR/GB/LC/PW/ST
- ★ **High precision:** 1% accuracy for safety comprehensive analyzer, 0.2% accuracy for power
- ★ **High speed:** GB and ACW/DCW/IR in parallel, up to 0.5s step fast test
- ★ **Informatization:** Optional ESRS for storage, barcode recognition, MES connection

Product Introduction

This Ainuo AN9640H(F)\AN9651H(F)\AN9651H-C(F) efficient electrical safety comprehensive tester features high speed, high accuracy and informatization, suitable for lines of intelligent manufacturing with fast-pace, hybrid, automation, informatization and MES management.

In addition to seven-in-one testing, this series of products has rich optional functions for sub-sectors, including automatic multi-stage power judgment, smart lamp switching test, LN phase sequence detection, LN detection, 64A ground bond resistance test, 500W/6kW/10kW testing power supply, U.S. standard testing power supply, LC and PW uninterruptible power supply test, etc.

This series of products can meet the safety standard testing requirements of various electrical products such as household appliances, energy-saving lamps, medical equipment, information equipment, audio and video equipment, laboratory equipment, and charging piles.

PC ESRS system, with barcode scanning interface to automatically identify the product barcode and specifications, automatically call the test program, scan the code and start automatically, and pack and store the test data.

PC ESRS system, with local storage of test data, data query, statistics and export; real-time transmission of test data, active upload, query upload, breakpoint resume, etc.; downloading test programs from the server.

Optional connection with MES through WIFI, LAN, RS232 and other interfaces, connection with intermediate table of Sql Server, Oracle, Mysql and other database, Modbus TCP connection, Web Api interface for connection, as well as connection with local TXT and Access database.

Features

High reliability

- 13 draft units who participated in drafting of national standards and verification regulations for safety comprehensive tester;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Strict electromagnetic environment, load conditions, endurance test verification;
- Electric shock protection, arc detection, open circuit detection, slow rise and down;
- 1% accuracy for safety comprehensive tester, 0.2% accuracy for power.

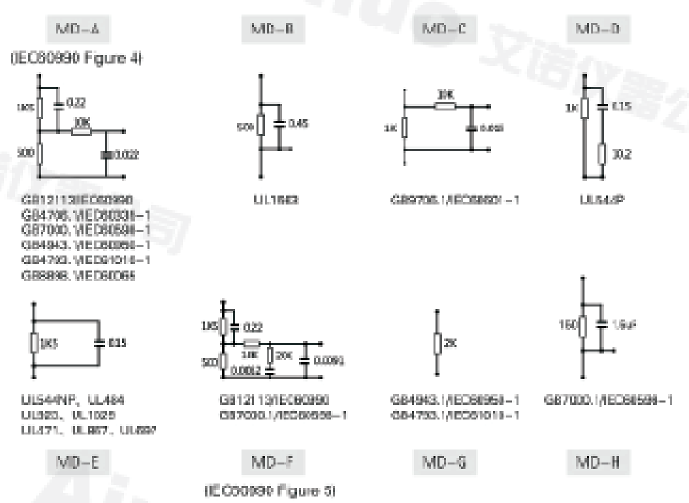
High speed

- Fast measurement and control: 0.5s step fast test, self-starting of first item after GB;
- Parallel test: GB and ACW/DCW/IR in parallel, time-saving.

Intelligent

- Intelligent system: PC ESRS system;
- Barcode management: barcode scanning and recognition, program matching, scan to start;
- Data management: test data storage, query, export, program file copy;
- Connection with MES: LAN\WIFI interface, MES connection for various database.

Specifications

Model	AN9640H(F)	AN9651H(F)	AN9651H-C(F)
AC withstand voltage (ACW)	5kVac/100mA		
DC withstand voltage (DCW)	6kVdc/10mA		
Insulation resistance (IR)	2.5kVdc/50GΩ		
Ground Bond resistance (GB)	32Aac/600mΩ (Optional 64A)		
Leakage current (LC)	300V/20A, MD-A (IEC60990 Figure 4, 8 MDs optional), RMS/peak measurement 		
Power test (PW)	300V/20A/6kW		
Start-up test (ST)	300V/20A		
Parallel	GB and ACW/DCW/IR in parallel		
Interface	5.5" color LCD, RS232\PLC\USB		PC ESRS system
Load power supply	Optional built-in 500VA variable frequency power supply or external variable frequency power supply	Built-in 6kVA variable frequency power supply (Optional 10kVA)	
Dimensions	426x177x550 (W×H×D, mm)	483x1355x600 (W×H×D, mm)	483x1355x600 (W×H×D, mm) Note: The height does not include the display at the top of cabinet

Electrical Safety Comprehensive Tester AN9640B(F)/AN9651B(F)/AN9651F(F)

★ **6-in-1:** ACW/IR/GB/LC/PW/ST
★ **High stability:** 1.5% accuracy for safety comprehensive tester, 0.5% accuracy for power
★ **High reliability:** industry classic, best-selling for 30 years

Product Introduction

This Ainuo AN9640B(F)/AN9651B(F)/AN9651F(F) series electrical safety comprehensive tester is a typical safety tester in the industry, and has been sold well at home and abroad for nearly 30 years. This product keeps pace with the times in terms of functions and performance, and is continuously improved to meet the requirements of change of electrical product safety standards and changes of safety compliance testing requirements of production lines. This series of products can meet the safety standard testing requirements of various electrical products such as household appliances, energy-saving lamps, information equipment, audio and video equipment and laboratory equipment.

Features

- **Regulations:** comply with safety standards in various industries and meet the testing requirements of new standards.
- **Multi-function:** integrating comprehensive testing of safety performance and electrical performance such as AC withstand voltage, insulation resistance, ground bond resistance, leakage current, power parameters, starting performance, etc., one station, one-key start, and complete full-function testing quickly.
- **Perfect configuration:** 500VA AC withstand voltage (AC 5kV/100mA), 200mA or higher short-circuit current, optional Dynamic withstand voltage, up to 32A ground bond resistance test current, and 12V or lower open circuit voltage; leakage current testing under operating/ non-operating temperature, standard GB/T 12113 Figure 4 Human Body Simulation Network (MD).

Specifications

Model	AN9640B(F)	AN9651B(F)	AN9651F(F)
AC withstand voltage (ACW)	5kVac/100mA		
Insulation resistance (IR)	1kVdc/2000MΩ		
Ground Bond resistance (GB)	32Aac/600mΩ		
Leakage current (LC)	300V/20A, MD-A (IEC60990 Figure 4), RMS		
Power test (PW)	300V/20A/6kW		
Start-up test (ST)	300V/20A		
Interface	5.5' LCD, RS232\PLC		
Load power supply	With external isolated power supply	Built-in 6kVA isolation transformer	Built-in 6kVA variable frequency power supply
Dimensions	426x178x600 (WxHxD, mm)	530x1105x460 (WxHxD, mm)	483x1355x600 (WxHxD, mm)

Three-phase Electrical Safety Comprehensive Tester
AN9651TH(F)

★ **8-in-1:** ACW/DCW/IR/GB/LC/PW/ST/WT
★ **High stability:** 2% accuracy for safety comprehensive tester, 0.5% accuracy for power
★ **Single/three-phase:** suitable for comprehensive test of single /three-phase products

Product Introduction

This AN9651TH(F) series electrical safety comprehensive tester has eight-in-one testing (ground bond resistance/ insulation resistance/AC withstand voltage/DC withstand voltage/leakage current/power parameters/start-up/ waiting), compatible three/single-phase loads, suitable for safety testing of line, labs, quality inspection department of electrical appliances such as central air conditioning, commercial heaters, commercial kitchen utensils and others.

Features

Multi industrial standards: comply with CCC, IEC, EN, VDE, BS, UL, JIS and other mandatory electrical safety standards. 200mA or higher short-circuit output current for 500VA withstand voltage (AC 5kV/100mA). Built-in replaceable MD card for leakage contact current test network, suitable for various industrial standards for different MD.

Complete functions: AC withstand voltage, DC withstand voltage, insulation resistance, ground bond resistance, leakage current, operating power, low-voltage start and waiting.

Multi power supply: built-in isolated power unit, automatically control of power supply of the product under test; external variable frequency power supply for testing online. Optional three-phase isolation transformers or variable frequency power supply and U.S. standard power supply of various specifications (20kVA\45kVA\60kVA\90kVA).

Intelligent test: 15 groups of memory of test conditions, 8-step programming for each group; one-key start to complete all tests.

Automatic control: interfaces for RS232/RS485/LAN (optional), barcode scanner, variable frequency power supply control, digital control, easy to configure automatic test systems.

Information management: optional PC and ESRS software for barcode recognition, data management, MES connection.

Simple operation: 10.4" TFT color screen, menu operation, Chinese/English dispaly, socket-type test tooling.

Specifications

Model	AN9651TH(F)
AC withstand voltage (ACW)	5kVac/100mA
DC withstand voltage (DCW)	6kVdc/10mA
Insulation resistance (IR)	1kVdc/2000MΩ
Ground bond resistance (GB)	32Aac/600mΩ
Leakage current (LC)	Single/three-phase load, 500V/30A, MD-A (IEC60990 Figure 4), RMS
Power test (PW)	Single/three-phase load, 500V/30A, three-phase 20kW (optional 45kW/60kW/90kW)
Start-up test (ST)	Single/three-phase, 500V/30A
Interface	10" color LCD, RS232\PLC port
Load power supply	Built-in 20kVA isolation transformer (optional 45kVA/60kVA/90kVA isolation transformer or variable frequency power supply)
Dimensions	600x1600x500 (WxHxD, mm)

Multi-channel Intelligent Electrical Safety Analyzer
AN1635(F)/AN1636(F)/AN1637(F)/AN1638(F)/AN1632(F) Series

★ **4-in-1:** ACW/DCW/IR/GB
★ **High precision:** 1% accuracy for safety comprehensive analyzer
★ **High speed:** GB and ACW/DCW/IR in parallel
★ **Informatization:** Android platform, data storage, MES connection

Product Introduction

This Ainuo AN16(F) series multi-channel intelligent electrical safety analyzer has the characteristics of intelligence, high speed and high precision, with functions for AC/DC withstand voltage, insulation resistance, AC ground bond resistance test, arc detection, open/short circuit detection, electric shock protection, multi-channel switching and others.

This series of products has wide ranges: 5kV/100mA (or 40mA) AC withstand voltage, 6kV/20mA DC withstand voltage, 6kV/50GΩinsulation resistance, 64A (or 32A)/ 600mΩAC ground bond resistance test.

This series of product has an intelligent platform, informatization functions and automatic interfaces, meeting requirements of high-quality development, intelligent manufacturing and industrial upgrading.

This series of products can meet the safety testing requirements of various electrical products with multi-input and multi-output, such as switching power supplies, power adapters, frequency converters, inverters, UPS, motors, electric drives, batteries, and charging piles.

Features

Safe and reliable

- Draft units who participated in drafting of national standards and verification regulations for safety comprehensive tester;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Complete electromagnetic environment, load conditions, endurance test verification;
- Electric shock protection, arc detection, open/short circuit detection and other functions.

Convenient and efficient

- Fast measurement and control: fast test, switching and discharge;
- Parallel test: GB and ACW/DCW/IR in parallel, doubled speed;
- Flexible configuration: multi functions, channels and models.

Intelligent and automatic

- Smart safety compliance analyzer: Android system, 7" touch screen, self-learning smart keyboard;
- Data management: local storage, network transmission, direct connection with MES system;
- Interfaces: RS232, USB, LAN, WIFI, PLC, I/O control.

Specifications

Model	AN1638H(F) ACW/DCW/IR/GB	AN1637H(F) ACW/DCW/IR/GB	AN1636H(F) ACW/DCW/IR	AN1635H(F) ACW/DCW/IR	AN1632H(F) ACW/IR	AN1632D(F) DCW/IR
AC withstand voltage (ACW)	5kVac/100mA	5kVac/40mA	5kVac/100mA	5kVac/40mA	5kVac/40mA	No
DC withstand voltage (DCW)	6kVdc/20mA				No	6kVdc/20mA
Insulation resistance (IR)	6kVdc/50GΩ					
Ground Bond resistance (GB)	64Aac/600mΩ	32Aac/600mΩ	No			
Parallel	GB and ACW/DCW/IR in parallel		No			
Multi-channel	Optional 8-channel high-voltage or ground card		Optional 8-channel high-voltage card			
Interface	Android system, 7" touch screen, RS232 \ LAN \ WiFi \ PLC \ USB interface					
Dimensions	426x132x520 (W×H×D, mm)					

Multi-channel Electrical Safety Tester

AN9635HC(F)\AN9636HC(F)\AN9637HC(F)\AN9638HC(F)

★ **4-in-1:** ACW/DCW/IR/GB
★ **High precision:** 1% accuracy
★ **Multi-Channel:** Multi-Channel scan test

Product Introduction

Ainuo AN96(F) series multi-channel electrical safety tester has the characteristics of high speed, high precision and multi-channel, with functions including AC withstand voltage, DC withstand voltage insulation resistance, AC ground bond test, as well as arc detection, open and short circuit detection, multi-channel switching and other function combinations.

The series of products have wide range options: AC withstand voltage 5kV/100mA (or 40mA), DC withstand voltage 6kV/20mA, insulation resistance 2.5kV/50GΩ, AC grounding 32A/600mΩ.

The product have information interfaces and automation interfaces, meeting the requirements of high-quality development, intelligent manufacturing and industrial upgrading.

The series of products can meet the safety testing requirements of various electrical products with multi I/Os, such as switching power supplies, power adapters, frequency converters, inverters, UPS, motors, electric drives, batteries, and charging piles.

Features

Safe and reliable

- Main drafting unit of state standards and verification regulations for safety testing products;
- Nearly 30 years of safety testing expertise and follow-up of industry needs;
- Complete electromagnetic, environment, load, operating conditions, fatigue test verification;
- Anti-shock protection, arc detection, open/short circuit detection etc.

Convenient and efficient

- Fast measurement and control: fast test, switching, discharge;
- Accurate test: 500VA AC withstand voltage, 1% accuracy;
- Flexible configuration: various functions, channels and models.

Automatic and efficient

- Parallel test: parallel positive/negative high voltage test, complete the three-terminal withstand voltage test within 1s;
- Scan test: multi-channel high voltage and ground bond scan test combination, flexible configuration;
- Rich interface: RS232, USB, LAN, PLC, I/O.

Specifications

Model	AN9638HC(F) ACW/DCW/IR/GB	AN9637HC(F) ACW/DCW/IR/GB	AN9636HC(F) ACW/DCW/IR	AN9635HC(F) ACW/DCW/IR
AC withstand voltage (ACW)	5kVac/100mA	5kVac/40mA	5kVac/100mA	5kVac/40mA
DC withstand voltage (DCW)	6kVdc/20mA			
Insulation Resistance (IR)	2.5kVdc/50GΩ			
Ground bond resistance (GB)	32Aac/600mΩ		None	
Parallel	Optional parallel positive/negative high voltage output, specially designed for three-terminal withstand voltage test of switching power supply			
Multi-channel scan	Optional 8-channel high voltage and ground bond test combination		Optional 8-channel high-voltage board	
Operation interface	5.6-inch" LCD, RS232\LAN\WIFI\PLC\USB port			
Dimensions (mm)	426×132×520 (W×H×D)			

Multifunctional Electrical Safety Tester
AN9633B(F)/AN9634B(F)/AN9635B(F)/AN9636B(F)/AN9637B(F)/AN9638B(F)

- ★ **4-in-1:** ACW/DCW/IR/GB
- ★ **High precision:** 1% accuracy for safety tester
- ★ **High speed:** 0.5s, quick operation

Product Introduction

This Ainuo AN9633B(F)/34B(F)/35B(F)/36B(F)/37B(F)/38B(F) series multifunctional safety tester has multi-functional combinations of AC/DC withstand voltage, insulation resistance and AC ground bond resistance, meeting the safety testing requirements of various electronic components and electrical products.
This series of product features compact, light and rich interfaces, suitable for desktop testing, system integration and other operating conditions.
This series of product has RS232/RS485/LAN/USB/PLC multiple communication ports, meeting requirements of intelligent manufacturing and industrial upgrading in electrical manufacturing industry.

Features

Safe and reliable

- Draft units who participated in drafting of national standards and verification regulations for safety compliance analyzers;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Complete electromagnetic environment, load conditions, endurance test verification;
- Electric shock protection, arc detection, open/short circuit detection and other functions.

Convenient and efficient

- Fast measurement and control: fast test, switching and discharge;
- Touch screen: unique keys + touch screen, easy to operate;
- Flexible configuration: multi functions, interfaces and models.

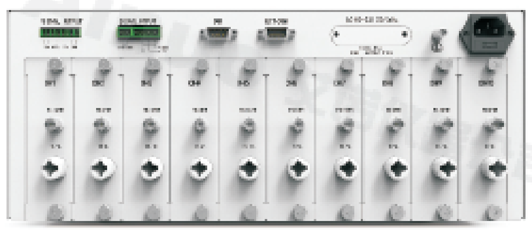
Light and durable

- Compact: four-in-one function, 2U high, standard 1/2 wide chassis;
- Interfaces: RS232, PLC, USB, LAN (optional).

Specifications

Model	AN9638B(F) ACW/DCW/IR/GB	AN9637B(F) ACW/DCW/IR/GB	AN9636B(F) ACW/DCW/IR	AN9635B(F) ACW/DCW/IR	AN9634B(F) ACW/DCW/IR/GB	AN9633B(F) ACW/DCW/IR
AC withstand voltage (ACW)	5kV/100mA	5kV/40mA	5kV/100mA	5kV/40mA	5kV/20mA	
DC withstand voltage (DCW)	6kV/10mA					
Insulation resistance (IR)	1kV/50GΩ					
Ground bond resistance (GB)	32Aac/600mΩ	32Aac/600mΩ	None		32Aac/600mΩ	None
Interface	5" color LCD touch screen, RS232/PLC/USB/LAN (optional)					
Dimensions (mm)	255 (W)×118 (H)×440 (D)			213 (W)×88 (H)×360 (D)		

Multi-channel Parallel Electrical Safety Tester
AN9633H(F) Series



- ★ **3-in-1:** ACW/DCW/IR
- ★ **Ten-channel parallel:** Multi-channel synchronous test
- ★ **Multi-condition test:** Channel independent or uniform setting
- ★ **High precision:** 1% accuracy

Product Introduction

Ainuo AN9633H(F) series multi-channel parallel electrical safety tester, with AC withstand voltage, DC withstand voltage, insulation resistance three-in-one function, up to 10 channels of parallel output, meeting the requirements for rapid safety testing of electronic components such as chargers, transformers, connectors, contactors, relays, wires and cables, switches, resistors, capacitors, etc.
4, 6, 8 and 10 channels can be chosen for this series of products for testing as required. Each channel has independent power amplifier, booster and measurement circuit. Each channel supports independent or uniform parameter setting, supporting multi-channel synchronous/ asynchronous start of testing.

Features

Safe and reliable

- Complete electromagnetic, environment, load, operating conditions, fatigue test verification;
- Anti-shock protection, arc detection, open/short circuit detection etc.

Convenient and efficient

- Fast test: 10 channels in parallel, fast switching, independent judgment;
- Flexible operation: independent/uniform setup, multi-channel synchronous test.

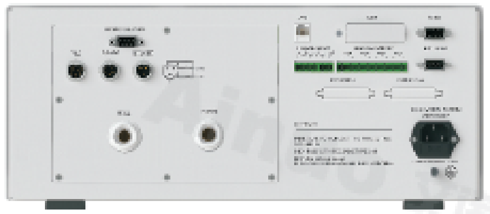
Efficient integration

- High volume ratio: 4U standard chassis, equivalent to 10 sets of 3-in-1 testers;
- Rich interfaces: RS232, PLC, USB, LAN (optional) port.

Specifications

Model	AN9633H-10(F)	AN9633H-8(F)	AN9633H-4(F)	AN9633H-4C(F)
AC withstand voltage (ACW)	5kV/10mA			
DC withstand voltage (DCW)	6kV/5mA			
Insulation resistance (IR)	2.5kV/50GΩ			
Number of channels	10 channels	8 channels	4 channels	4 channels
Start mode	Synchronous start	Synchronous start	Synchronous start	Synchronous/asynchronous start
Operation interface	5.5" color LCD, RS232/PLC interface			
Dimension W×H×D(mm)	426×177×600			

10kV Electrical Safety Analyzer
AN16310H(F) Series

★ **3-in-1:** Up to ACW/DCW/IR
★ **High precision:** 1% basic accuracy
★ **High voltage:** 10kV AC/DC high voltage

Product Introduction

Ainuo AN16310H(F) series 10kV intelligent electrical safety analyzer features high precision, high reliability and informatization, with functions including AC withstand voltage, DC withstand voltage, insulation resistance, as well as arc detection, open/short circuit detection, electric shock protection, etc.
The series of products have wide range, with AC withstand voltage of 10kV/40mA, DC withstand voltage of 10kV/10mA and insulation resistance of 2.5kV/50GΩ.
The series of products feature intelligent platforms, informatization and automatic interfaces, to meet requirements for intelligent automatic testing.
The series of products can meet the safety testing requirements of various high-voltage insulation products such as photovoltaic modules, high-voltage relays, wires and cables.

Features

Safe and reliable
- Main drafting unit of state standards and verification regulations for safety testing products;
- Nearly 30 years of safety testing expertise and follow-up of industry needs;
- Complete electromagnetic, environment, load, operating conditions, fatigue test verification;
- Anti-shock protection, arc detection, open/short circuit detection etc.

Intelligent automatic
- Smart safety tester: Android system, 7" touch screen, self-learning smart keyboard;
- Barcode recognition: barcode scanning, program matching, automatic startup, data packing;
- Data management: local storage, cloud storage, network transmission, direct connection with MES system;
- Rich interfaces: RS232, USB, LAN, WIFI, PLC, I/O control port.

Specifications

Model	AN16310H(F) ACW/DCW/IR	AN16310H-A(F) ACW/IR	AN16310H-D(F) DCW/IR
AC withstand voltage (ACW)	10kVac/40mA	10kVac/40mA	-----
DC withstand voltage (DCW)	10kVdc/10mA	-----	10kVdc/10mA
Insulation resistance (IR)	2.5kVdc/50GΩ		
Operation interface	Android system, 7" touch screen, RS232/LAN/WIFI/PLC/USB interface		
Dimension W×H×D(mm)	426 × 177 × 600		

Withstand Voltage Tester
AN9605(F)/AN9602(F) Series



★ **Compact:** 2U high, 1/2 standard chassis width
★ **High precision:** 1% accuracy
★ **High speed:** Fastest 0.5s test, simple operation

Product Introduction

Ainuo AN9605D(F)/AN9605B(F)/AN9605X(F)/AN9602X(F) series withstand voltage tester has AC withstand voltage, DC withstand voltage, 20mA output, 100mA output and other specifications, meeting the safety test requirements for various electrical products and components.
This series of products feature compact, light, rich interfaces, and suitable for desktop testing, system integration and other operating conditions.
This series of products have RS232/RS485/LAN/USB/PLC and other interfaces, meeting the needs of intelligent manufacturing and industrial upgrading in the electrical manufacturing industry.

Features

Safe and reliable
- Complete electromagnetic, environment, load, operating conditions, fatigue test verification;
- Anti-shock protection, arc detection, open/short circuit detection etc.

Convenient and efficient
- Touch screen: unique keys + touch screen, easy to operate;
- Flexible configuration: rich functions, multi interfaces and various models.

Light and durable
- Compact: suitable for system integration and desktop use.
- Rich interfaces: RS232, PLC, USB (optional), LAN (optional).

Specifications

Model	AN9605D(F)	AN9605B(F)	AN9605X(F)	AN9602X(F)	AN9602M(F)
AC withstand voltage (ACW)	None	5kV/20mA	5kV/20mA	5kV/100mA	5kV/200mA
DC withstand voltage (DCW)	6kV/10mA	None			
Accuracy	1%		2.5%		
Display operation	5" color LCD touch screen, function keys		Character VFD display, functional keys		
Operation interface	RS232/PLC/USB/LAN (optional) interface		RS232/PLC		
Dimension W×H×D(mm)	213 × 88 × 460		320 × 110 × 400	400 × 143 × 455	

Insulation Resistance Tester
AN9671(F) Series


★ **3-in-1**: Compact: 2U high, 1/2 standard chassis width
★ **High precision**: 1% basic accuracy
★ **High speed: fastest** 0.5s test, simple operation

Product Introduction

Ainuo AN9671B(F)/AN9671X(F) insulation resistance tester features compact, light, rich interfaces, and is suitable for desktop testing, system integration and other operating conditions.
This series of products have RS232/RS485/LAN/USB/PLC and other interfaces, meeting the needs of intelligent manufacturing and industrial upgrading in the electrical manufacturing industry.

Features

Safe and reliable
- Nearly 30 years of safety testing expertise and understanding of customer needs;
- Complete electromagnetic, environmental, load, operating conditions, fatigue test verification.

Convenient and efficient
- Touch screen: unique keys + touch screen, easy to operate;
- Flexible configuration: rich functions, multi interfaces and various models.

Light and durable
- Compact: suitable for system integration and desktop use.
- Rich interfaces: RS232, PLC, USB, LAN (optional).

Specifications

Model	AN9671B(F)	AN9671X(F)
Insulation Resistance (IR)	2.5kV/50GΩ	1kV/2000MΩ
Insulation voltage basic accuracy	1%	2.5%
Display operation	5" color LCD touch screen, functional keys	Character VFD display, functional keys
Operation interface	RS232/PLC/USB/LAN (optional) interface	RS232/PLC interface
Dimension W×H×D(mm)	213 × 88 × 460	320 × 110 × 400

Withstand Voltage/Insulation Resistance Tester
AN9632(F) Series

★ **Compact**: 2U high, 1/2 standard chassis width
★ **High precision**: 1% basic accuracy
★ **High speed**: Fastest 0.5s test, simple operation



Product Introduction

Ainuo AN9632B(F)/AN9632D(F)/AN9632X(F)/AN9632M(F) series withstand voltage/insulation resistance tester has AC withstand voltage, DC withstand voltage, insulation resistance, 20mA output, 200mA output and other specifications, meeting the safety test requirements for various electrical products and components.
This series of products feature compact, light, rich interfaces, and suitable for desktop testing, system integration and other operating conditions.
This series of products have RS232/RS485/LAN/USB/PLC and other interfaces, meeting the needs of intelligent manufacturing and industrial upgrading in the electrical manufacturing industry.

Features

Safe and reliable
- Complete electromagnetic, environment, load, operating conditions, fatigue test verification;
- Anti-shock protection, arc detection, open/short circuit detection etc.

Convenient and efficient
- Touch screen: unique keys + touch screen, easy to operate;
- Flexible configuration: rich functions, multi interfaces and various models.

Light and durable
- Compact: suitable for system integration and desktop use.
- Rich interfaces: RS232, PLC, USB (optional), LAN (optional).

Specifications

Model	AN9632D(F)	AN9632B(F)	AN9632X(F)	AN9632M(F)
AC withstand voltage (ACW)	None	5kV/20mA	5kV/20mA	5kV/200mA
DC withstand voltage (DCW)	6kV/10mA	None		
Insulation Resistance (IR)	2.5kV/50GΩ		1kV/2000MΩ	
High voltage output basic accuracy	1%		2.5%	
Display operation	5" color LCD touch screen, function keys		Character VFD display, functional keys	
Operation interface	RS232/PLC/USB/LAN (optional) interface		RS232/PLC interface	
Dimension W×H×D(mm)	213 × 88 × 460		320 × 110 × 400	400 × 143 × 455

Ground Bond Resistance Tester
AN1616(F)/AN1613(F)/AN9613(F) Series

- ★ **AC GB:** 64A/600mΩ, 32A/600mΩ, 1% basic accuracy
- ★ **DC GB:** 60A/600mΩ, 40A/600mΩ, 1% basic accuracy
- ★ **Multi-channel:** Optional 8-channel switching card for AC GB, supporting cascading
- ★ **Informatization:** Android platform, data storage, barcode recognition, MES connection

Features

Safe and reliable
- Draft units who participated in drafting of national standards and verification regulations for safety comprehensive tester;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Complete electromagnetic environment, load conditions, endurance test verification.

Rich functions
- Two modes: resistance/voltage mode, meet various industry standards;
- Multi-channel card: Optional 8-channel switching card for AC GB, supporting cascading;
- Automatic start: AC ground loop detection, loop formation, automatic start test.

Intelligent and automatic
- Smart safety compliance analyzer: Android system, 7" touch screen, self-learning smart keyboard;
- Barcode recognition: barcode scanning, program matching, automatic startup, data packing;
- Data management: local storage, network transmission, direct connection with MES system;
- Interfaces: RS232, RS485, PLC, USB, CAN, WIFI.

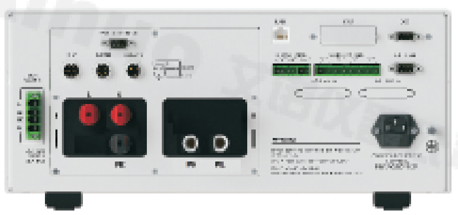
Specifications

Model	AN1616D(F)	AN1613D(F)	AN1616H(F)	AN1613H(F)	AN1613HD(F)
DC Ground Bond resistance (DCGB)	60Adc/600mΩ	40Adc/600mΩ	No		40Adc/600mΩ
Ground Bond resistance (GB)	No		64Aac/600mΩ	32Aac/600mΩ	
Multi-channel	No		Optional 8-channel grounding card		No
Interface	Android system, 7" touch screen, RS232\LAN\WIFI\PLC\USB				
Dimensions	426x132x520 (W×H×D, mm)				

Model	AN9613X(F)
Ground Bond resistance (GB)	32A/600mΩ
Voltage display	0.01-7.50V
Interface	VFD character display, RS232\PLC
Dimensions	320x110x400 (W×H×D, mm)

Model	AN9613B(F)
Ground Bond resistance (GB)	32A/600mΩ
Interface	5.5" color LCD touch screen, RS232\PLC\USB\LAN (optional)
Dimensions	213x88x460 (WxHxD, mm)

Leakage Current Analyzer
AN1620(F) Series



- ★ **Multi-body network:** 8 MD options, applicable to multi-industry safety standards;
- ★ **Multi-parameter measurement:** RMS, peak, AC/DC component measurement;
- ★ **Measurement frequency:** DC, 15Hz - 1MHz touch current frequency;
- ★ **Multi-power state:** 11 power switching states, built-in 500W power supply.

Features

Safe and reliable
- Draft units who participated in drafting of national standards and verification regulations for safety compliance analyzers;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Complete electromagnetic environment, load conditions, endurance test verification.

Rich functions
- Multi-body network: 8 MD options, applicable to multi-industry safety standards;
- Multi-parameter measurement: RMS, peak, AC/DC component measurement;
- Measurement frequency: DC, 15Hz - 1MHz touch current frequency;
- Multi-power state: 11 power switching states, built-in 500W power supply.

Intelligent and automatic
- Smart safety compliance analyzer: Android system, 7" touch screen, self-learning smart keyboard;
- Barcode recognition: barcode scanning, program matching, automatic startup, data packing;
- Data management: local storage, network transmission, direct connection with MES system;
- Interfaces: RS232, RS485, PLC, USB, CAN, WIFI.

Specifications

Model	AN1620H(F)	AN1620TH(F)	AN1620M(F)	AN1620TM(F)
Specification of tested object	Single-phase 300V/20A	Three-phase 500V/20A	Single-phase 300V/20A	Three-phase 500V/20A
Test power supply	Optional built-in 500W or external isolated power supply	External isolated power supply	Optional built-in 500W or external power supply	External isolated power supply
Test network	Standard IEC60990 Figure 4, Figure 5 (8 MDs optional)		Standard medical equipment 3 MD networks	
Current range	0-20mA rms, 30mA peak			
Interface	Android system, 10" touch screen, RS232\LAN\WIFI\PLC\USB			
Dimensions	426x177x550 (W×H×D, mm)			

Transformer Induction Withstand Voltage Tester
AN96810(F)

Product Introduction

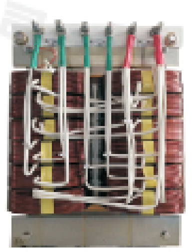
- The Transformer Induction Withstand Voltage Tester is mainly used in transformer industry.
- In addition to the main insulation of the transformer, that is, the insulation between the windings and between the winding and the iron core, the transformer has another important insulation performance index - vertical insulation. Vertical insulation means the insulation of transformer windings at different points and parts with different potentials, including turn-to-turn, between the layers and between the segments. The "Induction voltage test" in national standards and International Electrotechnical Commission (IEC) standard is one of the test methods to test the vertical insulation of the transformer.
- Ainuo AN968 Series Transformer Induction Voltage Analyzer is a professional equipment to test the vertical insulation performance of the transformer, using multi unique and international leading technologies with excellent high-accuracy active power measurement, to effectively used for determination of interturn short circuit in some microelectronics transformers.
- In micro-electronic transformers, due to high number of turns (more than a few thousand) and thin wire (enameled wire diameter of 0.1mm or less), for several or dozens of turns of short circuit, compared with normal transformers, the test current under doubling frequency doubling voltage changes less, while the change to active power is obviously (the change is generally about 50% for 10 turns short circuit).Experiments show that in case there is interturn short circuit, the power factor of the transformer changes greatly, the active power changes greatly, so it can be used as an auxiliary test means to more accurately judge the performance of the transformer.
- Current, power and power factor indicator can be used to identify the inter-turn short circuit of the transformer. Power measurement is the best basis for determination. AN968 analyzer adopts fast identification to simulate non-destructive testing, no damage to the tested transformer, to ensure accurate testing, high efficiency, ideal for labs and transformer line.

Features

- Wide voltage range：200～1200V；
- Wide frequency range: 50-600Hz;
- Measurement: voltage, current, frequency, active power;
- Key lock, humanization design to prevent mis-operation;
- HD VFD display;
- Standard RS232 port, optional RS485 port or remote control port.

Applications

- Transformer induction withstand voltage test



Specifications

Model			AN96810(F)
capacity			1200VA
Input	Voltage、Frequency		Single-phase 3 wires +PE；Phase voltage：220V±22V；Frequency：50Hz±2.5Hz
AC output	Voltage、Frequency		Single-phase 2 wires，200.0～1200.0V，50.0～600.0Hz
	Rated Current		1A
	Setting accuracy	Voltage	Resolution：0.1V，Accuracy：1%×reading value+0.2%×full scale value
		Frequency	Resolution：0.1Hz，Accuracy：0.1%
	Testing Accuracy	Voltage	Resolution：0.1V，Accuracy：1%×reading value+0.2%×full scale value
		Frequency	Resolution：0.1Hz，Accuracy：0.1%
		current	Resolution：0.1mA/1mA，Accuracy：1.5%×reading value +0.5%×full scale value
		Power	Resolution：0.01W/0.11W；Accuracy：1.5%×reading value +0.5%×full scale value （10% and above of voltage range & 5.0mA and above of current output）
	Frequency stability		≤0.1%
	Voltage distortion		Linear load：200～400V：THD≤5%；Above of 400V：THD≤3%
	Transient recovery time		20ms
	Source voltage effect		≤1%
	Load effect		≤1%
	Machine zero load power consumption		＜120W
	Protection		Short circuit，overload，power device overheat，current/power overlimit
Fun-ction	Display		VFD display
	Online adjustment function		Output voltage and frequency can be adjusted online
	Memory function		Power down memory function, memory last output mode and parameters;
	Communication		Standard：RS232；Optional：RS485、Analog control port
Environ-ment	Temperature and humidity		0～40℃，20～90%RH
Dimension W×H×D(mm)			483×200×600
Weight (Kg)			35

New Energy Vehicle Safety Analyzer
AN1662(F) Series

★ **Regulatory:** GB18384-2020 Electric Vehicles Safety Requirements/GB38032-2020 Electric Buses Safety Requirements;
★ **4-in-1:** vehicle insulation, insulation resistance, insulation monitoring, potential equalization, multi-channel testing;
★ **System:** accompanying device, information system, MES connection.

Product Introduction

This AN1662H(F) new energy vehicle safety analyzer and AN1662SD(F) test system comply with GB18384-2020 electric vehicle safety requirements and GB38032-2020 Electric buses safety requirements.

This AN1662H(F) new energy vehicles safety analyzer has the functions of vehicle insulation, insulation resistance, insulation monitoring, potential equalization and other electric vehicles safety testing, the connection for testing can be completed at one time with accessories, such as AC/DC charging gun, electric platform test clip, high-voltage component test clip, etc., and each step of safety test can be completed automatically or manually.

This new energy vehicle safety performance test system integrates the test function of AN1662H(F), so as to complete the automatic, information and intelligent test process of electric vehicle safety compliance analyzer via PC/ESRS measurement and control software, accompanying device and remote control test.

Features

System

- Four-in-one electric vehicle safety test, good scalability; One host integrates multi functions, high test speed and accuracy of safety analyzer;
- Multi-channel scanning, one-time wiring to complete all test items.

Hardware

- Wireless scanning, automatically identification of vehicle, automatically call of test program;
- CAN communication, automatic preset of vehicle status according to test items;
- Customized special accompanying test device, remote control panel, test accessories.

Software

- Process flow of electric vehicle safety test items, automatic/ manual test;
- Local storage of test data, unlimited storage, storage of all records of whole life;
- Reserved connection of MES of various database, available to download test conditions and upload test data;
- The software measurement and control system supports data query, screening, export and user privilege management.

Specifications AN1662H(F) Safety analyzer

Vehicle insulation	Range	0.1-999.9MΩ
	Voltage	200-1000Vdc
	Measuring method	Double voltmeter method
Insulation resistance	Output voltage	100-1000Vdc
	Range	0.1 - 9999MΩ
	Channel	8-channel
Insulation monitoring	Resistance switching	Detection of automatic 5-stage resistance switching
	Judgment method	CAN communication (optional), manual judgment
Potential equalization	Output current	DC constant current source, 1A
	Range	0-600mΩ
	Channel	10-channel
	Measuring method	Four-terminal method

Specifications AN1662SD(F) Safety Test System

No.	Component	Specification	Remarks
1	Electric vehicle safety analyzer	AN1662H(F)	Ainuo
2	Measurement and control software for safety analyzer	ESRS	Ainuo
3	PC	Intel-G1620/4G/120G	Advantech
4	Display	19"	DELL
5	UPS	1kW	Santak
6	Alarm light	Test/Pass/Fail	Customized
7	Printer	Self-adhesive label printing	Zebra
8	Wireless scanner	1D/2D Recognition	Zebra
9	Cabinet	White	Customized
10	Test accessories	On demand	Customized
11	Accompanying device	Optional	Customized
12	Remote controller	Optional	Customized
13	Can card	Optional	Customized

Photovoltaic Safety Analyzer
PVS(F) Series

- ★ **5-in-1:** ACW/DCW/IR/GB/DCGB
- ★ **High precision:** 1% accuracy for safety analyzer
- ★ **High speed:** AC GB and ACW/DCW/IR in parallel
- ★ **Informatization:** Android platform, data storage, MES connection

Product Introduction

This Ainuo PVS(F) series photovoltaic safety analyzer has the characteristics of intelligence, high speed and high precision, with functions for AC/DC withstand voltage, insulation resistance, AC/DC ground bond resistance test, arc detection, open/short circuit detection, electric shock protection and others.

The series of products has wide ranges: 5kV/100mA AC withstand voltage, 6kV/20mA DC withstand voltage, 6kV/50GΩ insulation resistance, 32A (or 64A)/600mΩAC ground bond resistance test, and 40A (or 60A)/600mΩ DC ground bond resistance test.

This series of product has an intelligent platform, informatization functions and automatic interfaces, meeting requirements of high-quality development, intelligent manufacturing and industrial upgrading.

This series of products can meet the safety testing requirements of various electrical products with AC/DC input/output, such as photovoltaic modules, inverters, switching power supplies, electric drives, batteries, and charging piles.

Features

Safe and reliable

- Draft units who participated in drafting of national standards and verification regulations for safety comprehensive analyzers;
- 30 years of experience on safety testing expertise and understanding of customer needs;
- Complete electromagnetic environment, load conditions, endurance test verification;
- Electric shock protection, arc detection, open/short circuit detection and other functions.

Convenient and efficient

- Fast measurement and control: fast test, switching and discharge;
- Parallel test: AC GB and ACW/DCW/IR in parallel, doubled speed;
- Flexible configuration: multi functions, channels and models.

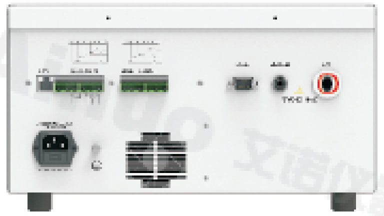
Intelligent and automatic

- Smart safety compliance analyzer: Android system, 7" touch screen, self-learning smart keyboard;
- Data management: local storage, network transmission, direct connection with MES system;
- Interfaces: RS232, RS485, PLC, USB, CAN, WIFI.

Specifications

Model	PVS450H(F)	PVS440H(F)	PVS430H(F)
AC withstand voltage (ACW)	5kVac/100mA		No
DC withstand voltage (DCW)	6kVdc/20mA		
Insulation resistance (IR)	6kVdc/50GΩ		
DC Ground Bond resistance (DCGB)	40Adc/600mΩ		
Ground Bond resistance (GB)	32Aac/600mΩ	No	
Parallel	AC GB and ACW/DCW/IR in parallel	No	
Interface	Android system, 7" touch screen, RS232\LAN\WIFI\PLC\USB		
Dimensions	426×132×520 (W×H×D, mm)		

Lithium Battery Safety Tester
AN8179F(F)



Product Introduction

Ainuo AN8179F(F) series is a special tester for the insulation of lithium battery cells, featuring quick test, high failure detection rate, low damage to failure point, and clear result display.

Fast test

The analyzer can test two parameters of the charging voltage wave and charging time of the lithium battery cell, completing one test within 50ms or more.

High detection rate

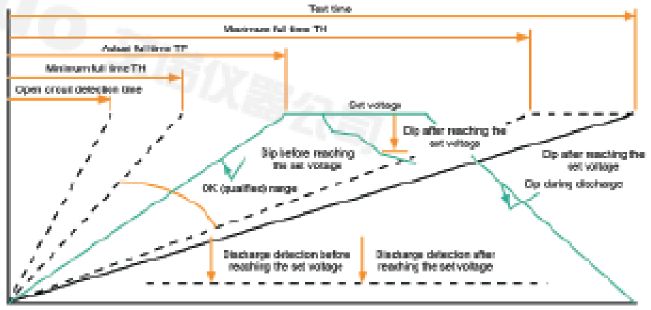
The analyzer can also accurately identify the micro-short-circuit conditions such as diaphragm perforation, impurities, and edge burrs of lithium battery cells in addition to testing the insulation failure of battery cells, preventing defective cells from entering the next process.

Low damage to failure point

The analyzer detects voltage drop in real time during charging/holding/discharging to detect any partial insulation failure as soon as possible, to avoid false temporarily conformity after clearing hidden micro-short circuit point, and avoid excessive damage to micro-short circuit (which is not conducive to fault analysis).

Clear result display

The analyzer fulfills test, judgement and display via wave display, and setting of voltage dip upper/lower limit and charging time upper/lower limit. The judgment basis and results are displayed clearly.



Specifications

Model		AN8179F(F)
Test capacity of capacitor		20nF ~ 6000nF
Voltage setting	Charging voltage range	50 ~ 1000V (optional 2000V)
	Dip of rise voltage	0~100%, display OFF when it is set to 0, indicating that this parameter does not participate in the judgment.
	Hold voltage dip	0~100%, display OFF when it is set to 0, indicating that this parameter does not participate in the judgment.
	Discharge voltage dip	0~100%, display OFF when it is set to 0, indicating that this parameter does not participate in the judgment.
Time	Test time T	10 ~ 3000ms
	Charging time TL/TH	10 ~ 3000ms
	Discharging time	Up to 2000ms (related to battery capacity)
Judgment method		Voltage dip, charging time
Standard parameter storage		100 groups
Display		8.0" TFT LCD, 800 × 600 dot matrix
Waveform Display		Time-horizontal axis, Voltage-vertical axis, 8*8 squares
Interface		RS232、LAN、USB、PLC
Dimensions W × H × D(mm)		350 × 187 × 360

Electrical Safety Remote Software
ESRS

★ **Platform**: ESRS measurement and control software mounted in Windows of PC.

★ **Application:** the system composing of ESRS measurement and control software and safety comprehensive analyzer.

★ **Multi functions:** automatic barcode recognition, automatic program calling, local data management, network transmission, MES connection.

Features

- **Platform:** ESRS measurement and control software mounted in Windows of PC.
- **Application:** the system composing of ESRS measurement and control software and safety comprehensive analyzer.
- **Intelligent test:** barcode recognition, automatic program matching, automatic start-up test, and automatic storage of test data;
- **Program editing**: open test program editing, store and call test programs from local or server;
- **Data traceability:** test data is stored synchronously locally, in the server or MES, local test data management;
- **MES connection:** connection with various MES through WIFI, LAN, RS232 and other interfaces, support connection with intermediate table of Sql Server, Oracle, Mysql and other database, Modbus TCP connection, Web Api interface for connection, as well as connection with local TXT and Access database.

Withstand Voltage Calibrator
AN16030H(F)/AN16015H(F)

★ **Specifications:** AC/DC withstand voltage verification, AC/DC withstand voltage insulation verification.

★ **Convenient:** years of customer experience and site adaptable, easy to use, error-proof.

Features

- Standard: JJG795-2016 Verification Regulations of Withstand Voltage Analyzer JJG1005-2019 Electronic Insulation Resistance Meters;
- High precision: 0.2 accuracy, with calibration of level-1 precision safety analyzer and insulation resistance tester;
- Convenient: easy-to-use with error-free without the manual;
- Portable: Optional dedicated protective trolley case, and the calibration device can be placed horizontally and vertically.

Specifications

AN16030H(F)			AN16015H(F)			
Integrate high voltage meter, ammeter, withstand voltage load resistance and insulation high resistance box to meet the measurement and calibration of AC withstand voltage, DC withstand voltage and insulation resistance.			Integrate high voltage meter, ammeter and withstand voltage load resistance to meet the measurement and calibration of AC withstand voltage, DC withstand voltage and insulation resistance voltage and current.			
Voltage measurement	0.1000~9.9999kV; 10.000~15.000kV; 0.0001kV/0.001kV; ± (0.2%× reading +2V)					
Current measurement	0.1000~9.9999-10. 000~99.999-100.00~240.00mA; 0.0001mA/0.001mA/0.01mA; ± (0.2%× reading +0.002 mA)					
Frequency measurement	Range	45.00~65.00Hz	ERROR	ERROR	±0.2%× reading	
Harmonic measurement	50th harmonic	Range	0.50 ~ 10.00%	ERROR	Less than 1% (absolute)	
Ripple measurement	Range	0.50 ~ 10.00%	Error	Less than 1% (absolute)		
Time index	1.00s ~ 999.99s, 0.01s, 0.5% ± 2 words (0.2% for 10s or higher)					
Built-in load	The voltage should not exceed 1.5kV for coarse/fine adjustment via the load, and the continuous load time should not exceed 30 seconds					
	0.5mA (1944.77KΩ); 1mA (944.77K); 2mA (444.77kΩ); 5mA (194.77kΩ);10mA (94.77k); 20mA (44.77k); 50mA (19.77kΩ); 100mA (9.77kΩ); 200mA (4.77kΩ)					
16030H(F) Built-in insulation resistance box						
Resistance	100KΩ~100GΩ					
Stage of step plate	×10GΩ	×1GΩ	×100MΩ	×10MΩ	×1MΩ	×100kΩ
Accuracy	5.0	2.0	1.0	0.5	0.2	0.2
Maximum voltage	5kV			2.5kV		

Electrical Safety Comprehensive Calibrator
AN965-15(F)

★ **Four-in-one inspection:** withstand voltage, insulation resistance, ground bond resistance and leakage current;

★ **Automatic switching:** Cooperate with the safety comprehensive inspection group to automatically switch items and complete spot inspection at one time

★ **Convenient:** years of customer experience and site adaptable, easy to use, error-proof.

Features

- Four-in-one: verification of withstand voltage current, insulation resistance, ground bond resistance and leakage current;
- Two-level spot inspection: Two-level spot inspection for each spot inspection, complete confirmation for pass/fail;
- Automatic identification: automatic identification and switching of withstand voltage\insulation\ground bond \leakage current, cooperating with the safety comprehensive inspection perfectly.

Specifications

Ground Bond resistance check

Stage	Input current	Ground bond resistance	Duration	Test terminal
Stage-0	≤25A	150mΩ±8mΩ	Less than 5 seconds	Ground bond Stage-0 + loop
Stage-1	≤25A	75mΩ±5mΩ	Less than 5 seconds	Ground bond Stage-1 + loop

AC Hipot check

Stage	Input voltage	Current-limiting resistance	Reference current point 1650V input voltage	Reference current point 1800V input voltage	Test terminal
Stage-0	≤2000V	600kΩ±12kΩ	2.75 mA	3.00 mA	High voltage + loop
Stage-1	≤2000V	200kΩ±4kΩ	8.25 mA	9.00 mA	High voltage + loop

Insulation Resistance check

Stage	Input voltage	Insulation resistance	Measuring terminal
Stage-0	≤1400V	120±12MΩ	High voltage + loop
Stage-1	≤1400V	60±6MΩ	High voltage + loop

Leakage Current check

Stage	Input voltage	Load resistance	Reference current point 233V input voltage	Reference current point 244V input voltage	Test terminal
Stage-0	≤290V	460kΩ±9.2kΩ	507μA	530μA	High voltage + loop
Stage-1	≤290V	230kΩ±4.6kΩ	1013μA	1061μA	High voltage + loop

AC Power Supply
ANFH(F) Series

AC Power Supply
ANFC(F) / ANFS(F) Series

Programmable High Power AC Power Supply
ANFP(F) Series

Bidirectional Grid Simulation Power Supply
ANBGS(F) Series

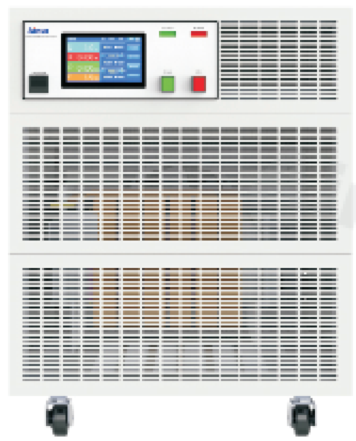
AC Constant Current Power Supply
AN77(F) Series

Frequency Conversion Power Supply
AN97(F) Series

Programmable AC Power Supply
AN61(F) Series

AC Constant Current Power Supply
ANCC(F) Series

AC Power Supply
ANFH(F) Series



Features

- 19' standard chassis, compact, can be installed in standard cabinet
- Withstand 3 times the rated current lasting for 2S, directly start impact load equivalent to 1/3 of the power
- Adjustment of voltage/frequency in output state
- Startup ramp-up and online ramp-up, and the ramp-up time can be set
- Measurements: voltage, current, frequency, active power
- Voltage level: 1.0~150.0V, 150.1~300.0V automatically adjustable or locked within 1.0~300.0V
- Line voltage drop compensation
- Multi shortcut groups, power-down memory and shortcut keys
- 4.3" color touch screen, convenient and intuitive
- Key lock and humanized design to avoid misoperation
- Operating data recorders: automatically record the power state when alarming and alarm code etc
- Standard RS232 port, optional RS485/GPIB/Ethernet port or analog control

Applications

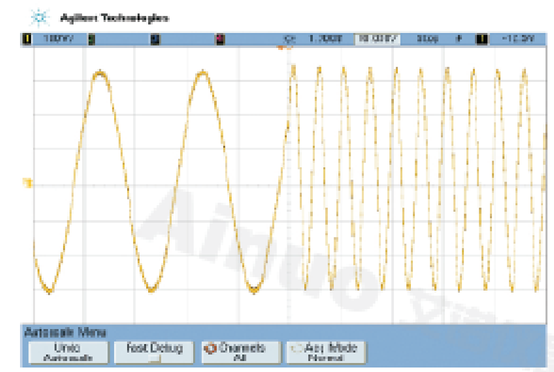
- Over shock capacity: impact loads with 1/3 power can be directly started without soft start

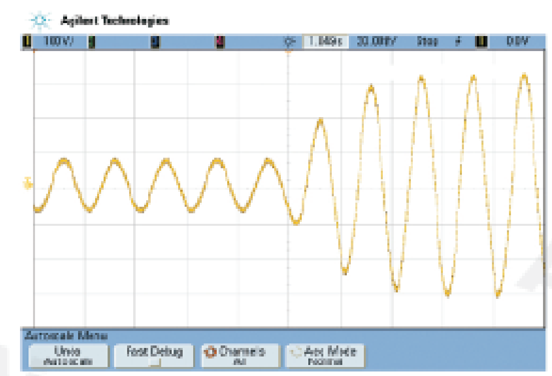
Product Introduction

ANFH(F) series AC power supply adopts digital technology and IGBT intelligent output with pure output waveform. The power supply has the ability to withstand impact of 3 times the rated current, featuring strong load adaptability, suitable for various impact loads such as motors and air conditioners, with good dynamic characteristics.

