Ainuo Instrument Co., Ltd.

PRODUCT CATALOG 2025

Ainuo

Qingdao Ainuo Instrument Co., Ltd.

Add: No. 134 Zhuzhou Road, Qingdao, China P.C.: 266101 Fax: +86.532.8399.5168 E-mail: ainuoworld@ainuo.com Web: www.ainuoworld.com

Toll Free Service: 400-0532-991

Shandong Ainuo Intelligent Instrument Co., Ltd.

Add: No.1069 Gangxing 3rd Road, Export Processing Zone, Jinan, China P.C.:250104 Fax:+86-532-8399-5168 E-mail: ainuoworld@ainuo.com Web: www.ainuoworld.com



















Ainuo 111 THE DIFFERENCE FOR FOR 百折而后

Jinan Company



Qingdao Company



1993 Since

Ainuo

COMPANY >>>

Founded in 1993 in the Qilu region, Ainuo Instruments Co., Ltd. operates self-built industrial parks in Jinan and Qingdao. For 30 years, the company has focused on the research, development, and production of electrical measuring instruments, test power supplies, and specialized power systems. Ainuo has focused on scientific research and technological innovation for many years and has won many honors such as National High-tech Enterprise, Shandong "Specialized and Innovative" Small and Medium-sized Enterprise, Qingdao New Economic Potential Enterprise, Qingdao New Economic Emerging Enterprise, Qingdao Young Eagle Enterprise, and Qingdao "One Enterprise, One Technology" R&D Center. Ainuo also actively supports industry development, serving as a governing member of the China Power Supply Society and the Shandong Aerospace Society.

Ainuo's core products include electrical safety testers, AC/DC power supplies, ground PSU for aircraft, motor test systems, power analyzers, and AC/DC electronic loads. These are widely used in sectors such as new energy, electric vehicles, household appliances, motor manufacturing, and switch-mode power supplies, as well as in aerospace, naval, railway systems, defense, and power utilities. They also serve quality inspection agencies and research institutes. All Ainuo products possess complete independent intellectual property rights, with over 300 proprietary intellectual property items, including more than 90 invention patents, and the company has led or participated in the formulation of multiple national standards, industry standards, and metrology procedures and specifications.

Ainuo Instruments adheres to a customer-centric approach, with core values of integrity, inclusiveness, continuous improvement, and excellence. The company's mission is to provide customers with precise, efficient, and world-class test&measurement technical solutions. It is committed to continuous business improvement, enhancing customer value with quality and innovation, and achieving outstanding performance. Ainuo aspires to follow the path of innovation, build a century-old enterprise, and become a global leader in test&measurement technical solutions.

Company Qualification



学技术进步奖

Shandong Gazelle Enterprise

Progress Award



CE Certificate

Quality Management System Certification -- Shandong Ainuo

China Electrical Safety Product Standards That Ainuo Participated In Drafting

No	Electrical Safety Product Standards	Stard No.
1	China eletrical industrial standard - «General specification of leakage current tester»	SJ/T 11383-2008
2	China eletrical industrial standard - «General specification of withstanding voltage tester»	SJ/T 11384-2008
3	China eletrical industrial standard - «General Standard of Insulation Resistance tester»	SJ/T 11385-2008
4	China eletrical industrial standard - «General specification of earth coninuity tester»	SJ/T 11386-2008
5	China national standard - «Earth Continuity tester»	GB/T 28030-2011
6	China national standard - «General specification for DC electronic load»	GB/T 29843-2013
7	China national standard - «Leakage Current tester»	GB/T 32191-2015
8	China national standard - «Withstanding Voltage tester»	GB/T 32192-2015
9	China eletrical industrial standard - «General specification for variable frequency and voltage power supplies»	SJ/T 10691-2022
10	China eletrical industrial standard - «General specification for digital power analyzer»	SJ/T 11821-2022