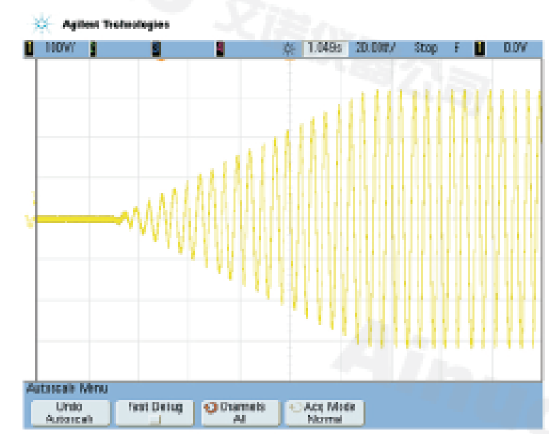
The power supply is designed suitable for 19" standard chassis, compact, and can be directly installed in a standard cabinet for various applications such as testing, system integration, production line, etc.; as well as 4.3" color LCD touch screen, convenient and intuitive, widely used in home appliance lines, labs, quality inspection institutes, certification centers etc.

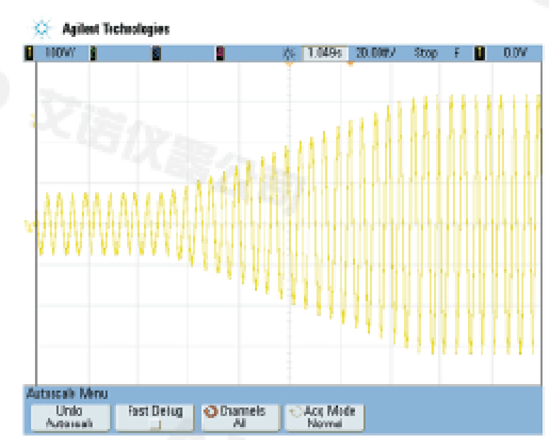
- Adjustment of voltage/frequency in output state



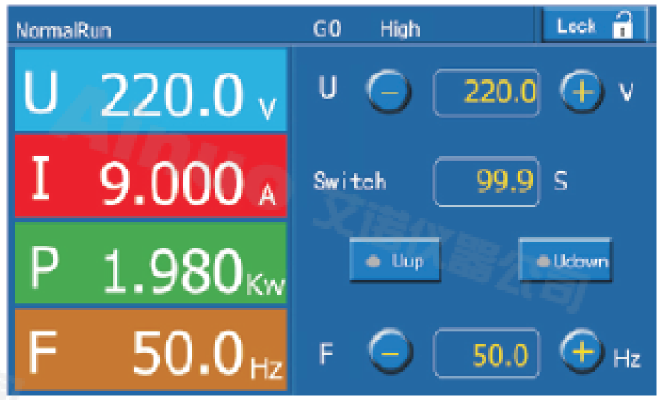


- Start ramp up and online ramp up

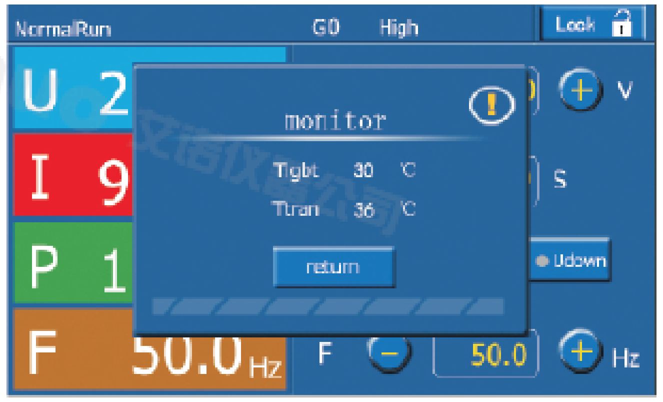




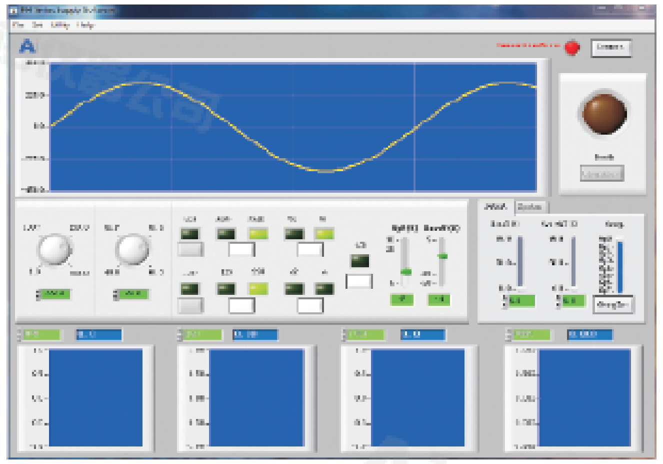
- 4.3" color touch screen, convenient and intuitive



- Online monitoring function



- PC control software



Specifications

Model			ANFH000S(F)	ANFH001S(F)	ANFH002S(F)	ANFH003S(F)	ANFH005S(F)	ANFH010S(F)	ANFH010TS(F)
Capacity			500 VA	1 KVA	2 KVA	3 KVA	5KVA	10KVA	10KVA
Input	Number of phases		Single-phase two-wire+PE						3-phase 4-wire+PE
	Voltage		Phase voltage: 220V±10%						Line Voltage:380V±10%
	Frequency		50/60Hz±3 Hz						
Output	Number of phases		Single-phase two-wire						
	Voltage		Phase voltage: 1.0~300.0V; Automatic state: (Low voltage) 1.0 ~ 150.0V, (High voltage) 150.1 ~ 300.0V; High voltage locked state: (High voltage) 1.0 ~ 300.0V						
	Frequency		45.0Hz ~ 65.0Hz, 100Hz, 120Hz, 200Hz, 240Hz, 400Hz						
	Rated current	110 V	4.6A	9.2A	18.2A	27.4A	45.6A	91.0A	91.0A
		220 V	2.3A	4.6A	9.1A	13.7A	22.8A	45.5A	45.5A
	Setting accuracy	Voltage	Resolution: 0.1 V Precision: 0.2% × reading value+0.2% × full scale value						
		Frequency	Resolution: 0.1 Hz Precision: 0.05%						
	Testing accuracy	Voltage	Resolution: 0.1 V Precision: 0.2% × reading value+0.2% × full scale value						
		Frequency	Resolution: 0.1 Hz Precision: 0.05%						
		Current	Resolution: 0.001A/0.01A/0.1A Precision: 0.3% × readng value+0.3% ×full scale value						
		Power	Resolution: 0.001 kW /0.01kW Precision: 0.45% × reading value+0.45% × full scale value						
	Frequency stability		≤0.02%						
	Voltage distortion		Linear load: THD<1%						
	Transient recovery time		20 ms						
	Voltage crest factor		1.41±0.1						
	Source voltage effect		≤1%						
	Load effect		≤1%						
	Overload capacity		105% < output ≤ 110% , turn off the output within 15 seconds; 110%< output ≤ 200%, turn off the output within 5 seconds; 200% < output ≤ 300%, turn off the output within 2 seconds; 300% < output, turn off the output immediately.						
	Shock resistance		Withstand 3 times rated current for 2S						
	Protection mode		Overheat protection, over-current protection, output overload protection, output short-circuit protection						
	Efficiency		>70%			>80%			
Function	Display mode		4.3" color LCD touch screen						
	Soft-start time		0.0~99.9Sec.						
	Online adjustment function		The output voltage and output frequency can be adjusted online (45.0~65.0Hz); Online switching ramp-up time can be set: 0.0~99.9s						
	Memory function		Power down memory function, memorizing last output mode and parameters						
	Shortcut group		9 groups						
	Line voltage drop compensation		0.000 – 0.0500 Ω						
	Communication		Standard RS232, optional RS485/GPIB/Ethernet						
	Remote control		Optional analog control port						
Working Environment	Temperature		0~40℃						
	Humidity		20% ~90%RH						
Dimensions W×H×D (mm)			3U		3U	4U	11U	13U	
			432×133(148)×400		432×133(148)×550	432×177(192)×550	432×489(563)×400	432×577(652)×400	
			The (*) means the height including machine foot, the feet can be removed				The (*) means the height including machine caster, the casters can be removed		
			Width is 432mm (handle excluded), 483mm (handle included), handle is optional						
Weight (kg)			17	20	26	35	59	82	82

AC Power Supply
ANFC(F) Series

Product Introduction

The ANFC(F) series AC power supply adopts FPGA digital control, instantaneous waveform control and high-frequency pulse width modulation (SPWM) technologies. It has the advantages of fast response speed, high output accuracy, and superior waveform quality; it can withstand 3 times the rated current impact, high capacity and strong load adaptability; adopts modular design concept, small volume and weight, convenient operation and high cost performance. Mainly used in applications such as home appliances, motors and production lines, it is one solution that meets the basic needs of traditional industries and a power supply alternative for equipment upgrades.

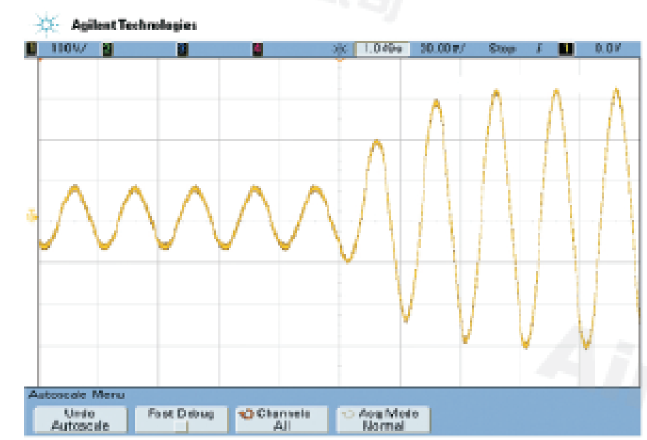
Features

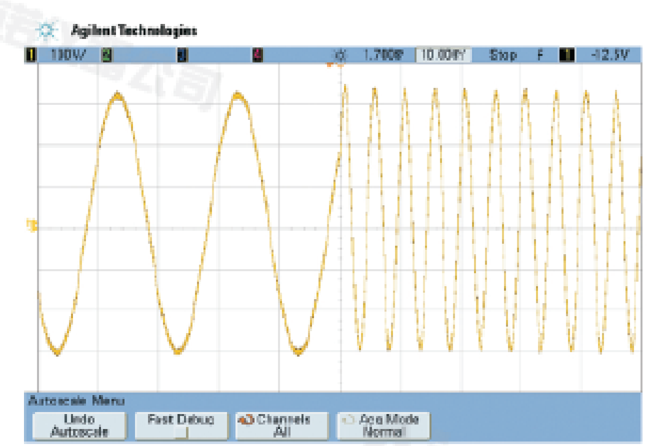
- Adopt FPGA digital technology, realize accuracy control and high quality sine wave output;
- Operating in over current shock (up to 3 times of rated current)within 2s, start the impact load of 1/3 capacity of power supply directly;
- Adjustable voltage and frequency during output status;
- Three-phase loading separately, start single phase output by U/V/W fast settings; (Only suitable for three-phase output power supply) ;
- Measurement: voltage, current, frequency, active power;
- Online monitoring: monitor IGBT temperature, transformer temperature, fan speed, input voltage and other parameters during output status;
- Operating data recorders: keep the record of power supply status and alarm code automatically during alarming;
- Voltage range: 1.0-150.0V or 150.1-300.0 V automatic adjustment, or locked at 1.0-300.0V;
- Shortcuts groups, power-off memory, shortcuts key and knobs operation;
- Fan speed will be adjustable automatically with the temperature of power supply to reduce the noise;
- Lock key, user-friendly design, automatically locking without operation for 5 minutes to prevent from operation mistakes;
- Standard RS232, optional RS485, GPIB, Ethernet, analog control and other remote communication/control.

Applications

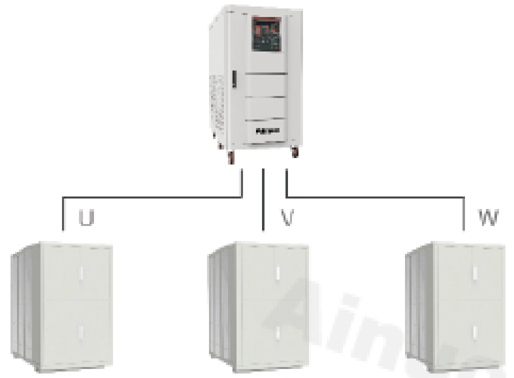
- Over shock capacity: impact load of 1/3 capacity of power supply directly without soft start.

- Adjustable voltage and frequency during output

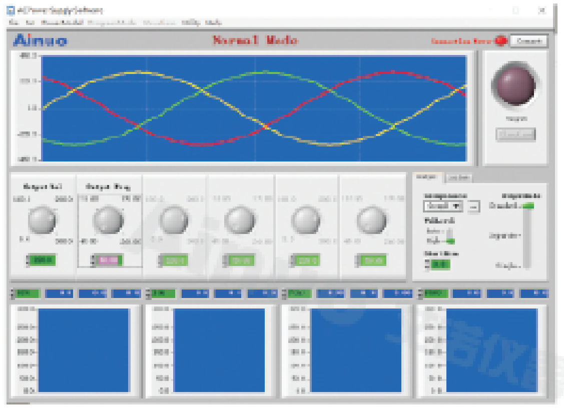




Three-phase loading separately(Only suitable for three-phase output power supply)



PC control software



Specifications

Model			ANFC015S(F)	ANFC020S(F)	ANFC030S(F)	ANFC045S(F)	ANFC060S(F)	ANFC090S(F)	ANFC120S(F)
Capacity			15kVA	20kVA	30kVA	45kVA	60kVA	90kVA	120kVA
Input	Voltage，Frequency		3-phase 4-wires + PE，Phase voltage: 220V±33V, line voltage: 380V±57V，50/60Hz±3Hz						
Output	Voltage		single -phase 2-wires，Automatic files: (low grade) 1 ~ 150.0V, (high-grade) 150.1~300V； high-grade lock:1.0 ~ 300.0V						
	Frequency		45.0～65.0Hz，100Hz、120Hz、200Hz、240Hz						
	Rated current	110V	136.3A	181.8A	272.7A	409.1A	545.4A	818.2A	1090.8A
		220V	68.2A	90.9A	136.3A	204.5A	272.7A	409.1A	545.4A
	Setting accuracy	Voltage	Resolution：0.1V；accuracy: 0.2%xreading value +0.2%xfull scale value						
		Frequency	Resolution：0.1Hz；accuracy：0.05%						
	Testing accuracy	Voltage	Resolution：0.1V；accuracy: 0.2%xreading value +0.2%xfull scale value						
		Frequency	Resolution：0.1Hz；accuracy：0.05%						
		Current	Resolution：0.1A/1A，accuracy：0.3%×reading value+0.3%×full scale value						
		Power	Resolution：0.1kW/0.01kW/0.001kW，accuracy：0.45%×reading value+0.45%×full scale value						
	Frequency stability		≤0.02%						
	Voltage distortion		Linear load：THD＜1%						
	Transient recovery time		20ms						
	Crest factor		1.41±0.1						
	Source voltage effect		≤1%						
	Load effect		≤1%						
	Overload capacity		105%＜output≤110% the output will be stopped within 15s；110%＜output≤200% the output will be stopped within 5s；200%＜output≤300% the output will be stopped within 2s；300%＜output the output will be stopped immediately;						
	Protection mode		IGBT overheat、IGBT over current、Transformer overheat、Input under voltage、Input over voltage、Output under voltage、Output over voltage、Output over load、Output short cirluit、output over current						
Function	Online adjustment function		The output voltage and frequency (45~65Hz) can be adjusted online under status						
	Memory function		Power down memory function, memory last output mode and parameters； Shortcut group 7 groups						
	Line voltage drop compensation		0.000～0.500Ω						
	Communication control interface		Standard：RS232；Optional：RS485、GPIB、Ethernet、Analog control port						
Environment	Temperature and humidity		0～40℃；20～90%RH						
Dimension W×H×D(mm)			600×1130×1018			700×1330×1218			800×1768×1418
Weight (Kg)			175	190	250	370	500	560	970

Specifications

Model			ANFC015T(F)	ANFC030T(F)	ANFC045T(F)	ANFC060T(F)	ANFC090T(F)	ANFC120T(F)	ANFC180T(F)	ANFC240T(F)
Capacity			15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	180kVA	240kVA
Input	Voltage，Frequency		3-phase 4-wires + PE，Phase voltage: 220V±33V, line voltage: 380V±57V，50/60Hz±3Hz							
Output	Voltage		Three -phase 4-wires，Automatic files: (low grade) 1.0 ~ 150.0V, (high-grade) 150.1~300V； high-grade lock:1.0~300.0V							
	Frequency		45.0 – 65.0Hz，100Hz、120Hz、200Hz、240Hz							
	Rated current	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
		220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	Setting accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value +0.2%×full scale value							
		Frequency	Resolution：0.1Hz，accuracy：0.05%							
	Testing accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value +0.2%×full scale value							
		Frequency	Resolution：0.1Hz，accuracy：0.05%							
		Current	Resolution：0.1A/1A，accuracy：0.3%×reading value +0.3%×full scale value							
		Power	Resolution：0.1kW/0.01kW/0.001kW，accuracy：0.45%×reading value +0.45%×full scale value							
	Frequency stability		≤0.02%							
	Voltage distortion		Linear load：THD＜1%							
	Transient recovery time		20ms							
	3 phase phase difference		120°±2°							
	Crest factor		1.41±0.1							
	Source voltage effect		≤1%							
	Load effect		≤1%							
	Overload capacity		105%＜output≤110% the output will be stopped within 15s；110%＜output≤200% the output will be stopped within 5s；200%＜output≤300% the output will be stopped within 2s；300%＜output the output will be stopped immediately							
	Protection Mode		IGBT overheat、IGBT over current、Transformer overheat、Input under voltage、Input over voltage、Output under voltage、Output over voltage、Output over load、Output short cirluit、output over current							
Function	Online adjustment function		The output voltage and frequency（45~65Hz）can be adjusted online under status							
	Memory function		Power down memory function, memory last output mode and parameters； Shortcut group 7 groups							
	Line voltage drop compensation		0.000 – 0.600Ω							
	Communication control interface		Standard：RS232；Optional：RS485、GPIB、Ethernet、Analog control port							
Environment	Temperature and humidity		0～40℃；20～90%RH							
Dimension W×H×D(mm)			600×1130×1018		700×1330×1218			800×1768×1418		
Weight (Kg)			260	300	430	540	730	970	1240	1390

Specifications

Model			ANFC350T(F)	ANFC450T(F)	ANFC550T(F)	ANFC650T(F)	ANFC1000T(F)	ANFC1500T(F)	ANFC2000T(F)
Capacity			350kVA	450kVA	550kVA	650kVA	1000kVA	1500kVA	2000kVA
Input	Voltage、Frequency		3-phase 4-wires + PE，Phase voltage: 220V±33V, line voltage: 380V±57V，50/60Hz±3Hz						
Output	Voltage		Three -phase 4-wires，Automatic files: (low-grade) 1.0 ~ 150.0V, (high-grade) 150.1~300V； high-grade lock:1.0 ~ 300.0V				Three -phase 4-wires，Automatic files: (low-grade) 10 ~ 150.0V, (high-grade) 150.1~300.0V； high-grade lock:10 ~ 300.0V		
	Frequency		45.0~65.0Hz、100Hz、120Hz、200Hz、240Hz				45.0 ~ 65.0Hz		
	Rated current	110V	1060A	1363A	1666A	1970A	3030A	4545A	6060A
		220V	530.3A	681.8A	833.3A	984.8A	1515A	2272A	3030A
	Setting accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value +0.2%×full scale value				Resolution:0.1V，accuracy:0.4%×reading value +0.4%×full scale value		
		Frequency	Resolution：0.1Hz，accuracy：0.05%						
	Testing accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value +0.2%×full scale value				Resolution：0.1V，accuracy:0.4%×reading value +0.4%×full scale value		
		Frequency	Resolution：0.1Hz，accuracy：0.05%						
		Current	Resolution：0.1A/1A，accuracy：0.3%×reading value +0.3%×full scale value				Resolution：0.1A/1A，accuracy:0.6%×reading value +0.6%×full scale value		
		Power	Resolution：0.1kW/0.01kW/0.001kW，accuracy：0.45%×reading value +0.45%×full scale value				Resolution：0.1kW/0.01kW/0.001kW，accuracy:0.9%×reading value +0.9%×full scale value		
	Frequency stability		≤0.02%						
	Voltage distortion		Linear load：THD < 3%						
	Transient recovery time		20ms						
	3 phase phase difference		120°±2°						
	Crest factor		1.41±0.1						
	Source voltage effect		≤1%						
	Load effect		≤1%						
	Overload capacity		105% < output≤110% the output will be stopped within 15s； 110% < output≤200% the output will be stopped within 5s； 200% < output≤300% the output will be stopped within 2s； 300% < output the output will be stopped immediately						
	Protection mode		IGBT overheat、IGBT over current、Transformer overheat、Input under voltage、Input over voltage、Output under voltage、Output over voltage、Output over load、Output short cirluit、output over current						
Function	Online adjustment function		The output voltage and frequency（45~65Hz）can be adjusted online under status						
	Memory function		Power down memory function, memory last output mode and parameters； Shortcut group 7 groups						
	Line voltage drop compensation		0.000 ~ 0.500Ω						
	Communication control interface		Standard：RS232；Optional：RS485、GPIB、Ethernet						
	Remote control		Analog control port (optional)						
Environment	Temperature and humidity		0 ~ 40℃;20 ~ 90%RH						
Dimension W×H×D(mm)			1800×2000×1400	2400×2000×1400	4800（1200×4）×2000×1200		-	-	-
Weight (Kg)			2730	3150	4270	4660	-	-	-

AC Power Supply
ANFS(F) Series

Product Introduction

The ANFS(F) series AC power supply adopts FPGA digital control, instantaneous waveform control and high-frequency pulse width modulation (SPWM) technologies. It has the advantages of fast response speed, high output accuracy, and superior waveform quality; it can withstand 3 times the rated current impact , a variety of output modes, which can achieve "one machine with multiple functions" to meet the needs of customers for flexible use; it adopts 8-inch color LCD with exquisite and high-grade appearance, and digital keys make the operation more convenient. Mainly used in applications such as home appliances, motors and production lines. It is one solution that meets the basic needs of traditional industries and a power supply alternative for equipment upgrades. It also provides laboratories, quality inspection units, scientific research institutes and other applications more flexible power configuration scheme.

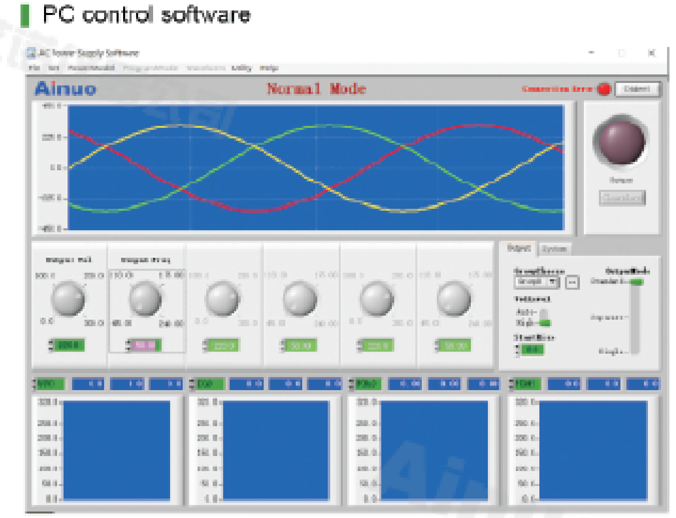
Features

- Adopt FPGA digital technology, realize accuracy control and high quality sine wave output;
- Advanced power output mode management: standard three-phase output, separated three-phase output (three-phase voltage and frequency adjusted independently), parallel single-phase output (three phase parallel, single-phase output) to achieve multi-function;
- Operating in over current shock (up to 3 times of rated current)within 2s, start the impact load of 1/3 capacity of power supply directly;
- Adjustable voltage and frequency during output status, frequency change without transit time;
- Measurement: voltage, current, current peak, frequency, active power, apparent power, power factor, voltage peak factor;
- Online monitoring: monitor IGBT temperature, transformer temperature, fan speed, input voltage and other parameters during output status;
- Operating data recorders: keep the record of power supply status and alarm code automatically during alarming, save the maintenance time;
- Fan speed will be adjustable automatically with the temperature of power supply to reduce the noise;
- Lock key, user-friendly design, automatically locking without operation for 5 minutes to prevent from operation mistakes;
- 8-inch large-screen color LCD display, digital key operation;
- Standard RS232, optional RS485, GPIB, Ethernet, analog control and other remote communication/control.

Applications

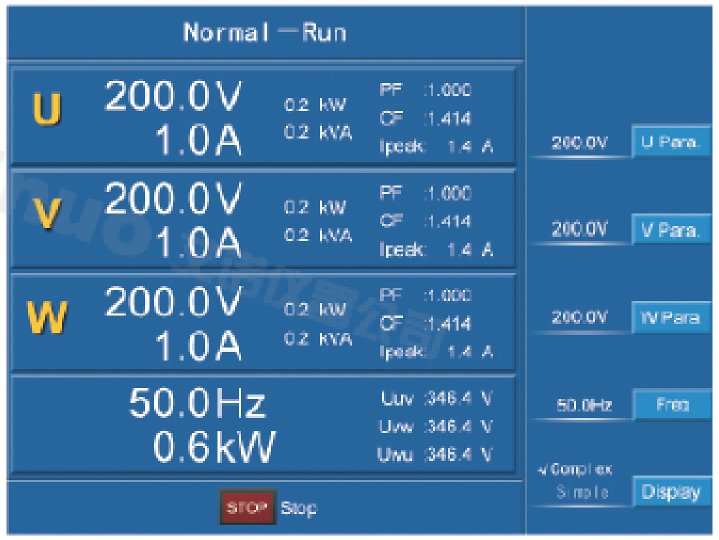
- Over shock capacity: impact load of 1/3 capacity of power supply directly without soft start.

- PC control software



- Output mode management
(standard three-phase output, separated three-phase output, parallel single-phase output)

- Large-size color LCD, digital key input, knob operation



Specifications

Model			ANFS015A(F)	ANFS030A(F)	ANFS045A(F)	ANFS060A(F)	ANFS090A(F)	ANFS120A(F)	ANFS180A(F)	ANFS240A(F)
Capacity			15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	180kVA	240kVA
Input	Voltage、Frequency		3-phase 4-wires + PE，Phase voltage: 220V±33V, line voltage: 380V±57V，50/60Hz±3Hz							
Output	Mode		3 phase standard mode，3 phase independent mode，parallel single phase mode							
	Voltage		Phase voltage: 0.0 ~ 300.0V，Automatic files: (low-grade) 0.0 ~ 150.0V, (high-grade) 150.1~300V； high-grade lock:0.0 ~ 300.0V							
	Frequency		45.00～240.00Hz							
	3 phase standard mode rated current	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
		220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	3 phase independent mode rated current	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
		220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	parallel single phase mode rated current	110V	136.3A	272.7A	409.1A	545.4A	818.2A	1090.9A	1636.4A	2181.8A
		220V	68.2A	136.3A	204.5A	272.7A	409.1A	545.4A	818.2A	1090.9A
	Setting accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value+0.2%×full scale value							
		Frequency	Resolution：0.01Hz，accuracy：0.05%							
	Testing accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value+0.2%×full scale value							
		Frequency	Resolution：0.01Hz，accuracy：0.05%							
		Current	Resolution：0.1A/1A，accuracy：0.3%×reading value +0.3%×full scale value							
		Power	Resolution：0.1kW/0.01kW/0.001kW，accuracy：0.45%×reading value+0.45%×full scale value							
	Frequency stability		≤0.02%							
	Voltage distortion		Linear load：THD＜1%							
	Transient recovery time		20ms							
	Three phase phase difference		Three phase standard mode：120°±2°							
	Crest factor		1.41±0.1							
	Source voltage effect		≤1%							
	Load effect		≤1%							
	Overload capacity		105%＜output≤110% the output will be stopped within 15s；110%＜output≤200% the output will be stopped within 5s；200%＜output≤300% the output will be stopped within 2s；300%＜output the output will be stopped immediately							
	Protection mode		IGBT overheat、IGBT over current、Transformer overheat、Input under voltage、Input over voltage、Output under voltage、Output over voltage、Output over load、Output short cirluit、output over current							
Function	Display mode;Start		8 inch LCD display，resolution：800*600；Soft-start time:0.0～99.9s							
	Online adjustment function		In the normal mode, the output voltage and frequency can be adjusted online							
	Memory function		Power down memory function，memory last output mode and parameters; shortcut group:10 groups							
	Line voltage crop compensation		0.000～0.500Ω							
	Communication		Standard：RS232；Optional：RS485、GPIB、Ethernet、Analog control port							
Environment	Temperature and humidity		0～40℃；20～90%RH							
Dimension W×H×D(mm)			600×1130×1018		700×1330×1218			800×1768×1418		
Weight(Kg)			280	330	470	590	780	1030	1320	1490

Specifications

Model			ANFS350A(F)	ANFS450A(F)	ANFS550A(F)	ANFS650A(F)
Capacity			350kVA	450kVA	550kVA	650kVA
Input	Voltage，Frequency		3-phase 4-wires + PE，Phase voltage: 220V±33V, line voltage: 380V±57V，50/60Hz±3Hz			
Output	Mode		3 phase standard mode，3 phase independent mode			
	Voltage		Automatic files: (low-grade) 0.0 ~ 150.0V, (high-grade) 150.1~300V； high-grade lock:0.0 — 300.0V			
	Frequency		45.00 ~ 240.00Hz			
	3 phase standard mode rated current	110V	1080A	1363A	1666A	1970A
		220V	530.3A	681.8A	833.3A	984.8A
	3 phase independent mode rated current	110V	1080A	1363A	1666A	1970A
		220V	530.3A	681.8A	833.3A	984.8A
	Setting accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value +0.2%×full scale value			
		Frequency	Resolution：0.01Hz，accuracy：0.05%			
	Testing accuracy	Voltage	Resolution：0.1V，accuracy：0.2%×reading value +0.2%×full scale value			
		Frequency	Resolution：0.01Hz，accuracy：0.05%			
		Current	Resolution：0.1A/1A，accuracy：0.3%×reading value +0.3%×full scale value			
		Power	Resolution：0.1kW/0.01kW/0.001kW，accuracy：0.45%×reading value +0.45%×full scale value			
	Frequency stability		≤0.02%			
	Voltage distortion		Linear load：THD＜3%			
	Transient recovery time		20ms			
	Three phase phase difference		Three phase standard mode：120°±2°			
	Crest factor		1.41±0.1			
	Source voltage effect		≤1%			
	Load effect		≤1%			
	Overload capacity		105%＜output≤110% the output will be stopped within 15s；110%＜output≤200% the output will be stopped within 5s；200%＜output≤300% the output will be stopped within 2s；300%＜output the output will be stopped immediately			
	Protection mode		IGBT overheat、IGBT over current、Transformer overheat、Input under voltage、Input over voltage、Output under voltage、Output over voltage、Output over load、Output short cirlut、output over current			
Function	Display mode;Start		8 inch LCD display，resolution：800*600，Soft-start time:0.0～99.9s			
	Online adjustment function		In the normal mode, the output voltage and frequency can be adjusted online			
	Memory function		Power down memory function, memory last output mode and parameters; shortcut group:10 groups			
	Line voltage crop compensation		0.000～0.500Ω			
	Communication		Standard：RS232；Optional：RS485、GPIB、Ethernet、Analog control port			
Environment	Temperature and humidity		0～40℃；20～90%RH			
Dimension W×H×D(mm)			1800×2000×1400	2400×2000×1400	4800（1200×4）×2000×1200	
Weight (Kg)			2730	3150	4270	4660

Programmable High Power AC Power Supply
ANFP(F) Series

Product Introduction

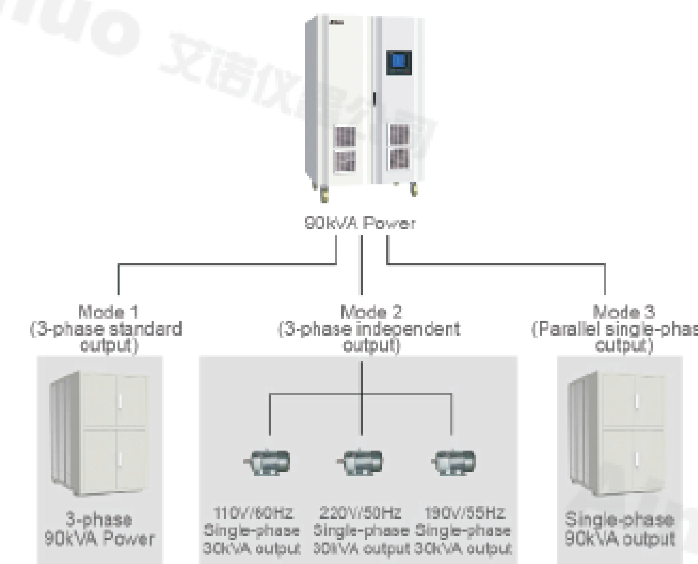
The ANFP(F) series programmable AC power supply adopts FPGA digital control, instantaneous waveform control and high-frequency pulse width modulation (SPWM) technologies. It has the advantages of fast response speed, high output accuracy, and superior waveform quality; it can withstand 3 times the rating Current impact capability, strong load adaptability; with multiple output modes and complex programmable functions, which can achieve test requirements such as ladder, step, gradual change, etc.; with three-phase unbalanced output mode, to achieve relevant regulatory tests or simulate special power grids And so on. It can be widely used in laboratories, quality inspection units, scientific research institutes and certification centers.

Features

- Adopt FPGA digital technology, realize accuracy control and high quality sine wave output;
- Advanced power management mode: three-phase standard mode, three-phase unbalanced mode (three-phase voltage can be adjusted independently, phase difference 0~359.9° adjustable), three-phase independent mode (three-phase voltage, frequency, can be adjusted independently) Parallel single-phase mode (three-phase parallel, single-phase output);
- Programmable step, stage, variations function, can realize relevant regulations;
- Harmonic function,2-40 times superposition;
- Operating in over current shock (up to 3 times of rated current)within 2s, start the impact load of 1/3 capacity of power supply directly;
- Adjustable voltage and frequency during output status, frequency change without transit time;
- Measurement: voltage, current, current peak, frequency, active power, apparent power, power factor, voltage peak factor;
- Online monitoring: monitor IGBT temperature, transformer temperature, fan speed, input voltage and other parameters during output status;
- Operating data recorders: keep the record of power supply status and alarm code automatically during alarming, save the maintenance time;
- Fan speed will be adjustable automatically with the temperature of power supply to reduce the noise;
- Lock key, user-friendly design, automatically locking without operation for 5 minutes to prevent from operation mistakes;
- Combination cabinet, 8" large-screen color LCD;
- Standard RS232, optional RS485, GPIB, Ethernet, analog control and other remote communication/control.

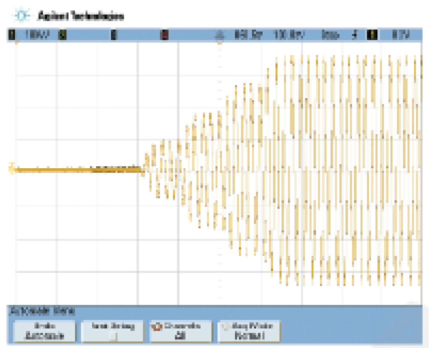
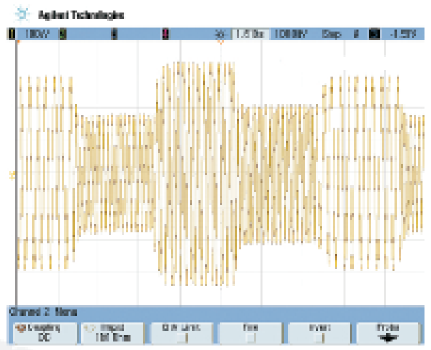
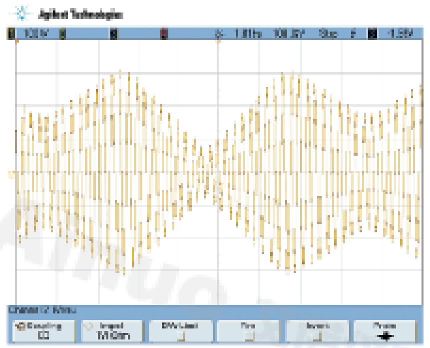
Applications

- Output mode management (standard three-phase output, separated three-phase output, parallel single-phase output)

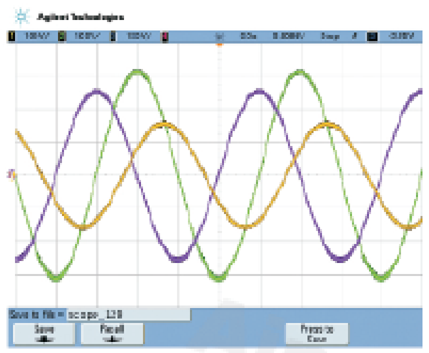


- Over shock capacity: impact load of 1/3 capacity of power supply directly without soft start;

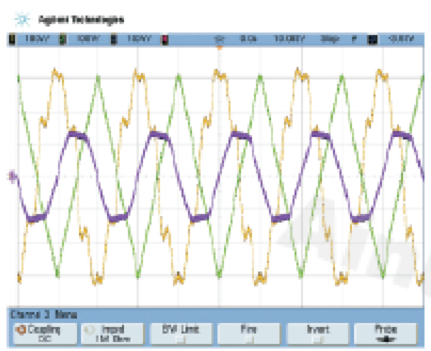
Programmable Output(Step,Stage,Varations)

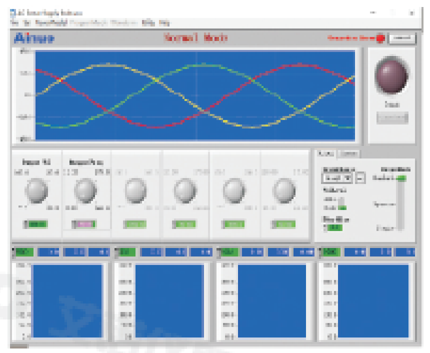
Three-phase unbalanced output (amplitude unbalance + angle unbalance)



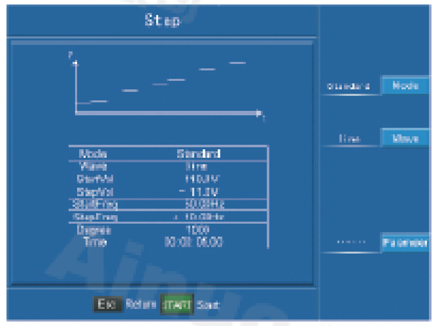
Harmonic

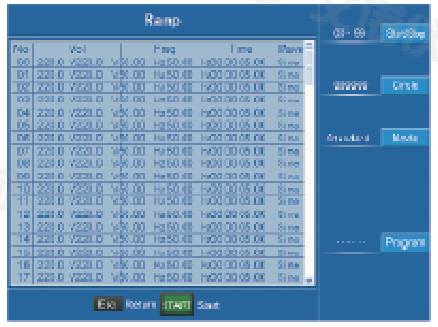


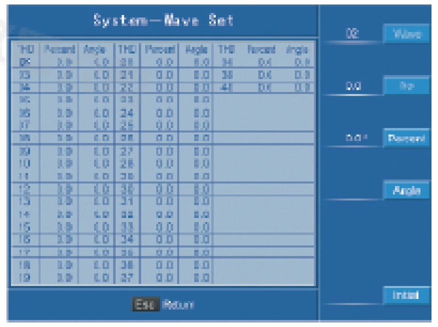
PC control software



Large-size color LCD, digital key input, knob operation







Specifications

Model			ANFP015A(F)	ANFP030A(F)	ANFP045A(F)	ANFP060A(F)	ANFP090A(F)	ANFP120A(F)	ANFP180A(F)	ANFP240A(F)
Capacity			15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	180kVA	240kVA
Input	Voltage, Frequency		3-phase 4-wires + PE, Phase voltage: 220V±33V, line voltage: 380V±57V, 50/60Hz±3Hz							
Output	Model		3 phase standard mode, 3 phase unbalanced mode, 3 phase independent mode, parallel single phase mode							
	Voltage		Phase voltage: 0.0 — 300.0V, Automatic files: (low-grade) 0.0 ~ 150.0V, (high-grade) 150.1~300V; high-grade lock:0.0 — 300.0V							
	Frequency		45.00 ~ 240.00Hz							
	3 phase standard / 3 phase unbalanced mode rated current	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
		220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	3 phase independent mode rated current	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
		220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	Parallel single-phase mode rated current	110V	136.3A	272.7A	409.1A	545.4A	818.2A	1090.9A	1636.4A	2181.8A
		220V	68.2A	136.3A	204.5A	272.7A	409.1A	545.4A	818.2A	1090.9A
	Setting accuracy	Voltage	Resolution: 0.1V, accuracy: 0.2%×reading value+0.2%×full scale value							
		Frequency	Resolution: 0.01Hz, accuracy: 0.05%							
	Testing accuracy	Voltage	Resolution: 0.1V, accuracy: 0.2%×reading value+0.2%×full scale value							
		Frequency	Resolution: 0.01Hz, accuracy: 0.05%							
		Current	Resolution: 0.1A/1A, accuracy: 0.3%×reading value+0.3%×full scale value							
		Power	Resolution: 0.1kW/0.01kW/0.001kW, accuracy: 0.45%×reading value+0.45%×full scale value							
	Frequency stability		≤0.02%							
	Voltage distortion		Linear load: THD < 1%							
	Transient recovery time		20ms							
	3 phase phase difference		3 phase standard mode: 120°±2° 3 phase unbalanced mode: 0.0° ~ 359.9°, 0.1°adjustable							
	Crest factor		1.41±0.1							
	Source voltage effect		≤1%							
	Load effect		≤1%							
	Overload capacity		105% < Output≤110% the output will be stopped within 15 Sec;110% < Output≤200% the output will be stopped within 5 Sec 200% < Output≤300% the output will be stopped within 2 Sec;300% < Output the output will be stopped immediately							
Func-tion	Protection mode		IGBT overheat、IGBT over current、Transformer overheat、Input under voltage、Input over voltage、 Output under voltage、Output over voltage、Output over load、Output short cirluit、output over current							
	Display mode		8 inch LCD display, resolution: 800*600; Soft-start:0.0 ~ 99.9s							
	Output waveform		Sine wave, harmonic (superposition 2~40 second harmonic)							
	Programming function	Step mode	9999 step							
		Stage mode	100 stage 999999 cycle							
		Varations mode	100 stage999999 cycle							
	Online adjustment function		Under normal mode, the output voltage and output frequency can be adjusted online, which can be switched on line.							
	Memory function/ Shortcut group		Power down memory function, memory last output mode and parameters: 10 groups							
	Line voltage crop compensation		0.000 ~ 0.500Ω							
	Communication		RS232 (standard)、RS485 (options)、GPIB (options)、Ethernet (options)、Analog control port (options)							
Environ-ment	Temperature/ Humidity		0 ~ 40℃, 20 ~ 90%RH							
Dimension W×H×D(mm)			1000×1990×800			1200×1990×800		1200×1990×1000		
Weight (Kg)			310	360	500	620	810	1060	1260	1380

Specifications

Model			ANFP350A(F)	ANFP450A(F)	ANFP550A(F)	ANFP650A(F)
Capacity			350KVA	450KVA	550KVA	650KVA
Input	Voltage, Frequency		3-phase 4-wires + PE, Phase voltage: 220V±33V, line voltage: 380V±57V, 50/60Hz±3Hz			
Output	Mode		3 phase standard mode, 3 phase unbalanced mode, 3 phase independent mode			
	Voltage		Phase voltage: 0.0 ~ 300.0V, Automatic files: (low-grade) 0.0 ~ 150.0V, (high-grade) 150.1~300V; high-grade lock:0.0 ~ 300.0V			
	Frequency		45.00 – 240.00Hz			
	3 phase standard / 3 phase unbalanced mode rated current	110V	1060A	1363A	1666A	1970A
		220V	530.3A	681.8A	833.3A	984.8A
	3 phase independent mode rated current	110V	1060A	1363A	1666A	1970A
		220V	530.3A	681.8A	833.3A	984.8A
	Setting accuracy	Voltage	Resolution: 0.1V, accuracy: 0.2%×reading value +0.2%×full scale value			
		Frequency	Resolution: 0.01Hz, accuracy: 0.05%			
	Testing accuracy	Voltage	Resolution: 0.1V, accuracy: 0.2%×reading value +0.2%×full scale value			
		Frequency	Resolution: 0.01Hz, accuracy: 0.05%			
		Current	Resolution: 0.1A/1A, accuracy: 0.3%×reading value +0.3%×full scale value			
		Power	Resolution: 0.1kW/0.01kW/0.001kW, accuracy: 0.45%×reading value+0.45%×full scale value			
	Frequency stability		≤0.02%			
	Voltage distortion		Linear load: THD < 3%			
	Transient recovery time		20ms			
	3 phase phase difference		3 phase standard mode: 120°±2° 3 phase unbalanced mode: 0.0° ~ 359.9°, 0.1°adjustable			
	Crest factor		1.41±0.1			
	Source voltage effect		≤1%			
	Load effect		≤1%			
	Overload capacity		105% < Output≤110% the output will be stopped within 15s; 110% < Output≤200% the output will be stopped within 5s; 200% < Output≤300% the output will be stopped within 2s; 300% < Output the output will be stopped immediately			
Function	Protection mode		IGBT overheat, IGBT over current, Transformer overheat, Input under voltage, Input over voltage, Output under voltage, Output over voltage, Lack output phase, Output over load, Output short cirluit, Output over current			
	Display mode		8 inch LCD display, resolution: 800*600			
	Programming function	Step mode	9999 set			
		Stage mode	100 stage 999999 cycle			
		Varations mode	100 stage999999 cycle			
	Online adjustment function		Under normal mode, the output voltage and output frequency can be adjusted online, which can be switched on line.			
	Memory function/ Shortcut group		Power down memory function, memory last output mode and parameters, 10 groups			
	Line voltage drop compensation		0.000 ~ 0.500Ω			
	Communication		RS232 (standard), RS485 (options), GPIB (options), Ethernet (options), Analog control port (options)			
Environment	Temperature/Humidity		0 ~ 40℃; 20 ~ 90%RH			
Dimension W×H×D(mm)			1800×2000×1400	2400×2000×1400	4800 (1200×4) ×2000×1200	
Weight (Kg)			2730	3150	4270	4660

Bidirectional Grid Simulation Power Supply
ANBGS(F) Series

Product Introduction

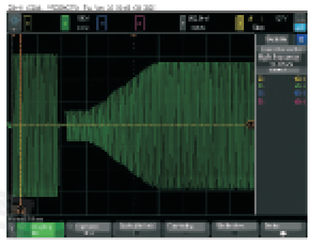
The ANBGS(F) series energy regenerative type grid simulation power is specially developed for new energy industries such as photovoltaic and wind energy, suitable for inverter testing and verification. The power supply has the function of energy regenerative type grid and can operate in four quadrants, saving energy consumption with low operating costs; FPGA digital control technology is adopted for smart inverter test process; with sine wave output and multi harmonic superposition output, single-phase, two-phase or three-phase High/Low (zero) Voltage Ride-Through (H/LVRT), which can simulate various abnormal conditions of power grid, and cooperate to achieve test of over/under-voltage, over/under-frequency, unbalance and anti-islanding protection, meeting test requirements in relevant regulations.

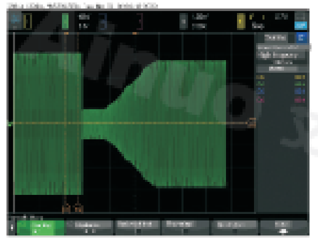
Features

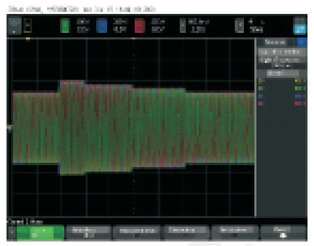
- FPGA digital control, intelligent inverter test process;
- With function of energy regenerative type grid, operating in four quadrants
- Input power factor correction.
- High-performance High/Low (zero) Voltage Ride-Through (H/LVRT), step, sag, flicker and other test functions, ride-through test within 1ms;
- Complex programming for voltage/frequency setting, easy over/under-voltage and over/under-frequency test;
- Three-phase unbalanced, adjustable three-phase voltage and phase difference separately, or direct setting of three-phase unbalance;
- 2-50th harmonic and inter-harmonic output;
- Test complying with NBT 32004-2018, IEC 61000-4-11/13/14/28 and other standard and regulations;
- Complete measurements: voltage, current, current peak, frequency, active power, apparent power, power factor, voltage crest factor;
- Online monitoring: monitor IGBT temperature, transformer temperature, fan speed, input voltage and other parameters in output state;
- Operating data recorders: keep the record of power supply status and alarm code automatically during alarming, save the maintenance time.
- Lock key, user-friendly design, automatically locking without operation for 5 minutes to prevent from operation mistakes.
- Combined cabinet for chassis, 8" large-screen color LCD; Standard RS485, Ethernet interface, synchronous signal interface, optional RS232/GPIB interface.

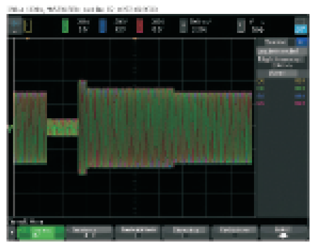
Applications

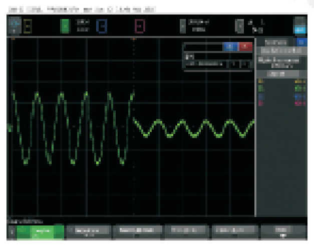
HVRT/LVRT: Programmed output mode for photovoltaic industries, to simulate the process of grid voltage sags and recovery and can simulate multiple modes such as zero voltage ride through (ZVRT), low voltage ride through (LVRT), high voltage ride through (HVRT), and Combined HVRT/LVRT etc., and the voltage, holding time, ride through angle, recovery voltage etc. can be set.

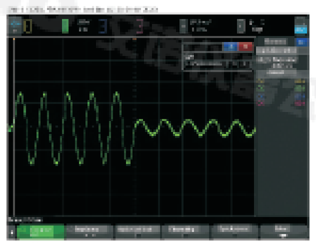

Zero Voltage Ride-Through (ZVRT)


Low Voltage Ride-Through (LVRT)

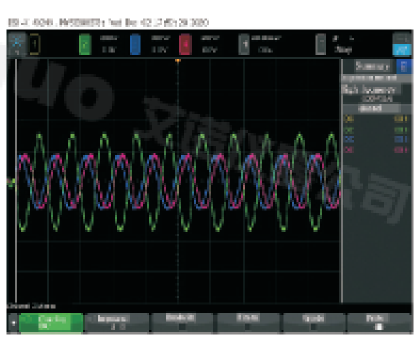

High Voltage Ride-Through (HVRT)

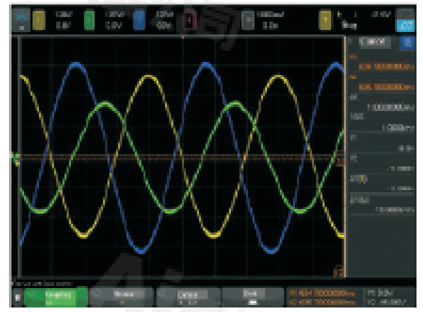

High/Low Voltage Ride-Through (H/LVRT)


60° Ride-Through

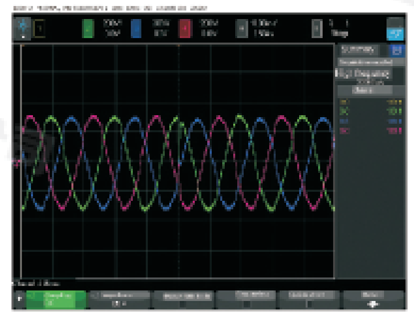

0° Ride-Through

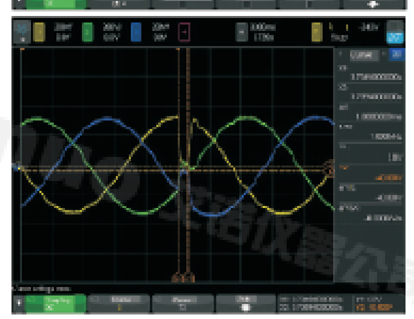
Unbalance: setting of U/V/W phase and voltage individually, direct setting of unbalance.



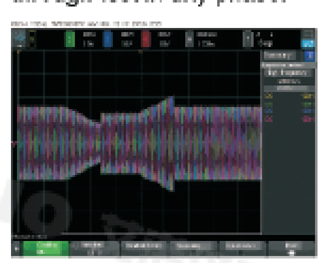
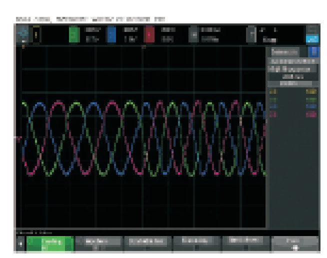


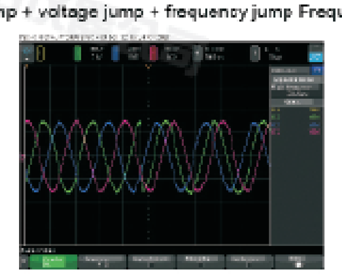
Sag: An output mode simulating short-time changes to voltage, 1ms Zero Voltage Ride-Through test.



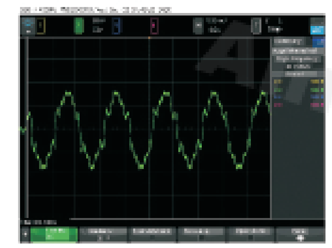
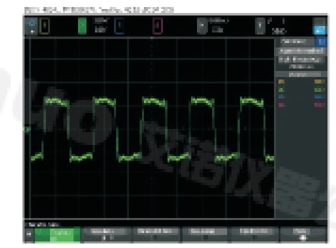

1ms Ride-Through

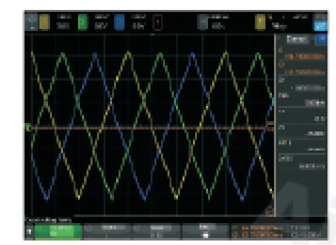
Programming: General programmable settings, voltage/frequency/phase are transformed by single-step setting, setting of trigger phase and cycle times, setting of parameters separately for three-phase output, sag/ride-through test in any phase.



Voltage Ramp + voltage jump + frequency jump Frequency 0° jump

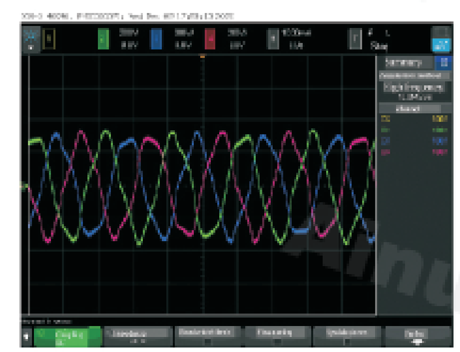

90° to 270°

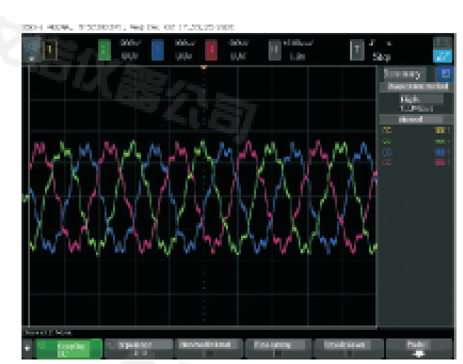
Harmonic: Harmonic editing (2-50th), various harmonics of various orders superposed on standard sine wave, setting of component and angle of each harmonic. The single harmonic can reach 30%, unlimited total harmonic content and harmonic superposition times. 50 sets of harmonic storage groups for fast calling.



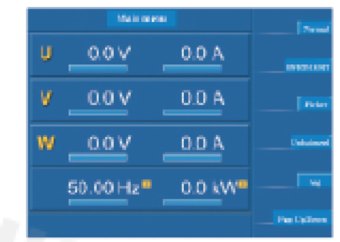
Interharmonics: Interharmonic editing, interharmonics superposed on standard sine waves, setting of interharmonic trigger angle, frequency, component and scanning time; frequency of interharmonic: 16-2500Hz.

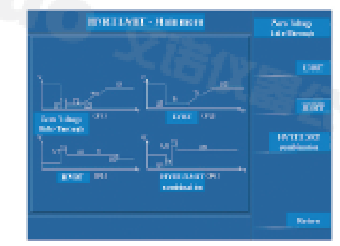
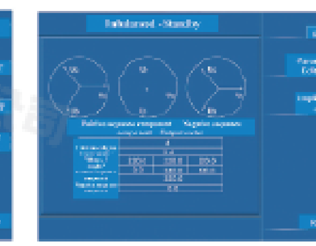
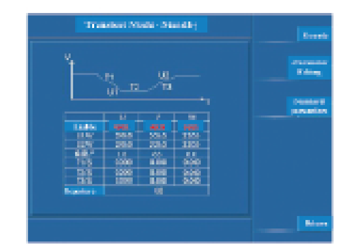
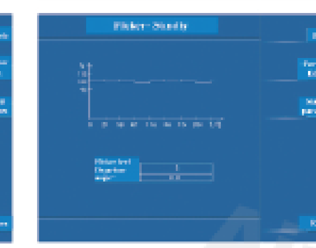




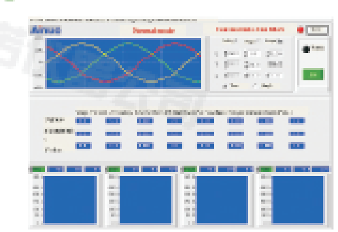
Flicker: Simulate the flicker characteristics of power grid to conduct the flicker adaptability test of DUT.

Large-size color LCD, numeric key input, knob operation.



PC control software




Specifications

Model			ANBGS 015TL(F)	ANBGS 030TL(F)	ANBGS 045TL(F)	ANBGS 060TL(F)	ANBGS 090TL(F)	ANBGS 120TL(F)	ANBGS 150TL(F) ANBGS 150TH(F)	ANBGS 200TL(F) ANBGS 200TH(F)	ANBGS 300TL(F) ANBGS 300TH(F)	ANBGS 400TL(F) ANBGS 400TH(F)
Capacity			15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	150kVA	200kVA	300kVA	400kVA
Input	Voltage		3-phase 4-wires + PE, Phase voltage: 220V±33V, line voltage: 380V±57V, frequency 50/60Hz±3Hz									
Input	Feedback function		With energy feedback grid function									
Input	Input power factor		>0.99(input rated voltage and input 50%-100% of rated current)									
Input	Input current distortion		<3% (at rated condition)									
Output	Output mode		Three-phase standard mode, three-phase unbalanced mode									
Output	Voltage, frequency	L version	Phase voltage: 0.0~350.0V; frequency: 40.00~70.00Hz									
Output	Voltage, frequency	H version	Phase voltage: 0.0~700.0V; frequency: 40.00~70.00Hz									
Output	Rated current	L version 220V	22.7A	45.4A	68.1A	90.9A	136.4A	181.8A	227.2A	303.0A	454.5A	606.0A
Output	Rated current	H version 440V	-	-	-	-	-	-	113.6A	151.5A	227.2A	303.0A
Output	Setting accuracy	Voltage	Resolution: 0.01V, Accuracy: 0.1%×full scale value									
Output	Setting accuracy	Frequency	Resolution: 0.001Hz, Accuracy: 0.01%									
Output	Testing accuracy	Voltage	Resolution: 0.01V, Accuracy: 0.1%×full scale value									
Output	Testing accuracy	Frequency	Resolution: 0.001Hz, Accuracy: 0.01%									
Output	Testing accuracy	Current	Resolution: 0.1A/1A, Accuracy: 0.2%×full scale value									
Output	Testing accuracy	Power	Resolution: 0.1kW/0.01kW/0.001kW, Accuracy: 0.3%×full scale value									
Output	Frequency stability		≤0.01%									
Output	Voltage distortion		Linear load<1%									
Output	Transient recovery time		1ms									
Output	3 phase phase difference		3-phase standard mode: 120°±2°; 3 phase unbalanced mode: 0.0°~359.9°, 0.1°Adjusted									
Output	Crest factor		1.41±0.1									
Output	Source voltage effect		≤0.02%									
Output	Load effect		≤0.02%									
Output	Overload capacity		105%<Output≤110% the output will be stopped within 600s; 110%<Output≤150% the output will be stopped within 60s; 150%<Output≤200% the output will be stopped within 2s; 200%<Output the output will be stopped immediately									
Output	Protection mode		IGBT overheat, IGBT over current, Transformer overheat, Input under voltage, Input over voltage, bus anti-recharge, Output under voltage, Output over voltage, Output lack phase, Output over current, Output over load, Output short circuit									
Function	Display		8" LCD, resolution: 800*600									
Function	Output waveform		Sine wave, harmonic (superimposed 2~50th harmonic), interharmonic									
Function	Transient mode		Yes, Voltage steps (sag) from high voltage to low voltage or low voltage to high voltage									
Function	Flicker mode		Yes, call of any group of flicker parameters from Group 1~39.									
Function	HVRT/LVRT mode		Yes, the standard curve can be called or customized as required for the user									
Function	Unbalanced mode		Yes, adjustable three-phase voltage/phase difference separately, or direct setting of three-phase unbalance;									
Function	Programming mode		200 steps of 999999 cycles, voltage/frequency/phase angle programmed freely for output									
Function	Soft-start time		0.0~99.9Sec.									
Function	Online adjustment function		Online adjusting of output voltage/frequency and switch of wave in normal mode									
Function	Memory		Power down memory function, memory last output mode and parameters.									
Function	Communication		RS485 (standard), Ethernet (standard), synchronous signal (standard), RS232 (optional), GPIB (optional)									
Environment	Temp./Humidity		0~40℃, 20~90%RH									
Dimensions W × H × D (mm)			800×1790 (including caster height 190)×800 800×1700 (including base height 100)×800			1000×1900 (including caster height 190)×1000 1000×1900 (including base height 100)×1000			1500×1900 (including base height 100)×1000		2000×1900 (including base height 100)×1150	

Specifications

Model			ANBGS 500TL(F) ANBGS 500TH(F)	ANBGS 600TL(F) ANBGS 600TH(F)	ANBGS 800TL(F) ANBGS 800TH(F)	ANBGS 1000TL(F) ANBGS 1000TH(F)	ANBGS 1200TL(F) ANBGS 1200TH(F)	ANBGS 1500TL(F) ANBGS 1500TH(F)	ANBGS 2000TL(F) ANBGS 2000TH(F)
Capacity			500kVA	600kVA	800kVA	1000kVA	1200kVA	1500kVA	2000kVA
Input	Voltage		3-phase 4-wires + PE, Phase voltage: 220V±33V, line voltage: 380V±57V, frequency 50/60Hz±3Hz						
Input	Feedback function		With energy feedback grid function						
Input	Input power factor		>0.99(input rated voltage and input 50%-100% of rated current)						
Input	Input current distortion		<3% (at rated condition)						
Output	Output mode		Three-phase standard mode, three-phase unbalanced mode						
Output	Voltage, frequency	L version	Phase voltage: 0.0~350.0V; frequency: 40.00~70.00Hz						
Output	Voltage, frequency	H version	Phase voltage: 0.0~700.0V; frequency: 40.00~70.00Hz						
Output	Rated current	L version 220V	757.5A	909.0A	1212A	1515A	1818A	2272A	3030A
Output	Rated current	H version 440V	378.7A	454.5A	606.0A	757.5A	909.0A	1136A	1515A
Output	Setting accuracy	Voltage	Resolution: 0.01V, Accuracy: 0.1%×full scale value						
Output	Setting accuracy	Frequency	Resolution: 0.001Hz, Accuracy: 0.01%						
Output	Testing accuracy	Voltage	Resolution: 0.01V, Accuracy: 0.1%×full scale value						
Output	Testing accuracy	Frequency	Resolution: 0.001Hz, Accuracy: 0.01%						
Output	Testing accuracy	Current	Resolution: 0.1A/1A, Accuracy: 0.2%×full scale value						
Output	Testing accuracy	Power	Resolution: 0.1kW/0.01kW/0.001kW, Accuracy: 0.3%×full scale value						
Output	Frequency stability		≤0.01%						
Output	Voltage distortion		Linear load: THD<1%						
Output	Transient recovery time		1ms						
Output	3 phase phase difference		3-phase standard mode: 120°±2°; 3 phase unbalanced mode: 0.0°~359.9°, 0.1°Adjusted						
Output	Crest factor		1.41±0.1						
Output	Source voltage effect		≤0.02%						
Output	Load effect		≤0.02%						
Output	Overload capacity		105%<Output≤110% the output will be stopped within 600s; 110%<Output≤150% the output will be stopped within 60s; 150%<Output≤200% the output will be stopped within 2s; 200%<Output the output will be stopped immediately						
Output	Protection mode		IGBT overheat, IGBT over current, Transformer overheat, Input under voltage, Input over voltage, bus anti-recharge, Output under voltage, Output over voltage, Output lack phase, Output over current, Output over load, Output short circuit						
Function	Display		8" LCD, resolution: 800*600						
Function	Output waveform		Sine wave, harmonic (superimposed 2~50th harmonic), interharmonic						
Function	Transient mode		Yes, Voltage steps (sag) from high voltage to low voltage or low voltage to high voltage						
Function	Flicker mode		Yes, call of any group of flicker parameters from Group 1~39.						
Function	HVRT/LVRT mode		Yes, the standard curve can be called or customized as required for the user						
Function	Unbalanced mode		Yes, adjustable three-phase voltage/phase difference separately, or direct setting of three-phase unbalance;						
Function	Programming mode		200 steps of 999999 cycles, voltage/frequency/phase angle programmed freely for output						
Function	Soft-start time		0.0~99.9Sec.						
Function	Online adjustment function		Online adjusing of output voltage/frequency and switch of wave in normal mode						
Function	Memory		Power down memory function, memory last output mode and parameters.						
Function	Communication		RS485 (standard), Ethernet (standard), synchronous signal (standard), RS232 (optional), GPIB (optional)						
Environment	Temp./Humidity		0~40℃, 20~90%RH						
Dimensions W × H × D (mm)			3000×1900 (including the base height 100)×1200		4000×1900 (including the base height 100)×1200	4400×2100 (including the base height 100)×1400		5600×2100 (including the base height 100)×1400	6400×2100 (including the base height 100)×1400

Frequency Conversion Power Supply
AN97H(F) Series

Product Introduction

The AN97H(F) series frequency conversion power supply adopts digital technology and IGBT intelligent output, pure output wave, with excellent technical performance. The power supply has an anti-shock circuit, suitable for various shock loads such as motors and air conditioners; excellent dynamic characteristics, strong load adaptation, high efficiency, simple operation, cost-efficient, suitable for industries such as export electrical appliances plants, laboratories, defense and related industries.

Features

- Over shock capacity: impact load of 1/3 capacity of power supply directly without soft start.;
- Adjustable voltage and frequency during output status;
- Measurement: voltage, current, frequency, active power;
- Level of voltage: 1.0~150.0V, 150.1~300.0V automatically adjusted or locked to 1.0~300.0V;
- Line voltage drop compensation
- Shortcuts groups, power-off memory, shortcuts key;
- Lock key, user-friendly design to prevent mis-operation;
- HD VFD display;
- Standard RS232 port, optional RS485 port or remote control port.

Applications

- Over shock capacity: impact load of 1/3 capacity of power supply directly without soft start.

Specifications

Model			AN97000H(F)	AN97001H(F)	AN97002H(F)	AN97003H(F)	AN97005H(F)	AN97010H(F)	AN97010TSH(F)
Capacity			500VA	1kVA	2kVA	3kVA	5kVA	10kVA	10kVA
Input	Voltage，Frequency		Single-phase 2-wires + PE，Phase voltage: 220V±22V, 50/60Hz±5%Hz； AN97010TSH(F) is three-phase four wire + PE						
Output	Voltage		Single-phase 2-wires; Automatic files: (low-grade) 1.0 ~ 150.0V, (high-grade) 150.1~300V； high-grade lock:1.0 ~ 300.0V						
	Frequency		45.0－65.0Hz，100Hz、120Hz、200Hz、240Hz、400Hz						
	Rated current	110V	4.6A	9.2A	18.2A	27.4A	45.6A	91.0A	91.0A
		220V	2.3A	4.6A	9.1A	13.7A	22.8A	45.5A	45.5A
	Setting accuracy	Voltage	Resolution：0.1V，Accuracy：0.4%×reading value +0.1%×full scale value						
		Frequency	Resolution：0.1Hz，Accuracy：0.1%						
	Testing accuracy	Voltage	Resolution：0.1V，Accuracy：0.4%×reading value +0.1%×full scale value						
		Frequency	Resolution：0.1Hz，Accuracy：0.1%						
		Current	Resolution：0.001A/0.01A，Accuracy：0.4%×reading value +0.1%×full scale value						
		Power	Resolution：0.1W/1W，Accuracy：5%						
	Frequency stability		≤0.1%						
	Voltage distortion		Linear load：THD＜1.5%						
	Transient recovery time		20ms						
	Crest factor		1.41±0.1						
	Source voltage effect		≤1%						
	Load effect		≤1%						
	Overload capacity		105%＜Output≤110% the output will be stopped within 15s；110%＜Output≤120% the output will be stopped within 5s						
	Loading capacity		Can start a inductive load which capacity is less than 0.5 rated power capacity of AC power supply, or a rectifier load which crest factor is less than 3.0						
	Protection mode		Short circuit protection, overload protection, power device overheat protection						
Function	Display		VFD						
	Online adjustment function		Output voltage and frequency can be adjusted online (45.0-65.0hz)						
	Memory function		Power down memory function, memory last output mode and parameters；6 groups						
	Communication		RS232（standard)、RS485（options)、Remote control port（options)						
Environment	Temperature/Humidity		0－40℃，20－90%RH						
Dimension W×H×D(mm)			483×200×380 (The height does not include the machine foot, the machine foot is detachable, the height is 15mm)		483×555×400		483×755×400	483×905×600	
Weight (Kg)			20		54	62	80	195	

Programmable AC Power Supply
AN61(F) Series

Product Introduction

The AN61(F) series AC Power Supply adopts advanced SPWM technology, DSP digital processing technology and high-power switching power supply technology, can output AC, DC, AC+DC power and provide AC load, DC load and rectification load with precise power input. It has the ability of offering 6 times peak current and is optimal test instrument of measuring the surge current, and can be used to set the angle of waveform switch for testing the surge current and output holdup time. It can also be used to set the fluctuation ratio of voltage and frequency for scanning the range of power input to be tested.

AN61(F) series product can simulate abnormal instantaneous rise, instantaneous drop, short circuit, jitter and others of electric supply, with the superposition function of harmonic waves or indirect harmonic waves, simulate the waveform distortion of electric supply, can also provide accurate and quick measurement of power parameters and harmonic waves, widely applied for the labs and production lines in power electronics, military, avionics, IEC standard test and other industries.

AN61(F) series AC Power Supply possesses strong programmable function, can complete the immunity test of IEC61000-4-11(test before certification) /-4-13/-4-14/-4-28 standard. Also, its programmable output impedance, together with the power analyzer, can complete the test of IEC61000-3-2/-3-3 harmonic wave current limit and flicker and is optimal choice of IEC standard test.

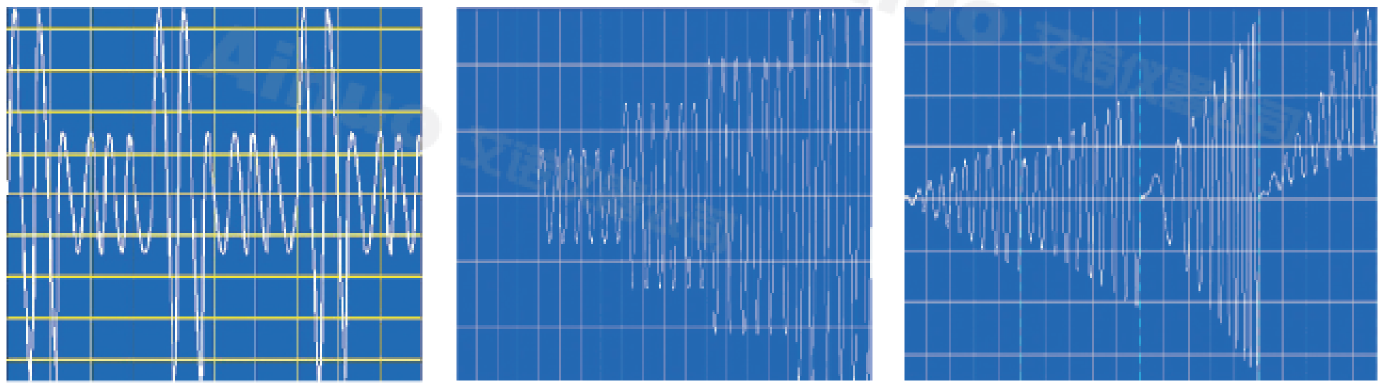
Features

- Advanced SPWM, DSP and high-power switching power supply, high power density
- AC/DC/AC + DC output mode (only for AN615(F) series)
- Programmable output impedance for IEC61000-3-3 test
- IEC61000-4-11, IEC61000-4-14, IEC61000-4-28 voltage/frequency change test
- IEC61000-4-13 harmonic/sub-harmonic waveform synthesis test
- High output peak current for surge current test
- Pulse output for voltage dips test and simulation actual grid interference
- Step output. The Step test mode provides automatic switch to change the output voltage step by step instead of gradually.
- List output. In sequence test mode, the output waveform is the combination of all serial number configuration. The user can edit the desired output voltage sequence on demand.
- Analog signal input interface for amplificaiton of external signal
- LCD display, compact, light, meeting requirements of standard cabinet installation
- Standard RS232 port, optional RS485, GPIB, Ethernet port.

Applications

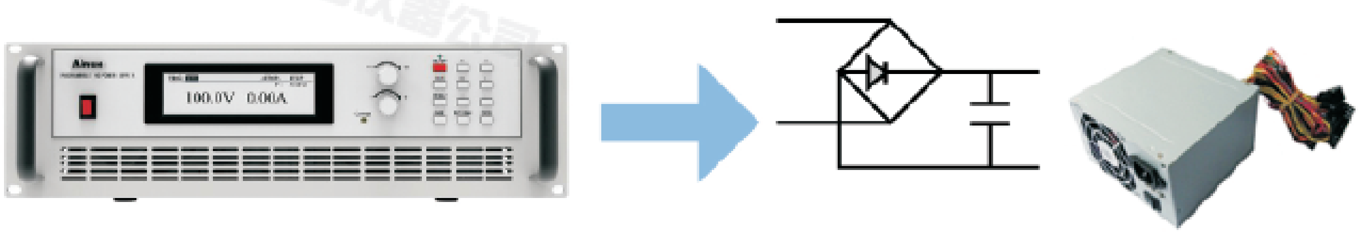
Simulate power supply input interference

Pulse, ladder, sequence and other output modes, simulating of any output wave in one step or continuously to simulate grid fluctuation.



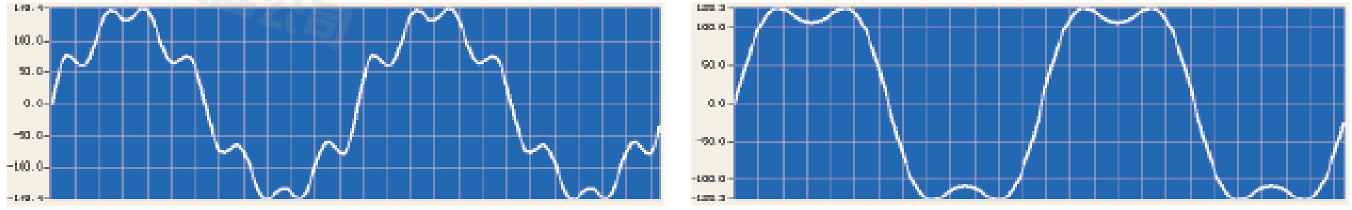
Testing of switching power supply inrush current

Free setting of start/stop angles through the output wave, peak current output up to 6 times, the AN61(F) series power supply is an ideal device for testing the inrush current of the switching power supply.



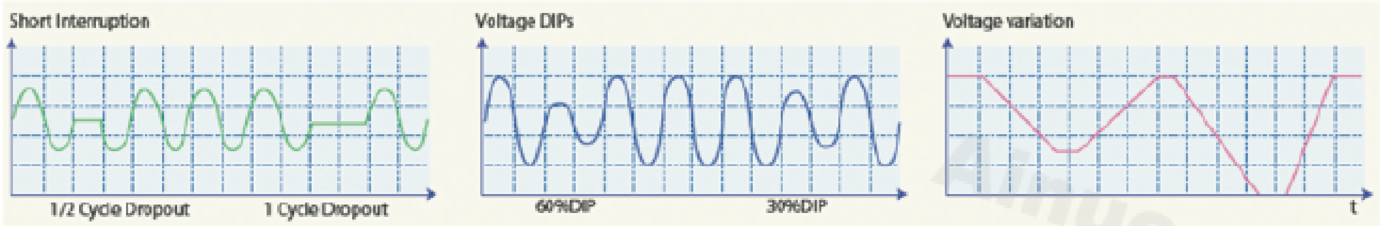
Harmonic and inter-harmonic synthesis (only for AN615(F) series)

Superimposing of 2-40th harmonics and inter-harmonics, so as to conduct comprehensive harmonic simulation tests.



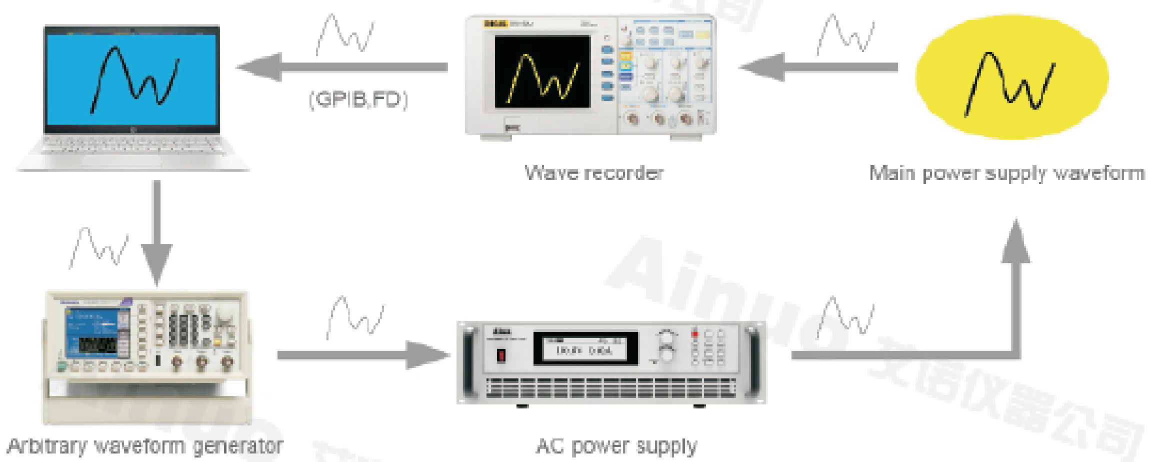
IEC Regulation test

Output of test voltage that meets IEC test conditions. Additionally, the software of host has a built-in test flow of IEC related test regulations to facilitate quick set up and use.

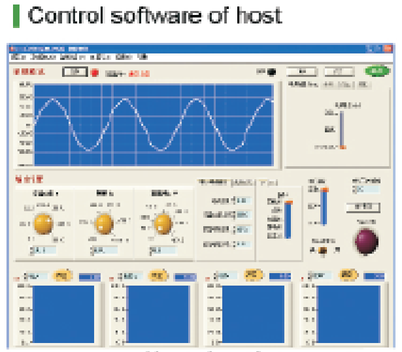


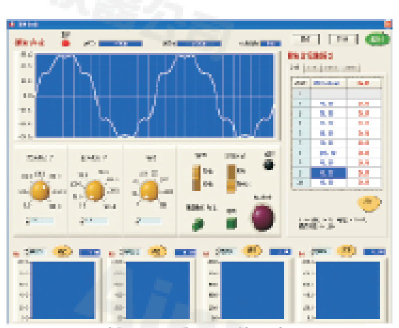
Free wave amplification

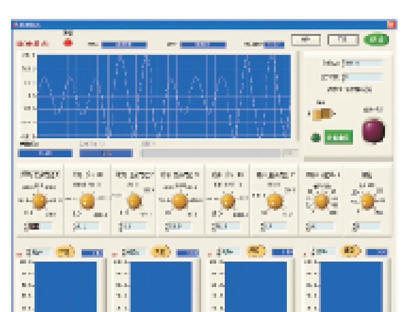
The AN61(F) series AC test power supply can amplify power of any wave through the specific external port. The customer can record the actual wave on site using the wave recorder, and then send it to the specific external port of AN61 power supply via the wave generator for power amplification, so that the customer can simulate the actual wave on site to test the product under test.

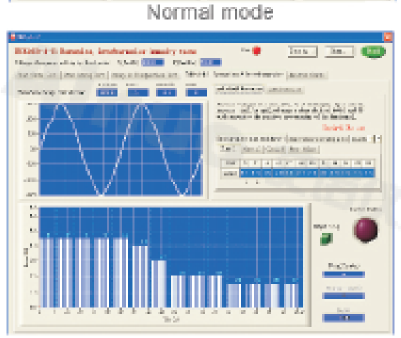


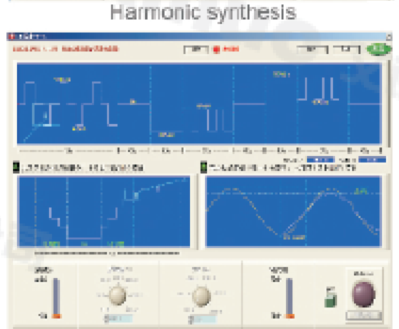
Control software of host

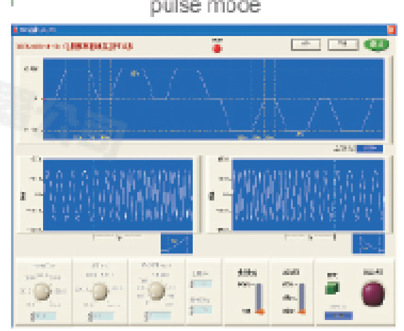

Normal mode


Harmonic synthesis


pulse mode


IEC61000-4-13:Voltage harmonic and inter-harmonic testing


IEC61000-4-14:Voltage fluctuation immunity test


IEC61000-4-28:Frequency fluctuation immunity test

Specifications

Model			AN61500(F)	AN61501(F)	AN61502(F)	AN61504(F)	AN61506(F)
Capacity			500VA	1000VA	2000VA	4000VA	6000VA
Input	Voltage		90～250V Single-Phase 2 wirse +PE			Phase Voltage: 190～250V 3-Phase 4 wirse+PE	Phase voltage: 198～242V 3-phase 4-wires+PE
Input	Current		8A Max @90V	16A Max @90V	28A Max @90V	14A Max @190V	14A Max @198V
Input	Frequency		47～63Hz				
Input	Power factor		0.97 Min			0.98 Min	0.98 Min
AC Output	Phase		Single phase				
AC Output	Power		500VA	1000VA	2000VA	4000VA	6000VA
AC Output	Voltage	Range	Low gear: 0.0～150.0V, High gear: 0.0～300.0V; Low/High/Auto				
AC Output	Voltage	Resolution	0.1V				
AC Output	Voltage	Accuracy	0.2%+0.2%F.S.				
AC Output	Voltage	Distortion	0.3%@50/60Hz; 1%@15～1000Hz				
AC Output	Voltage	Source voltage effect	≤0.1%				
AC Output	Voltage	Load effect	≤0.2%				
AC Output	Effective value of current	0-150V	4A	8A	16A	32A	60A
AC Output	Effective value of current	0-300V	2A	4A	8A	16A	30A
AC Output	Current peak	0-150V	24A	48A	96A	192A	240A
AC Output	Current peak	0-300V	12A	24A	48A	96A	120A
AC Output	Frequency	Range/Resolution /Accuracy	15～1000Hz, 0.1Hz, 0.15%				
DC Output	Power		250W	500W	1000W	2000W	3000W
DC Output	Voltage	Range	Low gear: -212.1V～212.1V, High gear: -424.2V～424.2V; Low/High/Auto				
DC Output	Current	-212.1~212.1V	2A	4A	8A	16A	30A
DC Output	Current	-414.2~414.2V	1A	2A	4A	8A	15A
Testing Acc-uracy	Voltage	Range/Resolution /Accuracy	AC: 300V, DC: 424V; 0.1V; 0.2%+0.2%F.S.				
Testing Acc-uracy	Current	Range	24A	48A	96A	192A	240A
Testing Acc-uracy	Current	Resolution	0.01A				
Testing Acc-uracy	Current	Accuracy of effective value	0.4%+0.3%F.S.				
Testing Acc-uracy	Current	Accuracy of current peak	0.4%+0.6%F.S.				
Testing Acc-uracy	Power	Resolution/Accuracy	0.1W; 0.4%+0.4%F.S.				
Fun-ction	Hamonic		2-40 times				
Fun-ction	Simulation bandwidth of harmonic and interhamonic		2400Hz				
Fun-ction	Programmable output impedance		0Ω +200μH～1Ω +1mH				None
Fun-ction	Programming		Pulse mode, step mode, sequence mode				
Fun-ction	Communication		RS232(Standard)、RS485(Optional)、GPIB(Optional)、Etherent(Optional)				
Environ-ment	Temperature		0～40℃				
Environ-ment	Humidity		30～90%RH				
DimensionW×H×D(mm)			483×134×610			483×288×610	442×222×620
DimensionW×H×D(mm)			The height does not include the machine foot(15mm, removable); The depth does not include the handle(50mm).				
Weight(Kg)			21			40	50

Specifications

Model			AN61600(F)	AN61601(F)	AN61602(F)	AN61604(F)	AN61606(F)
Capacity			500VA	1000VA	2000VA	4000VA	6000VA
Input	Voltage		90~250V Single-phase 2-wires+PE			Phase voltage: 190~250V 3-phase 4-wires+PE	Phase voltage: 198~242V 3-phase 4-wires+PE
	Current		8A Max @90V	16A Max @90V	28A Max @90V	14A Max @190V	14A Max @198V
	Frequency		47~63Hz				
	Power factor		0.97 Min			0.98 Min	0.98 Min
AC Output	Phase		Single phase				
	Power		500VA	1000VA	2000VA	4000VA	6000VA
	Voltage	Range	Low gear: 0.0~150.0V, High gear: 0.0~300.0V; Low/High/Auto				
		Resolution	0.1V				
		Accuracy	0.2%+0.2%F.S.				
		Distortion	0.3%@50/60Hz; 1%@15~1000Hz				
		Source voltage effect	≤0.1%				
		Load effect	≤0.2%				
	Effective value of current	0-150V	4A	8A	16A	32A	60A
		0-300V	2A	4A	8A	16A	30A
	Current peak	0-150V	24A	48A	96A	192A	240A
		0-300V	12A	24A	48A	96A	120A
	Frequency	Range/Resolution /Accuracy	15~1000Hz, 0.1Hz, 0.15%				
DC Output	Power		250W	500W	1000W	2000W	3000W
	Voltage	Range	Low gear: -212.1V~212.1V, High gear: -424.2V~424.2V; Low/High/Auto				
	Current	-212.1~212.1V	2A	4A	8A	16A	30A
		-414.2~414.2V	1A	2A	4A	8A	15A
Testing Accuracy	Voltage	Range/Resolution /Accuracy	AC: 300V, DC: 424V; 0.1V; 0.2%+0.2%F.S.				
	Current	Range	24A	48A	96A	192A	240A
		Resolution	0.01A				
		Accuracy of effective value	0.4%+0.3%F.S.				
		Accuracy of current peak	0.4%+0.6%F.S.				
	Power	Resolution/Accuracy	0.1W; 0.4%+0.4%F.S.				
Function	Programmable output impedance		0Ω+200μH~1Ω+1mH				None
	Programming		Pulse mode, step mode, sequence mode				
	Communication		RS232(Standard)、RS485(Optional)、GPIB(Optional)、Etherent(Optional)				
Environment	Temperature		0~40℃				
	Humidity		30~90%RH				
Dimension W×H×D(mm)			483×134×610			483×268×610	442×222×620
			The height does not include the machine foot(15mm, removable); The depth does not include the handle(50mm).				
Weight(Kg)			21			40	50

Specifications

Model			AN61700(F)	AN61701(F)	AN61702(F)	AN61704(F)
Capacity			1500VA	3000VA	6000VA	12000VA
Input	Voltage		Phase voltage:190~250V 3-phase 4-wires+PE			
	Current		4A Max@190V	8A Max@190V	14A Max@190V	28A Max@190V
	Frequency		47~63Hz			
	Power factor		0.97 Min			0.98 Min
AC Output	Phase		Three-phase&single-phase in parallel			
	Power	Total power	1500VA	3000VA	6000VA	12000VA
		Per phase power	500VA	1000VA	2000VA	4000VA
	Voltage	Range	Low gear: 0.0~150.0V, High gear: 0.0~300.0V			
		Gear	Low gear/High gear/Auto gear			
		Resolution	0.1V			
		Accuracy	0.2%+0.2%F.S.			
		Distortion	0.3%@50/60Hz; 1%@15~1000Hz			
		Source voltage effect	≤0.1%			
		Load effect	≤0.2%			
	Effective value of current	0-150V	4A	8A	16A	32A
		0-300V	2A	4A	8A	16A
	Current peak	0-150V	24A	48A	96A	192A
		0-300V	12A	24A	48A	96A
	Frequency	Range	15~1000Hz			
		Resolution	0.1Hz			
		Accuracy	0.15%			
Testing Accuracy	Voltage	Range	300V			
		Resolution	0.1V			
		Accuracy	0.2%+0.2%F.S.			
	Current	Range	24A	48A	96A	192A
		Resolution	0.01A			
		Accuracy of effective value	0.4%+0.3%F.S.			
		Accuracy of current peak	0.4%+0.6%F.S.			
	Power	Resolution	0.1W			
		Accuracy	0.4%+0.4%F.S.			
Function	Programming		Pulse mode, step mode, sequence mode			
	Communication		RS232(Standard)、RS485(Optional)、GPIB(Optional)、Etherent(Optional)			
Environment	Temperature		0~40℃			
	Humidity		30~90%RH			
Dimension W×H×D(mm)			515×650×700			515×1020×700
Weight(Kg)			120			≤180

AC Constant Current Power Supply
AN77(F) Series

Product Introduction

The AN77(F) series intelligent variable frequency power supply adopts digital technology and IGBT intelligent output, pure output wave. The power supply can output constant current AC wave, which can be used for short circuit. It outputs constant large current under the condition of small voltage, which can be used for detection of low-voltage power distribution devices such as air circuit breakers, contactors, and transformers, design and production of transformers and inductance devices. It is an ideal tester for device manufacturers, quality inspection institutes, and certification centers for applications with high current test conditions and low energy waste caused by the consumption of the load.

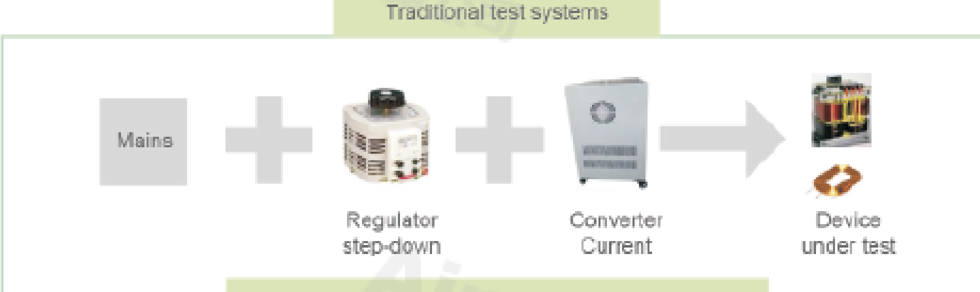
Features

- Low-voltage, high-current AC output to meet the test requirements of relevant regulations;
- Output frequency of 45~65Hz, suitable for the test requirements of different grids and devices;
- Adjust current and frequency in output state;
- Measurement: voltage, current, frequency, active power;
- Power-off memory and shortcut keys;
- Key lock, humanization design to prevent mis-operation;
- Standard RS232 port, optional RS485 port or remote control port.
- Custom of current source of any voltage level and current.

Applications

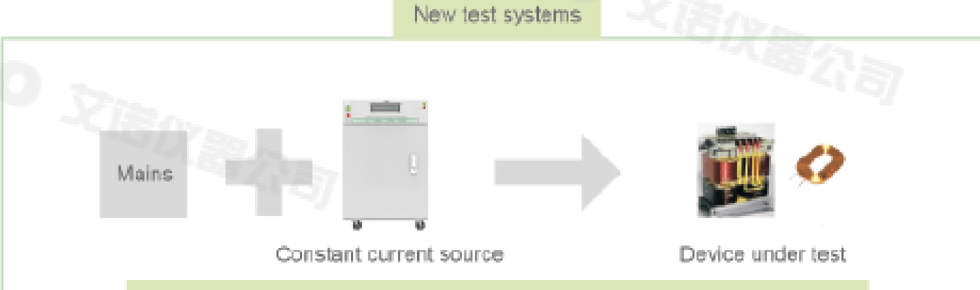
- Replace traditional voltage/current regulation, precise control, convenient operation.

Traditional test systems



Large occupy area, heat, loss, poor output waveform.

New test systems



Small size, less heat, less loss, good output waveform, easy to operate

Specifications

Model			AN77020-30(F)	AN77050-15(F)	AN77100-15(F)	AN77200-15(F)	AN77400-15(F)	AN77600-15(F)
Capacity			600VA	750VA	1.5kVA	3kVA	6kVA	9kVA
Input	Voltage		Single-phase 2 wires+PE Phase voltage: 220V±22V				Three-phase 4 wires+PE Line Voltage: 380V±38V	
	Frequency		50Hz±2.5Hz					
Output	Current		20A	50A	100A	200A	400A	600A
	Voltage、Frequency		Single-phase 2 wires; 20A output: 0~30.0V, Other output: 0~15.0V; Frequency: 45.0~65.0Hz					
	Setting accuracy	Current	Resolution: 0.01A/0.1A, Accuracy: 0.3%×reading value+0.3%×full scale value					
		Frequency	Resolution: 0.1Hz, Accuracy: 0.1%					
	Testing accuracy	Current	Resolution: 0.01A/0.1A, Accuracy: 0.3%×reading value+0.3%×full scale value					
		Frequency	Resolution: 0.1Hz, Accuracy: 0.1%					
		Voltage	Resolution: 0.01V, Accuracy: 0.3%×reading value +0.3%×full scale value					
		Power	Resolution: 1W, Accuracy: 0.45%×reading value +0.45%×full scale value					
	Frequency stability		≤0.1%					
	Voltage distortion		Linear load: THD<2%					
	Transient recovery time		20ms					
	Crest factor		1.41±0.1					
	Source voltage effect		≤0.5%					
	Load effect		≤0.5%					
	Protection mode		Overvoltage protection, overload protection, power device overheating protection					
Function	Display		VFD					
	Online adjustment function		The output voltage and frequency (45~65Hz) can be adjusted online under status					
	Memory function		Power down memory function, memory last output mode and parameters;					
	Communication		Standard: RS232; Optional: RS485、Analog control port					
Environment	Temperature and humidity		0~40℃, 20~90%RH					
Dimension W×H×D(mm)			483×174×452			483×750×400		483×908×570
Weight (Kg)			30	40	54	62	90	130

AC Constant Current Power Supply
ANCC(F) Series

Product Introduction

ANCC(F) series AC constant current source adopts FPGA digital control, instantaneous wave control and high-frequency Sine Pulse Width Modulation (SPWM) technology, fast response, high output precision, and excellent wave; constant current AC wave output, strong load adaptability;

8" color LCD, high-level beautiful appearance, digital keys, convenient operation. It can output constant high current under low voltage, suitable for testing of low-voltage power distribution devices such as air circuit breakers, contactors, and transformers, and the design and production verification of transformers and inductance devices, reducing energy waste caused by load consumption while meeting large current testing conditions, which is an ideal test equipment for device manufacturers, quality inspection institutes and certification centers.

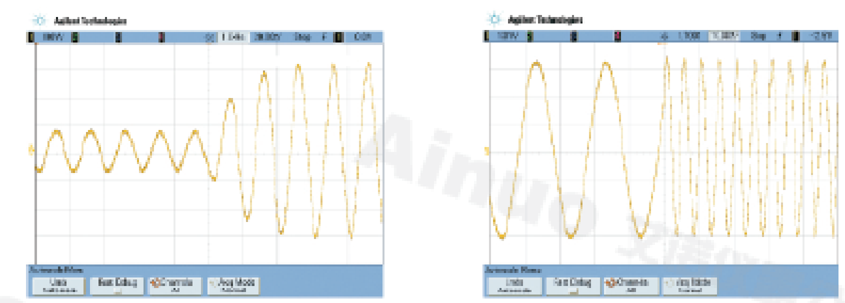
Features

- Adopt FPGA digital technology, realize precision control and high quality sine wave output.
- Low-voltage, high-current AC output to meet the test requirements of relevant regulations;
- Adjustable voltage and frequency during output status, frequency change without transit time.
- The output frequency is 45~65Hz, meeting the test requirements of different power grids and devices;
- Complete measurements: voltage, current, current peak, frequency, active power, apparent power, power factor, voltage crest factor;
- Online monitoring: monitor IGBT temperature, transformer temperature, fan speed, input voltage and other parameters in output state;
- Operating data recorders: keep the record of power supply status and alarm code automatically during alarming, save the maintenance time.
- Fan speed will be adjustable automatically with the temperature of power supply to reduce the noise.
- Lock key, user-friendly design, automatically locking without operation for 5 minutes to prevent from operation mistakes.
- 8" large-screen color LCD, digital key operation;
- Standard RS232, optional RS485, GPIB, Ethernet, analog control and other remote communication/control.
- Custom of current source of any voltage level and current.

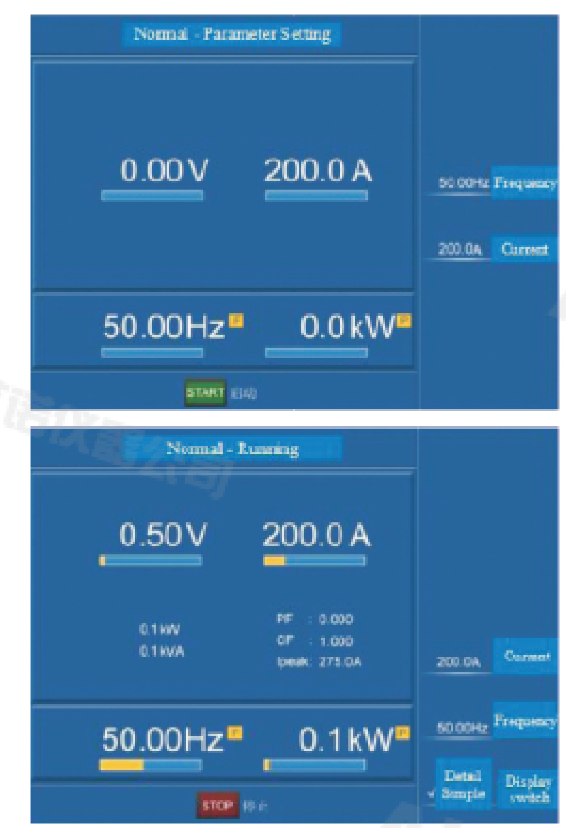
Applications

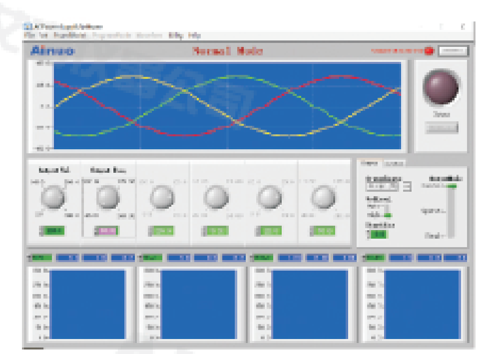
- Substitute the traditional voltage/current regulation, precise control and simple operation.

- Adjust current/frequency in output state.



- Large color LCD, digital keys and knobs operation.

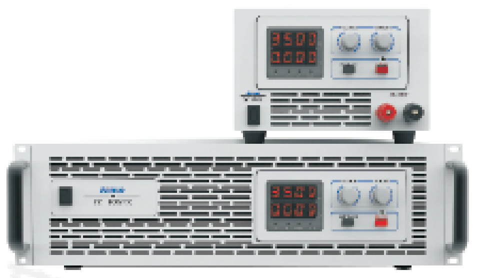




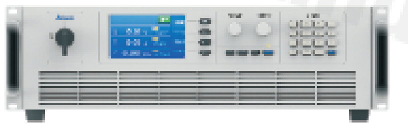
Specifications

Model			ANCC1000-15S(F)	ANCC2000-15S(F)	ANCC4000-7.5S(F)	ANCC4000-15S(F)
Capacity			15 kVA	30 kVA	30 kVA	60 kVA
Input	Phase		Three-phase four-wire + PE			
Input	Voltage		Phase voltage: 220V±33V, Line voltage: 380V±57V			
Input	Frequency		50/60Hz±3Hz			
Input	Phase		Single-phase two-wire			
Output	Current		1000A	2000A	4000A	3000A
Output	Voltage		15 V	15 V	7.5 V	15 V
Output	Frequency		45.0~65.0Hz			
Output	Testing accuracy	Current	Resolution: 0.1A, Accuracy: 0.3% × reading+0.3% × full scale			
Output	Testing accuracy	Frequency	Resolution: 0.1Hz, Accuracy: 0.1%			
Output	Testing accuracy	Voltage	Resolution: 0.01V, Accuracy: 0.3%×reading+0.3% × full scale			
Output	Testing accuracy	Power	Resolution: 0.1kW/0.01kW/0.001kW, Accuracy: 0.45% × reading + 0.45% × full scale			
Output	Frequency stability		≤0.02%			
Output	Voltage distortion		Linear load: THD<2%			
Output	Voltage crest factor		1.41±0.1			
Output	Protection mode		IGBT overheating, IGBT overcurrent, transformer overheating, input overvoltage/undervoltage, Output overvoltage/overcurrent/overload			
Function	Display		8" LCD			
Function	Online adjustment function		The output current/frequency can be adjusted online			
Function	Memory		Power down memory function, memory last output mode and parameters.			
Function	Communication		RS232 (standard), RS485 (optional)			
Operating environment	Temperature		0~40℃			
Operating environment	Humidity		20~90%RH			
Dimensions W×H×D (mm)			600×1130×1018			600×1330×1218

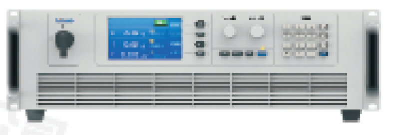
DC Power Supply AN50(F) Series



DC Power Supply AN50(V3)(F) Series



Programmable DC Power Supply
AN51(F) Series



Wide Range Programmable DC Power Supply
AN53(F) Series

DC Power Supply
AN50(F) Series

Product Introduction

The AN50(F) series DC power supply adopts high-frequency PWM control and phase-shifted full-bridge conversion, fast dynamic response, strong overcurrent capability, low output ripple, featuring compact, light, quiet, high efficiency, simple operation and cost-effective. It can be used for manufacturing, testing and maintenance of military electronic equipment such as motors, power tools, automotive electronics, switching coils and DC switches, aircraft and airborne equipment, radar, navigation, etc., as well as industrial and mining enterprises, colleges and universities laboratories, research institute, etc.