High-tech Enterprise Certificate





Quality Management System Certificate -- Qingdao Ainuo

Ainuo Product Catalogue

Safety Analyzer

Electrical Safety Comprehensive Analyzer		
Efficient Electrical Safety Comprehensive Tester	AN9640H(F)/AN9651H(F)/AN9651H-C(F)	P02
Intelligent Safety Analyzer	AN1640H(F)/AN1651H(F)/AN1651TH(F) Series 🔥	P05
Electrical Safety Comprehensive Tester	AN9640B(F)/AN9651F(F)	P08
Intelligent Safety Analyzer	AN1651H-M(F)/AN1640H-M(F)/AN1620H-M(F) Series NEW	P09
Multifunctional Electrical Safety Analyzer		
Comprehensive Electrical Safety Analyzer	AN9636HC(F)/AN9637HC(F)/AN9637HC8(F)	P11
Intelligent Safety Analyzer	AN1636H(F)/AN1638H(F)/AN1639H(F) Series 🔥	P13
Intelligent Safety Analyzer	AN1635H-10kV(F)/AN16310H(F)/AN16320A(F) Series	P15
Intelligent Safety Analyzer	AN1633A(F)/AN1633B(F) Series NEW	P16
Comprehensive Electrical Safety Analyzer	AN96XXB(F) Series	P17
New Energy Vehicle Safety Analyzer	AN166X(F) Series 🔥	P18
Single-function Electrical Safety Tester		
ACW, IR and GB Analyzer	AN96XXB(F) Series	P20
Grounding Resistance Analyzer	AN161XH(F) Series	P21
Contact Current Analyzer	AN1620H(F) Series	P22
Lithium Battery Safety Tester		
Pulse Lithium Battery Cell Short Circuit Tester	ANBTS7201(F) Series A	P23
Large Capacity Pulse Lithium Battery Cell Short Circuit Tester	ANBTS7202(F) Series	P25
Insulation Resistance Tester	ANBTS7101(F) Series	P26
High-accuracy Battery Tester	ANBTS7501H(F)	P27
71/2-digit DC Voltmeter	ANBTS7610(F) Series	P29
Battery Tester	ANBTS7500(F) Series NEW	P30
Battery Tester	ANBTS7520(F) Series	P31
Lithium Battery-Intelligent Safety Regulation Comprehensive Analyzer	ANBTS743xH(F) Series	P33
Lithium Battery Intelligent Safety Regulation Analyzer	ANBTS7436H-12kV(F) Series	P35
Electrical Safety Calibrator / Software		
Electrical Safety Comprehensive Calibrator	AN965-15(F)	P36
Withstand Voltage Calibrator	AN16015H(F)	P37
Safety Tester Remote Control Software	ESRS	P38

AC Power Supply

AC Power Supply		
AC Power Supply	ANFH(F) Series	
AC Power Supply	ANFC(F) Series	
AC Power Supply	ANFS(F) Series	
Programmable High Power AC Power Supply	ANFP(F) Series	
Programmalbe AC Test Power Supply		
Programmalbe AC Test Power Supply	AN61(F) Series 🔥	
Programmalbe Grid Simulator	ANGS(F) Series	
Regenerative AC Power Supply		
Regenerative Grid Simulator	ANRGS(F) Series NEW	
Bidirectional Grid Simulator	ANBGS(F) Series 🔥	
Bidirectional Grid Simulator (Pro)	ANBGS(F) Series (Pro)	
Constant Current AC Power Supply		
Constant Current AC Power Supply	ANCC(F) Series	

DC Power Supply

Programmable DC Power Supply	
DC Voltage-stabilized Power Supply	AN50(F) Low Power Series
Programmable DC Power Supply	AN51(F) Series
Wide Range Programmable DC Power Supply	AN53(F) Series 👌
Programmable Bidirectional DC Power Supply	ANEVH(F) Series 🔥
High Power Bidirectional DC Power Supply	ANEVT(F) Series
Dual-channel Bidirectional DC Power Supply	ANEVT DA(F) Series
Battery Simulator DC Power Supply	
Battery Simulator	ANEVS(F) Series 🔥