Order and extensions

- AN504XX(F): 35V output, 6kW/9kW/15kW/30kW
- AN505XX(F): 60V/80V output, 6kW/9kW/15kW/30kW
- AN506XX(F): 120V/150V output, 6kW/9kW/15kW/30kW
- AN507XX(F): 330V output, 6kW/9kW/15kW/30kW
- AN508XX(F): 630V output, 15kW/30kW

Features

- Work mode: CV, CC;
- Use high frequency PWM and full-bridge convert technique to achieve high efficiency;
- High power density design, standard case, wide application;
- LCD display, convenient for operation;
- 10 setting and quick recall groups;
- Exceptional output stability. Source voltage effect<0.2%, Load effect<0.3%, Temperature drifts <0.04%, time varying drifts <0.3%;
- Output voltage drop compensation, ensure the voltage accuracy under big current;
- Providing RS232(standard) ,RS485(optional), suitable for remote control;
- Protect function: output short circuit, output over current, output limit current, over heat, input under voltage, input phase lack protection, sense terminal over compensation protection, sense terminal reverse connection protection.
- Sequence test: 5 groups, 10 steps per group, 3000 cycles.
- Analog interface (optional): start, stop, alarm, 0-5V/0-10V or 4-20mA analog control output.

Specifications

Model		AN50402S(F) / AN50402T(F)	AN50403S(F) / AN50403T(F)	AN50405(F)	AN50410(F)
Input		Single phase: 220V±22V, 50/60±5Hz (3-phase 3-wire: 380V±40V, 50/60±5Hz)		3-phase 3-wire: 380V±40V, 50/60±5Hz	
Output	Voltage	0V-35V			
	Current	0-200A	0-300A	0-500A	0-1000A
	Power	0-6kW	0-9kW	0-15kW	0-30kW
Display Mode		LCD display, 4digits			
Testing Accuracy	Voltage	≤±0.5% (full scale value)		(15V-35V): ≤±1%(Reading); (0-15V): ≤±1%(Reading)±1V	
	Current	≤±0.5% (full scale value)		≤±1%(Reading +range)	
Ripple and Noise 20Hz-20MHz	Vrms	120mV		160mV	
	Vpp	500mV		800mV	
Effect		Source voltage effect±0.1%; Load effect: ±0.2%			
Over load		105%<Rated current≤110%, the output will be stopped within 5s; Rated current>110%, the output will be stopped immediately;		105%<Rated current≤200%, the output will be stopped within 5s; Rated current>200%, the output will be stopped immediately;	
Protection		Input phase loss protection (three-phase), input overvoltage and undervoltage, output overvoltage and undervoltage, overcurrent, overheat, short circuit protection, current limiting protection, s-terminal over compensation protection, s-terminal anti connection protection			
Transient response time		Meet the requirements of GJB572A Figure 13≤10ms			
Max output voltage drop compensation		4V			
Communication		RS232(Standard) / RS485(Optional)			
Memory		10 groups of memory storage, power down memory function			
List test function		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times (Optional)	
Analog interface(optional)		Start, stop, alarm, 0-5V/ 0-10V or 4-20mA analog control output			None
Environment		Temperature: 0~40℃; Humidity: 20~90%RH			
Dimension W×H×D(mm)		480×225×620		440×600×660	540×1230×670
Weight		55kg		90kg	180kg

Model		AN50502S(F) / AN50502T(F)	AN50503S(F) / AN50503T(F)	AN50505(F)	AN50510(F)
Input		Single phase: 220V±22V, 50/60±5Hz (3-phase 3-wire: 380V±40V, 50/60±5Hz)		3-phase 3-wire: 380V±40V, 50/60±5Hz	
Output	Voltage	0V-60V			
	Current	0-100A	0-150A	0-250A	0-500A
	Power	0-6kW	0-9kW	0-15kW	0-30kW
Display Mode		LCD display, 4digits			
Testing Accuracy	Voltage	≤±0.5% (full scale value)		(15V-60V): ≤±1%(reading value); (0-15V): ≤±1%(reading value)±1V	
	Current	≤±0.5% (full scale value)		≤±1%(Reading +range)	
Ripple and Noise 20Hz-20MHz	Vrms	180mV		280mV	
	Vpp	750mV		1200mV	
Effect		Source voltage effect:±0.2%; Load effect:±0.2%			
Over load		105%<Rated current≤110%, the output will be stopped within 5s; Rated current>110%, the output will be stopped immediately;		105%<Rated current≤200%, the output will be stopped within 5s; Rated current>200%, the output will be stopped immediately;	
Protection		Input phase loss protection (three-phase), input overvoltage and undervoltage, output overvoltage and undervoltage, overcurrent, overheat, short circuit protection, current limiting protection, s-terminal over compensation protection, s-terminal anti connection protection			
Transient response time		Meet the requirements of GJB572A Figure 13≤10ms			
Max output voltage drop compensation		4V			
Communication		RS232(Standard) / RS485(Optional)			
Memory		10 groups of memory storage, power down memory function			
List test function		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times (Optional)	
Analog interface(optional)		Start, stop, alarm, 0-5V/ 0-10V or 4-20mA analog control output			None
Environment		Temperature: 0~40℃; Humidity: 20~90%RH			
Dimension W×H×D(mm)		480×225×620		440×600×660	540×1230×670
Weight		55kg		90kg	180kg

Specifications

Model		AN50602S(F) / AN50602T(F)	AN50603S(F) / AN50603T(F)	AN50605(F)	AN50610(F)
Input		Single phase: 220V±22V, 50/60±5Hz (3-phase 3-wire: 380V±40V, 50/60±5Hz)		3-phase 3-wire: 380V±40V, 50/60±5Hz	
Output	Voltage	0V-120V			
	Current	0-60A	0-75A	0-125A	0-250A
	Power	0-6kW	0-9kW	0-15kW	0-30kW
Display Mode		LCD display, 4digits			
Testing Accuracy	Voltage	≤±0.5%	(40V-120V): ≤±1%(Reading); (1V-40V): ≤±1%(Reading)±1V		
	Current	≤±0.5%	≤±1%(Reading+Range)		
Ripple and Noise 20Hz-20MHz	Vrms	200mV		350mV	
	Vpp	800mV		1200mV	
Effect		Source voltage effect±0.1%; Load effect: ±0.2%			
Over load		105%<Rated current≤110%, the output will be stopped within 5s; Rated current>110%, the output will be stopped immediately;		105%<Rated current≤200%, the output will be stopped within 5s; Rated current>200%, the output will be stopped immediately	100%<Rated current≤125%, the output will be stopped within 30s; Rated current>125%, the output will be stopped immediately
Protection		Input phase loss protection (three-phase), input overvoltage and undervoltage, output overvoltage and undervoltage, overcurrent, overheat, short circuit protection, current limiting protection, s-terminal over compensation protection, s-terminal anti connection protection			
Transient response time		Meet the requirements of GJB572A Figure 13≤10ms			
Max output voltage drop compensation		4V			
Communication		RS232(Standard) / RS485(Optional)			
Memory		10 groups of memory storage, power down memory function			
List test function		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times (Optional)	
Analog interface(optional)		Start、stop、alarm、0-5V/ 0-10V or 4-20mA analog control output			
Environment		Temperature: 0～40℃; Humidity: 20～90%RH			
Dimension W×H×D(mm)		480×226×620		440×600×660	550×1200×660
Weight		55kg		90kg	240kg

Model		AN50702S(F)	AN50703S(F)	AN50705(F)	AN50710(F)	AN50805(F)	AN50810(F)
Input		Single phase: 220V±22V, 50/60±5Hz		3-phase 3-wire: 380V±40V, 50/60±5Hz			
Output	Voltage	0-330V				0-630V	
	Current	0-20A	0-30A	0-50A	0-100A	0-25A	0-50A
	Power	0-6kW	0-9kW	0-15kW	0-30kW	0-15kW	0-30kW
Display Mode		LCD display, 4digits					
Testing Accuracy	Voltage	(100V-330V): ≤±1%(reading value); (3V-100V): ≤±1%(reading value)±1V				(100V-630V): ≤±1%(reading value); (6-100V): ≤±1%(reading value)±1V	
	Current	≤±1% (Reading+Range)					
Ripple and Noise 20Hz-20MHz	Vrms	300mV		350mV			
	Vpp	900mV		900mV			
Effect		Source voltage effect:±0.2%; Load effect:±0.2%					
Over load		105%<Rated current≤110%, the output will be stopped within 5s; Rated current>110%, the output will be stopped immediately		100%<Rated current≤125%, the output will be stopped within 30s; Rated current>125%, the output will be stopped immediately			
Protection		Input phase loss protection (three-phase), input overvoltage and undervoltage, output overvoltage and undervoltage, overcurrent, overheat, short circuit protection, current limiting protection, s-terminal over compensation protection, s-terminal anti connection protection					
Transient response time		Meet the requirements of GJB572A Figure 13≤10ms					
Max output voltage drop compensation		15V					
Communication		RS232(Standard) / RS485(Optional)					
Memory		10 groups of memory storage, power down memory function					
List test function		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times		5 setting groups and 10 steps sequence, 3 working mode for every step, max cycle 3000 times (Optional)			
Analog interface(optional)		Start、stop、alarm、0-5V/ 0-10V or 4-20mA analog control output					
Environment		Temperature: 0～40℃; Humidity: 20～90%RH					
Dimension W×H×D(mm)		441×177.8×550		550×1200×660			
Weight		50kg		240kg			

DC Power Supply
AN50(V3)(F) Series

Product Introduction

The AN50(V3)(F) low-power series DC power supply adopts high-frequency PWM control and phase-shifted full-bridge conversion, fast dynamic response, strong overcurrent capability, low output ripple, featuring compact, light, quiet, high efficiency, simple operation and cost-effective. It can be used for manufacturing, testing and maintenance of military electronic equipment such as motors, power tools, automotive electronics, switching coils and DC switches, aircraft and airborne equipment, radar, navigation, etc., as well as industrial and mining enterprises, colleges and universities laboratories, research institute, etc.

Features

- 350mm deep full range of standard chassis, suitable for system integration and portable applications.
- High frequency PWM and full-bridge conversion technology, with high efficiency.
- Strong current/power overload capacity, up to 110%.
- Exceptional output stability.
- Voltage drop compensation terminal for large current output.
- Complete protection to ensure normal operation of power supply unit and load security.
- LED segment display. Clear, convenient for operation.
- Serial/parallel output, convenient expansion.
- Powerful programmable features to meet various testing needs.
- Supports SCPI/MODBUS-RTU standard protocol.

Order and extensions

- AN5010-100(F): 10V/100A/1kW
- AN5035-30(F): 35V/30A/1kW
- AN5035-50(F): 35V/50A/1.5kW
- AN5035-100(F): 35V/100A/3kW
- AN5060-25(F): 60V/25A/1.5kW
- AN5060-50(F): 60V/50A/3kW
- AN50120-12(F): 120V/12.5A/1.5kW
- AN50120-25(F): 120V/25A/3kW
- AN50300-5(F): 300V/5A/1.5kW
- AN50300-10(F): 300V/10A/3kW

Specifications

Model		AN5010-100(F)	AN5035-30(F)	AN5035-50(F)	AN5035-100(F)	AN5060-25(F)	AN5060-50(F)
Input		Single phase, 220V±22V, 47-63HZ					
Output	Voltage	0～10V	0～35V			0～60V	
	Current	0～100A	0～30A	0～50A	0～100A	0～25A	0～50A
	Power	0～1000W	0～1000W	0～1500W	0～3000W	0～1500W	0～3000W
Resolution/ Accuracy	Voltage	Resolution: 0.001V (≥10V, 0.01V), Accuracy≤0.4%Umax					
	Current	Resolution: 0.001A (≥10A, 0.01A), Accuracy≤0.5%Imax					
Ripple and Noise 20Hz~20MHz	Vrms	30mV				60mV	
	Vpp	200mV				300mV	
Effect	Voltage	Load effect≤0.1%Umax, Source effect≤0.05%Umax					
	Current	Load effect≤0.2%Imax, Source effect≤0.1%Imax					
Transient response time		≤5ms					
Rise time: 100%		On line voltage regulation: 50ms (10%-90%); Start slow rise time: 1S					
Max output voltage drop compensation		2V					
Communication		RS-232 (Standard) /485(Optional)					
Protection		Output short circuit protection ,output overvoltage, overheat, s-terminal over compensation protection, s-terminal anti connection protection					
Analog interface(optional)		Start、stop、alarm、0-5V/ 0-10V or 4-20m analog control output					
Environment		Temperature: 0～40℃; Humidity: 20～90%RH					
Dimension W×H×D(mm)		210×133×325		440×133×350			
Weight		6kg		9kg	12kg	9kg	12kg

Model		AN50120-12(F)	AN50120-25(F)	AN50300-5(F)	AN50300-10(F)
Input		Single phase, 220V±22V, 47-63HZ			
Output	Voltage	0～120V		0～300V	
	Current	0～12.5A	0～25A	0～5A	0～10A
	Power	0～1500W	0～3000W	0～1500W	0～3000W
Resolution/ Accuracy	Voltage	Resolution 0.001V/0.01V/0.1V, Accuracy≤0.4%Umax			
	Current	Resolution 0.001A/0.01A, Accuracy≤0.5%Imax			
Ripple and Noise 20Hz~20MHz	Vrms	80mV		100mV	
	Vpp	400mV		500mV	
Load effect	Voltage	Load effect≤0.1%Umax, Source effect≤0.05%Umax			
	Current	Load effect≤0.2%Imax, Source effect≤0.1%Imax			
Transient response time		≤5ms			
Rise time: 100%		On line voltage regulation: 50ms (10%-90%); Start slow rise time: 1S			
Max output voltage drop compensation		10V			
Communication		RS-232 (Standard) /485(Optional)			
Protection		Output short circuit protection ,output overvoltage, overheat, s-terminal over compensation protection, s-terminal anti connection protection			
Analog interface(optional)		Start、stop、alarm、0-5V/ 0-10V or 4-20m analog control output			
Environment		Temperature: 0～40℃; Humidity: 20～90%RH			
Dimension W×H×D(mm)		440×133×350			
Weight		9kg	12kg	9kg	12kg

Programmable DC Power Supply
AN51(F) Series

Product Introduction

The AN51(F) low-power series DC power supply adopts high-frequency PWM control and phase-shifted full-bridge conversion, fast dynamic response, strong over-current capability, low output ripple, featuring compact, light, quiet, high efficiency, simple operation and cost-effective. It can be used for manufacturing, testing and maintenance of military electronic equipment such as motors, power tools, automotive electronics, chips and electronic components, switching coils and DC switches, aircraft and airborne equipment, radar, navigation, etc., as well as industrial and mining enterprises, colleges and universities laboratories, research institute, etc.

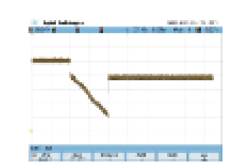
Features

- Colorful LCD display, digital keys, Convenient and easy for operation.
- 350mm deep full range of standard chassis, suitable for system integration and portable applications.
- High frequency PWM and full-bridge conversion technology, with high efficiency.
- Strong current/power overload capacity, up to 110%.
- Exceptional output stability.
- Voltage drop compensation terminal for large current output.
- Complete protection to ensure normal operation of power supply unit and load security.

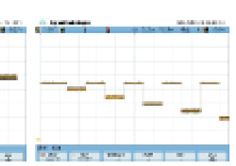
Order and extensions

- AN5135-50(F): 35V/50A/1.5kW
- AN5135-100(F): 35V/100A/3kW
- AN5160-25(F): 60V/25A/1.5kW
- AN5160-50(F): 60V/50A/3kW
- AN51120-12(F): 120V/12.5A/1.5kW
- AN51120-25(F): 120V/25A/3kW
- AN51300-5(F): 300V/5A/1.5kW
- AN51300-10(F): 300V/10A/3kW

- Powerful programming features to customize the output waveform.

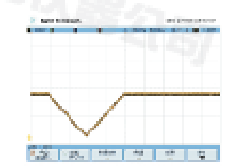


Simulation battery supply voltage transient drop test

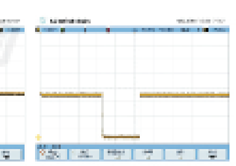


ISO 16750-2 Voltage drop reset test curve

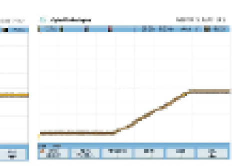
ISO 16750-2 Voltage start test curve



Simulation battery slow drop and slow rise voltage supply test



Communication power input transient drop test



Output voltage climb slope control

Specifications

Model		AN5135-50(F)	AN5135-100(F)	AN5160-25(F)	AN5160-50(F)
Input		Single phase，220V±22V，47-63HZ			
Output	Voltage	0～35V		0～60V	
	Current	0～50A	0～100A	0～25A	0～50A
	Power	0～1500W	0～3000W	0～1500W	0～3000W
Resolution/ Accuracy	Voltage	Resolution 0.01V，Accuracy≤0.2%Umax			
	Current	Resolution 0.01A，Accuracy≤0.35%Imax			
Ripple and Noise 20Hz~20MHz	Vrms	30mV		60mV	
	Vpp	200mV		300mV	
Effect	Voltage	Load effect≤0.1%Umax，Source effect≤0.05%Umax			
	Current	Load effect≤0.2%Imax，Source effect≤0.1%Imax			
Transient response time		≤5ms（50%-100%，or 100%-50%，error returns to 0.75% of stable value）			
Rise time：100%		On line voltage regulation：50ms（10%-90%）；Start slow rise time：1S			
Communication		RS-232（Standard）/485(Optional) / Analog interface（Optional）			
Protection		Output short circuit protection ,output overvoltage, overheat, s-terminal over compensation protection, s-terminal anti connection protection			
List test function（Optional）		Capable of storing 50 sequences, each sequence contains 20 steps, 13 functions optional for each step.			
Environment		Temperature：0～40℃；Humidity：20～90%RH			
Dimension W×H×D(mm)		440×133×350			
Weight		9kg	13.5kg	9kg	13.5kg

Model		AN51120-12(F)	AN51120-25(F)	AN51300-5(F)	AN51300-10(F)
Input		Single phase，220V±22V，47-63HZ			
Output	Voltage	0～120V		0～300V	
	Current	0～12.5A	0～25A	0～5A	0～10A
	Power	0～1500W	0～3000W	0～1500W	0～3000W
Resolution/ Accuracy	Voltage	Resolution：0.1V/0.01V，Accuracy≤0.2%Umax			
	Current	Resolution：0.01A，Accuracy≤0.35%Imax		Resolution：0.001A，Accuracy≤0.35%Imax	
Ripple and Noise 20Hz~20MHz	Vrms	80mV		100mV	
	Vpp	400mV		500mV	
Effect	Voltage	Load effect≤0.1%Umax，Source effect≤0.05%Umax			
	Current	Load effect≤0.2%Imax，Source effect≤0.1%Imax			
Transient response time		≤5ms（50%-100%，or 100%-50%，error returns to 0.75% of stable value）			
Rise time：100%		On line voltage regulation：50ms（10%-90%）；Start slow rise time：1S			
Communication		RS-232（Standard）/485(Optional) / Analog interface（Optional）			
Protection		Output short circuit protection ,output overvoltage, overheat, s-terminal over compensation protection, s-terminal anti connection protection			
List test function（Optional）		Capable of storing 50 sequences, each sequence contains 20 steps. 13 functions optional for each step.			
Environment		Temperature：0～40℃；Humidity：20～90%RH			
Dimension W×H×D(mm)		440×133×350			
Weight		9kg	13.5kg	9kg	13.5kg

Wide Range Programmable DC Power Supply

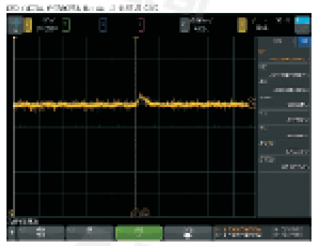
AN53(F) Series

Product Introduction

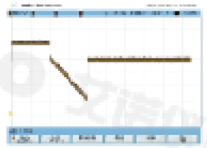
The AN53(F) series DC Power Supply adopts Active Power Factor Correction technology, high frequency LLC multi-resonant soft switching inverter technology, to achieve high power factor, fast dynamic response, low output ripple, high power density, and Constant Power (CP) wide range output. It has small size, light weight, low noise, high efficiency and easy operation etc. It can be used for manufacturing, testing and maintenance of military electronic equipment such as aircraft and airborne equipment, radar and navigation etc, as well as industrial and mining enterprises, college laboratories, institutes and so on.

Features

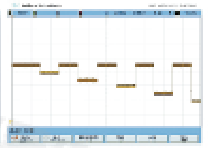
- Wide range output up to 3 times of "matrix" power supply of same power
- Active Power Factor Correction, full load power factor of more than 0.99
- High frequency LLC multi-resonant inverter with efficiency up to 0.93
- Industrial best transient response speed;



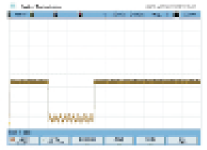
- Constant Voltage (CV), Constant Current (CC) and Constant Power (CP) output for multi applications
- Powerful programmable function, flexible settings



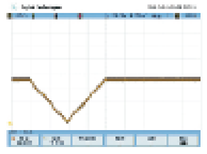
Simulation battery supply voltage transient drop test



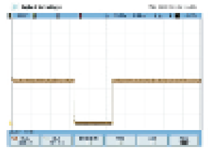
ISO 16750-2 Voltage drop reset test curve



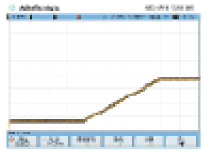
ISO 16750-2 Voltage start test curve



Simulation battery slow drop and slow rise voltage supply test

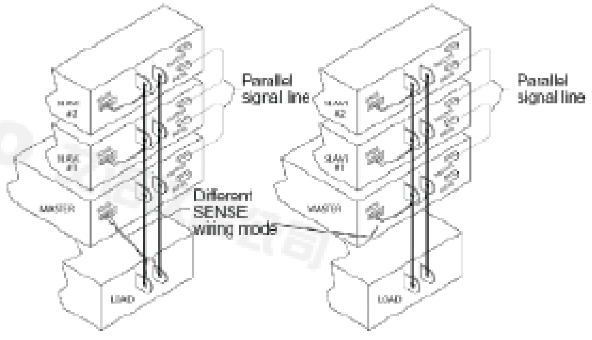


Communication power input transient drop test



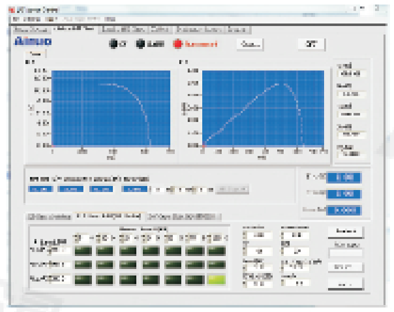
Output voltage climb slope control

- Built-in precise voltage/current measurement, stable output.
- Lead drop compensation terminal for output lead at large current.
- Complete protection for normal operation of power supply unit and load security.
- High brightness color LCD display, beautiful, simple, intuitive.
- Supports parallel output, expanding power/current range.



Multiple equipment can be flexibly configured as single output or parallel output

- Standard host software
- Solar cell I-V curve simulation



- Simulate a variety of solar cell output characteristics (Fill Factor)
- Test the maximum power point tracking (MPPT) capability and efficiency;
- Accurate voltage and current measurement.
- Serial output can be set to test the PV inverter operating voltage range.
- Standard RS232 interface;
- Standard graphical PC operating software. Single operation available.
- Simulate I-V curve under different temperature and illumination conditions.

Exceeding & Trustworthy DC Power Supply \\\ Ainuo

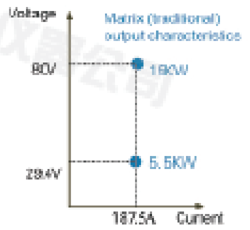
Ordering and function expansion

- AN5380-120S(F): 80V/120A/1.8kW
- AN5380-170S(F): 80V/170A/3kW
- AN5380-170(F): 80V/170A/5kW
- AN5380-340(F): 80V/340A/10kW
- AN5380-510(F): 80V/510A/15kW
- AN53300-15S(F): 300V/15A/1.8kW
- AN53300-30S(F): 300V/30A/3kW
- AN53300-50(F): 300V/50A/5kW
- AN53300-100(F): 300V/100A/10kW
- AN53300-150(F): 300V/150A/15kW
- AN53500-30(F): 500V/30A/5kW
- AN53500-60(F): 500V/60A/10kW
- AN53500-90(F): 500V/90A/15kW
- AN53750-20(F): 750V/20A/5kW
- AN53750-40(F): 750V/40A/10kW
- AN53750-60(F): 750V/60A/15kW
- AN531000-30(F): 1000V/30A/10kW
- AN531500-30(F): 1500V/30A/15kW

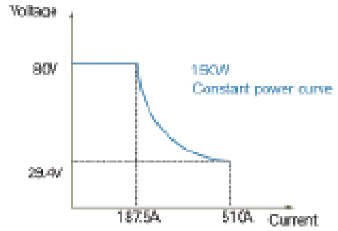
Support for multiple units in parallel output to expand the scope of the power/current

Applications

The power output curve of AN53(F) series is extended to provide users with a wider range of voltage/current, more flexible than traditional "matrix" output range. The output range of single Constant Power (CP) DC power is times of common matrix power. For example, 80V/510A/15kW models of the AN53 series can provide 80V/187.5A output at 15kW power, or 29V/510A output at 15kW. For traditional "matrix" output power, the technical index will be 80V/187.5A/15kW. When the output voltage is 29.4V, the maximum current is still 187.5A, and the power is only 5.5kW.



Common "matrix" power output



AN53 series power output

Specifications

Specifications of AN5380(F) series

Model		AN5380-120S(F)	AN5380-170S(F)	AN5380-170(F)	AN5380-340(F)	AN5380-510(F)
Input	Voltage	Single phase +PE, 198V~242VAC		3-phase 3-wire +PE, 340V~420VAC		
	Frequency	47-63HZ				
Output	Voltage	0~80V				
	Current	0~120A	0~170A	0~170A	0~340A	0~510A
	Power	0~1.8KW	0~3KW	0~5KW	0~10KW	0~15KW
Display Mode		4.3" color LCD				
Resolution/ Accuracy	Voltage	≤0.1%Umax, Resolution: 0.01V				
	Current	≤0.2%Imax, Resolution: 0.01A (>1000A, 0.1A)				
	Power	≤1%Pmax, Resolution: 0.001kW (>100kW, 0.01kW)				
Ripple and Noise 20Hz-20MHz	Vrms	30mV		40mV		
	Vpp	200mV		250mV		
Load effect		Voltage≤0.05%Umax, Current≤0.15%Imax				
Source effect		Voltage≤0.02%Umax, Current≤0.05%Imax				
Transient response time		≤2ms				
Rise time 100%		50ms (10%-90%)				
Max output voltage drop compensation		6.5V				
Communication		Standard RS232, Optional RS485、CAN、LAN、GPIB、Analog interface				
Protection		Reverse, current limiting, S terminal compensation, Input phase loss protection, output overvoltage, overheat, short circuit protection				
Parallel		Support multiple parallel outputs to expand the power/current range				
Environment		Temperature: 0~40℃; Humidity: 20~90%RH				
Dimension W×H×D (mm)		440×133×350		440×133×600		
Weight		16kg		17kg	27kg	37kg

Specifications

Specifications of AN53300(F) series

Model		AN53300-15S(F)	AN53300-30S(F)	AN53300-50(F)	AN53300-100(F)	AN53300-150(F)
Input	Voltage	Single phase +PE, 198V~242VAC		3-phase 3-wire +PE, 340V~420VAC		
	Frequency	47-63HZ				
Output	Voltage	0~300V				
	Current	0~15A	0~30A	0~50A	0~100A	0~150A
	Power	0~1.8KW	0~3KW	0~5KW	0~10KW	0~15KW
Display Mode		4.3" color LCD				
Resolution/ Accuracy	Voltage	≤0.1%Umax, Resolution: 0.01V				
	Current	≤0.2%Imax, Resolution: 0.01A (>1000A, 0.1A)				
	Power	≤1%Pmax, Resolution: 0.001kW (>100kW, 0.01kW)				
Ripple and Noise 20Hz-20MHz	Vrms	60mV				
	Vpp	450mV				
Load effect		voltage≤0.05%Umax, current≤0.15%Imax				
Source effect		voltage≤0.02%Umax, current≤0.05%Imax				
Transient response time		≤2ms				
Rise time 100%		50ms (10%-90%)				
Max output voltage drop compensation		6.5V				
Communication		Standard RS232, Optional RS485、CAN、LAN、GPIB、Analog interface				
Protection		Reverse, current limiting, S terminal compensation, Input phase loss protection, output overvoltage, overheat, short circuit protection				
Parallel		Support multiple parallel outputs to expand the power/current range				
Environment		Temperature: 0~40℃; Humidity: 20~90%RH				
Dimension W×H×D (mm)		440×133×350		440×133×600		
Weight		16kg		17kg	27kg	37kg

Specifications of AN53500(F) series

Model		AN53500-30(F)	AN53500-60(F)	AN53500-90(F)
Input		3-phase 3-wire +PE, 340V~420VAC, 47-63HZ		
Output	Voltage	0~500V		
	Current	0~30A	0~60A	0~90A
	Power	0~5kW	0~10kW	0~15kW
Display Mode		4.3" color LCD		
Resolution/ Accuracy	Voltage	≤0.1%Umax, Resolution: 0.01V		
	Current	≤0.2%Imax, Resolution: 0.01A (>1000A, 0.1A)		
	Power	≤1%Pmax, Resolution: 0.001kW (>100kW, 0.01kW)		
Ripple and Noise 20Hz-20MHz	Vrms	80mV		
	Vpp	700mV		
Load effect		Voltage: ≤0.05%Umax, Current: ≤0.15%Imax		
Source effect		Voltage: ≤0.02%Umax, Current: ≤0.05%Imax		
Transient response time		≤2ms		
Rise time 100%		50ms (10%-90%)		
Max output voltage drop compensation		25V		
Communication		Standard RS232, Optional RS485、CAN、LAN、GPIB、Analog interface		
Protection		reverse, current limiting, S terminal compensation, Input phase loss protection, output overvoltage, overheat, short circuit protection		
Parallel		Support multiple parallel outputs to expand the power/current range		
Environment		Temperature: 0~40℃; Humidity: 20~90%RH		
Dimension W×H×D (mm)		440×133×600		
Weight		17kg	27kg	37kg

Specifications

Specifications of AN53750(F) series				
Model		AN53750-20(F)	AN53750-40(F)	AN53750-60(F)
Input		3-phase 3-wire +PE，340V~420VAC，47~63HZ		
Output	Voltage	0~750V		
	Current	0~20A	0~40A	0~60A
	Power	0~5kW	0~10kW	0~15kW
Display Mode		4.3" color LCD		
Resolution/ Accuracy	Voltage	≤0.1%Umax，Resolution：0.01V		
	Current	≤0.2%Imax，Resolution：0.01A (>1000A, 0.1A)		
	Power	≤1%Pmax，Resolution：0.001kW (>100kW，0.01kW)		
Ripple and Noise 20Hz-20MHz	Vrms	200mV		
	Vpp	800mV		
Load effect		Voltage：≤0.05%Umax，Current：≤0.15%Imax		
Source effect		Voltage：≤0.02%Umax，Current：≤0.05%Imax		
Transient response time		≤2ms		
Rise time 100%		50ms（10%-90%）		
Max output voltage drop compensation		25V		
Communication		Standard RS232，Optional RS485、CAN、LAN、GPIB、Analog interface		
Protection		reverse, current limiting, S terminal compensation，Input phase loss protection, output overvoltage, overheat, short circuit protection		
Parallel		Support multiple parallel outputs to expand the power/current range		
Environment		Temperature：0~40℃；Humidity：20~90%RH		
Dimension W×H×D（mm）		440×133×585		
Weight		17kg	27kg	37kg

Specifications of AN531000(F)/1500(F) series			
Model		AN531000-30(F)	AN531500-30(F)
Input		3-phase 3-wire +PE，340V~420VAC，47-63Hz	
Output	Voltage	0~1000V	0~1500V
	Current	0~30A	
	Power	0~10kW	0~15kW
Testing accuracy	Voltage	≤0.1%Umax，Resolution 0.01V (>1000V，0.1V)	
	Current	≤0.2%Imax，Resolution 0.01A (>1000A, 0.1A)	
	Power	≤1%Pmax，Resolution 0.001kW (>100kW，0.01kW)	
Ripple and Noise 20Hz~20MHz	Vrms	350mV	400mV
	Vpp	1600mV	2400mV
Load effect		Voltage≤0.05%Umax，Current≤0.15%Imax	
Source effect		Voltage≤0.02%Umax，Current≤0.05%Imax	
Transient response time		≤2ms	
Rise time 100%		50ms（10%-90%）	
Max output voltage drop compensation		25V	
Communication interface		Standard RS232，Optional RS485、CAN、LAN、GPIB、Analog interface	
Protection		Reverse, current limiting, S terminal compensation，Input phase loss protection, output overvoltage, overheat, short circuit protection	
Parallel		Support multiple parallel outputs to expand the power/current range	
Environment		Temperature：0~40℃；Humidity：20~90%RH	
Dimension W×H×D（mm）		440×133×600	
Weight		27kg	37kg
Remark		The current range of models above 1000V can be customized for 40A	

ANEVT(F) Series High Precision Bidirectional DC Power Supply

ANEVT-DA(F) Series Dual-channel Bidirectional DC Power Supply

ANEVS(F) Series Battery Simulator

ANEVH(F) Series Programmable Bidirectional DC Power Supply

High Precision Bidirectional DC Power Supply
ANEVT(F) Series

Product Introduction

ANEVT(F) series high-precision bidirectional DC power supply adopts high-frequency PWM rectification and bidirectional DCDC conversion, FPGA digital control, seamless switching between forward and reverse, automatic bidirectional operation, energy feedback to the grid at full power; advanced digital control, ultra-high control accuracy, fast response, wide output voltage range; compared with conventional bidirectional power supply, it can achieve full range of high-precision output from 0V to full scale, up to 2000V, and the maximum power of a single machine can reach 1MW; abundant programming and testing functions, suitable for a variety of applications with different upper computer software.

Features

- Grid feedback: both power supply and load characteristics, achieving the function of load for automatic energy feedback to the grid in addition to high-power DC power supply performance; energy saving, green and environment protection.
- High-precision output: accuracy of output voltage is ±0.05% F.S. and current is ±0.1% F.S.
- Fast dynamic response: output voltage response time for 10%-90% sudden applied load and 90%-10% sudden shedding load: ≤5ms; +90%~-90% forward/reverse switching time: ≤10ms.
- Mainstream high-frequency PWM rectification control, power factor ≥0.99, THD and injected harmonic current meet the requirements of GB/T14549-93, high-quality energy feedback to the grid.
- Optimized bidirectional DCDC conversion, wider range of output voltage, 0V-full scale adjustable.
- Advanced IGBT parallel technology to meet output peak power and peak current 1.3 times or more of the rating.
- CC, CV, CP modes.
- Multi protection: input over-voltage/under-voltage, lack phase, output over voltage, IGBT overheat, IGBT over current, over temperature protection, short circuit current-limiting protection.
- Built-in EMI filter to filter the interference signal caused by the high-frequency switching process.
- Communication and remote control: standard CAN, RS232/RS485 port and upper computer remote control software.
- Programmable slow-rise output.
- Large-screen LCD display, compatible with buttons and touch screen, suitable for operation under various harsh operating conditions.
- Lock screen: After the power supply is not operated for more than 5 minutes, the keyboard and touch screen will automatically be locked.

Specifications

Voltage level	Product model	Rated current(A)	Peak current(A)	Current peak time(S)	Rated power (kW)	Peak power (kW)	Power peak time(S)
500V	ANEVT500-200(F)	200	300	60	60	90	60
	ANEVT500-300(F)	300	450	60	90	135	60
	ANEVT500-400(F)	400	480	60	120	144	60
	ANEVT500-500(F)	500	600	60	120	144	60
800V	ANEVT800-100(F)	100	150	60	60	90	60
	ANEVT800-200(F)	200	300	60	60	90	60
	ANEVT800-300(F)	300	450	60	90	135	60
	ANEVT800-500(F)	500	750	60	160	240	60
	ANEVT800-600(F)	600	800	60	250	333	60
	ANEVT800-750C(F)	750	850	60	300	340	60
	ANEVT800-900C(F)	900	1100	60	400	489	60
	ANEVT800-1000C(F)	1000	1260	60	500	630	60
	ANEVT800-2000C(F)	2000	2520	60	1000	1260	60
1000 V	ANEVT1000-200(F)	200	260	60	90	117	60
	ANEVT1000-350(F)	350	455	60	160	208	60
	ANEVT1000-400(F)	400	520	60	250	325	60
	ANEVT1000-500(F)	500	650	60	250	325	60
	ANEVT1000-650C(F)	650	850	60	300	392	60
	ANEVT1000-900C(F)	900	1200	60	400	533	60
	ANEVT1000-1000C(F)	1000	1260	60	500	630	60
	ANEVT1000-2000C(F)	2000	2520	60	1000	1260	60
Description	1500V or above and other voltage, current level and power level can be customized as required. The voltage range with letter "C" in the model is 24V-full scale.						

Applications

- Testing of electric vehicle motors and controllers
- Testing of electric vehicle transmission system and powertrain system
- Testing of special electric vehicle motors, controllers, electric vehicle transmission systems, and powertrain systems
- Testing of fuel cell
- Testing of new energy motor system
- Testing of ship electric drive, electric drive system
- Testing of charger and charging pile
- Testing of battery pack charge/discharge
- Testing of capacitor and super capacitor charge/discharge
- Testing of energy storage system converter
- Testing of UPS and EPS system
- Testing of hybrid
- Simulated battery to replace real battery-powered test applications
- Power supply for high-power DC test

General parameters		
Input Power		3-phase 4-wire +PE, line voltage 380V±57V, 50/60Hz±5Hz
Output parameters	Voltage accuracy	0.05% F.S, resolution: 0.1V
	Current accuracy	0.1% F.S, resolution: 0.1A
	Source effect/ Load effect	0.1%F.S
	Ripple (Vpp)	0.2%F.S
	Transient recovery time	≤5 ms
	Current rise time	≤10 ms
	Protection	IGBT overheat, IGBT overcurrent, transformer overheat, input overvoltage, input undervoltage, bus overvoltage, output overvoltage, output overcurrent
Feedback parameters	Three-phase line voltage	323~437V
	Frequency	45~60
	Power factor	≥0.99
	Total harmonic content	≤3%
	Feedback function	Energy feedback at full power
Function	Wave editing	Control of voltage/current slope, ladder, cycle control, jump control
	E-stop	E-stop button
	Soft start	Pre-charge
	Communication port	RS232+CAN+LAN, RS485(optional)
Working environment	Temp./humidity	0~40℃, 10~90%RH (no condensation)
	Altitude	≤2000m
Dimension and weight	Weight	1030 kg
	Dimension W×H×D (mm)	1000×2000×1000
	The dimension and weight is that for type of 90kW and below. For other types, contact us for detail.	

Dual-channel Bidirectional DC Power Supply
ANEVT-DA(F) Series

Product Introduction

ANEVT(F) series dual-channel bidirectional DC power supply adopts high-frequency PWM rectification and bidirectional DCDC conversion, FPGA digital control, seamless switching between forward and reverse, automatic bidirectional operation, energy feedback to the grid at full power; advanced digital control, ultra-high control accuracy, fast response; two channels independently configured and not affect each other, which can be used in parallel to expand the DC output capacity and reduce investment by customer; abundant programming and testing functions, suitable for a variety of applications with different upper computer software.

Features

- Independent channel configuration: each channel is independently programmed, voltage, current and power parameters are set independently, and the operating parameters in programming mode are set independently.
- The channels are independent of each other and do not affect each other.
- Parallel channels: The two channels do not affect each other, and can be used in parallel.
- Grid feedback: both power supply and load characteristics, achieving the function of load for automatic energy feedback to the grid in addition to high-power DC power supply performance; energy saving, green and environment protection.
- High-precision output: accuracy of output voltage: ±0.05% F.S.
- Fast dynamic response: output voltage response time for 10%-90% sudden applied load and 90%-10% sudden shedding load: ≤5ms; +90%~-90% forward/reverse switching time: ≤10ms.
- Mainstream high-frequency PWM rectification control, power factor ≥0.99, THD and injected harmonic current meet the requirements of GB/T14549-93, high-quality energy feedback to the grid.
- Advanced IGBT parallel technology, efficient and reliable. CC, CV, CP modes.
- Multi protection: input over-voltage/under-voltage, lack phase, output over voltage, IGBT overheat, IGBT over current, over temperature protection, short circuit current-limiting protection.
- Built-in EMI filter to filter the interference signal caused by the high-frequency switching process.
- Communication and remote control: standard CAN, RS232/RS485 port and remote control software of the upper computer.
- Programmable slow-rise output.

Applications

- Testing of electric vehicle motors and controllers
- Testing of electric vehicle transmission system and powertrain system
- Testing of special electric vehicle motors, controllers, electric vehicle transmission systems, and powertrain systems
- Testing of fuel cell
- Testing of new energy motor system
- Testing of ship electric drive, electric drive system
- Testing of charger and charging pile
- Testing of battery pack charge/discharge
- Testing of capacitor and super capacitor charge/discharge
- Testing of energy storage system converter
- Testing of UPS and EPS system
- Testing of hybrid
- Simulated battery to replace real battery-powered test applications
- Power supply for high-power DC test

Specifications

Dual channel ANEVT-DA(F) type						
Voltage level	Product model	Rated current per channel (A)	Peak current per channel (A)	Rated power per channel (kW)	Peak power per channel (kW)	Peak time (S)
24-900V	ANEVT800-300DA(F)	300	450	90	135	60
	ANEVT800-500DA(F)	500	700	160	224	60
	ANEVT800-600DA(F)	600	780	200	260	60
	ANEVT800-700DA(F)	700	900	250	298	60
	ANEVT800-750DA(F)	750	850	300	340	60
	ANEVT800-900DA(F)	900	1100	400	489	60
	ANEVT800-1000DA(F)	1000	1280	500	830	60
24-1000V	ANEVT1000-200DA(F)	200	267	90	120	60
	ANEVT1000-250DA(F)	250	375	160	240	60
	ANEVT1000-300DA(F)	300	390	200	260	60
	ANEVT1000-600DA(F)	600	780	250	325	60
	ANEVT1000-650DA(F)	650	850	300	392	60
	ANEVT1000-900DA(F)	900	1200	400	533	60
	ANEVT1000-1000DA(F)	1000	1280	500	830	60
Description	The power can be distributed freely for both channels within the power range of the whole machine.					

General parameters of dual channel ANEVT(F) series		
Input parameters	Input Power	4-phase 3-wire +PE, line voltage 380V±57V, 50/60Hz±5Hz
	Isolation function	Built-in isolation transformer
	Input power factor	0.99 (rated conditions)
	Input current distortion	5% (rated conditions)
Output parameters	Voltage accuracy	0.05% F.S, resolution: 0.1V
	Current accuracy	0.1% F.S, resolution: 0.1A
	Power accuracy	1% F.S, resolution: 10W
	Power supply effect	Source effect: 0.1% F.S, load effect: 0.1% F.S
	Ripple (Vpp)	0.2%F.S
	Transient recovery time	5 ms
	Current rise time	10ms (10%~90%, resistive load, test condition: power output, load test on)
	Protection	IGBT overheat, IGBT overcurrent, transformer overheat, input overvoltage, input undervoltage, output overvoltage, output overcurrent, lack phase protection
	Three-phase line voltage	323~437V (allowed grid voltage)
Feedback parameters	Frequency	45~60Hz (allowed grid frequency)
	Power factor	0.99 (rated conditions)
	Total harmonic content	5% (rated conditions)
	Switching time	10ms (forward maximum current to reverse maximum current)
	Feedback function	Energy feedback at full power
Function	Wave editing	Control of voltage/current slope, ladder, cycle control, jump control
	E-stop	E-stop button
	Battery simulation	With battery simulation function
	Soft start	Pre-charge
	Communication port	RS232+CAN+LAN, RS485(optional)
	Output contactor	Available and controllable
	Discharge protection	Discharge Unit ; protection unit
	Fan speed control	Fan temperature control and speed regulation
	Switch input interface	3 channel
	Switch output interface	One for each channel, indicating alarm status of the channel
Working environment	Temp./humidity	0~40℃, 10~90%RH (no condensation)
	Altitude	≤2000m

Battery Simulator
ANEVS(F) Series

Product Introduction

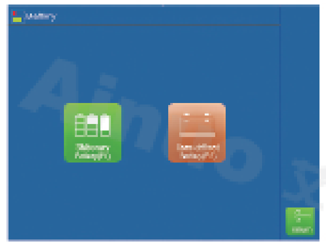
- ANEVS(F) series battery simulators take bidirectional DC power supply with high precision and high dynamic response as the core, to simulate the external characteristics of battery based on the accurate modeling of lithium manganese oxide, lithium cobalt oxide, lithium iron phosphate, lead acid, nickel metal hydride batteries. ANEVS series battery simulators are professional equipment specially designed and developed for new energy vehicle power test benches, high control accuracy and fast dynamic response, widely used in testing of motor controllers, motors, and new energy vehicle powertrain. The performance of the ANEVS series battery simulator is better than GB/T 18488 Drive motor system for electric vehicles - Specification and experimental conditions, and GB/T 29307-2012 The reliability test methods of drive motor system for electric vehicles.
- ANEVS(F) series battery simulator adopts high-frequency PWM rectification and bidirectional DCDC conversion, FPGA digital control, seamless switching between forward and reverse, automatic bidirectional operation, energy feedback to the grid at full power; advanced digital control, ultra-high control accuracy, fast response, wide output voltage range; compared with conventional bidirectional power supply, it can achieve full range of high-precision output from 0V to full scale, up to 2000V, and the maximum power of a single machine can reach 1MW.
- Abundant programming and testing functions, suitable for a variety of applications with different software; to simulate battery output characteristics and battery charge/discharge characteristics; providing 5 common types of battery models. Users can choose the type of battery, the number of battery cells in series, the number of cells in parallel and SOC parameters, so as to simulate the battery output characteristics and charge/discharge characteristics, including change to internal resistance during charging/discharging. In addition, custom battery model output is available.

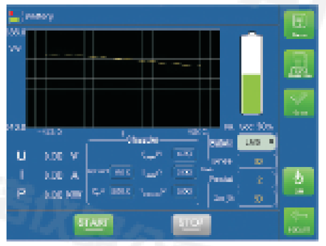
Features

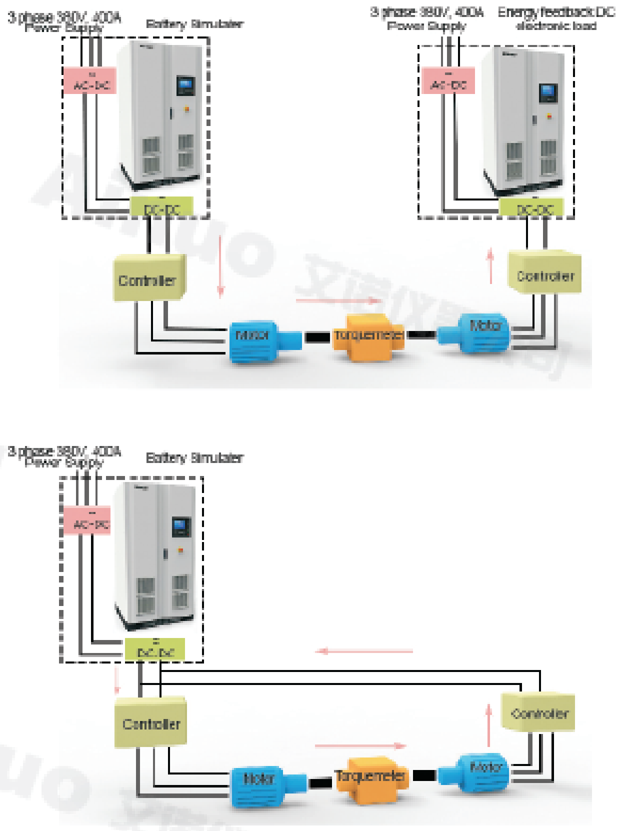
- Grid feedback: both power supply and load characteristics, working as load for automatic energy feedback to the grid in addition to high-power DC power supply performance; energy saving, green and environment protection.
- High-precision output: accuracy of output voltage is ±0.05% F.S. and current is ±0.1% F.S.
- Fast dynamic response: output voltage response time for 10%-90% sudden applied load and 90%-10% sudden shedding load: ≤5ms; +90%~-90% forward/reverse switching time: ≤10ms.
- Mainstream high-frequency PWM rectification control, power factor: ≥0.99, THD and injected harmonic current meet the requirements of GB/T14549-93, high-quality energy feedback to the grid.
- Accurate and perfect battery model to simulate a variety of battery characteristics. Users can choose the type of battery, the number of battery cells in series, the number of cells in parallel and SOC parameters
- Custom battery model output is available.
- Advanced IGBT parallel technology to output peak power and peak current 1.3 times or more of the rating.
- CC, CV, CP modes.
- Multi protection: input over-voltage/under-voltage, lack phase, output over voltage, IGBT overheat, IGBT over current, over temperature protection, short circuit current-limiting protection.
- Built-in EMI filter to filter the interference signal caused by the high-frequency switching process, to avoid interference to the motor controller when the battery simulator is running.
- Communication and remote control: standard CAN, RS232/RS485 port and remote control software of the upper computer.
- Large-screen LCD display, compatible with buttons and touch screen, suitable for operation under various harsh operating conditions.

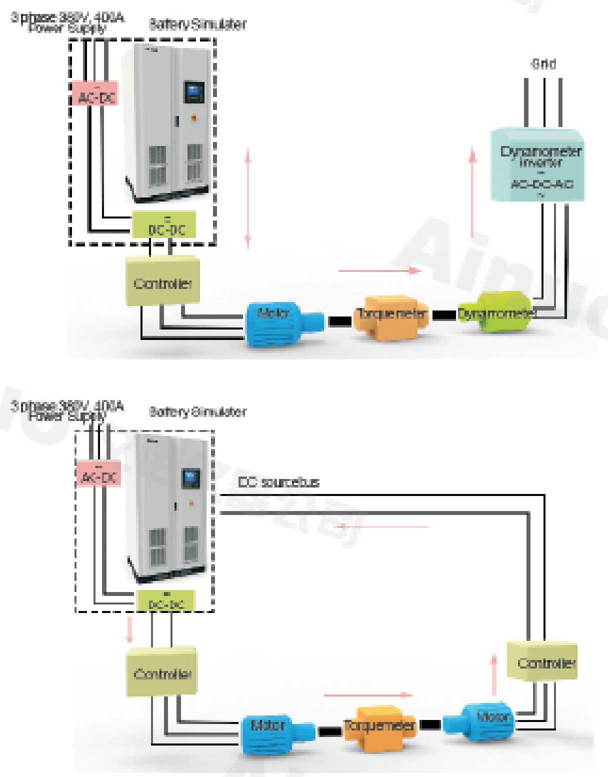
Applications

- Testing of electric vehicle motors and controllers
- Testing of electric vehicle transmission system and powertrain system
- Testing of special electric vehicle motors, controllers, electric vehicle transmission systems, and powertrain systems
- Testing of new energy motor system
- Testing of ship electric drive, electric drive system
- Testing of charger and charging pile
- Testing of battery pack charge/discharge
- Testing of capacitor and super capacitor charge/discharge
- Testing of energy storage system converter
- Testing of UPS and EPS system
- Testing of hybrid
- Simulated battery to replace real battery-powered test applications
- Power supply for high-power DC test



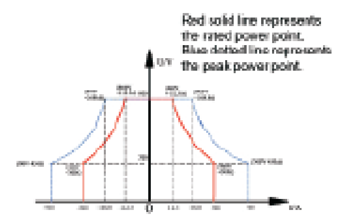




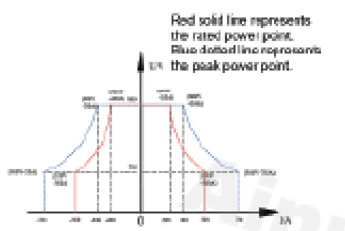


Output VI curve

Advanced IGBT parallel technology, high peak power and peak current output. Take ANEVS800-300(F) and ANEVS800-500(F) as examples:

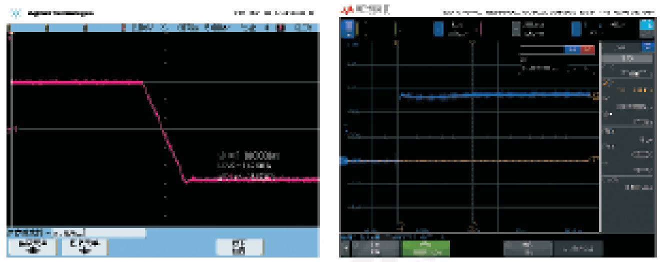


Red solid line: represents rated power points
Blue dotted line: represents peak power points
ANEVS800-300(F) - V-I curve
Rated current: 300A; Rated power: 90kW;
Peak current: 450A; Peak power: 135kW.



Red solid line: represents rated power points
Blue dotted line: represents peak power points
ANEVS800-500(F) - V-I curve
Rated current: 500A; Rated power: 160kW
Peak current: 750A; Peak power: 240kW

Fast dynamic current response characteristics



Specifications

Voltage level	Product model	Rated current (A)	Peak current (A)	Current peak time (S)	Rated power (kW)	Peak power (kW)	Power peak time (S)
500 V	ANEVS500-200(F)	200	300	60	60	90	60
	ANEVS500-300(F)	300	450	60	90	135	60
	ANEVS500-400(F)	400	480	60	120	144	60
	ANEVS500-500(F)	500	600	60	120	144	60
800 V	ANEVS800-100(F)	100	160	60	60	90	60
	ANEVS800-200(F)	200	300	60	60	90	60
	ANEVS800-300(F)	300	450	60	90	135	60
	ANEVS800-500(F)	500	650	60	160	208	60
	ANEVS800-600(F)	600	800	60	250	333	60
	ANEVS800-750C(F)	750	850	60	300	340	60
	ANEVS800-900C(F)	900	1100	60	400	489	60
	ANEVS800-1000C(F)	1000	1260	60	500	630	60
	ANEVS800-2000C(F)	2000	2520	60	1000	1260	60
1000 V	ANEVS1000-200(F)	200	260	60	90	117	60
	ANEVS1000-350(F)	350	455	60	160	208	60
	ANEVS1000-400(F)	400	520	60	250	325	60
	ANEVS1000-500(F)	500	650	60	250	325	60
	ANEVS1000-650C(F)	650	850	60	300	392	60
	ANEVS1000-900C(F)	900	1200	60	400	533	60
	ANEVS1000-1000C(F)	1000	1260	60	500	630	60
	ANEVS1000-2000C(F)	2000	2520	60	1000	1260	60
Description	1500V or above and other voltage, current level and power level can be customized as required. The voltage range with letter "C" in the model is 24V-full scale.						

General parameters of ANEVS(F) series		
Input Power		3-phase 4-wire +PE, 380V±57V, 50/60Hz±5Hz
Output parameters	Voltage accuracy	0.05% F.S, resolution: 0.1V
	Current accuracy	0.1% F.S, resolution: 0.1A
	Source effect\Load effect	0.1%F.S
	Ripple (Vpp)	0.2%F.S
	Transient recovery time	≤ 5 ms
	Current rise time	≤ 10 ms
	Protection	IGBT overheat, IGBT overcurrent, transformer overheat, input overvoltage, input undervoltage, bus overvotage, output overvoltage, output overcurrent
Feedback parameters	Three-phase line voltage	323~437V
	Frequency	45~60
	Power factor	≥0.99
	Total harmonic content	≤3%
	Feedback function	Energy feedback at full power
Function	Wave editing	Control of voltage/current slope, ladder, cycle control, jump control
	E-stop	E-stop button
	Output contactor	Available and controllable
	Communication port	RS232+CAN+LAN, RS485(optional)
Working environment	Temp./humidity	0~40℃, 10~90%RH (no condensation)
	Altitude	≤2000m
Dimension and weight	Weight	1030 kg
	Dimension W×H×D(mm)	1000×1900×1000
	The dimension and weight is that for type of 90kW and below. For other types, contact us for detail.	

Battery Pack Charge/Discharge Test System

ANEVP(F) Series

Product Introduction

ANEVP(F) series battery pack charge/discharge test system is a set of automated test system designed and developed in accordance with the battery pack industry standard for electric vehicles for the detection of PACK line, mainly consisting of power battery pack charge/discharge test power supply and host test software. The power battery pack charging/discharging test power supply adopts high-frequency PWM rectification and bidirectional DCDC conversion, FPGA digital control, seamless switching between forward and reverse, automatic bidirectional operation, energy feedback to the grid at full power; advanced digital control, ultra-high control accuracy, fast response, wide output voltage range; compared with conventional bidirectional power supply, it can achieve full range of high-precision output from 0V to full scale, up to 2000V, and the maximum power of a single machine can reach 1MW.

Features

- Grid feedback: both power supply and load characteristics, achieving the function of load for automatic energy feedback to the grid in addition to high-power DC power supply performance; energy saving, green and environment protection.
- High-precision output: accuracy of output voltage is ±0.05% F.S. and current is ±0.1% F.S.
  high-quality voltage and current waves, no damage to the battery pack.
- Fast dynamic response:
  Current rise time (10%-90%): ≤1ms, meet the test standard requirements of battery pack industry;
  output voltage response time for 10%-90% sudden applied load and 90%-10% sudden shedding load: ≤5ms;
  +90%~-90% forward/reverse switching time: ≤10ms.
  Mainstream high-frequency PWM rectification control, power factor ≥0.99, THD and injected harmonic current meet the requirements of GB/T14549-93, high-quality energy feedback to the grid.
- Optimized bidirectional DCDC conversion, wide output voltage range, 0V-full range adjustable.
- CC, CV, CP modes.
- Multi protection: input over-voltage/under-voltage, lack phase, output over voltage, IGBT overheat, IGBT over current, over temperature protection, short circuit current-limiting protection.
- Built-in EMI filter to filter the interference signal caused by the high-frequency switching process.
- Large-screen LCD display, compatible with buttons and touch screen, suitable for operation under various harsh operating conditions.
- Communication and remote control: standard CAN, RS232/RS485 port and remote control software of the upper computer.
- The setting can be imported into an EXCEL file: current, voltage, power, temperature, SOC during conventional shortcut group parameter test process; cycle list, current, voltage, power, temperature, SOC test data in programming mode.
- BMS data docking: DBC file import, including all types of DBC files on the market, manually adding of protocols, quick data docking and control with BMS of different manufacturers.

- Data processing: powerful data analysis capabilities, display of historical data curve, export the recording time/voltage/current/power to CSV files by the chosen period, convenient for engineers to analyze and judge the test results via combination of data and curve, and test and record the comprehensive operation process.

Test standards and test items

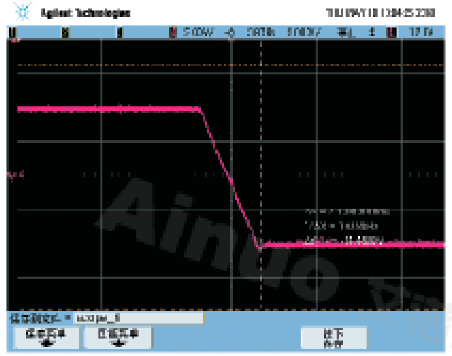
Test standards:

- GB/T 31467.1-2015 Lithium-ion traction battery pack and system for electric vehicles. Part 1: Test specification for high power applications
- GB/T 31467.2-2015 Lithium-ion traction battery pack and system for electric vehicles. Part 2: Test procedures for high-energy applications
- GB/T 31467.3-2015 Lithium-ion traction battery pack and system for electric vehicles. Part 3: Safety requirements and test methods
- GB/T 31484-2015 Cycle life requirements and test methods for traction battery of electric vehicle
- GB/T 31485-2015 Safety requirements and test methods for traction battery of electric vehicle
- GB/T 31486-2015 Electrical performance requirements and test methods for traction battery of electric vehicle
- QC/T 741-2014 Ultra-capacitor for electric vehicles

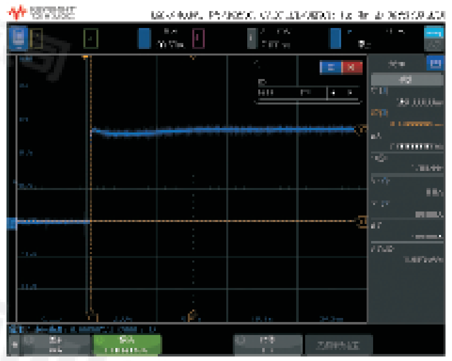
Test items

Test type	Experiment items	Standard
Basic performance test	Capacity and energy testing	GB/T 31467.1-2015-7.1
		GB/T 31467.2-2015-7.1
	Power and internal resistance test	GB/T 31467.1-2015-7.2
		GB/T 31467.2-2015-7.2
	No load capacity loss	GB/T 31467.1-2015-7.3
		GB/T 31467.2-2015-7.3
	Capacity loss during storage	GB/T 31467.1-2015-7.4
		GB/T 31467.2-2015-7.4
	High/low temperature starting power	GB/T 31467.1-2015-7.5
	Energy efficiency test	GB/T 31467.1-2015-7.6
		GB/T 31467.2-2015-7.5
Security test	Overheat protection	GB/T 31467.3-2015-7.13
	Overcharge protection	GB/T 31467.3-2015-7.15
	Over-discharge protection	GB/T 31467.3-2015-7.16
Cycle life test	Initial capacity and energy	GB/T 31484-2015-6.2
	Initial power	GB/T 31484-2015-6.3
	Standard cycle life	GB/T 31484-2015-6.4
	Operating cycle life	GB/T 31484-2015-6.5
Software working mode	Current ladder or ramp experiment	PC software function
	Voltage ladder or ramp experiment	
	High-speed pulse experiment of power battery	
	Battery temperature test	

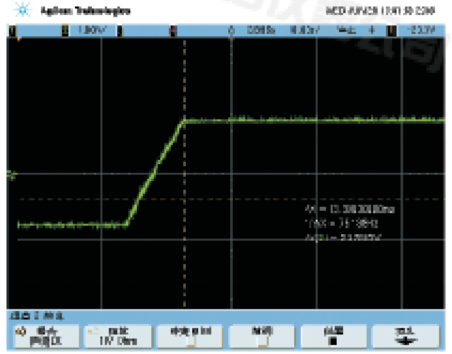
Experimental wave and host screen



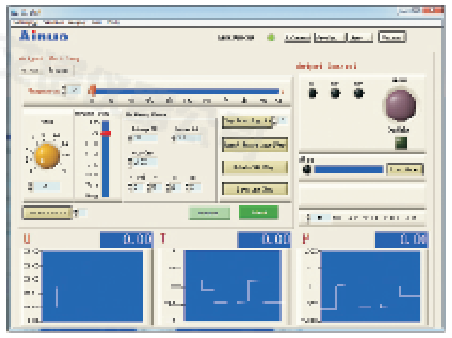
300A charge to discharge switching time



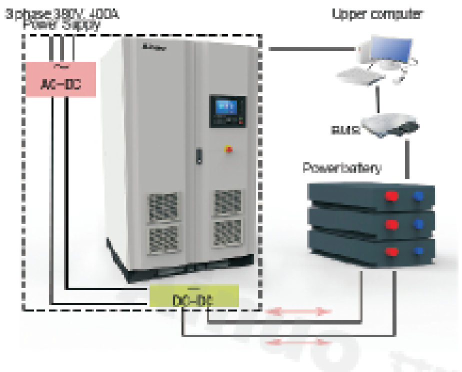
Current rise time



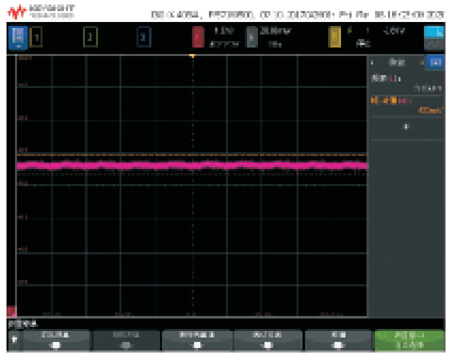
Discharge to charge switching time



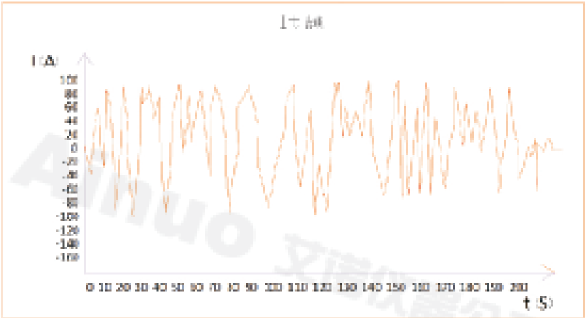
Computer control software

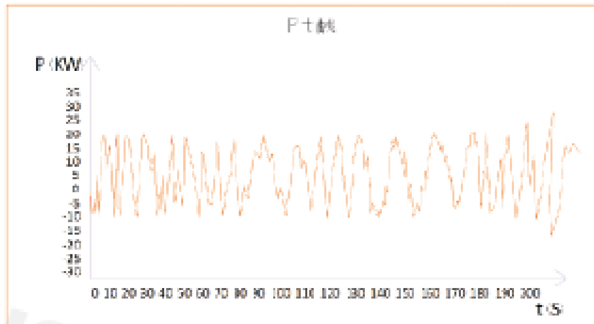


Charge/discharge test



Output voltage ripple





Protection

Complete protection measures are set for the charge/discharge cut-off conditions in all modes for real-time monitoring of the charge/discharge test process to ensure the safety and reliability of the test process. Users can set protection thresholds flexibly, including battery pack charge/discharge cut-off voltage, maximum allowable charging current, maximum cell charge cut-off voltage, minimum cell discharge cut-off voltage, maximum cell temperature, SOC limit protection and other cut-offs conditions. When the actual operating value exceeds the threshold set by the user, the system automatically stops and issues an alarm. The log file automatically records the alarm status.

Operating condition simulation test

Electric vehicle driving conditions simulation test following electric vehicle industry standards;
Output of current-time and power-time curves under operating conditions;
Programmable for automatic switching between operating condition simulation and test experiment;

Applications

- Testing of battery pack charge/discharge
- Testing of capacitor, super capacitor charge/discharge
- Testing of hybrid
- Testing of electric vehicle motors and controllers
- Testing of electric vehicle transmission system and powertrain system
- Testing of cell
- Testing of electric vehicle motors and controllers
- Testing of ship electric drive, electric drive system
- Testing of charger and charging spot
- Testing of energy storage system converter
- Testing of UPS, EPS system
- Simulated battery to replace real battery-powered test applications
- Testing of special electric vehicle motors, controllers, electric vehicle transmission systems, and powertrain systems
- Power supply for high-power DC test

Specifications

Voltage level	Product model	Rated current (A)	Peak current (A)	Current peak time (S)	Rated power (kW)	Peak power (kW)	Power peak time (S)
500 V	ANEVP500-200(F)	200	300	60	60	90	60
	ANEVP500-300(F)	300	450	60	90	135	60
	ANEVP500-400(F)	400	480	60	120	144	60
	ANEVP500-500(F)	500	600	60	120	144	60
800 V	ANEVP800-100(F)	100	150	60	60	90	60
	ANEVP800-200(F)	200	300	60	60	90	60
	ANEVP800-300(F)	300	450	60	90	135	60
	ANEVP800-500(F)	500	650	60	160	208	60
	ANEVP800-600(F)	600	800	60	250	333	60
	ANEVP800-750C(F)	750	850	60	300	340	60
	ANEVP800-900C(F)	900	1100	60	400	489	60
	ANEVP800-1000C(F)	1000	1260	60	500	630	60
	ANEVP800-2000C(F)	2000	2520	60	1000	1260	60
1000 V	ANEVP1000-200(F)	200	260	60	90	117	60
	ANEVP1000-350(F)	350	455	60	160	208	60
	ANEVP1000-400(F)	400	520	60	250	325	60
	ANEVP1000-500(F)	500	650	60	250	325	60
	ANEVP1000-650C(F)	650	850	60	300	392	60
	ANEVP1000-900C(F)	900	1200	60	400	533	60
	ANEVP1000-1000C(F)	1000	1250	60	500	630	60
	ANEVP1000-2000C(F)	2000	2520	60	1000	1260	60
Description	1500V or above and other voltage, current level and power level can be customized as required. The voltage range with letter "C" in the model is 24V-full scale.						

General parameters of ANEVP(F) series		
Input Power		3-phase 4wire +PE, line voltage: 380V±57V, 50/60±5Hz
Output parameters	Voltage accuracy	0.05% F.S, resolution: 0.1V
	Current accuracy	0.1% F.S, resolution: 0.1A
	Source effect\Load effect	0.1%F.S
	Ripple (Vpp)	0.2%F.S
	Transient recovery time	≤ 5 ms
	Current rise time	≤1 ms
	Protection	IGBT overheat, IGBT overcurrent, transformer overheat, input overvoltage, input undervoltage, bus overvoltage, output overvoltage, output overcurrent
Feedback parameters	Three-phase line voltage	323~437V
	Frequency	45~60Hz
	Power factor	≥0.99
	Total harmonic content	≤3%
	Feedback function	Energy feedback at full power
Function	Wave editing	Control of voltage/current slope, ladder, cycle control, jump control
		Number of working steps: ≤900
		Cycle times: ≤9999
		Loop nesting: maximum 8 layers
	E-stop	E-stop button
	Soft start	Pre-charge
	Communication port	RS232+CAN+LAN, RS485(optional)
	Data management	Export to EXCEL files
	Protection	Battery pack voltage upper/lower limit protection, maximum charge/discharge current protection, cell voltage upper/lower limit protection, SOC limit protection, cell overheat protection
Working environment	Temp./humidity	0~40℃, 10~90%RH (no condensation)
	Altitude	≤2000m
Dimension and weight	Weight	1030 kg
	Dimension W×H×D(mm)	1000×1900×1000
	The dimension and weight is that for type of 90kW and below. For other types, contact us for detail.	

Feedback DC Electronic Load
ANEL(F) Series

Protection

ANEL(F) series feedback DC electronic load adopts high-frequency PWM rectification and bidirectional DCDC conversion, FPGA digital control, energy feedback to the grid at full power, more energy-saving, green and environmentally friendly compared with conventional DC load; advanced digital control, ultra-high control accuracy, fast response, wide output voltage range, it can achieve full range of load input from 0V to full scale.

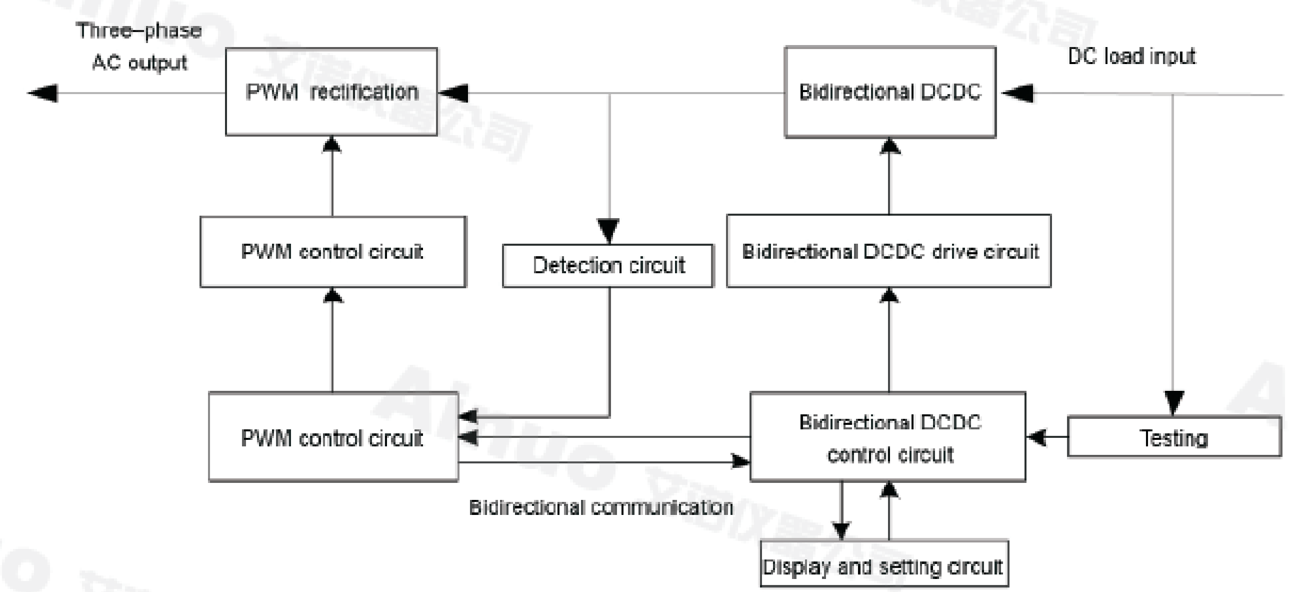


Diagram of ANEL(F) series feedback DC electronic load

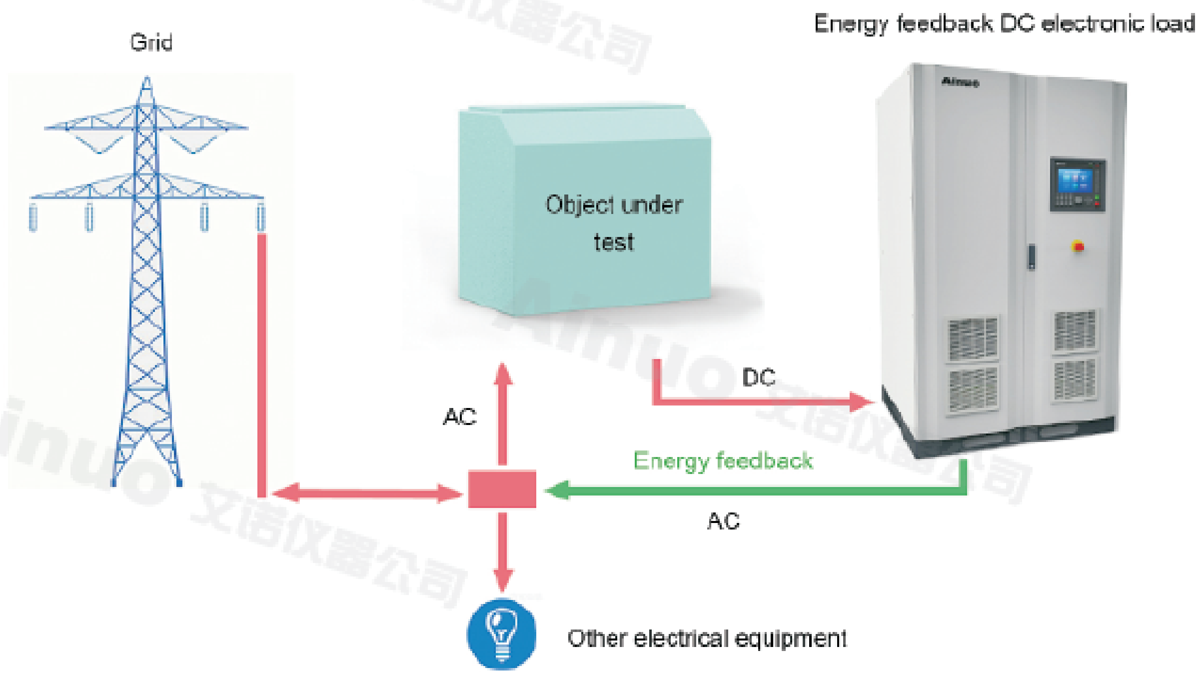
The feedback DC electronic load realizes the DC load function of automatic energy feedback to the grid. Compared with the conventional load, it is more convenient and safe. The conventional load is energy-consuming, and energy is consumed by resistance heating; the feedback DC electronic load is energy-feeding, and the energy is fed back to the grid, green, environment friendly, reliable, safe, featuring outstanding advantages

Features

- Two-stage circuit of PWM rectification and bidirectional DCDC, achieving load of automatic energy feedback to the grid, energy saving, green and environment protection.
- Mainstream high-frequency PWM rectification control, power factor ≥0.99, THD and injected harmonic current meet the requirements of GB/T 14549-93, high-quality energy feedback to the grid.
- High-precision output: accuracy of output voltage is ±0.05% F.S. and current is ±0.1% F.S.
- Fast dynamic response: response time for 10%-90% sudden applied load and 90%-10% sudden shedding load: ≤5ms
- Optimized bidirectional DCDC conversion, wider range of DC input voltage, 0V-full scale DC input.
- CC, CV, CP modes.
- Multi protection: input over-voltage/under-voltage, lack phase, output over voltage, IGBT overheat, IGBT over current, over temperature protection, short circuit current-limiting protection.
- Built-in EMI filter to filter the interference signal caused by the high-frequency switching process.
- Communication and remote control: standard CAN, RS232/RS485 port and remote control software of the upper computer.
- Efficiency up to 95% under rated conditions.
- Large-screen LCD display, compatible with buttons and touch screen, suitable for operation under various harsh operating conditions.
- Screen (key) lock: After the power supply is not operated for more than 5 minutes, the keyboard and input of touch screen will automatically be locked.

Applications

- Fuel cell test
- Battery pack, battery pack discharge test
- Power electronics test
- Testing of charger and charging pile
- Capacitor, super capacitor discharge test
- Energy storage system converter test



Specifications

Voltage level	Product model	Rated current (A)	Peak current (A)	Current peak time (S)	Rated power (kW)	Peak power (kW)	Power peak time (S)
500 V	ANEL500-200(F)	200	300	60	60	90	60
	ANEL500-300(F)	300	450	60	90	135	60
	ANEL500-400(F)	400	480	60	120	144	60
	ANEL500-500(F)	500	600	60	120	144	60
800 V	ANEL800-100(F)	100	150	60	60	90	60
	ANEL800-200(F)	200	300	60	60	90	60
	ANEL800-300(F)	300	450	60	90	135	60
	ANEL800-500(F)	500	650	60	160	208	60
	ANEL800-600(F)	600	800	60	250	333	60
	ANEL800-750C(F)	750	850	60	300	340	60
	ANEL800-900C(F)	900	1100	60	400	489	60
	ANEL800-1000C(F)	1000	1260	60	500	630	60
	ANEL800-2000C(F)	2000	2520	60	1000	1260	60
1000 V	ANEL1000-200(F)	200	260	60	90	117	60
	ANEL1000-350(F)	350	455	60	160	208	60
	ANEL1000-400(F)	400	520	60	250	325	60
	ANEL1000-500(F)	500	650	60	250	325	60
	ANEL1000-650C(F)	650	850	60	300	392	60
	ANEL1000-900C(F)	900	1200	60	400	533	60
	ANEL1000-1000C(F)	1000	1260	60	500	630	60
	ANEL1000-2000C(F)	2000	2520	60	1000	1260	60

General parameters of ANEL(F) series		
DC input	Voltage range	0-full scale
	Voltage accuracy	0.05% F.S, resolution: 0.1V
	Current accuracy	0.1% F.S, resolution: 0.1A
	Source effect\Load effect	0.1%F.S
	Ripple (Vpp)	0.2%F.S
	Transient recovery time	≤ 5 ms
	Current rise time	≤ 1 ms
AC output	Voltage/frequency	3-phase 4-wire +PE, line voltage: 380V±57V, 45~60Hz
	Power factor	≥0.99
	Total harmonic content	≤3%
	Feedback function	Energy feedback at full power
Function	Wave editing	Control of voltage/current slope, ladder, cycle control, jump control
	E-stop	E-stop button
	Protection	IGBT overheating, IGBT overcurrent, transformer overheating, output lack phase, bus overvoltage, input overvoltage, input overcurrent
	Communication port	RS232+CAN+LAN, RS485(optional)
	Local operation	Compatible touch and key operation
Working environment	Temp./humidity	0~40℃, 10~90%RH (no condensation)
	Altitude	≤2000m
Weight and dimension	Weight	1030 kg
	Dimension W×H×D(mm)	1000×1900×1000
	The dimension and weight is that for type of 120kW and below. For other types, contact us for detail.	

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Fuel Cell Dedicated DC Electronic Load

ANELF(F) Series

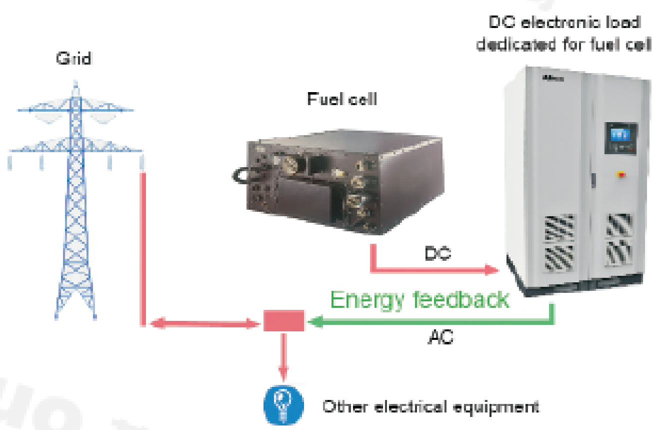


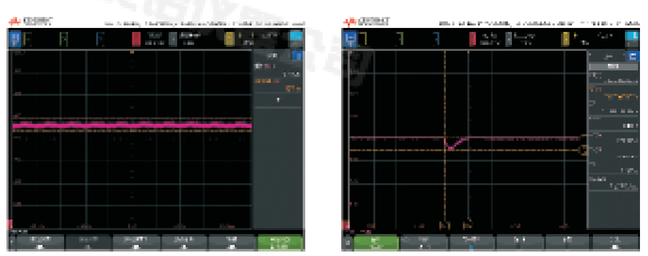
Product Introduction

ANELF(F) series fuel cell dedicated DC electronic load is an energy feedback DC electronic load developed for testing of fuel cell stack, fuel cell engine system, fuel cell backup power supply, etc. It adopts high-frequency PWM rectification and bidirectional DCDC conversion, FPGA digital control, ultra-high control accuracy, fast response, energy feedback to the grid at full power; advanced digital control, it can achieve full range of input from 0V to full scale. Low voltage large current load input characteristics and energy feedback, suitable for testing of fuel cell stacks and fuel cell engine systems etc.

Features

- Two-stage circuit of PWM rectification and bidirectional DCDC, achieving load of automatic energy feedback to the grid, energy saving, green and environment protection.
- Mainstream high-frequency PWM rectification control, power factor ≥0.99, THD and injected harmonic current meet the requirements of GB/T14549-93, high-quality energy feedback to the grid.
- Optimized bidirectional DCDC conversion, wider range of DC input voltage, 0V-full scale DC input.
- High-precision output: accuracy of output voltage is ±0.05% F.S. and current is ±0.1% F.S.
- Fast dynamic response: response time for 10%-90% sudden applied load and 90%-10% sudden shedding load: ≤5ms
- For testing of fuel cell industry, advanced IGBT parallel technology, low voltage large current stable control.
- CC, CV, CP modes.
- Multi protection: input over-voltage/under-voltage, lack phase, output over voltage, IGBT overheat, IGBT over current, over temperature protection, short circuit current-limiting protection.
- Built-in EMI filter to filter the interference signal caused by the high-frequency switching process.
  Communication and remote control: standard CAN.
- RS232/RS485 port and remote control software of the upper computer.
- Strict heat management, stable and reliable.
- Large-screen LCD display, compatible with buttons and touch screen, suitable for operation under various harsh operating conditions.
- Screen (key) lock: After the power supply is not operated for more than 5 minutes, the keyboard and input of touch screen will automatically be locked.





Low ripple output characteristics

Specifications

Voltage level	Product model	Rated current (A)	Peak current (A)	Current peak time (S)	Rated power (kW)	Peak power (kW)	Power peak time (S)
500 V	ANELF500-200(F)	200	300	60	60	90	60
	ANELF500-300(F)	300	450	60	90	135	60
	ANELF500-400(F)	400	480	60	120	144	60
	ANELF500-500(F)	500	600	60	120	144	60
800 V	ANELF800-100(F)	100	150	60	60	90	60
	ANELF800-200(F)	200	300	60	60	90	60
	ANELF800-300(F)	300	450	60	90	135	60
	ANELF800-500(F)	500	650	60	160	208	60
	ANELF800-600(F)	600	800	60	250	333	60
	ANELF800-750C(F)	750	850	60	300	340	60
	ANELF800-900C(F)	900	1100	60	400	489	60
	ANELF800-1000C(F)	1000	1260	60	500	630	60
	ANELF800-2000C(F)	2000	2520	60	1000	1260	60
1000 V	ANELF1000-200(F)	200	260	60	90	117	60
	ANELF1000-350(F)	350	455	60	160	208	60
	ANELF1000-400(F)	400	520	60	250	325	60
	ANELF1000-500(F)	500	650	60	250	325	60
	ANELF1000-650C(F)	650	850	60	300	392	60
	ANELF1000-900C(F)	900	1200	60	400	533	60
	ANELF1000-1000C(F)	1000	1260	60	500	630	60
	ANELF1000-2000C(F)	2000	2520	60	1000	1260	60
Description	Other voltage, current and power is customized. Models with the letter "C" and ANEFL800-800 have voltage range of 24V-full scale.						

General parameters of ANELF(F) series		
DC input	Voltage and accuracy	0-1000V, 0.05% F.S, resolution: 0.1V
	Current and accuracy	0-2000A, 0.1% F.S, resolution: 0.1A
	Power supply effect	Source effect: 0.1% F.S, load effect: 0.1% F.S
	Ripple (Vpp)	0.2%F.S
	Transient recovery time	≤5 ms
	Current rise time	≤1 ms
AC output	Number of phases	3-phase 4-wire +PE, 380V±57V, 45~60Hz
	Power factor	≥0.99
	Total harmonic content	≤3%
	Feedback function	Energy feedback at full power
Function	Wave editing	Control of voltage/current slope, ladder, cycle control, jump control
	E-stop	E-stop button
	Protection	IGBT overheating, IGBT overcurrent, transformer overheating, output lack phase, bus overvoltage, input overvoltage, input overcurrent
	Communication port	RS232+CAN+LAN, RS485(optional)
	Local operation	Compatible touch and key operation
	Display	Large-screen color LCD
Working environment	Temp./humidity	0~40℃, 10~90%RH (no condensation)
	Altitude	≤2000m
Weight		1030 kg
Dimension W×H×D(mm)		1000×1900×1000 (excluding base, base: 100), total height: 2000
		Contact us for detail about the dimension and weight of type of 120kW or above.

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Programmable Bidirectional DC Power Supply
ANEVH(F) Series

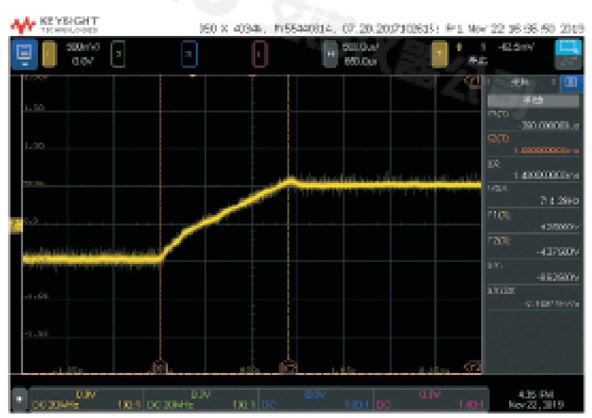
Product Introduction

The ANEVH(F) series is a programmable DC power supply that integrates DC power supply and feedback load, which can be used as a "source" and output power; or used as load to realize sink function, absorbing power and returning to the grid cleanly; standard dual-quadrant operation.

The ANEVH(F) series programmable bidirectional DC test power supply covers 8 voltage levels, covering 0V-2250V, supporting multiple parallel machines, and the power can be expanded up to 1MW; bidirectional energy flow, automatic seamless switching, high power density, fast dynamic response, built-in function generator and standard test curve to generate a variety of waves, excellent characteristics and rich test functions, suitable for testing applications in laboratory, automotive electronics, new energy three power, micro-grid, high-power test and other applications.

Features

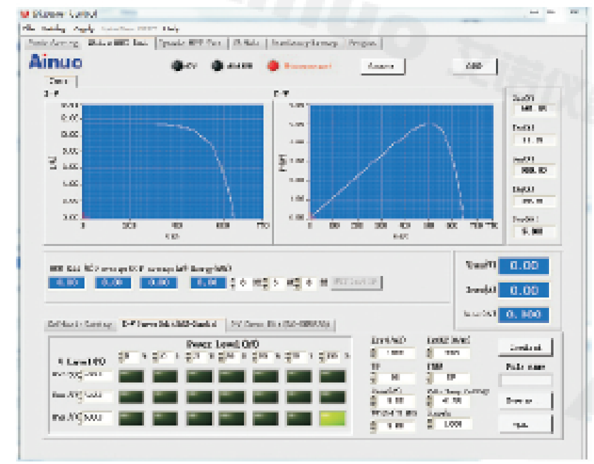
- Integrating source and load functions into one, full series 3U standard chassis.
- High-frequency PWM rectification and bidirectional DCDC technology, completely eliminate the noise of conventional high-power bidirectional power supply, quiet power supply.
- Higher power density, compact, high speed.
- Energy flow in both directions, automatically and seamlessly forward/reverse switching.
- Feedback efficiency up to 95%, energy saving, environment protection.



The maximum current switching time
in the positive direction is as low as 1.4ms

- Voltage: 8 levels, covering 0-2250V, industrial highest voltage level, unique high-voltage series.
- Current: 0-2160A.
- Built-in function generator, support arbitrary wave generation.
- Built-in voltage curves for DIN40839, ISO-16750-2 and ISO21848 standard automotive grids.
- Comprehensive OTP, OVP, OCP, OPP protection.
- S terminal compensation

- Solar cell I-V curve simulation



- Simulate a variety of solar cell output characteristics (Fill Factor)
- Test the maximum power point tracking (MPPT) capability and efficiency;
- Accurate voltage and current measurement.
- Serial output can be set to test the PV inverter operating voltage range.
- Standard RS232 interface;
- Standard graphical PC operating software. Single operation available.
- Simulate I-V curve under different temperature and illumination conditions.

Applications

- Micro-grid and micro-inverter testing
- Automotive motor, controller and power battery testing
- Fuel cell test, fuel cell DCDC test
- UPS, on-board charger (OBC), charging spot, bidirectional DC-DC test
- Industrial testing for electrolysis, electroplating, welding, etc.
- Testing of communication power supply, LED product Testing of automotive electronics, avionics
- High power test, DC feedback load demand application

Ordering and function expansion

- ANEVH100-170(F) 100V/170A /5kW
- ANEVH100-340(F) 100V/340A /10kW
- ANEVH100-510(F) 100V/510A /15kW
- ANEVH300-75(F) 300V/75A /5kW
- ANEVH300-150(F) 300V/150A /10kW
- ANEVH300-225(F) 300V/225A /15kW
- ANEVH500-40(F) 500V/40A /5kW
- ANEVH500-80(F) 500V/80A /10kW
- ANEVH500-120(F) 500V/120A /15kW
- ANEVH750-25(F) 750V/25A /5kW
- ANEVH750-50(F) 750V/50A /10kW
- ANEVH750-75(F) 750V/75A /15kW
- ANEVH1000-40(F) 1000V/40A /10kW
- ANEVH1000-75(F) 1000V/75A/15kW
- ANEVH1500-40(F) 1500V/40A /15kW
- ANEVH2250-25(F) 2250V/25A /15kW
- ANEVH300-225(F) 300V/225A /21kW
- ANEVH500-120(F) 500V/120A /21kW
- ANEVH750-75(F) 750V/75A /21kW
- ANEVH1000-75(F) 1000V/75A /21kW
- ANEVH1500-40(F) 1500V/40A /21kW
- ANEVH2250-25(F) 2250V/25A /21kW
- ANEVH500-180(F) 500V/180A /30kW
- ANEVH750-120(F) 750V/120A /30kW
- ANEVH1500-60(F) 1500V/60A /30kW
- ANEVH2250-40(F) 2250V/40A /30kW

Support multiple units in parallel to expand power/current range

Specifications

Model		ANEVH100-170(F)	ANEVH100-340(F)	ANEVH100-510(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~100VDC	0~100VDC	0~100VDC
	Current	-170A ~ 170A	-340A ~ 340A	-510A ~ 510A
	Power	-5KW ~ 5KW	-10KW ~ 10KW	-15KW ~ 15KW
Display		4.3" LCD		
Voltage resolution		0.01V (>1000V, 0.1V)		
Current resolution		0.01A (>1000A, 0.1A)		
Power resolution		0.001kW (>100kW, 0.01kW)		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	40mV		
	Vpp	250mV		
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms (10%-90%)		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms (+90%→-90%)		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB (A) (measuring distance≥2 meters)		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax (300V→6.5V)		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		~90%		
Feedback parameters	Frequency	45-66HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	~90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×767mm		
Weight		5kw: ≤21kg 10kw: ≤29kg 15kw≤37kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Specifications

Model		ANEVH300-75(F)	ANEVH300-150(F)	ANEVH300-225(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~300VDC	0~300VDC	0~300VDC
	Current	-75A~75A	-150A~150A	-225A~225A
	Power	-5kW ~ 5kW	-10kW ~ 10kW	-15kW ~ 15kW
Display		4.3" LCD		
Voltage resolution		0.01V (>1000V, 0.1V)		
Current resolution		0.01A (>1000A, 0.1A)		
Power resolution		0.001kW (>100kW, 0.01kW)		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	100mV		
	Vpp	650mV		
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms (10%-90%)		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms (+90%→-90%)		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB (A) (measuring distance≥2 meters)		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax (300V→6.5V)		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		~90%		
Feedback parameters	Frequency	45-65HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	~90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×767mm		
Weight		5kw: ≤21kg 10kw: ≤29kg 15kw≤37kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Safety Analyzer
AC Power Supply
DC Power Supply
Bidirectional DC Power Supply
Power Analyzer
Motor Test Scheme
Electronic Load

Specifications

Model		ANEVH500-40(F)	ANEVH500-80(F)	ANEVH500-120(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~500VDC	0~500VDC	0~500VDC
	Current	-40A~40A	-80A~80A	-120A~120A
	Power	-5kW～5kW	-10kW～10kW	-15kW～15kW
Display		4.3" LCD		
Voltage resolution		0.01V（>1000V，0.1V）		
Current resolution		0.01A（>1000A，0.1A）		
Power resolution		0.001kW（>100kW，0.01kW）		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	70mV		
	Vpp	500mV		
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms（10%-90%）		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms（+90%→-90%）		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB（A）（measuring distance≥2 meters）		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax（300V→6.5V）		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		～90%		
Feedback parameters	Frequency	45-66HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	～90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×787mm		
Weight		5kw：≤21kg 10kw：≤29kg 15kw：≤37kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Specifications

Model		ANEVH750-25(F)	ANEVH750-50(F)	ANEVH750-75(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~750VDC	0~750VDC	0~750VDC
	Current	-25A~25A	-50A~50A	-75A~75A
	Power	-5kW～5kW	-10kW～10kW	-15kW～15kW
Display		4.3" LCD		
Voltage resolution		0.01V（>1000V，0.1V）		
Current resolution		0.01A（>1000A，0.1A）		
Power resolution		0.001kW（>100kW，0.01kW）		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	90mV		
	Vpp	800mV		
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms（10%-90%）		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms（+90%→-90%）		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB（A）（measuring distance≥2 meters）		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax（300V→6.5V）		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		～90%		
Feedback parameters	Frequency	45-66HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	～90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×787mm		
Weight		5kw：≤21kg 10kw：≤29kg 15kw：≤37kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Specifications

Model		ANEVH1000-40(F)	ANEVH1000-75(F)	ANEVH1500-40(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~1000VDC	0~1000VDC	0~1500VDC
	Current	-40A ~ 40A	-75A ~ 75A	-40A ~ 40A
	Power	-10KW ~ 10KW	-15KW ~ 15KW	-15KW ~ 15KW
Display		4.3" LCD		
Voltage resolution		0.01V（>1000V，0.1V)		
Current resolution		0.01A（>1000A，0.1A)		
Power resolution		0.001kW（>100kW，0.01kW)		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	300mV	100mV	200mV
	Vpp	1600mV	1000mV	2000mV
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms（10%-90%)		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms（+90%→-90%)		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB（A） (measuring distance≥2 meters)		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax（300V→6.5V)		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		~90%		
Feedback parameters	Frequency	45-66HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	~90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×767mm		
Weight		5kw：≤21kg 10kw：≤29kg 15kw：≤37kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Specifications

Model		ANEVH2250-25(F)
Input	Phase	3-phase 3-wires+PE
	Voltage	342V~528VAC
	Frequency	45~66HZ
	Power factor	≥0.99
Output	Voltage	0~2250VDC
	Current	-25A ~ 25A
	Power	-15KW ~ 15KW
Display		4.3" LCD
Voltage resolution		0.01V（>1000V，0.1V)
Current resolution		0.01A（>1000A，0.1A)
Power resolution		0.001kW（>100kW，0.01kW)
Setting error (programming accuracy) 1	Voltage	≤0.1%FS
	Current	≤0.2%FS
	Power	≤1%FS
Measurement error (readback accuracy)	Voltage	≤0.1%FS
	Current	≤0.2%FS
	Power	≤1%FS
Ripple and noise 20Hz~20MHz	Vrms	200mV
	Vpp	2000mV
Load effect	Voltage	≤0.05%Umax
	Current	≤0.15%Imax
Source effect	Voltage	≤0.02%Umax
	Current	≤0.05%Imax
Voltage rise time		≤30ms（10%-90%)
Transient response time 2		≤2ms
Forward/reverse switching speed		2ms（+90%→-90%)
Temp. drift	Voltage	0.05% of setting value
	Current	0.05% of setting value
Noise		≤65dB（A） (measuring distance≥2 meters)
OVP range		110%F.S
Max lead voltage drop compensation		≤5% Umax（300V→6.5V)
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output
Other external interfaces		Standard parallel port
Efficiency		~90%
Feedback parameters	Frequency	45-66HZ
	Power factor	≥0.99
	Switching time	≤2ms
	Feedback function	Full power feedback
	Feedback efficiency	~90%
Working temperature		0~50℃
Storage temperature		-20~70℃
Humidity		<80%, no condensation
Dimension (W×H×D)	Cabinet dimension	444×133×753mm
	Overall dimension	482×133×767mm
Weight		5kw：≤21kg 10kw：≤29kg 15kw：≤37kg
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.

Specifications

Model		ANEVH300-225(F)	ANEVH500-120(F)	ANEVH750-75(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~300VDC	0~500VDC	0~750VDC
	Current	-225A~225A	-120A~120A	-75A~75A
	Power	-21KW~21KW	-21KW~21KW	-21KW~21KW
Display		4.3" LCD		
Voltage resolution		0.01V (>1000V, 0.1V)		
Current resolution		0.01A (>1000A, 0.1A)		
Power resolution		0.001kW (>100kW, 0.01kW)		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	100mV	70mV	90mV
	Vpp	650mV	500mV	800mV
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms (10%-90%)		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms (+90%→-90%)		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB (A) (measuring distance≥2 meters)		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax (300V→6.5V)		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		~90%		
Feedback parameters	Frequency	45-66HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	~90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×767mm		
Weight		21kw: ≤39kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Specifications

Model		ANEVH1000-75(F)	ANEVH1500-40(F)	ANEVH2250-25(F)
Input	Phase	3-phase 3-wires+PE		
	Voltage	342V~528VAC		
	Frequency	45~66HZ		
	Power factor	≥0.99		
Output	Voltage	0~1000VDC	0~1500VDC	0~2250VDC
	Current	-75A~75A	-40A~40A	-25A~25A
	Power	-21KW~21KW	-21KW~21KW	-21KW~21KW
Display		4.3" LCD		
Voltage resolution		0.01V (>1000V, 0.1V)		
Current resolution		0.01A (>1000A, 0.1A)		
Power resolution		0.001kW (>100kW, 0.01kW)		
Setting error (programming accuracy) 1	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Measurement error (readback accuracy)	Voltage	≤0.1%FS		
	Current	≤0.2%FS		
	Power	≤1%FS		
Ripple and noise 20Hz~20MHz	Vrms	100mV	185mV	200mV
	Vpp	1000mV	2000mV	2000mV
Load effect	Voltage	≤0.05%Umax		
	Current	≤0.15%Imax		
Source effect	Voltage	≤0.02%Umax		
	Current	≤0.05%Imax		
Voltage rise time		≤30ms (10%-90%)		
Transient response time 2		≤2ms		
Forward/reverse switching speed		2ms (+90%→-90%)		
Temp. drift	Voltage	0.05% of setting value		
	Current	0.05% of setting value		
Noise		≤65dB (A) (measuring distance≥2 meters)		
OVP range		110%F.S		
Max lead voltage drop compensation		≤5% Umax (300V→6.5V)		
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB		
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection		
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output		
Other external interfaces		Standard parallel port		
Efficiency		~90%		
Feedback parameters	Frequency	45-65HZ		
	Power factor	≥0.99		
	Switching time	≤2ms		
	Feedback function	Full power feedback		
	Feedback efficiency	~90%		
Working temperature		0~50℃		
Storage temperature		-20~70℃		
Humidity		<80%, no condensation		
Dimension (W×H×D)	Cabinet dimension	444×133×753mm		
	Overall dimension	482×133×767mm		
Weight		21kw: ≤39kg		
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.		

Specifications

Model		ANEVH500-180(F)	ANEVH750-120(F)
Input	Phase	3-phase 3-wires+PE	
	Voltage	342V~528VAC	
	Frequency	45~66HZ	
	Power factor	≥0.99	
Output	Voltage	0~500VDC	0~750VDC
	Current	-180A～180A	-120A～120A
	Power	-30KW～30KW	-30KW～30KW
Display		4.3" LCD	
Voltage resolution		0.01V（>1000V，0.1V）	
Current resolution		0.01A（>1000A，0.1A）	
Power resolution		0.001kW（>100kW，0.01kW）	
Setting error (programming accuracy) 1	Voltage	≤0.1%FS	
	Current	≤0.2%FS	
	Power	≤1%FS	
Measurement error (readback accuracy)	Voltage	≤0.1%FS	
	Current	≤0.2%FS	
	Power	≤1%FS	
Ripple and noise 20Hz~20MHz	Vrms	100mV	120mV
	Vpp	1000mV	1200mV
Load effect	Voltage	≤0.05%Umax	
	Current	≤0.15%Imax	
Source effect	Voltage	≤0.02%Umax	
	Current	≤0.05%Imax	
Voltage rise time		≤30ms（10%-90%）	
Transient response time 2		≤2ms	
Forward/reverse switching speed		2ms（+90%→-90%）	
Temp. drift	Voltage	0.05% of setting value	
	Current	0.05% of setting value	
Noise		≤65dB（A）（measuring distance≥2 meters）	
OVP range		110%F.S	
Max lead voltage drop compensation		≤5% Umax（300V→6.5V）	
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB	
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection	
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output	
Other external interfaces		Standard parallel port	
Efficiency		～90%	
Feedback parameters	Frequency	45-66HZ	
	Power factor	≥0.99	
	Switching time	≤2ms	
	Feedback function	Full power feedback	
	Feedback efficiency	～90%	
Working temperature		0~50℃	
Storage temperature		-20~70℃	
Humidity		<80%, no condensation	
Dimension (W*H*D)	Cabinet dimension	444×133×753mm	
	Overall dimension	482×133×767mm	
Weight		30kw：≤40kg	
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.	

Specifications

Model		ANEVH1500-60(F)	ANEVH2250-40(F)
Input	Phase	3-phase 3-wires+PE	
	Voltage	342V~528VAC	
	Frequency	45~66HZ	
	Power factor	≥0.99	
Output	Voltage	0~1500VDC	0~2250VDC
	Current	-60A～60A	-40A～40A
	Power	-30KW～30KW	-30KW～30KW
Display		4.3" LCD	
Voltage resolution		0.01V（>1000V，0.1V）	
Current resolution		0.01A（>1000A，0.1A）	
Power resolution		0.001kW（>100kW，0.01kW）	
Setting error (programming accuracy) 1	Voltage	≤0.1%FS	
	Current	≤0.2%FS	
	Power	≤1%FS	
Measurement error (readback accuracy)	Voltage	≤0.1%FS	
	Current	≤0.2%FS	
	Power	≤1%FS	
Ripple and noise 20Hz~20MHz	Vrms	220mV	250mV
	Vpp	2400mV	2600mV
Load effect	Voltage	≤0.05%Umax	
	Current	≤0.15%Imax	
Source effect	Voltage	≤0.02%Umax	
	Current	≤0.05%Imax	
Voltage rise time		≤30ms（10%-90%）	
Transient response time 2		≤2ms	
Forward/reverse switching speed		2ms（+90%→-90%）	
Temp. drift	Voltage	0.05% of setting value	
	Current	0.05% of setting value	
Noise		≤65dB（A）（measuring distance≥2 meters）	
OVP range		110%F.S	
Max lead voltage drop compensation		≤5% Umax（300V→6.5V）	
Communication		Standard: CAN/232/485/LAN Optional: USB/GPIB	
Protection		Input lack voltage protection, short circuit protection, output overvoltage protection, current limiting protection, overheat protection	
Analog interface (optional)		Start, stop, alarm, 0-5V or 0-10V analog control output	
Other external interfaces		Standard parallel port	
Efficiency		～90%	
Feedback parameters	Frequency	45-66HZ	
	Power factor	≥0.99	
	Switching time	≤2ms	
	Feedback function	Full power feedback	
	Feedback efficiency	～90%	
Working temperature		0~50℃	
Storage temperature		-20~70℃	
Humidity		<80%, no condensation	
Dimension (W*H*D)	Cabinet dimension	444×133×753mm	
	Overall dimension	482×133×767mm	
Weight		30kw：≤40kg	
Note		1. Testing condition for programming/read precision: 25℃±5℃; 2. The time required for the output voltage to return to within "±0.75% of the rating" as the load change from 100% to 50% or reverse.	

Single-phase AC/DC Power Meter
AN8721PV3(F)/AN8711JV3(F)

Single-phase AC/DC Power Meter
AN87310(F)

High-accuracy Three-phase Power Meter
AN87330(F)

Multi-channel High Precision Power Analyzer
AN87600(F)

Three-phase High-precision Power Meter
ANPM300(F)

Three-phase High-precision Power Analyzer
ANPM600(F)

Single-phase AC/DC Power Meter AN8721PV3(F)

Product Introduction

This AN8721PV3(F) series AC/DC power analyzer adopts STM32 controller as the core and supplemented by FPGA, using direct sampling and intelligent identification technology, widely used in electrical measurements of single-phase electrical equipment, such as voltage, current, power, power factor, frequency, electrical energy, time etc., wide range, 4-window LED highlight, simple operation, U disk read/write, serial communication, parameter alarm, voltage/current ratio settings and other functions, multi-purpose, accurate and durable.

Features

- AC/DC universal wide-range, DC ~ 4kHz bandwidth, load adaptability;
- Reliable, stable, compact, light, the machine depth is only 30cm;
- High measurement speed, up to 0.25s refresh rate;
- Voltage/current ratio setting, easy expansion;
- Standard RS-232 or RS-485 serial port, MODBUS communication, test automation;
- Optional digital I/O, remote input and alarm signal output.

Applications

- Strict industrial site type test;
- High temperature aging room test;
- Home appliances, commercial appliances line standby power measurement;
- Power tools test;
- Lighting test.

Specifications

Model	AN8721PV3(F)	AN8711PV3(F)	AN8711JV3(F)
Measurement parameters	Voltage U、current I、active power P、reactive power Q、apparent power S、power factor λ、phase angleΦ、voltage frequency f、electric energy Wh、electric energy time Time		
Wiring	Common ground short circuit between voltage/current terminals (not removable),only support Ammeter internal connection		No short circuit,support four-wire method long-distance measurement wiring
Input impedance	Voltage:approx.2MΩ,Current:approx.4mΩ(20A),approx.80mΩ(1A)		
Rated voltage	Single phase 0-600V		
Rated current	1A/20A	20A	
Voltage range	6V~600V		
Current range	10mA~1A/20A	200mA~20A	
Voltage/current accuracy	±(0.1% × display + 0.1% × range);(DC,45Hz≤f≤1kHz)		±(0.1% × display + 0.1% × range);(45Hz≤f≤65Hz)
Active power accuracy	±(0.1% × display + 0.1% × range);(DC,45Hz≤f≤1kHz)		±(0.1% × display + 0.1% × range);(45Hz≤f≤65Hz)
Active power range	22mW(PF=0.01)~4.4kW(PF=1)@220V(1A/20A);4.4W(PF=0.01)~4.4kW(PF=1)@220V(20A);		
Active power resolution	0.01W		
Power factor accuracy	±(0.01～1) ,Resolution:0.001	±(0.1～1),Resolution:0.001	
Frequency range	DC,45Hz≤f≤4kHz		45Hz≤f≤65Hz
Frequency accuracy	±(0.1% × display) (voltage amplitude should be greater than 10% of range)		
Electric energy range/accuracy	0－99999MWh,±(0.1% × display + 0.1% × range)		
Electric energy counting	H:999 Min:59Sec:59,±(0.05% × display)		
Voltage/current ratio	0.1～1000.0		
Data update cycle	0.25,0.5,1[s]		
Alarm	5 groups, voltage, current, power upper/lower limit, threshold		
Control interface	RS-232 (Optional RS-485)、Switch I/O (Optional)		
Dimension	Dimension:213(W)×88(H)×300(D)mm; Opening:210(W)×85(H) mm, Foot height:15 mm		

Single-phase AC/DC Power Meter
AN87310(F)

Features

- Universal wide-range design for AC/DC, DC~100kHz bandwidth, stronger load adaptability
- Reliable, stable, compact, light
- Fast measurement, refresh rate up to 0.1s
- Standard RS-232 or RS-485 port, support MODBUS communication, automatic testing

Product Introduction

This AN87310(F) series AC/DC power meter adopts STM32 controller as the core and supplemented by FPGA, using direct sampling and intelligent identification technology, widely used in electrical measurements of single-phase electrical equipment, such as voltage, current, power, power factor, frequency, electrical energy, time, harmonics etc., wide range, 4-window LED highlight, simple operation, U disk read/write, serial communication, parameter alarm, voltage/current ratio settings and other functions, multi-purpose, professional and reliable.

Applications

- Strict industrial site type test
- High temperature aging room test
- Power tool test
- Lighting test
- Standby power measurement of household appliances and commercial appliances lines
- Current: 1mA~22A/5mA~55A, voltage: 0.15~1200V, rated power and standby power can be measured
- Minimum power resolution: 0.1mW
- 50th harmonic and distortion analysis

Specifications

Model	AN87310(F)
Current	20A/50A (optional)
Wiring	1P2W(1-phase 2-wire)
Input impedance	Voltage:approx.2MΩ;Current direct input: approx.10mΩ ;Current sensor input: approx.100kΩ
Full range peak factor	3
Rated voltage (direct input)	15/30/60/100/150/300/600/1000*[V];*1000V Full range peak factor:1.5
Rated current (direct input)	100m/200m/500m/1/2/5/10/20[A]
Rated current(sensor input)	50m/100m/200m/500m/1/2/5/10[V]
Voltage/current accuracy	(1% – 110%) × range
Power factor	±(0.001 – 1.000)
Voltage accuracy	DC: ±(0.1% × display + 0.2% × range) 0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range) 45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range) 66Hz<f≤1kHz: ±(0.1% × display + 0.2% × range) 1kHz<f≤10kHz: ±([0.07×f]% × display + 0.3% × range) 10kHz<f≤100kHz: ±(0.5% × display + 0.5% × range), ±[{0.04 × (f–10)}% × display]
Current accuracy	DC: ±(0.1% × display + 0.2% × range) 0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range) 45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range) 66Hz<f≤1kHz: ±(0.1% × display + 0.2% × range) 1kHz<f≤10kHz: ±([0.07×f]% × display + 0.3% × range) 10kHz<f≤100kHz: ±(0.5% × display + 0.5% × display), ±[{0.04×(f–10)}% × display]
Active power accuracy	DC: ±(0.1% × display + 0.2% × range) 0.5Hz≤f<45Hz: ±(0.3% × display + 0.2% × range) 45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range) 66Hz<f≤1kHz: ±(0.2% × display + 0.2% × range) 1kHz<f≤10kHz: ±(0.1% × display + 0.3% × range), ±[{0.067 × (f–1)}% × display] 10kHz<f≤100kHz: ±(0.5% × display + 0.5% × range), ±[{0.09×(f–10)}% × range]
Active power range/ resolution	2.2mW~4.4kW@220V,PF=0.01~1, 0.1mW
Frequency range/accuracy	DC, 0.5Hz~100kHz, ±0.1% × display
Harmonic measurement	11Hz~600Hz, 1 ~ 50th harmonic content, total distortion
Electric energy range	0 – 99999MWh (Resolution:1mWh/0.01mAh), ±0.5% × display
Electric energy counting	H:9999, Min:59, Sec:59
Filter	500Hz, 5.5kHz Voltage line, current line and frequency filter
Ratio	1.0~10000.0
Data update cycle	100m/250m/500m/5[s]
Alarm	5groups ,voltage, current, power upper/lower limit, threshold
Control interface	Standard:RS-232; Optional:RS-485
Dimension	Dimension:213(W)×88(H)×380(D) mm, Opening:210(W)×85(H) mm, Foot height:15 mm

High-accuracy Three-phase Power Meter
AN87330(F)

Product Introduction

The AN87330(F) series high-accuracy power meter adopts the latest FPGA+ARM digital processing system to achieve synchronous sampling, which fully meets the testing needs of three-phase equipment in the fields of motors, home appliances, new energy etc. on the market. It is specially designed for production links such as automated line and integrated system etc.

Features

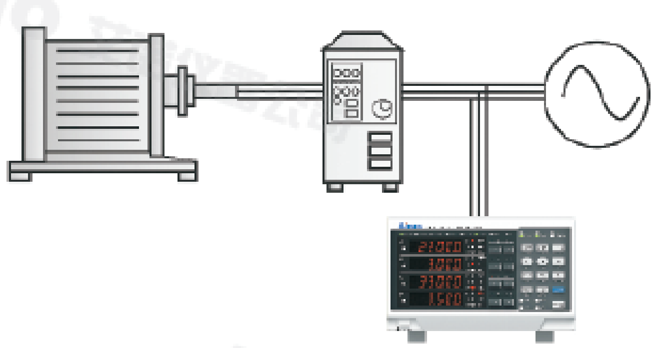
- High performance, wide frequency band: accuracy up to 0.1%, the bandwidth is DC, 0.5Hz~100kHz, suitable for testing of non-sinusoidal wave load.
- True differential synchronous conditioning sampling, guaranteeing super large direct test capability, voltage: 0.15~1000V, current: 5mA~50A/1mA~20A.
- Optional motor torque and speed interface, suitable for testing of three-phase motor mechanical power and energy consumption.
- Standard RS232, LAN port, standard MODBUS protocol, to meet the customization needs of multiple protocols, optional RS485, GPIB module.
- Support three-phase interphase angle test.

Applications

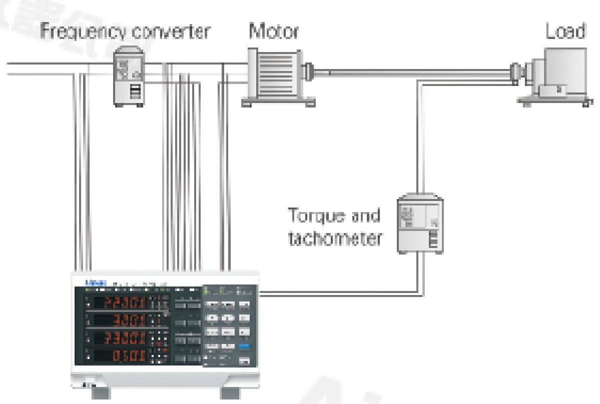
- Dynamic test of brushless DC motor
- FG signal RMS, peak-peak measurement, duty cycle calculation, wave data analysis.
- Measurement of RMS and frequency of 3-phase back electromotive force.
- Phase angle test
- Power measurement of inverter motor and inverter
- Power bandwidth DC, 0.5Hz~100kHz
- Current: 0~20A/current sensor
- Simultaneously measure input and output power
- 50th harmonic and distortion analysis

Testing of torque/speed of 3-phase motor

Support the latest type of motor test module, reserved motor sensor test interface, suitable for signal test of most motor sensor on the market, 3-phase motor efficiency test by single machine, synchronized signal, improved test accuracy.



AN87330(F)

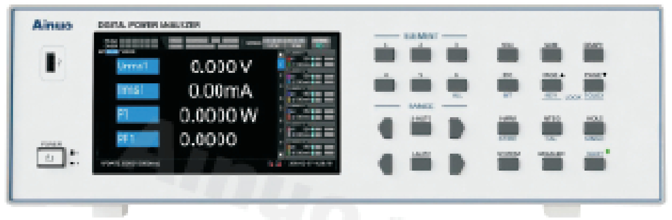


AN87330(F)

Specifications

Model	AN87330(F)
Current	20A/50A (optional)
Wiring	1P3W (1-phase 3-wire)、3P3W (3-phase 3-wire,2 voltage 2 current)、 3V3A (3-phase 3 -wire,3 voltage 3 current)、3P4W (3-phase 4-wire)
Input impedance of all phase	Voltage:approx.2MΩ; Current direct input:approx.10mΩ current sensor input:approx.100kΩ
Full range peak factor	3
Rated voltage(direct input)	15/30/60/100/150/300/600/1000*[V];*1000V full range peak factor:1.5
Rated current(direct input)	100m/200m/500m/1/2/5/10/20*[A];*20A full range peak factor:1.5
Rated current(sensor input) (optional)	50m/100m/200m/500m/1/2/5/10[V]
Voltage/current accuracy	(1%～110%) × range;*voltage:1000V range、current 20A accuracy range(1%～100%) × range
Power factor	±(0.001 ～ 1.000)
Voltage accuracy	DC:±(0.1% × display + 0.2% × range) 0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range) 45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range) 66Hz<f≤1kHz: ±(0.1% × display + 0.2% × range) 1kHz<f≤10kHz: ±([0.07 × f]% × display + 0.3% × range) 10kHz<f≤100kHz: ±(0.5% × display + 0.5% × range), ±[{0.04 × (f−10)}% × display]
Current accuracy	DC: ±(0.1% × display + 0.2% × range) 0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range) 45Hz≤f≤66Hz: ±(0.1% × display +0.1% × range) 66Hz<f≤1kHz: ±(0.1% × display +0.2% × range) 1kHz<f≤10kHz: ±([0.07 × f]%× display +0.3% × range) 10kHz<f≤100kHz: ±(0.5% × display + 0.5% × range), ±[{0.04 × (f−10)}% × display]
Active power accuracy	DC: ±(0.1% × display + 0.2% × range) 0.5Hz≤f<45Hz: ±(0.3% × display + 0.2% × range) 45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range) 66Hz<f≤1kHz: ±(0.2% × display + 0.2% × range) 1kHz<f≤10kHz: ±(0.1% × display + 0.3% × range), ±[{0.067 × (f−1)}% × display] 10kHz<f≤100kHz: ±(0.5% × display + 0.5% × range), ±[{0.09 × (f−10)}% × display]
Active power measurement/ resolution	4.4mW~4.4kW/phase @220V, PF=0.01~1 , 0.1mW
Frequency range/accuracy	DC,0.5Hz ～ 100kHz, ±(0.1% × display)
Harmonic measurement	10Hz ～ 600Hz, 1～50th harmonic content, total distortion
Electric energy range/ accuracy	0～99999MWh (resolution:1mWh/0.01mAh), ±(0.2% × display)
Electric energy timing	H:9999 Min:59 Sec:59
Filter	500Hz, 5.5kHz voltage line, current line and frequency filter
Ratio	1.0～5000.0
External input change	0.010–100.000
Data update cycle	100m/200m/500m/1/2/5/10[s]
Alarm	Three-phase total voltage, three-phase total current, three-phase total power upper/lower limit, threshold
Control interface	Standard:RS-232, Ethernet; Optional:RS-485, motor measuring board (pulse torque speed sensor)
Communication protocol	Ainuo3.0, Modbus, TCP Modbus
Dimension	Dimension:213(W)× 133(H)× 400(D)mm, Opening: 213(W) × 133(H) mm, Foot height:15 mm

Multi-channel Power Analyzer AN87600(F)



★ Six-channel simultaneous power analysis
★ **Basic accuracy:** ±0.1%
★ **Measurement bandwidth:** DC, 0.5Hz~100kHz
★ **Acquisition rate:** 200kSps
★ **Maximum voltage:** standard 1000V, optional 1500V
★ **Maximum current:** 50A/20A (standard)/10A/5A/2A/1A, support combination, optional sensor
★ **LCD display:** Full touch screen, custom display items, wave display
★ **Data storage:** Custom storage items, export in CSV format
★ **Perfect size:** Standard 3U height, suitable for integration

Man-machine Operation

- Standby power consumption and power analysis of single-phase/three-phase household appliances and commercial appliances
- PV inverter power, efficiency, harmonic analysis.
- Electric vehicles, charging pile electrical performance test.
- Power electronics, transformers, generator power/harmonic analysis.
- Inverter, inverter motor power/harmonic analysis.
- Switching power supply power/harmonic/inrush current analysis.
- Lighting/LED power analysis.

Features

- **Multi-channel:** 1~6-channel synchronous measurement unit, flexibly configured as multi-channel single-phase, three-phase three × 2, three-phase four × 2, four-phase (DC + three-phase three) and other modes for measurement of various loads (air conditioners, inverters, frequency converters, motors);
- **High precision:** High-speed FPGA+ARM processor dual-core processing, 16-bit high-speed high-precision AD converter, accuracy of 0.1%, up to 100ms display update cycle;
- **Wide power range:** 20A current measurement (optional 50A/10A/5A/2A/1A and other specifications, support combination) per channel, minimum power resolution of 0.1mW, meeting the measurement requirements of standby power consumption and rated power;
- **Wide broadband:** AC/DC signal, power measurement bandwidth DC, 0.5~100kHz, suitable for various standard/non-standard sine wave load power measurement;
- **Multi-channel harmonic analysis:** Simultaneous harmonic analysis for six-channel, up to 50th harmonic measurement, distortion analysis, visual display of harmonic component of each order and total components;
- **Multi-channel frequency measurement:** Simultaneous frequency measurement for six channels;
- **Line filtering:** 500Hz, 5.5kHz low-pass filter is used to measure the fundamental wave of PWM wave and filter out the high-frequency interference of switching power supply current;
- **Sensor:** Ratio function, normal I-I, V-V voltage/current transformers; I-V current sensors with BNC interface, maximum input voltage of 10V, optional high current sensors;
- **Efficiency calculation:** Measurement of input/output energy consumption of the equipment at the same time, and calculate its efficiency;
- **Electric energy accumulation:** accumulate forward/ reverse electric energy and comprehensive electric energy separately, and measure electric energy for sale and purchase;

Channel configuration

The multi-channel power analyzer can support a variety of wiring methods, including 1P2W, 1P3W, 3P3W, 3V3A, 3P4W, etc.

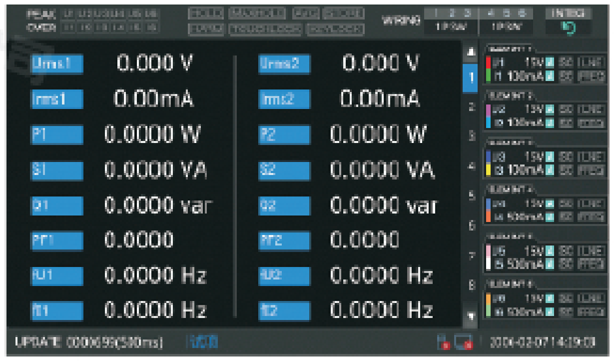
Wiring	1 channel	2 channels	3 channels	4 channels	5 channels	6 channels
1P2W 1-phase 2-wire	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W
1P3W 1-phase 3-wire	1P3W			1P3W		
3P3W 3-phase 3-wire	3P3W			3P3W		
3V3A 3-phase 3-wire	3V3A			3V3A		
3P4W 3-phase 4-phase	3P4W			3P4W		

Exceeding & Trustworthy Power Analyzer \\\ Ainuo

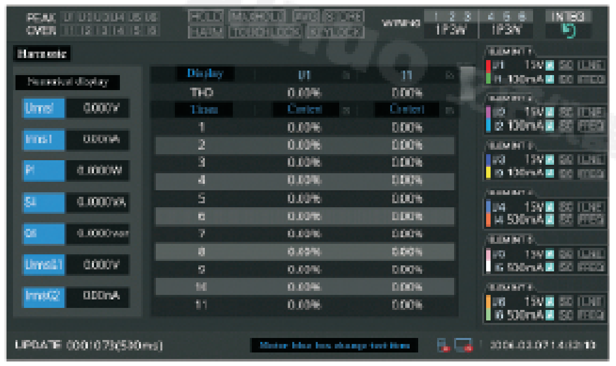
Applications

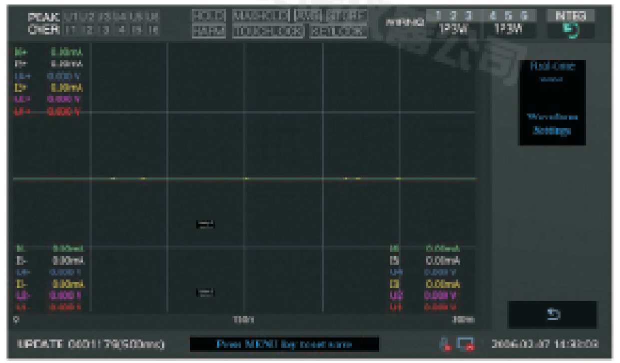
4 items displayed

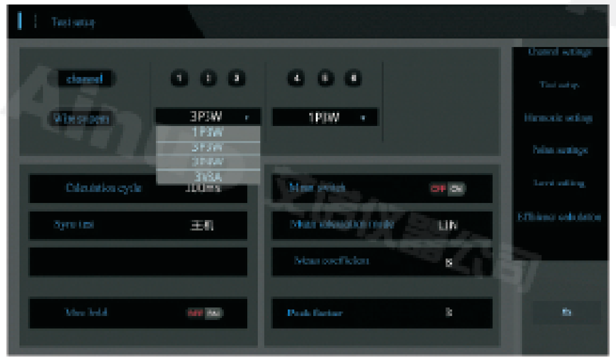
8 items displayed


16 items displayed


Full numerical display


List display

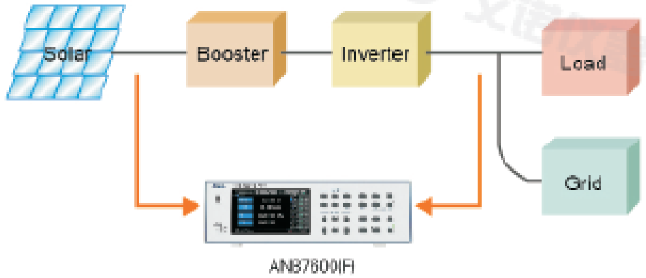

Waveform display



Touch screen setup experience display

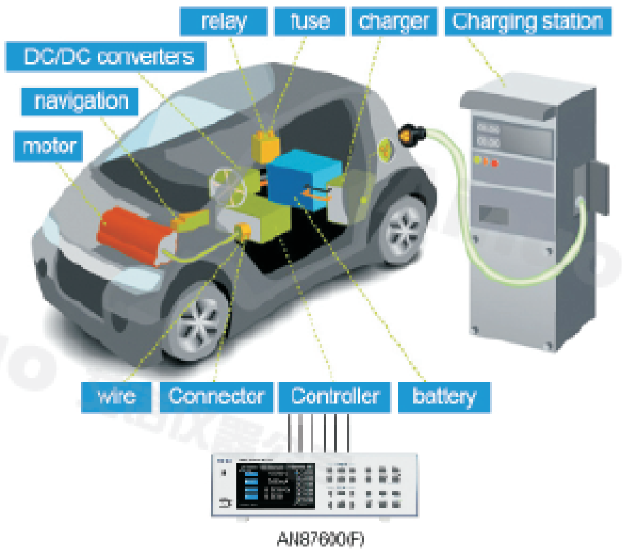
PV inverter power measurement

- Meet GB/T 37409-2019 Testing specifications for photovoltaic grid-connected inverter
- Voltage 0~1500V
- Current: 0~50A/current sensor.
- Simultaneous measurement of input/output (single-phase/three-phase) power and power factor
- Automatic efficiency calculation
- 50th harmonic and distortion analysis
- Two-way power measurement for buying and selling electricity



Electric vehicle electrical performance measurement

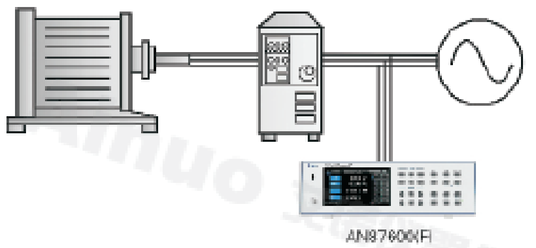
- Multi-channel to test multi parameters simultaneously: charging station performance, battery charge/discharge performance, power conversion performance, motor performance, etc.
- AC/DC, maximum current of 50A, extended to larger current sensors.
- High precision, basic accuracy of 0.1%, minimum power resolution of 0.1mW.
- Measure AC/DC signal instantaneous RMS, average, peak, electric energy and so on.



Inverter motor, frequency converter power measurement

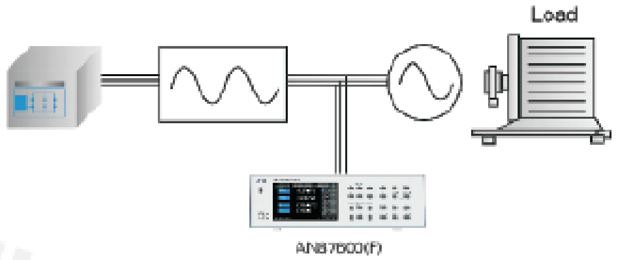
- Meet GB12668 standard.
- Power bandwidth DC, 0.5Hz~100kHz
- Current: 0~50A/current sensor.

- Simultaneously measure input and output power
- 50th harmonic and distortion analysis



Power supply, UPS power measurement

- Current: 0~1A/2A/5A/10A/20A/50A
- Power bandwidth DC, 0.5Hz~100kHz
- Simultaneous measuring input/output (single-phase, three-phase) power, monitoring battery charge/discharge.
- Automatic efficiency calculation.

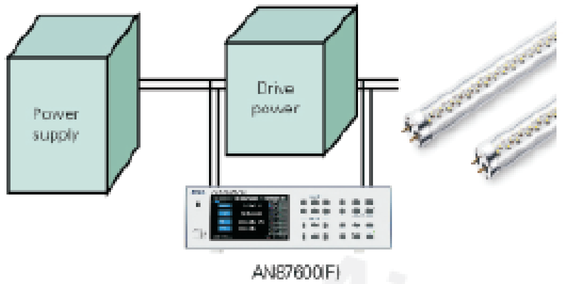


Home appliance performance evaluation, standby power consumption measurement.

- Meet IEC 62301-2011 standard.
- Current: 0~1A/2A/5A/10A/20A/50A, measurement of rated power and standby power
- Minimum power resolution: 0.1mW
- 50th harmonic and distortion analysis.

Lighting, LED power measurement

- Current: 0~1A/2A/5A/10A
- Minimum power resolution: 0.1mW
- Measurement of drive power input/output power, power factor, efficiency
- 50th harmonic and distortion analysis.



Specifications

Model	AN87600(F)-X
Measurement channel-x	1～6
Wiring	1P2W (1-phase 2-wire), 1P3W (1-phase 3-wire), 3P3W (3-phase 3-wire, 2-voltage 2-current), 3V3A (3-phase 3-wire, 3-voltage 3-current), 3P4W (3-phase 4-wire)
Measurement parameters	Voltage U, current I, active power P, reactive power Q, apparent power S, power factor λ, voltage frequency fU, current frequency fI, phase angle Φ, efficiency η, total electrical energy Wh, forward electrical energy Wh+, reverse electric energy Wh-, current integral Ah, 50th harmonic analysis HDF, voltage/current distortion THD, peak voltage Vpk, peak current Ipk, voltage crest factor CfU, current crest factor CfI...
Input impedance	Voltage: about 2MΩ, Direct current input: Approx. 2.5mΩ (50A specification) Current sensor input: Approx. 100kΩ
AD acquisition rate	About 100kS/s
Full scale crest factor	3 *See below for exceptions
Rated voltage range (Direct input)	15/30/60/100/150/300/600/1000*[V] (optional 1500*[V]) * The crest factor of 1000V full scale is 1.5
Rated current range (Direct input)	Size for 20A current: 100m/200m/500m/1/2/5/10/20[A] Optional: Size for 50A current: 500m/1/2/5/10/20/40/50*[A] * The crest factor of 50A full scale is 1.5 Size for 10A current: 50m/100m/200m/500m/1/2/5/10[A] Size for 5A current: 20m/50m/100m/200m/500m/1/2/5[A] Size for 2A current: 10m/20m/50m/100m/200m/500m/1/2[A] Size for 1A current: 5m/10m/20m/50m/100m/200m/500m/1[A]
Rated current range (BNC Sensor)	50m/100m/200m/500m/1/2/5/10[V]
Accuracy of voltage/current	(1%~110%)*× range * Accuracy of 1000V voltage, 20A current: (1%~100%) x scale
Power factor Range	±(0.001 ~ 1.000)
Voltage measurement accuracy	DC ±(0.1%×display+0.1%×range) 0.5Hz≤f<45Hz ±(0.1%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.05%×range) 66Hz<f≤1kHz ±(0.1%×display+0.2%×range) 1kHz<f≤10kHz ±({0.1+0.05×(f-1)}%×display+0.2%×range) 10kHz<f≤100kHz ±({0.5+0.04×(f-10)}%×display+0.3%×range)
Current measurement accuracy	DC ±(0.1%×display+0.1%×range) 0.5Hz≤f<45Hz ±(0.1%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.1%×display+0.2%×range) 1kHz<f≤10kHz ±((0.1×f) %display+0.2%×range) 10kHz<f≤100kHz ±({1+0.08×(f-10)}%×display+0.3%×range)
Power measurement accuracy	DC ±(0.1%×display+0.1%×range) 0.5Hz≤f<45Hz ±(0.3%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.2%×display+0.2%×range) 1kHz<f≤10kHz ±({0.2+0.1×(f-1)} %×display+0.2%×range) 10kHz<f≤50kHz ±({0.2+0.1×(f-1)} %×display+0.3%×range) 50kHz<f≤100kHz ±({5.1+0.18×(f-50)}%×display+0.3%×range)
Active power Range	Size for 20A current: 2.2mW~4.4kW@220V, PF=0.01~1 Optional: Size for 50A current: 11mW~11kW@220V, PF=0.01~1 Size for 10A current:1.1mW~2.2kW@220V, PF=0.01~1 Size for 5A current:0.4mW~1.1kW@220V, PF=0.01~1 Size for 2A current:0.2mW~440W@220V, PF=0.01~1 Size for 1A current:0.1mW~220W@220V, PF=0.01~1
Active power resolution	0.1mW
Frequency range	DC, 0.5Hz ~ 100kHz
Frequency measurement accuracy	±0.1%×display
Harmonic measurement	11Hz ~ 600Hz, 1 ~ 50th harmonic component, total distortion
Electric energy measurement range	0~999999MWh (Resolution: 1mWh/0.01mAh)
Electric energy measurement accuracy	±(0.1%×display+0.1%×range)
Expanded uncertainty	Voltage, current, power, frequency, electric energy: ≤0.20%
Filter function	500Hz, 5.5kHz voltage line, current line and frequency filtering
Ratio	1 ~ 50000
Data update cycle	100m / 250m / 500m / 5 [s]
Control interface	Standard: RS-232, switching interface, network port; Optional: RS-485, GPIB
Display	7" LCD touch screen
Outline dimension	426 x 132.5 x 430.3 (W, front bezel) x(H, front bezel) (D, excluding posts), mm
Size of the opening	422 x 128.5 (W, body) x (H, body), mm
Foot height	17.5 mm
Machine weight	Approx. 7.5 kg

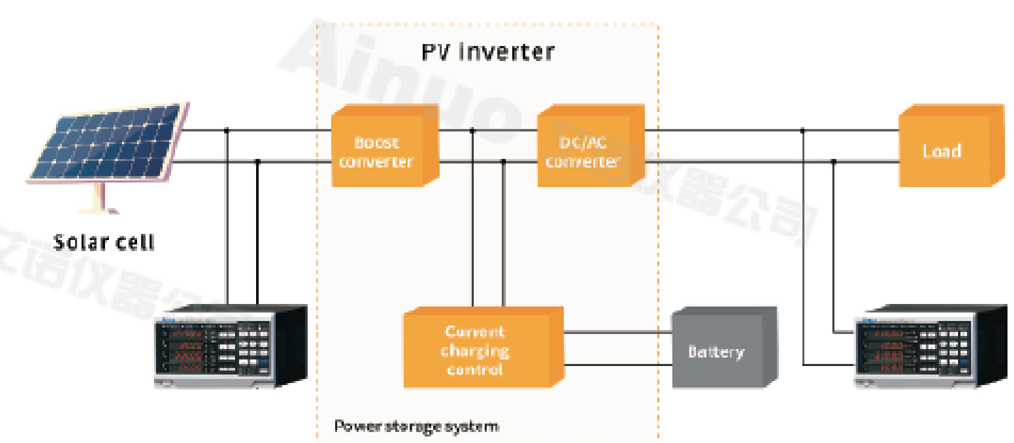
Three-phase High-precision Power Meter ANPM300(F)

Features

- **Test bandwidth:** DC, 0.5~100kHz, 0.1%, 0.15~1000V, 0.2m~50A (including custom range)
- 50th harmonics, external sensor input Standard LAN port, RS232/485 port, MODBUS-RTU,
- TCP-MODBUS and custom protocols.
- Optional motor board, compatible with electro-mechanical power synchronization efficiency test

Applications

- Photovoltaic inverter and other single/three-phase product power, efficiency, harmonic analysis, test before/after aging, widely used in the test system ATE platform.
- Electric vehicle and charging pile electrical performance measurement.



Specifications

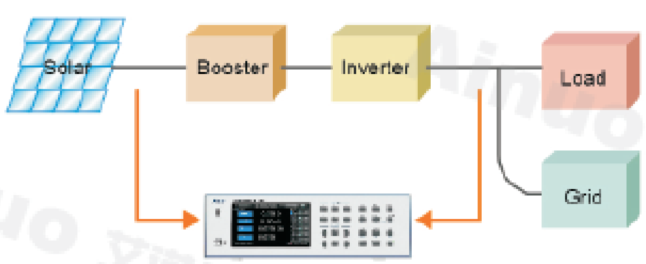
Model	ANPM300(F)
Current specification	20A
Wiring	1P3W (1-phase 3-wire), 3P3W (3-phase 3-wire, 2-voltage 2-current), 3V3A (3-phase 3-wire, 3-voltage 3-current), 3P4W (3-phase 4-wire)
Input impedance of each phase	Voltage: approx. 2MΩ Direct current input: approx. 10mΩ Current sensor input: approx. 100kΩ
Full scale crest factor	3
Rated voltage range (Direct input)	15/30/60/100/150/300/600/1000*[V] * The crest factor of 1000V full scale is 1.5
Rated current range (Direct input)	100m/200m/500m/1/2/5/10/20*[A] * The crest factor of 20A maximum scale (full scale) is 1.5
Rated current range (sensor input)	50m/100m/200m/500m/1/2/5/10[V]
Voltage/Current Precision scope	(1%～110%)×range * Accuracy of 1000V voltage, 20A current range: (1%～100%)×range
Power factor Range	±(0.001 ～ 1.000)
Voltage measurement accuracy	DC ±(0.1%×display+0.2%×range) 0.5Hz≤f<45Hz ±(0.1%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.1%×display+0.2%×range) 1kHz<f≤10kHz ±[(0.07×f)%xdisplay+0.3%×range) 10kHz<f≤100kHz ±(0.5%xdisplay+0.5%xrange), ±[(0.04×(f−10)]%xdisplay]
Current precision	DC ±(0.1%×display+0.2%×range) 0.5Hz≤f<45Hz ±(0.1%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.1%×display+0.2%×range) 1kHz<f≤10kHz ±[(0.07×f)%xdisplay+0.3%×range) 10kHz<f≤100kHz ±(0.5%xdisplay+0.5%xrange), ±[(0.04×(f−10)]%xdisplay]
Accuracy of active power measurement	DC ±(0.1%×display+0.2%×range) 0.5Hz≤f<45Hz ±(0.3%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.2%×display+0.2%×range) 1kHz<f≤10kHz ±(0.1%xdisplay+0.3%xrange), ±[(0.067×(f−1)]%xdisplay] 10kHz<f≤100kHz ±(0.5%xdisplay+0.5%xrange), ±[(0.09×(f−10)]%xdisplay]
Range of active power measurement	4.4mW~4.4kW/phase @220V, PF=0.01~1
Max. resolution of active power	0.1mW
Frequency range	DC, 0.5Hz ～ 100kHz
Frequency measurement accuracy	±0.1%×display
Harmonic measurement	10Hz ~ 600Hz, 1 ~ 50th harmonic content, total distortion
Electric energy measurement range	0 ~ 99999MWh (Resolution: 1mWh/0.01mAh)
Electric energy measurement accuracy	±0.2%×display
Electric energy timer	9999:59:59
Filter function	500Hz, 5.5kHz voltage circuit, current circuit and frequency filtering
Voltage/current ratio	1.0～5000.0
External input ratio	0.010~100.000
Data update cycle	100m/200m/500m/ 1/2/5/10[s]
Alarm	Three-phase total voltage, current, power upper/lower limit setting
Control interface	Standard: RS-232, Ethernet; Optional: RS-485, motor measurement board (pulse torque-speed sensor)
Protocol	Ainuo3.0, Modbus, TCP Modbus
Outline dimension	213 (W) × 132.5 (H) × 400 (D) mm
Size of the opening	213 (W) × 132.5 (H) mm
Foot height	15 mm
Machine weight	Approx. 4 kg
Machine power consumption	Approx. 60VA

Three-phase High-precision Power Analyzer
ANPM600(F)

★ **Six-channel simultaneous power analysis**
★ **Accuracy:** ±0.1%
★ **Measurement bandwidth** DC, 0.5Hz~100kHz
★ **Sampling rate** 200kSps
★ **Maximum voltage:** conventional 1000V, optional 1500V
★ **Maximum current:** 50A/20A (conventional)/10A/5A/2A/1A, optional sensor
★ **LCD display:** Full touch screen experience, custom display entry, wave display
★ **Data storage:** custom storage items, export in CSV format
★ **Perfect size:** Standard 3U height, suitable for system integration
★ **Free custom:** 1~6 channel combination, matching boards with different current

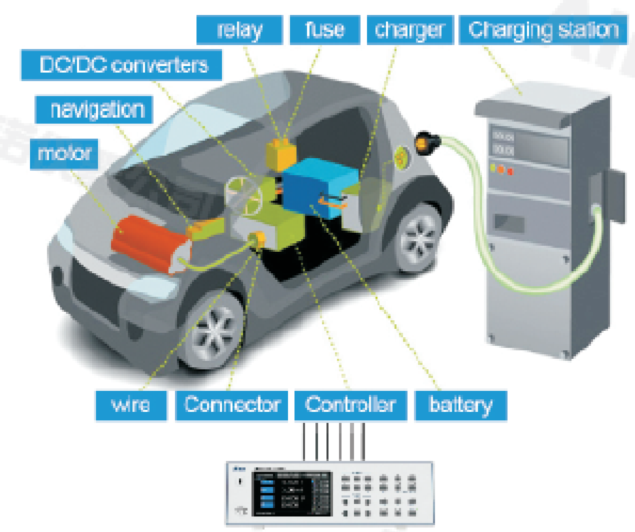
PV inverter power measurement

- GB/T 37409-2019 Testing specifications for photovoltaic grid-connected inverter
- Voltage 0~1500V
- Current 0~50A/current sensor
- Simultaneous measurement of input/output (single-phase/three-phase) power and power factor
- Automatic efficiency calculation
- 50th harmonic and distortion analysis
- Two-way power measurement for buying and selling electricity



Electric vehicle electrical performance measurement

- Multi-channel to measure multi parameters simultaneously: OBC, charging pile efficiency test, battery charging/discharging performance, power conversion performance, motor performance, etc.
- AC/DC, 50A maximum current, extended to higher current sensors
- High accuracy, basic accuracy of 0.1%, minimum power resolution of 0.1mW
- Measurement of instantaneous RMS, mean, peak, electric energy, etc. of AC/DC signals



Specifications

Model	ANPM600(F)-X
Measurement channel-x	1~6
Wiring	1P2W (1-phase 2-wire), 1P3W (1-phase 3-wire), 3P3W (3-phase 3-wire, 2-voltage 2-current), 3V3A (3-phase 3-wire, 3-voltage 3-current), 3P4W (3-phase 4-wire)
Measurement parameters	Voltage U, current I, active power P, reactive power Q, apparent power S, power factor λ, voltage frequency fU, current frequency fI, phase angle Φ, efficiency η, total electrical energy Wh, forward electrical energy Wh+, reverse electric energy Wh-, current integral Ah, 50th harmonic analysis HDF, voltage/current distortion THD, peak voltage Vpk, peak current Ipk, voltage crest factor CfU, current crest factor CfI...
Input impedance	Voltage: about 2MΩ, Direct current input: Approx. 2.5mΩ (50A specification) Current sensor input: Approx. 100kΩ
AD acquisition rate	About 100kS/s
Full scale crest factor	3 *See below for exceptions
Rated voltage range (Direct input)	15/30/60/100/150/300/600/1000*[V] (optional 1500*[V]) * The crest factor of 1000V full scale is 1.5
Rated current range (Direct input)	Size for 20A current: 100m/200m/500m/1/2/5/10/20[A] Optional: Size for 50A current: 500m/1/2/5/10/20/40/50*[A] * The crest factor of 50A full scale is 1.5
Rated current range (BNC Sensor)	50m/100m/200m/500m/1/2/5/10[V]
Accuracy of voltage/current	(1%~110%)×range * Accuracy of 1000V voltage, 20A current: (1%~100%) x scale
Power factor Range	±(0.001 ~ 1.000)
Voltage measurement accuracy	DC ±(0.1%×display+0.1%×range) 0.5Hz≤f<45Hz ±(0.1%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.05%×range) 66Hz<f≤1kHz ±(0.1%×display+0.2%×range) 1kHz<f≤10kHz ±({0.1+0.05×(f-1)}%×display+0.2%×range) 10kHz<f≤100kHz ±({0.5+0.04×(f-10)}%×display+0.3%×range)
Current measurement accuracy	DC ±(0.1%×display+0.1%×range) 0.5Hz≤f<45Hz ±(0.1%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.1%×display+0.2%×range) 1kHz<f≤10kHz ±((0.1×f)%display+0.2%×range) 10kHz<f≤100kHz ±({1+0.08×(f-10)}%×display+0.3%×range)
Power measurement accuracy	DC ±(0.1%×display+0.1%×range) 0.5Hz≤f<45Hz ±(0.3%×display+0.2%×range) 45Hz≤f≤66Hz ±(0.1%×display+0.1%×range) 66Hz<f≤1kHz ±(0.2%×display+0.2%×range) 1kHz<f≤10kHz ±({0.2+0.1×(f-1)}%×display+0.2%×range) 10kHz<f≤50kHz ±({0.2+0.1×(f-1)}%×display+0.3%×range) 50kHz<f≤100kHz ±({5.1+0.18×(f-50)}%×display+0.3%×range)
Active power Range	20A current: 2.2mW~4.4kW@220V, PF=0.01~1 Optional: 50A current: 11mW~11kW@220V, PF=0.01~1 10A current: 1.1mW~2.2kW@220V, PF=0.01~1 5A current: 0.4mW~1.1kW@220V, PF=0.01~1 2A current: 0.2mW~440W@220V, PF=0.01~1 1A current: 0.1mW~220W@220V, PF=0.01~1
Active power resolution	0.1mW
Frequency range	DC, 0.5Hz ~ 100kHz
Frequency measurement accuracy	±0.1%×display
Harmonic measurement	11Hz ~ 600Hz, 1 ~ 50th harmonic component, total distortion
Electric energy measurement range	0~999999MWh (resolution: 1mWh/0.01mAh)
Electric energy measurement accuracy	±(0.1%×display+0.1%×range)
Expanded uncertainty	Voltage, current, power, frequency, electric energy: ≤0.20%
Filter function	500Hz, 5.5kHz voltage line, current line and frequency filtering
Ratio	1 ~ 50000
Data update cycle	100m/250m/500m/5[s]
Control interface	Standard: RS-232, digital interface, network port; Optional: RS-485, GPIB
Display	7" LCD touch screen
Outline dimension	426 x 132.5 x 430.3 (W, front bezel) x(H, front bezel) (D, excluding posts), mm
Size of the opening	422 x 128.5 (W, body) x (H, body), mm
Foot height	17.5 mm
Machine weight	Approx. 7.5 kg

Comprehensive Coil/Stator Test Scheme
AN8351(F)

Comprehensive New Energy Motor Test Scheme
AN83DX(F)

Comprehensive DC Brushless Motor Test Scheme
AN8355(F)

Comprehensive Stepping/Servo Motor Test Scheme
AN83FX(F)

Comprehensive High-power Motor Test Scheme
AN8353(F)

Comprehensive Stator Vacuum Test Scheme
AN8321(F)

Comprehensive Coil/Stator Test Scheme AN8351(F)

Product Introduction

This product is suitable for static testing of various types of coils/stators, widely used in the testing of coils and stators of electric vehicles, shaded pole motors, universal motors, asynchronous motors, tubular motors, linear motors, and automated production lines.

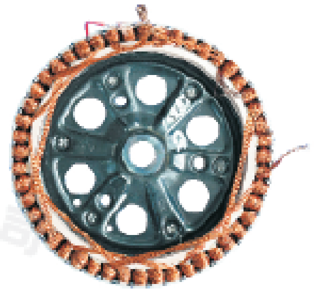
Features

- Efficient: complete performance testing in one connection, automatic storage of test data.
- Compatible: six-in-one test items such as withstand voltage, insulation, resistance, and turn-to-turn.
- High performance: voltage regulation, insulation, turn-to-turn and other voltage adjustments using closed-loop voltage feedback adjustment system to accurately control the voltage regulation and rising process, stable voltage output.
- Module: Module test unit to avoid interference, and customize single/multi-station, serial/parallel test system as required.
- Intelligent: intelligent self-check, remote diagnosis and online upgrade, quick location of problems and eliminating.
- Easy maintenance: plug-in design, convenient for disassembly; intelligent self-check, remote diagnosis, online upgrade and other flexible settings, quick location of problems.

Test items

- Stator: withstand voltage, insulation, resistance, resistance balance, interturn, inductance, rotation.

Test cases



Specifications

General parameters of AN8351(F) series			
Application industries		Various types of coils and stators	
Model of product		AN8351(F)	Custom parameters
Withstand voltage test	Output voltage	Range: 300 ~ 3000 VAC, step: 10V	5000 VAC
		Allowable error: ± (2.5% x setting +10V)	
	Break down current	Range: 0.10~20.00 mA	100 mA
		Allowable error: ± (2.5% x reading +5 words)	
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)	
Insulation test	Output voltage	Range: 200 ~ 1000 VDC, step: 5V	
		Allowable error: ±(3% x setting +5V)	
	Ripple coefficient	<5%	
	Resistance measurement	Range: 1.0~500MΩ	
		Allowable error: ≤200MΩ, ±(3% x reading +5 words)	
		>200MΩ, ±(5% x reading +8 words)	
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)	
Resistance test	Test and measurement	Range: 0.1~20k Ω, unit: Ω	
		Allowable error: ±(0.3% x reading +3 words)	1mΩ－400KΩ
	Temperature measurement	(0.0－60.0) ℃, allowable error: ±0.5℃	
Resistance balance	Calculation formula	|Resistance -Resistance average|/Resistance average*100%	
	Display range	0.0%~99.9%	
Interturn test	Pulse voltage	Range: 300~3000 V, step: 100V	
		Allowable error: ±(3% x setting +10V)	5000 V
	Wavefront time	≤0.5μs	
	Acquisition frequency	5kHz~40MHz	
	Wave parameters	Area, difference area, (1~10) consecutive impacts; range: 0~99%	
Inductance test	Test range	0.0001μH-99.99kH	
	Allowable error	0.5%	
	Test frequency	100Hz,120Hz,1kHz,10kHz	
	Test level	0.1,0.3,1.0 (V)	
Rotation test	Decision parameter	CW/CCW/None	

Comprehensive New Energy Motor Test Scheme

AN83DX(F)

Product Introduction

This product is suitable for the performance test of the new energy automobile motor stator/complete machine, widely used in testing of various types of new energy motors such as permanent magnet synchronous motors and disc motors.

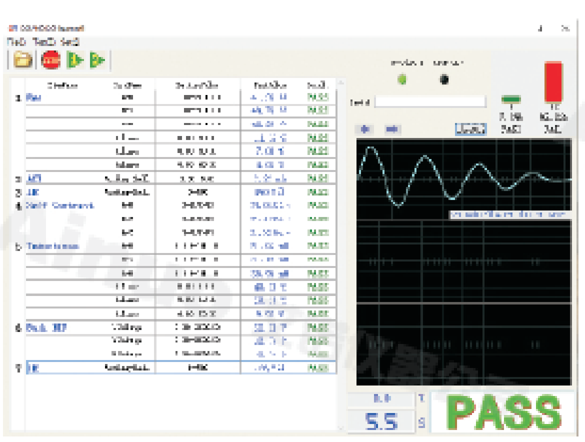
Features

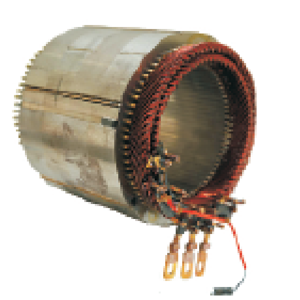
- Wide range: test of ultra wide resistance range (1mΩ~400KΩ).
- High performance: Closed-loop feedback adjustment system is adopted for voltage regulation such as withstand voltage, insulation, and turn-to-turn, precise control of voltage regulation and rising process, stable voltage output.
- Efficient: testing of 3-phase winding, thermistor and transformer can be complete after connection at one time, high efficiency of this type of motor test.
- Module: Module test unit to avoid interference, and customize single/ multi-station test system as required.
- Multi ports: USB, RS232, LAN and other ports, PLC simulation, TCP/IP network protocol, etc., to facilitate data interaction and instrument control.

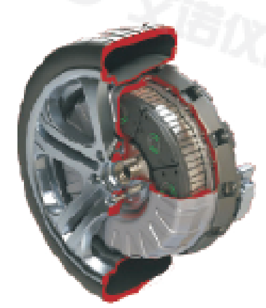
Test items

- Stator: withstand voltage, insulation, resistance, resistance balance, interturn inductance
- Motor: withstand voltage, insulation, winding/thermosensitive/transformer resistance, back electromotive force, power.

Test cases





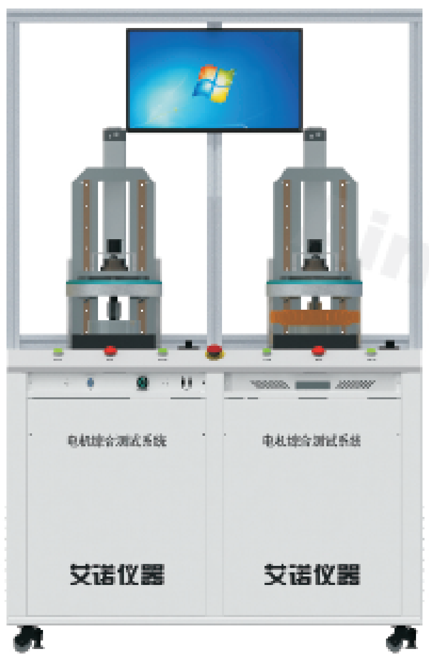


Specifications

General parameters of AN83DXS(F)/AN83DXM(F) series				
Application industries		Automotive motors, disc motors, etc.		
Model of product		AN83DXS(F)	AN83DXM(F)	Custom parameters
Withstand voltage test	Output voltage	Range: 300 ~ 3000 VAC, step: 10V		5000 VAC
		Allowable error: ± (2.5% x setting +10V)		
	Break down current	Range: 0.10~20.00 mA		100 mA
		Allowable error: ± (2.5% x reading +5 words)		
	Duration	Range: 1.0~99.9s, allowable error: ±(1% x setting +0.1s)		
Insulation test	Output voltage	Range: 200 ~ 1000 VDC, step: 5V		
		Allowable error: ±(3% x setting +5V)		
	Ripple coefficient	<5%		
	Resistance measurement	Range: 1.0~500MΩ		
		Allowable error: ≤200MΩ, ±(3% x reading +5 words)		
		>200MΩ, ±(5% x reading +8 words)		
	Duration	Range: 1.0~99.9s, allowable error: ±(1% x setting +0.1s)		
Resistance test	Test and measurement	Range: 0.1~20k Ω, unit: Ω		1mΩ~400KΩ
		Allowable error: ±(0.3% x reading +3 words)		
	Temperature measurement	(0.0~60.0) ℃, allowable error: ±0.5℃		
Resistance balance	Calculation formula	|Resistance -Resistance average|/Resistance average*100%		
	Display range	0.0%~99.9%		
Interturn test	Pulse voltage	Range: 300~3000 V, step: 100V		5000 V
		Allowable error: ±(3% x setting +10V)		
	Wavefront time	≤0.5μs		
	Acquisition frequency	5kHz~40MHz		
	Wave parameters	Area, difference area, (1~10) consecutive impacts; range: 0~99%		
Inductance test	Test range	0.0001μH-99.99kH		
	Basic accuracy	0.5%		
	Test frequency	100Hz,120Hz,1kHz,10kHz		
	Test level	0.1,0.3,1.0 (V)		
Back electromotive force	Range of test voltage		1~1000.0V; 1~1000.0V;	Level-0.02
	Accuracy of test voltage		± (0.3% x reading + 0.2% x range)	
	Range of speed		100-3000rpm	
No-load / Locked-rotor	Voltage range		1.0~1000.0V;	Level-0.02
	Voltage accuracy		± (0.3% x reading + 0.2% x range)	
	Current range		1.0~1000.00A;	
	Current accuracy		± (0.3% x reading + 0.2% x range)	
	Range of power		1.0~500KW;	
	Power accuracy		±(0.8% x reading +0.2% x range)	
	Frequency range		0.5~100KHz;	
	Accuracy of frequency		±(0.1% x reading)	

Optional information				
Optional function	Interphase voltage	Interphase insulation	Rotation direction	Back electromotive force
AN6315S	√	√	√	——
AN8315M	√	√	——	√

Comprehensive DC Brushless Motor Test Scheme
AN8355(F)



Product Introduction

This product is suitable for testing of dynamic performance of various types of DC brushless motors with/without load, widely used in household brushless motors, electric vehicle motors, fan motors, drone motors, brushless power tools and other industries.

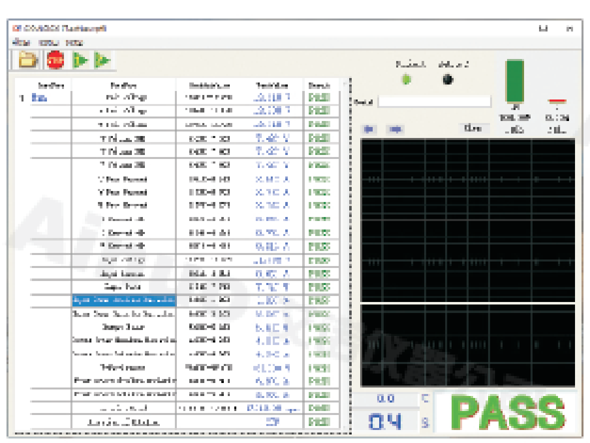
Features

- Broadband: signal detection of 0.5Hz~100KHz ultra-wideband.
- High accuracy: measurement accuracy of voltage/current up to 0.2%.
- Efficient: One-time wiring to complete all testing items such as static, no load, Hall signal, etc., high efficiency.
- One-stop: self-developed AC/DC power supply, convenient and unified before/after sale.
- Module: Module test unit to avoid interference, and customize single/ multi-station, serial/parallel test system as required.
- Multi ports: USB, RS232, LAN and other ports, PLC simulation, TCP/IP network protocol, etc., to facilitate data interaction and instrument control.

Test items

- Stator: withstand voltage, insulation, resistance, resistance balance, interturn, inductance, rotation
- Motor: withstand voltage, insulation, resistance, back electromotive force, no load, speed, Hall, rotation.

Test cases



Specifications

General parameters of AN8355S(F)/AN8355M(F) series				
Application industries		Household brushless motors, electric vehicle motors, fan motors, drone motors, brushless power tools, etc.		
Model of product		AN8355S(F)	AN8355M(F)	Custom parameters
Withstand voltage test	Output voltage	Range: 300 – 3000 VAC, step: 10V		5000 VAC
		Allowable error: ± (2.5% x setting +10V)		
	Break down current	Range: 0.10~20.00 mA		100 mA
		Allowable error: ± (2.5% x reading +5 words)		
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)		
Insulation test	Output voltage	Range: 200 ~ 1000 VDC, step: 5V		
		Allowable error: ±(3% x setting +5V)		
	Ripple coefficient	<5%		
	Resistance measurement	Range: 1.0~500MΩ		
		Allowable error: ≤200MΩ, ±(3% x reading +5 words)		
		>200MΩ ±(5% x reading +8 words)		
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)		
Resistance test	Test and measurement	Range: 0.1~20k Ω, unit: Ω		1mΩ~400KΩ
		Allowable error: ±(0.3% x reading +3 words)		
	Temperature measurement	(0.0~60.0) ℃, allowable error: ±0.5℃		
Resistance balance	Calculation formula	|Resistance -Resistance average|/Resistance average*100%		
	Display range	0.0%~99.9%		
Interturn test	Pulse voltage	Range: 300~3000 V, step: 100V		5000 V
		Allowable error: ±(3% x setting +10V)		
	Wavefront time	≤0.5μs		
	Acquisition frequency	5kHz~40MHz		
	Wave parameters	Area, difference area, (1~10) consecutive impacts; range: 0~99%		
Inductance test	Test range	0.0001μH-99.99kH		
	Allowable error	0.5%		
	Test frequency	100Hz,120Hz,1kHz,10kHz		
	Test level	0.1,0.3,1.0 (V)		
Back electromotive force	Voltage range		(1.0- 300.0) V;	Level-0.02
	Allowable error		±(0.5% x reading +4 words)	
	Range of speed		100-3000rpm	
No-load test	Voltage range		(50.0- 300.0)V;	Level-0.02
	Allowable error		± (0.3% x reading + 0.2% x range)	
	Current		(0.05- 20.00) A;	
	Allowable error		± (0.3% x reading + 0.2% x range)	
	Range of power		(1.0-6.0k) W; (1.0-6.0k) W;	
	Allowable error		±(0.8% x reading +0.2% x range)	
Load test	Load range		(0.20-0.75) Nm 0.20-0.75 Nm	
Hall test	Voltage range		(0.5- 10.0) V	
	Allowable error		±(0.5%×reading value+2)	
	Frequency		(10- 1000) Hz	
	Allowable error		±(0.1%×reading value+1)	
	Duty cycle		20-80%; allowable error ±1%	
Rotation test	Decision parameter		CW/CCW/None	

Comprehensive Stepping/Servo Motor Test Scheme
AN83FX(F)

Product Introduction

This product is suitable for testing of reactive, permanent magnet, hybrid stepper motors, AC/DC servo motors. It can complete the test of the static, back electromotive force, hall, encoder and other items of the motor.

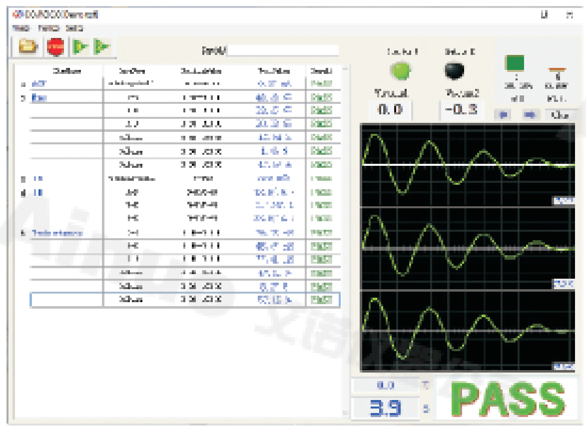
Features

- Wide range: test of ultra wide resistance range (1mΩ~400KΩ).
- High performance: voltage regulation, insulation, turn-to-turn and other voltage adjustments using closed-loop voltage feedback adjustment system to accurately control the voltage regulation and rising process, stable voltage output.
- One-stop: self-developed AC/DC power supply, convenient and unified before/after sale.
- Module: Module test unit to avoid interference, and customize single/multi-station, serial/parallel test system as required.
- Multi ports: USB, RS232, LAN and other ports, PLC simulation, TCP/IP network protocol, etc., to facilitate data interaction and instrument control.

Test items

- Stator: withstand voltage, insulation, resistance, resistance balance, interturn, inductance, rotation
- Complete machine: withstand voltage, insulation, winding resistance, inductance, back electromotive force, rotation.

Test cases



Specifications

General parameters of AN83FXS(F)/AN83FXM(F) series				
Application industries		Stepper motor, servo motor, etc.		
Model of product		AN83FXS(F)	AN83FXM(F)	Custom parameters
Withstand voltage test	Output voltage	Range: 300 ~ 3000 VAC, step: 10V		5000 VAC
		Allowable error: ± (2.5% x setting +10V)		
	Break down current	Range: 0.10~20.00 mA		100 mA
		Allowable error: ± (2.5% x reading +5 words)		
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)		
Insulation test	Output voltage	Range: 200 ~ 1000 VDC, step: 5V		
		Allowable error: ±(3% x setting +5V)		
	Ripple coefficient	<5%		
	Resistance measurement	Range: 1.0~500MΩ		
		Allowable error: ≤200MΩ, ±(3% x reading +5 words)		
		>200MΩ, ±(5% x reading +8 words)		
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)		
Resistance test	Test and measurement	Range: 0.1~20k Ω, unit: Ω		1mΩ~400KΩ; 1m~400KΩ
		Allowable error: ±(0.3% x reading +3 words)		
	Temperature measurement	(0.0~60.0) ℃, allowable error: ±0.5℃		
Resistance balance	Calculation formula	|Resistance -Resistance average|/Resistance average*100%		
	Display range	0.0%~99.9%		
Interturn test	Pulse voltage	Range: 300~3000 V, step: 100V		5000 V
		Allowable error: ±(3% x setting +10V)		
	Wavefront time	≤0.5μs		
	Acquisition frequency	5kHz~40MHz 5kHz~40MHz		
	Wave parameters	Area, difference area, (1~10) consecutive impacts; range: 0~99%		
Inductance test	Test range	0.0001μH-99.99kH		
	Basic accuracy	0.5%		
	Test frequency	100Hz,120Hz,1kHz,10kHz		
	Test level	0.1,0.3,1.0 (V)		
Back electromotive force	Voltage range		0.5~50V or 1~400.0V;	Level-0.02
	Allowable error		± (0.3% x reading + 0.2% x range)	
	Range of speed		100-3000rpm	
Rotation test	Decision parameter	CW/CCW/None		

Optional information					
Optional function	Interphase voltage	Interphase insulation	Static moment	Hall signal	Encoder
AN8353S	√	√	——	——	——
AN8353M	√	√	√	√	√

Comprehensive High-power Motor Test Scheme
AN8353(F)

Product Introduction

This product is suitable for the performance test of 3-phase stator/complete machine with power below 500KW, and widely used in industries such as elevator motor, reducer, industrial fan, water pump motor, crane, generator and so on.

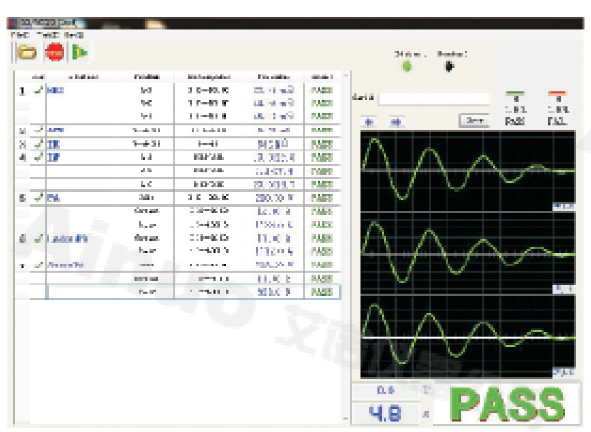
Features

- Wide range: test of ultra wide resistance range (1mΩ~400KΩ).
- High level: 500KW motor turn-to-turn vibration, improving the detection rate of winding damage.
- Efficient: complete testing after connection at one time, high efficiency of large motor test.
- One-stop: self-developed AC/DC power supply, convenient and unified before/after sale.
- Module: Module test unit to avoid interference, and customize single/ multi-station, serial/parallel test system as required.
- Multi ports: USB, RS232, LAN and other ports, PLC simulation, TCP/IP network protocol, etc., to facilitate data interaction and instrument control.

Test items

- Stator: withstand voltage, insulation, resistance, resistance balance, interturn.
- Motor: withstand voltage, insulation, resistance, interturn, no-load, locked-rotor.

Test cases



Specifications

General parameters of AN8353S(F)/AN8353M(F) series				
Application industries		Elevator motor, industrial reducer, high power fan, water pump motor, etc.		
Model of product		AN8353S(F)	AN8353M(F)	Custom parameters
Withstand voltage test	Output voltage	Range: 300 ~ 3000 VAC, step: 10V		5000 VAC
		Allowable error: ± (2.5% x setting +10V)		
	Break down current	Range: 0.10~20.00 mA		100 mA
		Allowable error: ± (2.5% x reading +5 words)		
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)		
Insulation test	Output voltage	Range: 200 ~ 1000 VDC, step: 5V		
		Allowable error: ±(3% x setting +5V)		
	Ripple coefficient	<5%		
	Resistance measurement	Range: 1.0~500MΩ		
		Allowable error: ≤200MΩ, ±(3% x reading +5 words)		
		>200MΩ, ±(5% x reading +8 words)		
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)		
Resistance test	Test and measurement	Range: 0.1~20k Ω, unit: Ω		1mΩ ~400KΩ 1m~400KΩ
		Allowable error: ±(0.3% x reading +3 words)		
	Temperature measurement	(0.0~60.0) ℃, allowable error: ±0.5℃		
Resistance balance	Calculation formula	|Resistance -Resistance average|/Resistance average*100%		
	Display range	0.0%~99.9%		
Interturn test	Pulse voltage	Range: 300~3000 V, step: 100V		5000 V
		Allowable error: ±(3% x setting +10V)		
	Wavefront time	≤0.5μs		
	Acquisition frequency	5kHz~40MHz 5kHz~40MHz		
	Wave parameters	Area, difference area, (1~10) consecutive impacts; range: 0~99%		
No-load / Locked-rotor	Voltage range		1.0~1000.0V;	Level-0.02
	Allowable error		± (0.3% x reading + 0.2% x range)	
	Current		1.0~1000.00A;	
	Allowable error		± (0.3% x reading + 0.2% x range)	
	Range of power		1.0~500KW;	
	Allowable error		±(0.8% x reading +0.2% x range)	
	Frequency range		0.5~100KHz;	
	Allowable error		±(0.1% x reading)	

Optional information								
Optional function	Interphase voltage	Interphase insulation	Inductance	Current balance	Rotation direction	Airtight	Fill oil	Vibration
AN8326S	√	√	√	√	√	-----	-----	-----
AN8326M	√	√	√	√	-----	√	√	√

Comprehensive Stator Vacuum Test Scheme
AN8321(F)

Product Introduction

This product is suitable for the inter-turn isoelectric performance test of various types of motor stators under vacuum negative voltage up to -99kPa, widely used in air conditioners, refrigerator compressor stators, automobile motor stators, brushless stators and other industries.

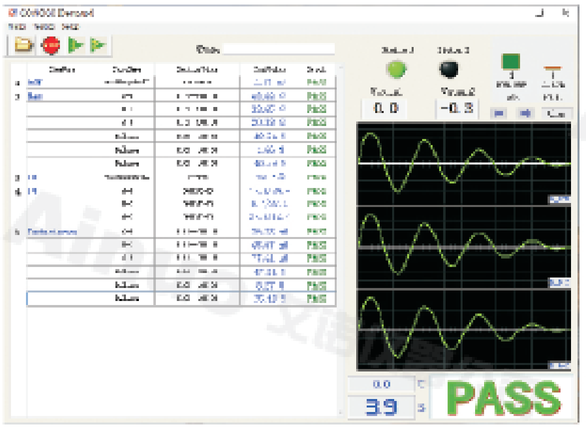
Features

- Vacuum: free setting of vacuum between 0~-99kPa (0~-742.5Torr).
- High efficiency: Custom double-station serial/parallel test system. The four tests of turn-to-turn and withstand voltage can be completed within 5.9 seconds, up to 10,000 pieces/day.
- High performance: voltage regulation, insulation, turn-to-turn and other voltage adjustments using closed-loop voltage feedback adjustment system to accurately control the voltage regulation and rising process, stable voltage output.
- Intelligent: intelligent self-check, remote diagnosis and online upgrade, quick location of problems and eliminating.
- Multi ports: USB, RS232, LAN and other ports, PLC simulation, TCP/IP network protocol, etc., to facilitate data interaction and instrument control.

Test items

- Stator: withstand voltage, insulation, resistance, interturn, inductance, rotation.

Test cases

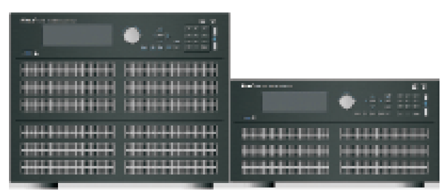


Specifications

General parameters of AN8321(F) series			
Application industries		Air conditioner compressor stator, refrigerator compressor stator, automotive electronic stator, brushless motor stator, etc.	
Model of product		AN8321(F)	Custom parameters
Withstand voltage test	Output voltage	Range: 300 ~ 3000 VAC, step: 10V	5000 VAC
		Allowable error: ± (2.5% x setting +10V)	
	Break down current	Range: 0.10~20.00 mA	100 mA
		Allowable error: ± (2.5% x reading +5 words)	
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)	
Insulation test	Output voltage	Range: 200 ~ 1000 VDC, step: 5V	
		Allowable error: ±(3% x setting +5V)	
	Ripple coefficient	<5%	
	Resistance measurement	Range: 1.0~500MΩ	
		Allowable error: ≤200MΩ, ±(3% x reading +5 words)	
		>200MΩ, ±(5% x reading +8 words)	
	Duration	Range: 1.0~99.9s, allowable error: ± (1% x setting +0.1s)	
Resistance test	Test and measurement	Range: 0.1~20k Ω, unit: Ω	1mΩ—400KΩ 1m~400KΩ
		Allowable error: ±(0.3% x reading +3 words)	
	Temperature measurement	(0.0～60.0) ℃, allowable error: ±0.5℃	
Interturn test	Pulse voltage	Range: 300~3000 V, step: 100V	5000 V
		Allowable error: ±(3% x setting +10V)	
	Wavefront time	≤0.5μs	
	Acquisition frequency	5kHz~40MHz	
	Wave parameters	Area, difference area, (1~10) consecutive impacts; range: 0~99%	
Inductance test	Test range	0.0001μH-99.99kH	
	Allowable error	0.5%	
	Test frequency	100Hz,120Hz,1kHz,10kHz	
	Test level	0.1,0.3,1.0（V）	
Rotation test	Decision parameter	CW/CCW/None	

High Precision Programmable DC Electronic Load
AN23500(F) Series

High Voltage and High Power DC Electronic Load
AN23600E(F) Series



AC/DC Electronic Load
AN29(F) Series

Electronic Load
AN23500(F) Series

Product Introduction

The AN23500(F) series DC electronic load is a new DC load launched by Ainuo Instruments, covering voltage of 150V, 600V , and the power 150W~1.2kW. This series of electronic load is mainly used for testing of products in many fields such as new energy vehicle OBC, power battery, charging spot test, power electronics, servo/server power supply, high voltage UPS, photovoltaic, grid energy storage, aerospace and other fields. A new generation of digital controller is adopted, with built-in five modes and a variety of advanced modes, to meet the programming, automated testing and other needs.

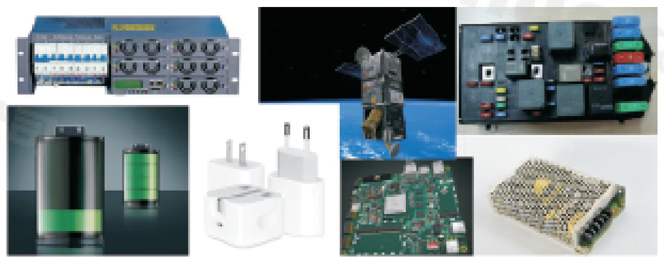
Features

- Precision measurement, with accuracy of voltage 0.015%+0.03%F.S., current 0.03%+0.05%F.S. and power 0.1%+0.1%F.S.;
- Built-in dynamic loading mode, up to 25kHz dynamic frequency, Vpk+/- test;
- Built-in LED to simulate LED load and test LED power supply;
- Minor dynamic overshoot amplitude, less than 30% of set current;
- Built-in constant current (CC), constant voltage (CV), constant resistance (CR), constant power (CP), short circuit simulation, overcurrent protection test, series test, AUTO test etc.;
- Complete protection, including OCP (overcurrent protection)/OVP (overvoltage protection)/ OTP (overtemperature protection)/RVP (reverse connection protection), etc.;
- Built-in temperature acquisition chip and speed-adjustable fan control;
- Built-in battery, suitable for discharge test for power integration;
- Flexible interface, standard RS232, optional RS485;
- Light, ABS+PC injection molding shell, beautiful and generous.

Model	150V	600V	Height	Width
150W	AN23510(F)		2U	½2U
150W	AN23511(F)		2U	½2U
300W	AN23512(F)	AN23512B(F)	2U	½2U
600W	AN23513(F)	AN23513B(F)	2U	2U
1200W	AN23514(F)	AN23514B(F)	2U	2U

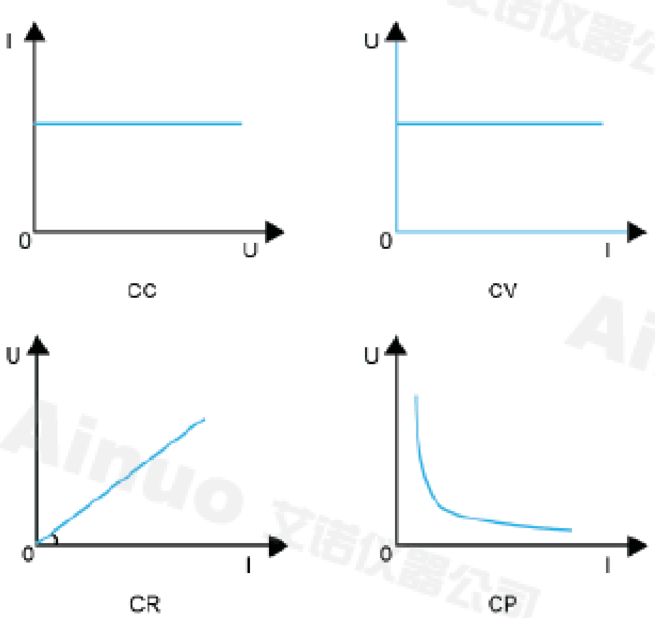
Applications

- Switch power supply test
- Server power supply and communication power supply test
- Adapter, charger and portable charger test
- Battery discharge test
- Automotive electronics test, such as fuses, control boxes, etc.
- Relay simulation load test
- Military aerospace power test
- DC power supply and power electronic components test



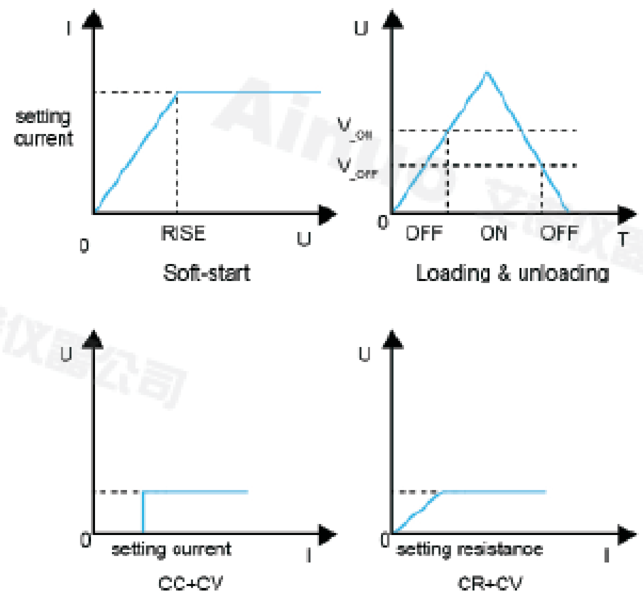
Basic Modes

The AN23500(F) load has four built-in basic modes: constant voltage (CV), constant current (CC), constant resistance (CR), and constant power (CP), suitable for various testing.



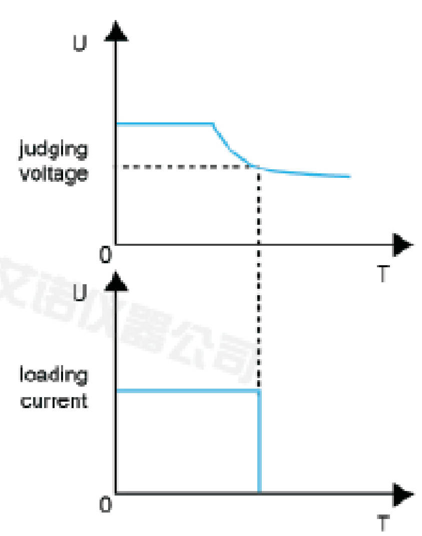
Combined Modes

The AN23500(F) load has four built-in combined modes: soft-start, loading/unloading, CC+CV, CR+CV, suitable for various testing.



BATY Mode - Dedicated Battery Testing Mode

The AN23500(F) series load has constant battery capacity test mode, and discharge via constant current (CC) mode. Voltage threshold can be set for judgment. When the battery voltage drops to the threshold, the loading automatically stops, and the current output of the battery under test is turned off to avoid damage to the battery due to over-discharge. The load provides real-time display of discharge level in Ah. BATY mode is also suitable for supercapacitors and other similar discharge tests.

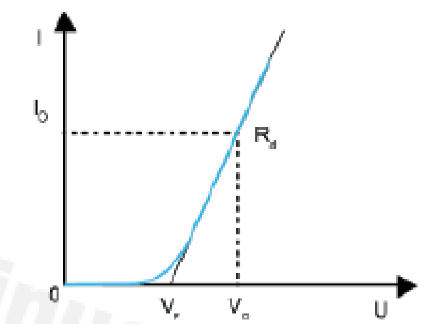


Adjustable Load Rise/Fall Slope

Various current rise/fall rate can be set for AN23500(F) series loads as required. Current change rate: 2.5A/us; time: 20us-999999ms, resolution: 20us.

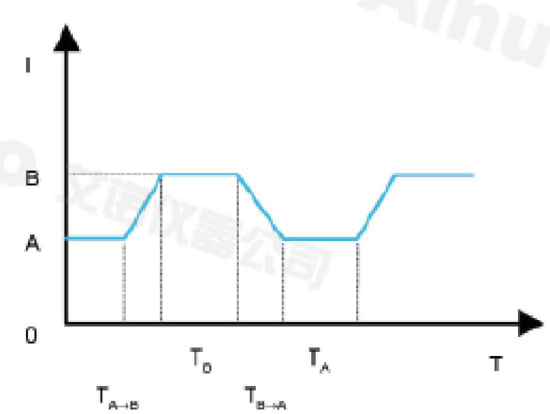
LED Mode - Simulate LED Load Mode

The AN23500(F) series load has built-in simulated LED load mode, loading as shown below to simulate the characteristics that the current of LED is 0 before it is turned on and rises according to the volt-ampere curve after it is turned on. Electronic load is adopted to simulate loading so as to avoid light pollution or instable parameters of LED strips and resistive loads.



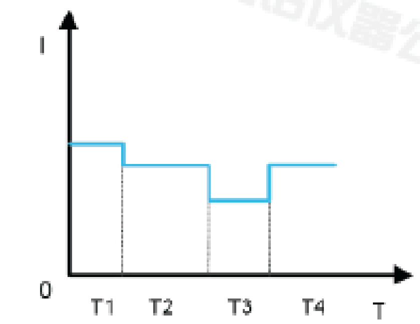
CCD Mode - Fast Dynamic Test

The AN23500(F) series loads have built-in high-speed dynamic loading test function, with dynamic change up to 25kHz, including three modes: continuous, pulse and trigger. You can set the current loading value, loading time, rise/fall time, etc., as shown in the figure below. In addition to dynamically loading, the load also provides peak-to-peak voltage measurement with sampling frequency up to 25kHz.



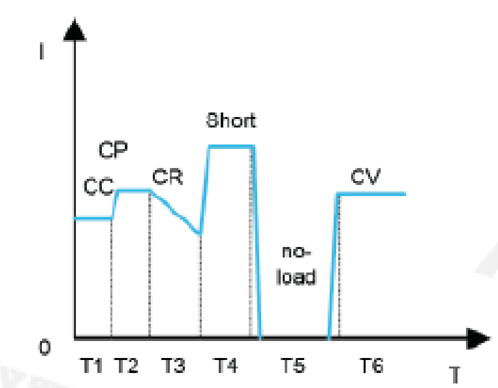
LIST Mode – Series Loading

Up to 8 groups of data can be edited via built-in series test of AN23500(F) load. 200 steps can be edited in each group, and the execution time (0-100s) of each step can be edited. Various loading current waves are provided for battery discharge, server, communication power mixed load modulation etc. as an effective supplement to dynamic current testing.



Auto Mode - Automatic Test

Up to 8 groups of data can be edited via built-in series test of AN23500(F) load. 50 steps can be edited in each group, including three (6) modes: no-load, constant current (CC), constant voltage (CV), constant power (CP), constant resistance (CR) and short-circuit; 4 parameters can be edited, tested and compared: current, voltage, power and resistance, and the delay test time (0.2~100s) can be edited, while considering the speed and accuracy of the test.

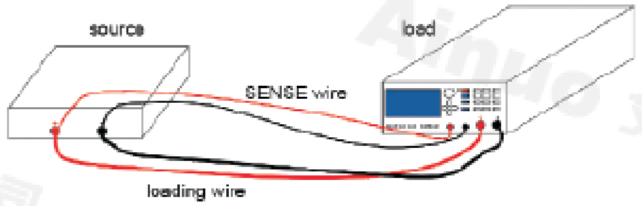


High Precision Measurement

AN23500(F) series load has two levels of voltage/current measurement. Taking AN23514(F) as an example, the voltage is 20V/150V, suitable for low voltage and high voltage applications at the same time; the current is 24A/240A, providing more accurate current measurements for various applications. High-precision A/D, D/A chips are adopted, some models support accuracy of voltage 0.015%+0.03%F.S., current 0.03%+0.05%F.S., and power 0.1%+0.1%F.S.

Remote Measurement

AN23500(F) series loads have remote measurement function. When the current consumption on the load is high, the voltage drop generated by the load terminal, the connection line between the load and the source under test is high and cannot be ignored. To ensure the measurement accuracy, the remote test (SENSE) is added. Select the remote test when the loading current is large or for test items with strict voltage requirements. The SENSE terminal is set at the front of operation panel, convenient for wiring.



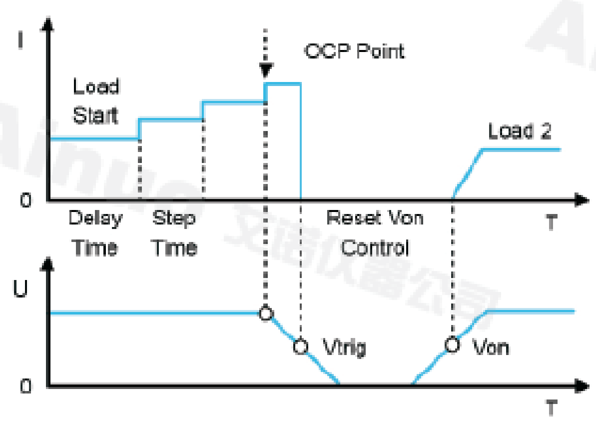
I Monitor - Current Monitoring

AN23500(F) series loads have an analog current output terminal (BNC), outputting 0~5.5V analog signal corresponding to 0~maximum current. It can be directly connected to an external voltmeter or oscilloscope through the BNC terminal for real-time monitoring of current waves without additional current probes.

Precisely Lock The Power Protection Point

AN23500(F) series loads have OCP/OPP function. Too large output current of the source under test may cause damage. Therefore, most of the power sources under test have overcurrent protection function: when overloaded, the output voltage will be reduced or the output will be stopped. Therefore, a test mode for this condition is set for the load - Over Current Test (OCP).

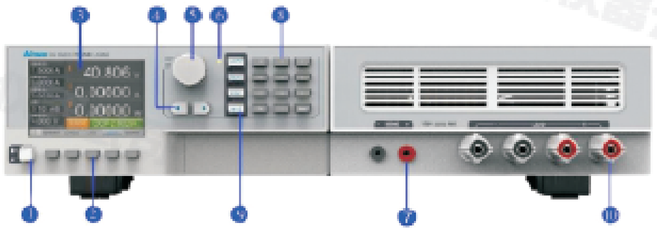
After setting the loading circuit and the threshold voltage, when the load detects that the voltage is less than or equal to the threshold, the loading stops, and at the same time, the current at the moment of protection is displayed on the screen, and the result is judged according to the protection point.



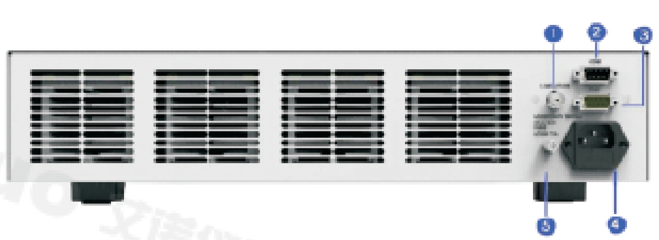
Complete Protection

AN23500(F) series load is highly reliable with a variety of protections, including: OVP (overvoltage protection), OCP (overcurrent protection), OTP (overtemperature protection), OPP (overpower protection), RVP (reverse connection protection), SSP (SENSE protection).

Panel



No.	Name	Description
①	Power switch	AC power switch of electronic load host
②	F1-F5 menu	F1-F5, shortcuts
③	Display screen	Display setting and measurement
④	Direction buttons	Left/right keys
⑤	Knob	Move the cursor up/down and adjust parameters
⑥	Tricolor indicator light	Load working LED
⑦	Vsense terminal	Remote detection power voltage
⑧	Number key	Number keys 0-9 (Cancel key)
⑨	Control buttons	LOAD、MENU、ESC、ENTER
⑩	DC load terminal	Loading terminal



No.	Name	Description
①	I_Monitor	Loading current wave detection
②	COM	RS232 or RS485 optional
③	PLC	Various PLC functions (reserved)
④	Power socket	Power input
⑤	PE terminal	Connect to ground

Exceeding & Trustworthy Electronic Load \\\ Ainuo

Specifications

Model		AN23510(F)		AN23511(F)		AN23513(F)		AN23513B(F)	
Constant Current(CC)	Range	0-3A	0-30A	0-3A	0-30A	0- 12A	0-120A	0-3A	0-30A
	Resolution of setting	0.1mA	1mA	0.1mA	1mA	1mA	10mA	0.1mA	1mA
	Accuracy	0.03%+0.05%F.S.				0.05%+ 0.05%F.S.	0.1%+ 0.05%F.S.	0.03%+0.05%F.S.	
Constant Voltage(CV)	Range	0.1-20V	0.1-150V	0.1-20V	0.1- 150V	0.1-20V	0.1- 150V	0.1-60V	0.1-600V
	Resolution of setting	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.03%+0.05%F.S.		0.03%+0.02%F.S.		0.03%+0.02%F.S.		0.03%+ 0.02%F.S.	0.03%+ 0.05%F.S.
Constant Resistance(CR) (when input voltage and current≥10% of full range)	Range	0.03Ω-99.999Ω / 100Ω-999.99Ω / 1000Ω-9999.9Ω							
	Resolution of setting	0.001Ω / 0.01Ω / 0.1Ω							
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.							
Constant Power(CP) (when input voltage and current≥10% of full range)	Range	100W/150W				100W/600W			
	Resolution of setting	1mW/10mW							
	Accuracy	0.2%+0.2%F.S.		0.1%+0.1%F.S.		0.1%+0.1%F.S.			
Voltage measurement	Range	0-20V	0-150V	0-20V	0-150V	0-20V	0- 150V	0-60V	0-600V
	Resolution of setting	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.015%+0.05%F.S.		0.015%+0.03%F.S.		0.015%+0.03%F.S.		0.015%+ 0.03%F.S.	0.015%+ 0.05%F.S.
Current measurement	Range	0-3A	0-30A	0-3A	0-30A	0- 12A	0- 120A	0-3A	0-30A
	Resolution of setting	0.01mA	0.1mA	0.01mA	0.1mA	0.1mA	1mA	0.01mA	0.1mA
	Accuracy	0.05%+0.1%F.S.		0.03%+ 0.05%F.S.	0.03%+ 0.08%F.S.	0.05%+ 0.05%F.S.	0.1%+ 0.08%F.S.	0.05%+ 0.05%F.S.	0.1%+ 0.08%F.S.
Power measurement (when input voltageand current≥10% of full range)	Range	100W/150W				100W/600W			
	Resolution of setting	1mW/10mW							
	Accuracy	0.2%+0.2%F.S.				0.1%+0.1%F.S.			
Battery test		Input voltage: Max. set voltage; current resolution: current resolution of the stage; time: 0-99.999H							
Dynamic test		Test frequency: 0-25KHz; current change rate: 2.5A/μs; time: 20μs-999999ms, resolution: 20μs							
Current soft start time		0-999999ms, accuracy: 20μs							
Short circuit function		≥1.1 times the range of the stage							
Temperature	Operating temperature	0~40℃							
	Storage temperature	-25~70℃							
Dimensions	W×H×D (mm)	213×88×401				426×88×460			
Weight	Kg	6.7		6.6		12.4		12.0	

Model		AN23512(F)		AN23512B(F)		AN23514(F)		AN23514B(F)	
Constant Current(CC)	Range	0-6A	0-60A	0-3A	0- 15A	0-24A	0-240A	0-6A	0-60A
	Resolution of setting	0.1mA	1mA	0.1mA	1mA	1mA	10mA	0.1mA	1mA
	Accuracy	0.03%+0.05%F.S.				0.05%+ 0.05%F.S.	0.1%+ 0.05%F.S.	0.03%+0.05%F.S.	
Constant Voltage(CV)	Range	0.1-20V	0.1- 150V	0.1-60V	0.1-600V	0.1-20V	0.1- 150V	0.1-60V	0.1-600V
	Resolution of setting	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.03%+0.02%F.S.		0.03%+ 0.02%F.S.	0.03%+ 0.05%F.S.	0.03%+0.02%F.S.		0.03%+ 0.02%F.S.	0.03%+ 0.05%F.S.
Constant Resistance(CR) (when input voltage and current≥10% of full range)	Range	0.03Ω-99.999Ω / 100Ω-999.99Ω / 1000Ω-9999.9Ω							
	Resolution of setting	0.001Ω / 0.01Ω / 0.1Ω							
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.							
Constant Power(CP) (when input voltage and current≥10% of full range)	Range	100W/300W				100W/600W			
	Resolution of setting	1mW/10mW							
	Accuracy	0.1%+0.1%F.S.							
Voltage measurement	Range	0-20V	0- 150V	0-60V	0-600V	0-20V	0- 150V	0-60V	0-600V
	Resolution of setting	1mV	10mV	1mV	10mV	1mV	10mV	1mV	10mV
	Accuracy	0.015%+0.05%F.S.		0.015%+ 0.03%F.S.	0.015%+ 0.05%F.S.	0.015%+0.03%F.S.		0.015%+ 0.03%F.S.	0.015%+ 0.05%F.S.
Current measurement	Range	0-6A	0-60A	0-3A	0- 15A	0- 12A	0- 120A	0-3A	0-30A
	Resolution of setting	0.01mA	0.1mA	0.01mA	0.1mA	0.1mA	1mA	0.01mA	0.1mA
	Accuracy	0.03%+ 0.05%F.S.	0.03%+ 0.08%F.S.	0.03%+ 0.05%F.S.	0.03%+0. 08%F.S.	0.05%+ 0.05%F.S.	0.1%+ 0.08%F.S.	0.05%+ 0.05%F.S.	0.1%+ 0.08%F.S.
Power measurement (when input voltageand current≥10% of full range)	Range	100W/300W				100W/600W			
	Resolution of setting	1mW/10mW							
	Accuracy	0.1%+0.1%F.S.							
Battery test		Input voltage: Max. set voltage; current resolution: current resolution of the stage; time: 0-99.999H							
Dynamic test		Test frequency: 0-25KHz; current change rate: 2.5A/μs; time: 20us-999999ms, resolution: 20μs							
Current soft start time		0-999999ms, accuracy: 20μs							
Short circuit function		≥1.1 times the range of the stage							
Temperature	Operating temperature	0~40℃							
	Storage temperature	-25~70℃							
Dimensions	W×H×D (mm)	213×88×401				426×88×460			
Weight	Kg	6.7		6.6		12.4		12.0	

Note: Power F.S. = Vrange F.S. ×Irange F.S.

High Power DC Electronic Load
AN23600E(F) Series

Product Introduction

This AN23600E(F) series is a brand-new high-power DC electronic load developed by Ainuo Instruments, with voltage of 150V/600V/1200V and power of 2kW~60kW. This series of electronic loads are mainly used for testing of products in new energy vehicle OBC, power battery, charging pile, power electronics, servo/server power supply, high voltage UPS, photovoltaic, grid energy storage, aerospace and other fields. A new generation of digital controller is adopted, with built-in five modes and seven advanced modes, providing series test to meet the user's programming, automated test and other needs.

This AN23600E(F) series provides a complete series of models, as shown in the table below

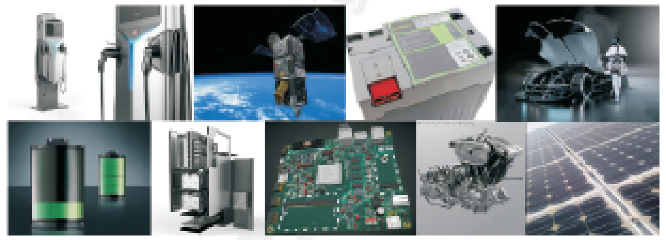
	150V	600V	1200V	Height
2kW	AN23602E-150-200(F)	AN23602E-600-140(F)	AN23602E-1200-80(F)	4U
3kW	AN23603E-150-300(F)	AN23603E-600-210(F)	AN23603E-1200-120(F)	4U
4kW	AN23604E-150-400(F)	AN23604E-600-280(F)	AN23604E-1200-160(F)	4U
5kW	AN23605E-150-500(F)	AN23605E-600-350(F)	AN23605E-1200-200(F)	4U
6kW	AN23606E-150-600(F)	AN23606E-600-420(F)	AN23606E-1200-240(F)	4U
8kW	AN23608E-150-800(F)	AN23608E-600-560(F)	AN23608E-1200-320(F)	7U
10kW	AN23610E-150-1000(F)	AN23610E-600-700(F)	AN23610E-1200-400(F)	7U
12kW	AN23612E-150-1200(F)	AN23612E-600-840(F)	AN23612E-1200-480(F)	7U
15kW	AN23615E-150-1500(F)	AN23615E-600-1050(F)	AN23615E-1200-600(F)	10U
18kW	AN23618E-150-1800(F)	AN23618E-600-1260(F)	AN23618E-1200-720(F)	10U
20kW	AN23620E-150-2000(F)	AN23620E-600-1400(F)	AN23620E-1200-800(F)	13U
24kW	AN23624E-150-2400(F)	AN23624E-600-1680(F)	AN23624E-1200-960(F)	13U
30kW	AN23630E-150-2400(F)	AN23630E-600-2100(F)	AN23630E-1200-1200(F)	21U
36kW	AN23636E-150-2400(F)	AN23636E-600-2400(F)	AN23636E-1200-1440(F)	21U
42kW	AN23642E-150-2400(F)	AN23642E-600-2400(F)	AN23642E-1200-1680(F)	27U
48kW	AN23648E-150-2400(F)	AN23648E-600-2400(F)	AN23648E-1200-1920(F)	27U
54kW	AN23654E-150-2400(F)	AN23654E-600-2400(F)	AN23654E-1200-2160(F)	35U
60kW	AN23660E-150-2400(F)	AN23660E-600-2400(F)	AN23660E-1200-2400(F)	35U

Features

- High power density, 4U high for 6kW, 13U high for 24kW; compact, light, convenient;
- Precision measurement, accuracy of voltage 0.015%+0.015%F.S., current 0.04%+0.04%F.S. and power 0.1%+0.1%F.S. (unchanged at high temperature);
- Built-in dynamic loading mode, dynamic frequency up to 50kHz, Vpk+/- test;
- Built-in FLEX mode, to simulate capacitive load, inductive load and composite impedance load;
- Wide range, current range almost twice the traditional high-power load with same capacity;
- Excellent dynamic characteristics, rapid current rise up to 96A/us;
- Built-in constant current (CC), constant voltage (CV), constant resistance (CR), constant power (CP), short circuit simulation, overcurrent protection test, series test and other functions;
- Complete protection, including overcurrent\overvoltage\overtemperature\reverse connection\SENSE protection, etc.;
- Built-in temperature acquisition chip and speed-adjustable fan control;
- Built-in battery mode, suitable for battery integration and timing during discharge test;
- Rich interfaces, standard RS232, optional RS485/LAN/GPIB/CAN and others.

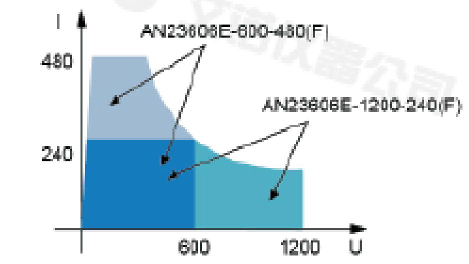
Applications

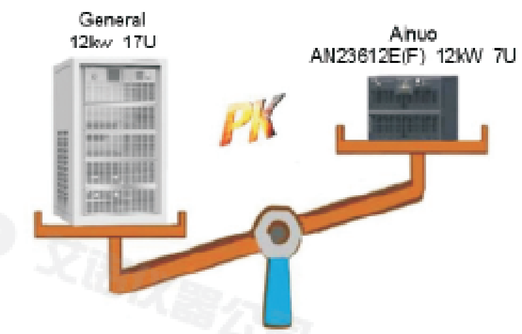
- DC charging pile/vehicle charger, power electronics test
- Testing of intelligent manufacturing and industrial motors
- Test of automotive electronics, such as fuses, control boxes, etc.
- Test of simulated relay load
- Test of military aerospace power supply
- Test of server power supply, high voltage UPS, communication power supply
- Battery discharge test
- Test of photovoltaic module array, wind power generation dummy load
- Test of simulated energy storage system
- Test of DC power supply and power electronic components



High Power Density, Compact, Wide Voltage

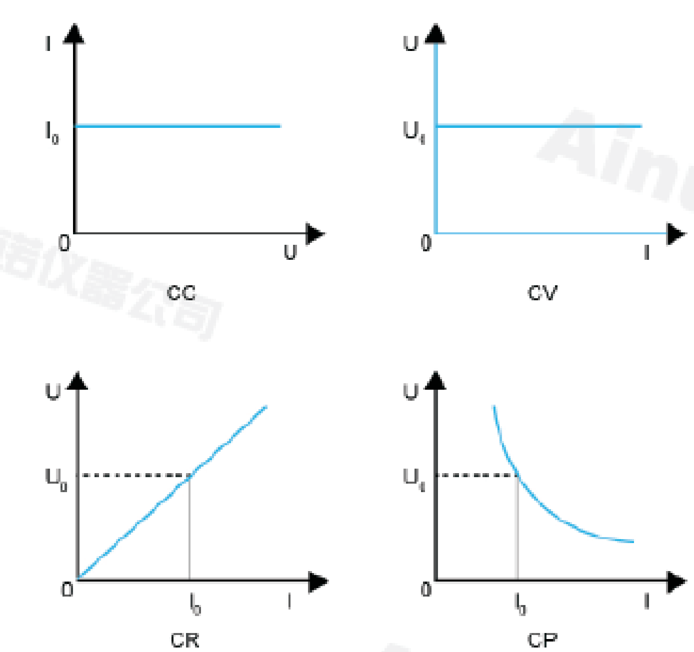
The AN23600E(F) series load has wide range of voltage/current input for various testing of high current and low voltage, or high voltage and low current, featuring high power density, half the volume and one third the weight of traditional electronic loads.





Basic Mode

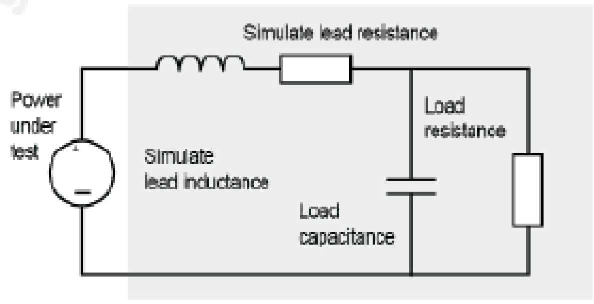
Built-in constant voltage (CV), constant current (CC), constant resistance (CR), and constant power (CP) modes to meet various testing requirements.

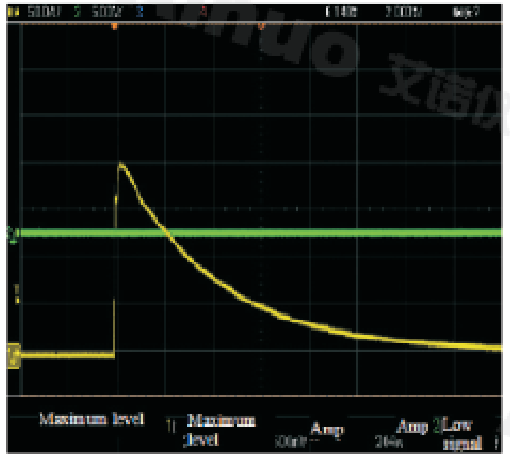


FLEX Mode - Built-in Complex Impedance Network Power-on Mode

The input filter capacitor in real load will cause huge inrush current at the moment of power-on. The parasitic resistance and inductance of long internal lead will cause further distortion of the loading wave. So its impedance will be equivalent to a complex impedance network.

The built-in complex impedance (FLEX) mode of AN23600E(F) series is designed to simulate such loads to test the suitability of the power supply under test. The four test parameters shown in the figure below are decomposed according to the characteristics of real load in this mode. After power-on, the load will load current according to the set impedance network.



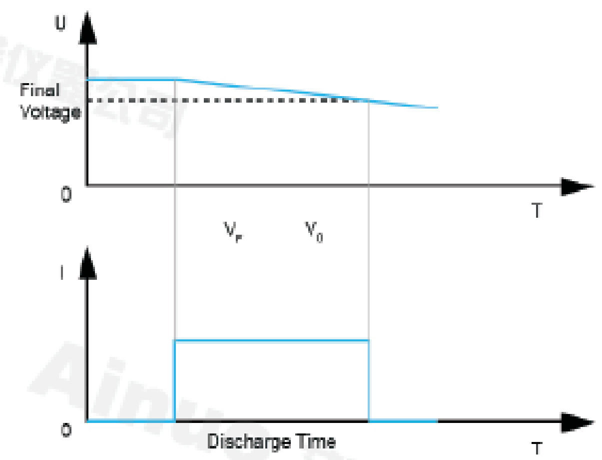


Set parameters in FLEX mode
Simulate lead inductance: 0.1uH~20uH
Simulate lead resistance: 30mΩ~20Ω
Load capacitance: 30uF~50000uF
Load resistance: Consistent with high-level in CR mode

BATY Mode - Dedicated Mode for Battery Test

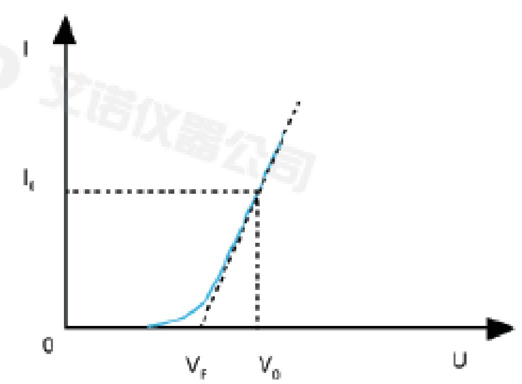
The AN23600E(F) series load provides three discharge modes for batteries: constant current (CC), constant resistance (CR) and constant power (CP), and can control the loading of the electronic load by setting the voltage threshold and test time (1~100000 seconds) to avoid damage to the battery caused by over-discharge. In addition, it provides discharge level indication.

BATY mode is also available for supercapacitors and other similar discharge tests.



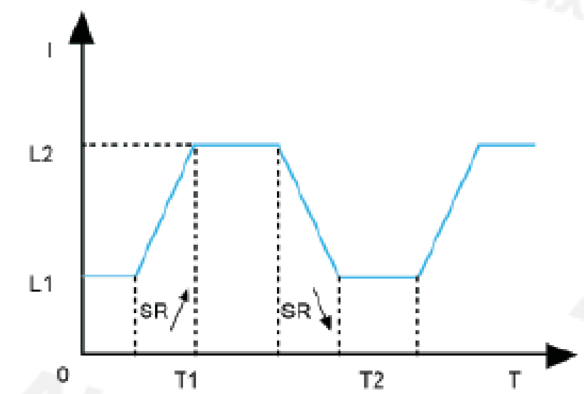
LED Mode - Simulate LED Load Mode

The AN23600E(F) series load has built-in load mode to simulate LED, loading as shown in the below figure to simulate the current of LED 0A before it is turned on and volt-ampere rise after turn on. The electronic load is adopted to simulate loading to avoid problems of light pollution and instability of parameters caused by the LED strips and resistive loads.



CCD Mode - Fast Dynamics and Vpp Test

The AN23600E(F) series load has built-in high-speed dynamic loading test function, and the dynamic change can be up to 50kHz. The user can set the number of repetitions for a period (1~100000), or continuously perform dynamic loading. As shown in the figure below, you can set the current high/low loading value, loading time, rising/falling slopes, etc. While performing dynamic loading, the load also provides peak-to-peak voltage measurement with acquisition frequency of up to 500kHz.

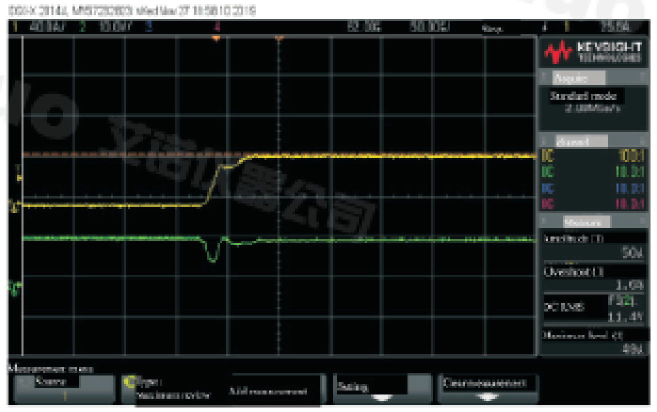


CC Mode - Ultra-fast Loading Speed and Ultra-low Overshoot

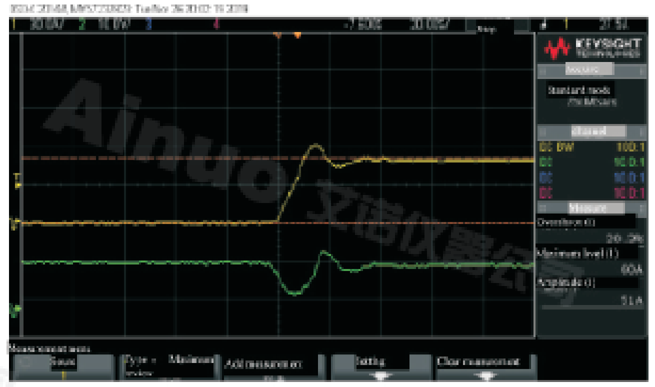
The AN23600E(F) series of loads can provide ultra-fast loading.

For example, AN23606E-1200-240(F) can provide 12A/us rising speed. In addition to rapid loading, the built-in digital controller of the load can minimize the overshoot amplitude.

The below figure shows the compare between the current rise wave of AN23600E(F) load and the electronic load of certain brand during loading at full speed.



Current rise wave of AN23600E(F) series at full speed



Current rise wave of certain brand electronic load at full speed

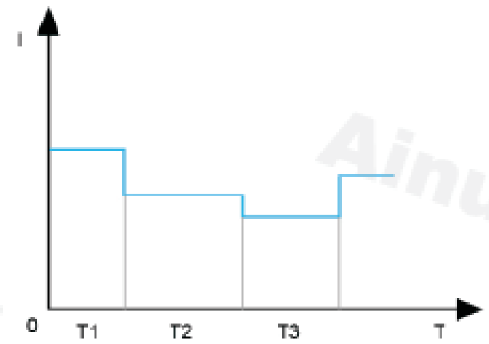
CV Mode - High Performance Controller With Adjustable Loop Speed

With more applications of constant current (CC) sources, This AN23600E(F) series load has built-in optimized zero compensation controller. While satisfying fast, stable and accurate loading, there are three kinds of loop speed adjustable, expanding the load adaptability. Different from the ordinary integral-type lag control, an obvious advance predictive control link can be seen in the right figure. The bottom is the current wave, and the pre-judgment of the power supply under test is completed first, so that the CV loading process can be completed quickly and stably.

LIST Mode – Series Loading

Up to 8 groups of data can be edited via built-in series test of AN23600E(F) load. 200 steps can be edited for each group, and the execution time (0-100s) can be edited for each step.

Different loading current waves are provided in battery discharge, server, communication power combined load modulation and other occasions, as an effective supplement to dynamic current testing.



High Precision Measurement

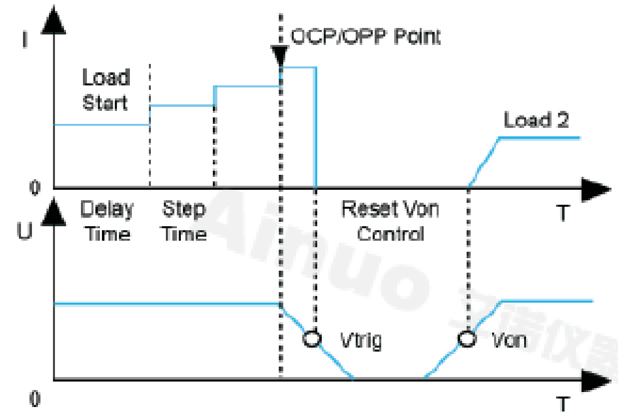
This AN23600E(F) series load provides three levels for voltage/current measurements. Taking AN23606E-1200-240(F) as an example, the voltage is 150V/600V/1200V, meeting the needs of low-medium-high voltage; the current is 24A/120A/240A, providing accurate measurements for different applications. High-precision A/D and D/A chips, with accuracy of voltage 0.015%+0.015%F.S., current 0.04%+0.04%F.S. and power 0.1%+0.1%F.S.

Instantaneous Overpower Capability

The AN23600E(F) series has instantaneous 2 times overpower loading capacity, so that the load can withstand the loading capacity exceeding the rated power in short time.
Idea selection of impact products.
Users can select models according to the rated power of the power supply or battery instead of the maximum power, low cost, high adaptability.

Precisely Lock Power Protection Point

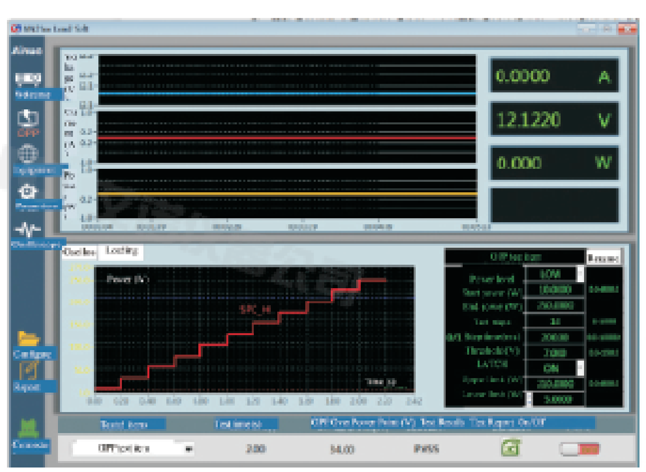
Too large output current/power of the source under test may cause damage. Therefore, most of the power sources under test have overcurrent/overpower protection: the output voltage is reduced or stopped when overloaded. So this kind of load provides test modes for this situation - Over Current Point, Over Power Point (OCP, OPP).

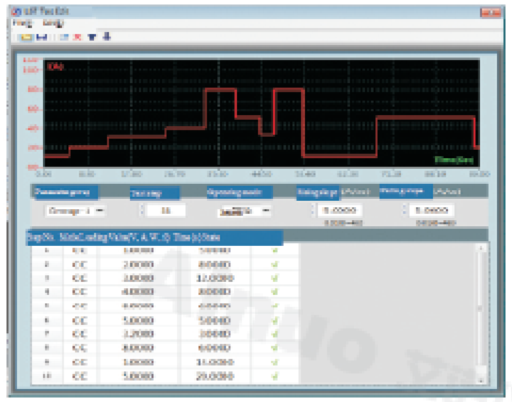


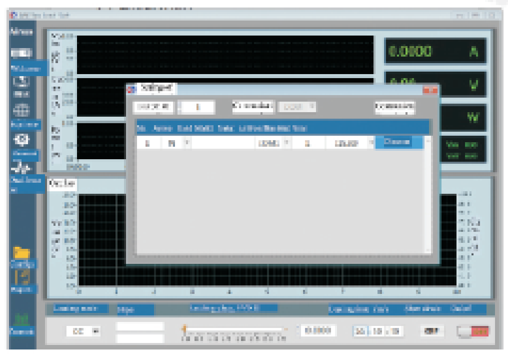
When the load detects that the voltage is less than or equal to the threshold after setting the loading current and the threshold, the loading stops, and the current/power at the moment of protection is displayed on the screen, and the result is judged according to the protection point.

Visual Programming Software

Users can test by using the PC software programming load. It will be troublesome to set the series test (List) via the load interface, but can be set quickly via the graphical interface of the host, cooperated with the wave drawing, convenient for the testers.
Over Current Point, Over Power Point (OCP, OPP), the host will store the test results and process data automatically and generate a test result report.

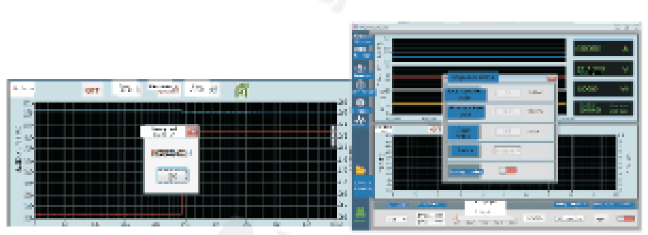




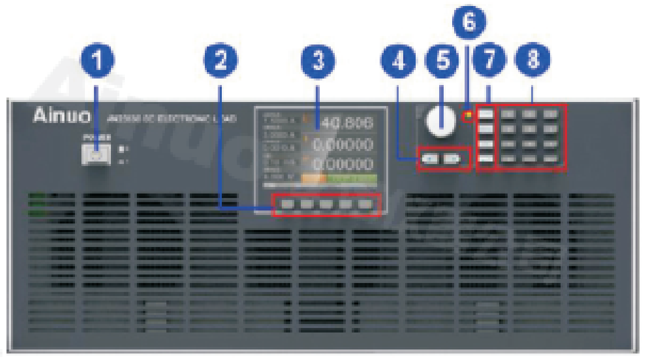


Acquire Data

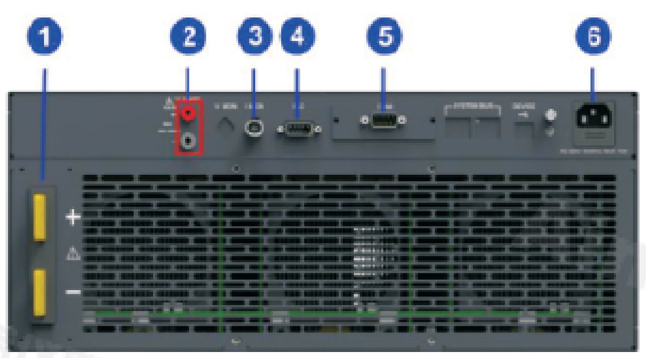
The user can acquire the instantaneous voltage/current via acquisition of the load and cooperating with the trigger source, and draw a wave of the data points via the host software. The test data can be exported to a excel file.
Acquisition time: 1-40 us; resolution: 1 us
Number of acquisition points: 1~1024 (total number)
Trigger source: Load on/Load off/TTL/BUS/Manual



Panel



No.	Name	Description
①	Power switch	AC power switch of electronic load host
②	F1-F5 menu	F1~F5, shortcuts
③	Display screen	Display settings and measurement
④	Direction buttons	Left/right keys
⑤	Knob	Move the cursor up/down and adjust parameters
⑥	Tricolor indicator light	Load working LED
⑦	Control buttons	LOAD、MENU、ESC、ENTER
⑧	Number key	Number keys 0-9, (Cancel key)



No.	Name	Description
①	DC load terminal	Loading terminal
②	Vsense terminal	Remote detection power voltage
③	I_Monitor	Loading current wave detection
④	PLC	Various PLC functions (reserved)
⑤	COM	RS232 or RS485 optional
⑥	Power socket	Power input

Specifications

Model		AN23602E-150-200(F)	AN23603E-150-300(F)	AN23604E-150-400(F)	AN23605E-150-500(F)	AN23606E-150-600(F)	AN23608E-150-800(F)
Operating range	Voltage	0-150V					
	Current	0-200A	0-300A	0-400A	0-500A	0-600A	0-800A
	Power	2 kW	3 kW	4 kW	5 kW	6 kW	8 kW
Minimum working voltage		1.8V@200A	1.8V@300A	1.8V@400A	1.8V@500A	1.8V@600A	1.8V@800A
CC loading	Measurement range	20/100/200A	30/150/300A	40/200/400A	50/250/500A	60/300/600A	80/400/800A
	Resolution	0.2/1/2mA	0.2/1/2mA	0.4/2/4mA	0.5/2/5mA	0.5/2/5mA	1/5/10mA
	Accuracy	0.05%+0.05%F.S.					
CV loading	Measurement range	16/80/150V					
	Resolution	0.1/0.5/1mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	15mΩ-150Ω(16V) 60mΩ-600Ω(80V) 1.5Ω-3000Ω(150V)	10mΩ-100Ω(16V) 40mΩ-400Ω(80V) 1Ω-2000Ω(150V)	7.5mΩ-75Ω(16V) 30mΩ-300Ω(80V) 0.75Ω-1500Ω(150V)	5mΩ-50Ω(16V) 20mΩ-200Ω(80V) 0.5Ω-1000Ω(150V)	5mΩ-50Ω(16V) 20mΩ-200Ω(80V) 0.5Ω-1000Ω(150V)	3.8mΩ-37.5Ω(16V) 15mΩ-150Ω(80V) 0.375Ω-750Ω(150V)
	Resolution	2mA/V sense	2mA/V sense	4mA/V sense	5mA/V sense	5mA/V sense	10mA/V sense
	Accuracy	Vin/ Rset* (0.2%)+0.2%F.S.					
CP loading	Measurement range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W
	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.2mA/μs-2A/μs (20A) 1mA/μs-7A/μs (100A) 2mA/μs-14A/μs (200A)	0.2mA/μs-3A/μs (30A) 1mA/μs-10.5A/μs (150A) 2mA/μs-21A/μs (300A)	0.5mA/μs-4A/μs (40A) 2mA/μs-14A/μs (200A) 5mA/μs-28A/μs (400A)	0.5mA/μs-5A/μs (50A) 2mA/μs-17.5A/μs (250A) 5mA/μs-35A/μs (500A)	0.5mA/μs-6A/μs (60A) 2mA/μs-21A/μs (300A) 5mA/μs-42A/μs (600A)	1mA/μs-8A/μs (80A) 5mA/μs-24A/μs (400A) 10mA/μs-48A/μs (800A)
	Resolution	0.2/1/2mA/μs	0.2/1/2mA/μs	0.4/2/4mA/μs	1/5/10mA/μs	0.5/2/5mA/μs	1/5/10 mA/μs
Specification	Outline dimension	426×177 (201 including feet, removable)×600 (W×H×D), mm					426 mm ×400mm ×650 mm (W×H×D)
	Weight	24.5 kg	29.5 kg	29.5 kg	35 kg	35 kg	61 kg

Model		AN23610E-150-1000(F)	AN23612E-150-1200(F)	AN23615E-150-1500(F)	AN23618E-150-1800(F)	AN23620E-150-2000(F)	AN23624E-150-2400(F)
Operating range	Voltage	0-150V					
	Current	0-1000A	0-1200A	0-1500A	0-1800A	0-2000A	0-2400A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum working voltage		1.8V@1000A	1.8V@1200A	1.8V@1500A	1.8V@1800A	1.8V@2000A	1.8V@2400A
CC loading	Measurement range	100/500/1000A	120/600/1200A	150/750/1500A	180/900/1800A	200/1000/2000A	240/1200/2400A
	Resolution	1/5/10mA	1/5/10mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
CV loading	Measurement range	15/80/150V					
	Resolution	0.1/0.5/1mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	2.5mΩ-25Ω(16V) 10mΩ-100Ω(80V) 0.25Ω-500Ω(150V)	2.5mΩ-25Ω(16V) 10mΩ-100Ω(80V) 0.25Ω-500Ω(150V)	1.7mΩ-16.67Ω(16V) 6.7mΩ-66.67Ω(80V) 0.167Ω-333.34Ω(150V)	1.7mΩ-16.67Ω(16V) 6.7mΩ-66.67Ω(80V) 0.167Ω-333.34Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)
	Resolution	10mA/Vsense	10mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/ Rset* (0.2%)+0.2%F.S.					
CP loading	Measurement range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W
	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	40/200/400mW	100/500/1000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	1mA/μs-10A/μs (100A) 5mA/μs-27.5A/μs (500A) 10mA/μs-55A/μs (1000A)	1mA/μs-12A/μs (120A) 5mA/μs-30A/μs (600A) 10mA/μs-60A/μs (1200A)	2mA/μs-15A/μs (150A) 10mA/μs-32A/μs (750A) 20mA/μs-64A/μs (1500A)	2mA/μs-18A/μs (180A) 10mA/μs-36A/μs (900A) 20mA/μs-72A/μs (1800A)	2mA/μs-20A/μs (200A) 10mA/μs-40A/μs (1000A) 20mA/μs-80A/μs (2000A)	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)
	Resolution	1/5/10 mA/μs	1/5/10 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs
Specification	Outline dimension	426 mm ×400 mm ×650 mm (W×H×D)		426 mm×532.5 mm×650 mm (W×H×D)		426 mm ×662 mm ×650 mm (W×H×D)	
	Weight	86.5kg	72kg	92.5kg	98kg	113kg	124kg

Specifications

Model		AN23630E-150-2400(F)	AN23636E-150-2400(F)	AN23642E-150-2400(F)	AN23648E-150-2400(F)	AN23654E-150-2400(F)	AN23660E-150-2400(F)
Operating range	Voltage	0-150V					
	Current	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A
	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum working voltage		1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A
CC loading	Measurement range	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A
	Resolution	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
CV loading	Measurement range	16/80/150V					
	Resolution	0.1/0.5/1mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)
	Resolution	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%F.S.					
CP loading	Measurement range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000W
	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)	2mA/μs-24A/μs (240A) 10mA/μs-48A/μs (1200A) 20mA/μs-96A/μs (2400A)
	Resolution	2/10/20 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs	2/10/20 mA/μs
Specification	Outline dimension	530 mm×1100mm ×680 mm (W×H×D)	530 mm×1100mm ×680 mm (W×H×D)	530 mm×1365mm ×680mm (W×H×D)	530 mm×1365mm ×680mm (W×H×D)	600 mm×1795 mm ×800 mm (W×H×D)	600 mm×1795 mm ×800 mm (W×H×D)
	Weight	205kg	231kg	272kg	298kg	435kg	469kg

Model		AN23602E-600-140(F)	AN23603E-600-210(F)	AN23604E-600-280(F)	AN23605E-600-350(F)	AN23606E-600-420(F)	AN23608E-600-560(F)
Operating range	Voltage	0-600V					
	Current	0-140A	0-210A	0-280A	0-350A	0-420A	0-560A
	Power	2kW	3kW	4kW	5kW	6kW	8kW
Minimum working voltage		14V@140A	14V@210A	14V@280A	14V@350A	14V@420A	14V@420A
CC loading	Measurement range	14/70/140A	21/105/210A	28/140/280A	35/175/350A	42/210/420A	56/280/560A
	Resolution	0.2/1/2mA	0.2/1/2mA	0.4/2/4mA	0.4/2/4mA	0.4/2/4mA	0.5/2/5mA
	Accuracy	0.05%+0.05%F.S.					
CV loading	Measurement range	80/150/600V					
	Resolution	0.5/1/5mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	0.15Ω-1500Ω(80V) 0.6Ω-6000Ω(150V) 6Ω-12000Ω(600V)	0.1Ω-1000Ω(80V) 0.4Ω-4000Ω(150V) 4Ω-8000Ω(600V)	75mΩ-750Ω(80V) 300mΩ-3000Ω(150V) 3Ω-6000Ω(600V)	50mΩ-500Ω(80V) 200mΩ-2000Ω(150V) 2Ω-4000Ω(600V)	50mΩ-500Ω(80V) 200mΩ-2000Ω(150V) 2Ω-4000Ω(600V	38mΩ-375Ω(80V) 150mΩ-1.5kΩ(150V) 1.5Ω-3kΩ(600V)
	Resolution	2mA/Vsense	2mA/Vsense	4mA/Vsense	4mA/Vsense	4mA/Vsense	5mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%F.S.					
CP loading	Measurement range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W
	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.2mA/μs-0.6A/μs (14A) 1mA/μs-3A/μs (70A) 2mA/μs-6A/μs (140A)	0.2mA/μs-0.9A/μs (21A) 1mA/μs-4.5A/μs (105A) 2mA/μs-9A/μs (210A)	0.4mA/μs-1.2A/μs (28A) 2mA/μs-6A/μs (140A) 4mA/μs-12A/μs (280A)	0.4mA/μs-1.5A/μs (35A) 2mA/μs-7.5A/μs (175A) 4mA/μs-15A/μs (350A)	0.4mA/μs-1.8A/μs (42A) 2mA/μs-9A/μs (210A) 4mA/μs-18A/μs (420A)	0.5mA/μs-1.8A/μs (56A) 2mA/μs-9A/μs (280A) 5mA/μs-18A/μs (560A)
	Resolution	0.2/1/2mA/μs	0.2/1/2mA/μs	0.4/2/4mA/μs	0.4/2/4mA/μs	0.4/2/4mA/μs	0.5/2/5mA/μs
Specification	Outline dimension	426mm×177(201 including feet, removable)mm×600mm (W×H×D)					426 mm ×400 mm ×650 mm (W×H×D)
	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg

Specifications

Model		AN23610E -600-700(F)	AN23612E -600-840(F)	AN23615E -600-1050(F)	AN23618E -600-1260(F)	AN23620E -600-1400(F)	AN23624E -600-1680(F)
Operating range	Voltage	0-600V					
	Current	0-700A	0-840A	0-1050A	0-1260A	0-1400A	0-1680A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum working voltage		14V@700A	14V@840A	14V@1050A	14V@1260A	14V@1400A	14V@1400A
CC loading	Measurement range	70/350/700A	84/420/840A	105/525/1050A	126/630/1260A	140/700/1400A	168/840/1680A
	Resolution	0.5/2.5/5mA	1/5/10mA	1/5/10mA	1/5/10mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
CV loading	Measurement range	60/150/600V					
	Resolution	0.5/1/5mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	25mΩ-250Ω(80V) 0.1Ω-1000Ω(150V) 1Ω-2000Ω(600V)	25mΩ-250Ω(80V) 0.1Ω-1000Ω(150V) 1Ω-2000Ω(600V)	17mΩ-166.67Ω(80V) 67Ω-666.67Ω(150V) 0.67Ω-1333.34Ω(600V)	17mΩ-166.67Ω(80V) 67Ω-666.67Ω(150V) 0.67Ω-1333.34Ω(600V)	13mΩ-125Ω(80V) 50mΩ-500Ω(150V) 0.5Ω-1000Ω(600V)	13mΩ-125Ω(80V) 50mΩ-500Ω(150V) 0.5Ω-1000Ω(600V)
	Resolution	5mA/Vsense	10mA/Vsense	10mA/Vsense	10mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/ Rset* (0.2%)+0.2%F.S.					
CP loading	Measurement range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W
	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	100/500/1000mW	100/500/1000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.5mA/μs-2.1A/μs (70A) 2.5mA/μs-10.5A/μs (350A) 5mA/μs-21A/μs (700A)	1mA/μs-2.4A/μs (84A) 5mA/μs-12A/μs (420A) 10mA/μs-24A/μs (840A)	1mA/μs-2.7A/μs (105A) 5mA/μs-13.5A/μs (525A) 10mA/μs-27A/μs (1050A)	1mA/μs-3A/μs (105A) 5mA/μs-15A/μs (525A) 10mA/μs-30A/μs (1050A)	2mA/μs-3.3A/μs (140A) 10mA/μs-16.5A/μs (700A) 20mA/μs-33A/μs (1400A)	2mA/μs-3.6A/μs (168A) 10mA/μs-18A/μs (840A) 20mA/μs-36A/μs (1680A)
	Resolution	0.5/2.5/5mA/μs	1/5/10mA/μs	1/5/10mA/μs	1/5/10mA/μs	2/10/20mA/μs	2/10/20mA/μs
Specification	Outline dimension	426 mm ×400 mm ×650 mm (W×H×D)		426 mm×532.5 mm×650 mm (W×H×D)		426 mm ×665 mm ×650 mm (W×H×D)	
	Weight	66.5kg	72kg	92.5kg	98kg	113kg	124kg

Model		AN23630E -600-2100(F)	AN23636E -600-2400(F)	AN23642E -600-2400(F)	AN23648E -600-2400(F)	AN23654E -600-2400(F)	AN23660E -600-2400(F)
Operating range	Voltage	0-600V					
	Current	0-2100A	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A
	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum working voltage		14V@2100A	14V@2400A	14V@2400A	14V@2400A	14V@2400A	14V@2400A
CC loading	Measurement range	210/1050/2100A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A
	Resolution	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
CV loading	Measurement range	60/150/600V					
	Resolution	0.5/1/5mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	10mΩ-100Ω(80V) 40mΩ-400Ω(150V) 0.4Ω-800Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)
	Resolution	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%F.S.					
CP loading	Measurement range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/6000/60000W
	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	2mA/μs-3.6A/μs (210A) 10mA/μs-18A/μs (1050A) 20mA/μs-36A/μs (2100A)	2mA/μs-3.6A/μs (240A) 10mA/μs-18A/μs (1200A) 20mA/μs-36A/μs (2400A)	2mA/μs-3.6A/μs (240A) 10mA/μs-18A/μs (1200A) 20mA/μs-36A/μs (2400A)	2mA/μs-3.6A/μs (240A) 10mA/μs-18A/μs (1200A) 20mA/μs-36A/μs (2400A)	2mA/μs-3.6A/μs (240A) 10mA/μs-18A/μs (1200A) 20mA/μs-36A/μs (2400A)	2mA/μs-3.6A/μs (240A) 10mA/μs-18A/μs (1200A) 20mA/μs-36A/μs (2400A)
	Resolution	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs
Specification	Outline dimension	530 mm×1100mm ×680 mm (W×H×D)	530 mm×1100mm ×680 mm (W×H×D)	530 mm×1365mm ×680mm (W×H×D)	530 mm×1365mm ×680mm (W×H×D)	600 mm ×1795mm ×800 mm (W×H×D)	600 mm ×1795mm ×800 mm (W×H×D)
	Weight	205kg	231kg	272kg	298kg	435kg	469kg

Specifications

Model		AN23602E -1200-80(F)	AN23603E -1200-120(F)	AN23604E -1200-160(F)	AN23605E -1200-200(F)	AN23606E -1200-240(F)	AN23608E -1200-320(F)
Operating range	Voltage	0-1200V					
	Current	0-80A	0-120A	0-160A	0-200A	0-240A	0-320A
	Power	2kW	3kW	4kW	5kW	6kW	8kW
Minimum working voltage		20V@80A	20V@120A	20V@160A	20V@200A	20V@240A	20V@320A
CC loading	Measurement range	8/40/80A	12/60/120A	16/80/160A	20/100/200A	24/120/240A	32/160/320A
	Resolution	0.1/0.5/1mA	0.1/0.5/1mA	0.2/1/2mA	0.2/1/2mA	0.2/1/2mA	0.4/2/4mA
	Accuracy	0.04%+0.06%F.S.					
CV loading	Measurement range	150/600/1200V					
	Resolution	1/5/10mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	0.3Ω-3kΩ(150V) 1.2Ω-12kΩ(600V) 30Ω-60kΩ(1200V)	0.2Ω-2kΩ(150V) 0.8Ω-8kΩ(600V) 20Ω-40kΩ(1200V)	0.15Ω-1.5kΩ(150V) 0.6Ω-6kΩ(600V) 15Ω-30kΩ(1200V)	0.1Ω-1kΩ(150V) 0.4Ω-4kΩ(600V) 10Ω-20kΩ(1200V)	0.1Ω-1kΩ(150V) 0.4Ω-4kΩ(600V) 10Ω-20kΩ(1200V)	75mΩ-0.75kΩ(150V) 0.3Ω-3kΩ(600V) 7.5Ω-15kΩ(1200V)
	Resolution	1mA/Vsense	1mA/Vsense	2mA/Vsense	2mA/Vsense	2mA/Vsense	4mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%F.S.					
CP loading	Measurement range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W
	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.1mA/μs-0.4A/μs (8A) 0.5mA/μs-2A/μs (40A) 1mA/μs-4A/μs (80A)	0.1mA/μs-0.6A/μs (12A) 0.5mA/μs-3A/μs (60A) 1mA/μs-6A/μs (120A)	0.2mA/μs-0.8A/μs (16A) 1mA/μs-4A/μs (80A) 2mA/μs-8A/μs (160A)	0.2mA/μs-1A/μs (20A) 1mA/μs-5A/μs (100A) 2mA/μs-10A/μs (200A)	0.2mA/μs-1.2A/μs (24A) 1mA/μs-6A/μs (120A) 2mA/μs-12A/μs (240A)	0.4mA/μs-1.2A/μs (32A) 2mA/μs-6A/μs (160A) 4mA/μs-12A/μs (320A)
	Resolution	0.1/0.5/1mA/μs	0.1/0.5/1mA/μs	0.2/1/2mA/μs	0.2/1/2mA/μs	0.2/1/2mA/μs	0.4/2/4mA/μs
Specification	Outline dimension	426mm×177mm×600mm (W×H×D)					426 mm ×400 mm ×650 mm (W×H×D)
	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg

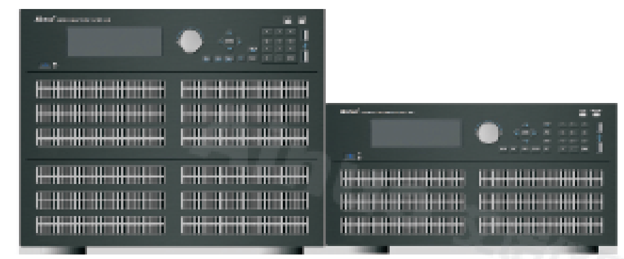
Model		AN23610E -1200-400(F)	AN23612E -1200-480(F)	AN23615E -1200-600(F)	AN23618E -1200-720(F)	AN23620E -1200-800(F)	AN23624E -1200-960(F)
Operating range	Voltage	0-1200V					
	Current	0-400A	0-480A	0-600A	0-720A	0-800A	0-960A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum working voltage		20V@400A	20V@480A	20V@600A	20V@720A	20V@800A	20V@960A
CC loading	Measurement range	40/200/400A	48/240/480A	60/300/600A	72/360/720A	80/400/800A	96/480/960A
	Resolution	0.4/2/4mA	0.5/2.5mA	0.5/2.5mA	0.5/2.5mA	1/5/10mA	1/5/10mA
	Accuracy	0.04%+0.06%F.S.					
CV loading	Measurement range	150/600/1200V					
	Resolution	1/5/10mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	50mΩ-0.5kΩ(150V) 0.2Ω-2kΩ(600V) 5Ω-10kΩ(1200V)	50mΩ-0.5kΩ(150V) 0.2Ω-2kΩ(600V) 5Ω-10kΩ(1200V)	34mΩ-0.34kΩ(150V) 0.14Ω-1.34kΩ(600V) 3.34Ω-6.67kΩ(1200V	34mΩ-0.34kΩ(150V) 0.14Ω-1.34kΩ(600V) 3.34Ω-6.67kΩ(1200V)	25mΩ-0.25kΩ(150V) 0.1Ω-1kΩ(600V) 2.5Ω-5kΩ(1200V)	25mΩ-0.25kΩ(150V) 0.1Ω-1kΩ(600V) 2.5Ω-5kΩ(1200V)
	Resolution	4mA/Vsense	5mA/Vsense	5mA/Vsense	5mA/Vsense	10mA/Vsense	10mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%F.S.					
CP loading	Measurement range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W
	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	100/500/1000mW	100/500/1000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.4mA/μs-1.4A/μs (40A) 2mA/μs-7A/μs (200A) 4mA/μs-14A/μs (400A)	0.4mA/μs-1.6A/μs (48A) 2mA/μs-8A/μs (240A) 4mA/μs-16A/μs (480A)	0.5mA/μs-1.8A/μs (60A) 2mA/μs-9A/μs (300A) 5mA/μs-18A/μs (600A)	0.5mA/μs-2A/μs (72A) 2mA/μs-10A/μs (360A) 5mA/μs-20A/μs (720A)	1mA/μs-2.2A/μs (80A) 5mA/μs-11A/μs (400A) 10mA/μs-22A/μs (800A)	1mA/μs-2.4A/μs (96A) 5mA/μs-12A/μs (480A) 10mA/μs-24A/μs (960A)
	Resolution	0.4/2/4mA/μs	0.4/2/4mA/μs	0.5/2/5mA/μs	0.5/2/5mA/μs	1/5/10mA/μs	1/5/10mA/μs
Specification	Outline dimension	426 mm ×400 mm ×650 mm (W×H×D)		426 mm×532.5 mm ×650 mm (W×H×D)		426 mm ×665 mm ×650 mm (W×H×D)	
	Weight	68.5kg	72kg	92.5kg	98kg	113kg	124kg

Specifications

Model		AN23630E-1200-1200(F)	AN23636E-1200-1440(F)	AN23642E-1200-1680(F)	AN23648E-1200-1920(F)	AN23654E-1200-2160(F)	AN23660E-1200-2400(F)
Operating range	Voltage	0-1200V					
	Current	0-1200A	0-1440A	0-1680A	0-1920A	0-2160A	0-2400A
	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum working voltage		20V@1200A	20V@1440A	20V@1680A	20V@1920A	20V@2160A	20V@2400A
CC loading	Measurement range	120/600/1200A	144/720/1440A	168/840/1680A	192/960/1920A	216/1080/2160A	240/1200/2400A
	Resolution	1/5/10mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.04%+0.06%F.S.					
CV loading	Measurement range	150/600/1200V					
	Resolution	1/5/10mV					
	Accuracy	0.025%+0.025%F.S.					
CR loading	Measurement range	20mΩ-0.2kΩ(150V) 80mΩ-0.8kΩ(600V) 2Ω-4kΩ(1200V)	17mΩ-0.17kΩ(150V) 67mΩ-0.67kΩ(600V) 1.67Ω-3.33kΩ(1200V)	14mΩ-0.14kΩ(150V) 57mΩ-0.57kΩ(600V) 1.43Ω-2.86kΩ(1200V)	13mΩ-0.13kΩ(150V) 50mΩ-0.5kΩ(600V) 1.25Ω-2.5kΩ(1200V)	11mΩ-0.11kΩ(150V) 44mΩ- 0.44kΩ(600V) 1.11Ω-2.22kΩ(1200V)	10mΩ-0.1kΩ(150V) 40mΩ-0.4kΩ(600V) 1Ω-2kΩ(1200V)
	Resolution	10mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/ Rset* (0.2%)+0.2%F.S.					
CP loading	Measurement range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000W
	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	1mA/μs-2.4A/μs (120A) 5mA/μs-12A/μs (600A) 10mA/μs-24A/μs (1200A)	2mA/μs-2.4A/μs (144A) 10mA/μs-12A/μs (720A) 20mA/μs-24A/μs (1440A)	2mA/μs-2.4A/μs (168A) 10mA/μs-12A/μs (840A) 20mA/μs-24A/μs (1680A)	2mA/μs-2.4A/μs (192A) 10mA/μs-12A/μs (960A) 20mA/μs-24A/μs (1920A)	2mA/μs-2.4A/μs (216A) 10mA/μs-12A/μs (1080A) 20mA/μs-24A/μs (2160A)	2mA/μs-2.4A/μs (240A) 10mA/μs-12A/μs (1200A) 20mA/μs-24A/μs (2400A)
	Resolution	1/5/10mA/μs	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs	2/10/20mA/μs
Specification	Outline dimension	530 mm×1100mm ×680 mm (W×H×D)	530 mm×1100mm ×680 mm (W×H×D)	530 mm×1365mm ×680mm (W×H×D)	530 mm×1365mm ×680mm (W×H×D)	600 mm ×1795mm ×900 mm (W×H×D)	600 mm ×1795mm ×900 mm (W×H×D)
	Weight	205kg	231kg	272kg	298kg	435kg	469kg

General parameters				
Voltage		150 V	600 V	1200 V
Composite impedance	Measurement range	LS: 0.1uH~20uH RS: 30mΩ~20Ω CL: 30uF~50000uF RL: Same as CR mode high range		
	Resolution	LS: 0.1uH RS: 1 mΩ CL: 1uF RL: Same as CR mode high range		
LED test	Measurement range	coeff: 0.01~1		
Battery test	Discharging time	1s~100000s		
	Resolution	1s		
Current dynamics	T1&T2	0.020~99.999ms/100ms~99999ms		
	Resolution	2us/1ms		
	Accuracy	2us+100ppm		
	Minimum rise time	100us(Typical)		
Current measurement	Range/resolution	Same as CC loading		
	Accuracy	Same as CC loading		
Voltage measurement	Range/resolution	Same as CV loading		
	Accuracy	0.015%+0.015%F.S.		
	Input resistance	800kΩ (Typical)	1MΩ (Typical)	2MΩ (Typical)
Power measurement	Range/resolution	Same as CP loading		
	Accuracy	0.1%+0.1%F.S.*UF.S.		
Working temperature, humidity		0 ~ 40℃, 20-90%RH		
Temperature coefficient		100ppm/℃ (Typical)		

AC/DC Electronic Load
AN29(F) Series



Product Introduction

AN29(F) series AC/DC electronic load has flexible parallel and online functions. When multiple units are connected in parallel, they can expand the current and power, meeting testing requirements of high-power single-phase power supplies. When three-phase online, a three-phase load is formed to meet the three-phase power testing requirements. Multiple units can also be connected in parallel to form a high-power three-phase electronic load.

Features

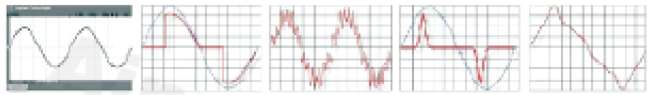
- CE
- Power Capacity: 1400W~ 8400W
- Working voltage is low to 2V, and up to 350Vrms
- Current range: 10Arms~60Arms, peak current: 45A~ 270A
- Frequency range: 44~ 1000Hz, DC
- Peak factor: 1.4 ~ 5.0000
- Adjustable power factor, setting range 0-1.0
- 3 units in parallel to realize 3 phase load
- Work mode: Constant current CC, constant resistance CR, constant power CP
- Current shift: current shift can be adjusted under testing
- DC: Static loading, dynamic loading, 40 programming steps
- AC: Waveform simulation, sine, 3-15 harmonic, phase gate, crest factor
- Upper/lower limits adjustment, over limit alarming(GO/NG)
- Remote voltage detect sense port, used for precise measurement, eliminate wires voltage drop
- Protection function: Over voltage, over current, over power, over heat, DC reversed polarity
- Measurement parameter: U, I, P, F and PF

Order information and extended functions

- AN29201(F): AC/DC Electronic Load 260V/10A/1400W
- AN29202(F): AC/DC Electronic Load 260V/20A/2800W
- AN29203(F): AC/DC Electronic Load 260V/30A/4200W
- AN29204(F): AC/DC Electronic Load 260V/40A/5600W
- AN29205(F): AC/DC Electronic Load 260V/50A/7000W
- AN29206(F): AC/DC Electronic Load 260V/60A/8400W
- RS485, GPIB optional

Production Function

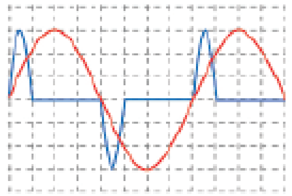
Waveform simulation



Test Function

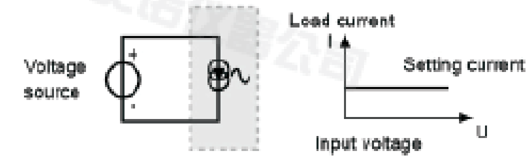
Power factor test

Simulate inductive and capacitive load, PF is from 0 to 1. If load current phase shift and PF are both need to set, PF can be set on front panel easily, do not need wire connection.



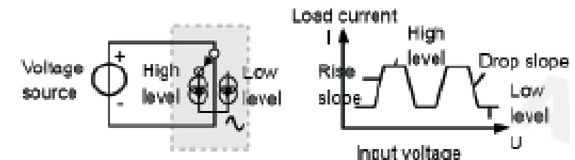
Regulation test

Under CC mode, load current is just changing setting value, not with DUT output voltage. Please refer to the characteristic curve.



Dynamic performance test

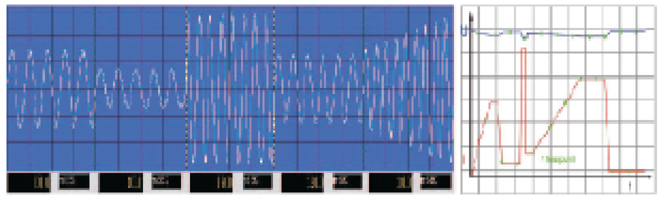
Dynamic mode is switching between 2 levels in cycle, please refer to the characteristic curve. Dynamic current rising/dropping slope can be adjusted separately.



Dynamic mode

Programmable steps

4 groups, 10 steps/group. 4 groups can be parallel into 40 steps, and also can be divided into separated steps.


Programmable steps loading waveform
Programmable DC loading waveform

Connect in parallel and series

3 units in parallel to realize 3 phase load.

Specifications

Model		AN29201(F)	AN29202(F)	AN29203(F)
Power capacity		1400W	2800W	4200W
Current		0 ~ 10Arms (45Apeak)	0 ~ 20Arms (90 Apeak)	0 ~ 30Arms (135 Apeak)
Voltage		2~ 280Vrms (360 Vpeak)，can customize 350Vrms (500Vpeak)		
	Frequency	44 ~ 1000Hz, DC		
AC mode CC mode	Setting range	0 ~ 10Arms, programmable	0 ~ 20Arms, programmable	0 ~ 30Arms, programmable
	Accuracy	50/60/400Hz:0.1% + 0.2%×range		
	Resolution	2mA	5mA	5mA
CR mode	Setting range	1~1200Ω, programmable	1Ω~600Ω, programmable	1Ω~400Ω, programmable
	Accuracy	50/60Hz: ±（1.5% +0.5%×range） 400Hz: ±（1.5% +1.0%×range）		
	Resolution	0.2Ω	0.1Ω	0.067Ω
CP mode	Setting range	1400W, programmable	2800W, programmable	4200W, programmable
	Accuracy	DC/50/60/400Hz: 0.2% + 0.3%×range		
	Resolution	0.25W	0.5W	0.75W
Crest setting range	Setting range	1.4 ~ 5.0, programmable		
Gate trigger mode	Turn on angle	0-359°		
	Turn off angle	1-360°		
Harmonic mode	Order	1-15		
	Setting range	0-1		
	Resolution	0.1%		
Power factor mode	Setting range	0 ~ 1 lead or lag, programmable	0 ~ 1 lead or lag, programmable	0 ~ 1 lead or lag, programmable
	Accuracy	1%×range	1%×range	1%×range
	Resolution	0.01		
Rectifying load mode	Frequency	45Hz ~ 70Hz		
	R, L, I mode	Rs, Ls, C, RL		
	Inductor parasitic resistance setting range	0 ~ 9.999Ω	0 ~ 9.999Ω	0 ~ 9.999Ω
	L setting range	0 ~ 9999μH	0 ~ 9999μH	0 ~ 9999μH
	C setting range	100 ~ 9999μF	100 ~ 9999μF	100 ~ 9999μF
	R setting range	2.77 ~ 9999.99Ω	1.39 ~ 9999.99Ω	1.11 ~ 9999.99Ω
DC mode	Voltage range	2V ~ 260V	2V ~ 280V	2V ~ 280V
	Current range	0A ~ 10A	0A ~ 20A	0A ~ 30A
	Min working voltage	2V	2V	2V
	Rising time	1ms		
	Work mode	CC, CR, CP, Dynamic		
	Short circuit simulation	CR		
Meas.	Voltage Meas. range	260V	260V	260V
	Voltage accuracy	0.1% + 0.1%×range	0.1% + 0.1%×range	0.1% + 0.1%×range
	Voltage resolution	100mV	100mV	100mV
	Current Meas. range	10.00A	20.00A	30.00A
	Current accuracy (50/60/400Hz)	0.1% + 0.2%×range	0.1% + 0.2%×range	0.1% + 0.2%×range
	Current resolution	2.0mA	4.0mA	6.0mA
	Other parameters	W, VA, VAR, PF, Freq, distortion		
Other	Protection	OCP: 10.5Arms; OVP: 273Vrms; OPP: 1470W; Over heat	OCP: 21Arms; OVP: 273Vrms; OPP: 2940W; Over heat	OCP: 31.5Arms; OVP: 387Vrms; OPP: 4410W; Over heat
	Interface	Standard RS232, optional USB, remote		
	Input	115/230 Vac ±15%		
	Dimension (W×H×D)	440×222×465		
	Bracket height (mm)	15		

Specifications

Model		AN29204(F)	AN29205(F)	AN29206(F)
Power capacity		5600W	7000W	8400W
Current		0 ~ 40Arms (180Apeak)	0 ~ 50Arms (225 Apeak)	0 ~ 60Arms (270 Apeak)
Voltage		2~ 260Vrms (360 Vpeak)，can customize 350Vrms (500Vpeak)		
	Frequency	44 ~ 1000Hz, DC		
AC mode CC mode	Setting range	0 ~ 40Arms, programmable	0 ~ 50Arms, programmable	0 ~ 60Arms, programmable
	Accuracy	DC/50/60/400Hz:0.1% + 0.2%×range		
	Resolution	7mA	9mA	10mA
CR mode	Setting range	1Ω~300Ω, programmable	1Ω~240Ω, programmable	1Ω~200Ω, programmable
	Accuracy	DC/50/60Hz: ±（1.5% +0.5%×range） 400Hz: ±（1.5% +1.0%×range）		
	Resolution	0.05Ω	0.04Ω	0.04Ω
CP mode	Setting range	5600W, programmable	7000W, programmable	8400W, programmable
	Accuracy	DC/50/60/400Hz: 0.2% + 0.3%×range		
	Resolution	1W	1.25W	1.5W
Crest setting range	Setting range	1.4 ~ 5.0, programmable		
Gate trigger mode	Turn on angle	0-359°		
	Turn off angle	1-360°		
Harmonic mode	Order	1-15		
	Setting range	0-1		
	Resolution	0.1%		
Power factor mode	Setting range	0 ~ 1 lead or lag, programmable	0 ~ 1 lead or lag, programmable	0 ~ 1 lead or lag, programmable
	Accuracy	1%×range	1%×range	1%×range
	Resolution	0.01		
Rectifying load mode	Frequency	45Hz ~ 70Hz		
	R, L, I mode	Rs, Ls, C, RL		
	Inductor parasitic resistance setting range	0 ~ 9.999Ω	0 ~ 9.999Ω	0 ~ 9.999Ω
	L setting range	0 ~ 9999μH	0 ~ 9999μH	0 ~ 9999μH
	C setting range	100 ~ 9999μF	100 ~ 9999μF	100 ~ 9999μF
	R setting range	1 ~ 9999.99Ω	1 ~ 9999.99Ω	1 ~ 9999.99Ω
DC mode	Voltage range	2V ~ 260V	2V ~ 260V	2V ~ 260V
	Current range	0A ~ 40A	0A ~ 50A	0A ~ 60A
	Min working voltage	2V	2V	2V
	Rising time	1ms		
	Work mode	CC, CR, CP, Dynamic		
	Short circuit simulation	CR		
Meas.	Voltage Meas. range	260V	260V	260V
	Voltage accuracy	0.1% + 0.1%×range	0.1% + 0.1%×range	0.1% + 0.1%×range
	Voltage resolution	100mV	100mV	100mV
	Current Meas. range	40.00A	50.00A	60.00A
	Current accuracy (50/60/400Hz)	0.1% + 0.2%×range	0.1% + 0.2%×range	0.1% + 0.2%×range
	Current resolution	8.0mA	10.0mA	12.0mA
	Other parameters	W, VA, VAR, RF, Freq, distortion		
Other	Protection	OCP: 42Arms; OVP: 273Vrms; OPP: 2880W; Over heat	OCP: 52.5Arms; OVP: 273Vrms; OPP: 7350W; Over heat	OCP: 63Arms; OVP: 273Vrms; OPP: 8820W; Over heat
	Interface	Standard RS232, optional USB, remote		
	Input	115/230 Vac ±15%		
	Dimension (W×H×D)	440×354×465		