Power Analyzer

Dual-channel Battery Simulator

		12702101
Multi-channel High Precision Power Analyzer	ANPA4000(F) NEW	P124
Multi-channel High Precision Power Analyzer	AN87660(F) 🔥	P128
Compact Multi-channel Power Analyzer	AN87400(F) 🔥	P134
Three-phase Power Analyzer	AN87330(F) 🔥	P138
Single-phase Power Analyzer	AN87310(F)	P140

Motor Test Scheme

P40 P43 P47 P51

P55 P63

P67 P74 P79

P83

Partial Discharge (PD) Tester	AN8A10PD(F) Series NEW	P143
Motor Stator/Complete Machine Comprehensive Tester	AN8A10RT(F) Series 🔥	P145

Electronic Load

Lower Power DC Electronic Load	AN235(F) Series	P148
High Power DC Electronic Load	AN236(F) Series 🔥	P154
High Power Bidirectional DC Electronic Load	ANEL(F) Series 🔥	P164
AC/DC Electronic Load	AN29(F) Series	P167

ANEVH(F) Series 🔥	P101
ANEVT(F) Series	P110
ANEVT DA(F) Series	P113
ANEVS(F) Series 🔥	P116
ANEVS DA(F) Series	P120

P87

P94

P96

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



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



Comprehensive Electrical Safety Analyzer AN9636HC(F)/AN9637HC(F) /AN9637HC8(F)



Comprehensive Electrical Safety Analyzer AN96XXB(F) Series



Contact Current analyzer AN1620H(F) Series

3,100 0-

High-accuracy Battery

Tester

ANBTS7501H(F)



Ainuo Product Catalogue Safety Analyzer

Intelligent Safety Analyzer AN1640H(F)/AN1651H(F)/ AN1651TH(F) Series



Intelligent Safety Analyzer AN1636H(F)/AN1638H(F)/ AN1639H(F) Series



New Energy Vehicle Safety Analyzer AN166X(F) Series

Pulse Lithium Battery Cell Short

Circuit Tester

ANBTS7201(F) Series

12 000 00

71/2-digit DC

Voltmeter

ANBTS7610(F) Series



ANBTS7202(F) Series



Battery Tester

ANBTS7500(F) Series



Battery Tester ANBTS7520(F) Series



Withstand Voltage Calibrator AN16015H(F)



Safety Tester Remote Control Software ESRS





Product Overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. The AN9640H(F) series Efficient Electrical Safety Comprehensive Tester features complete functions, high reliability, and high cost-effectiveness, meeting the comprehensive safety performance testing needs for various production lines such as household appliances.

Features /

- Seven-in-one: ACW/DCW/IR/GB/LC/PW/ST
- High precision: 1% accuracy for safety tester, 0.2% accuracy for power
- High speed: GB and ACW/DCW/IR in parallel, fast switching, fast test
- Automation: RS232/LAN/USB/BARCODE/PLC/ALARM/REMOTE interface
- Informatization: Optional industrial PC and ESRS software for data storage and MES integration



Analyzer ANBTS743xH(F)



Calibrator AN965-15(F)



Electrical Safety

Comprehensive

.

....

....

Electrical Safety

Comprehensive Tester

AN9640B(F)/AN9651F(F)

Intelligent Safety Analyzer

AN1635H-10kV(F)/AN16310H(F)

AN16320A(F)



Large Capacity Pulse Lithium Battery Cell Short Circuit Tester





Intelligent Safety Analyzer

AN1651H-M(F)/AN1640H-M(F)/

AN1620H-M(F) Series

Intelligent Safety Analyzer

AN1633A(F)/AN1633B(F) Series



AN161XH(F) Series









P01

ACW, IR and GB Analyzer AN96XXB(F) Series



Ainuo // Safety Analyzer

Exceeding & Trustworthy

Applications

Safety of household and similar electrical appliances (GB4706.1/IEC60335-1)

- Audio and video, information technology, and communication technology equipment (GB4943.1/ IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)

Luminaires (GB/T7000.1/IEC60598-1)

Electric vehicle conductive charging system (GB/T18487.1)

Specifications

Model	AN9640H(F)	AN9651H(F)	AN9651H-C(F)
AC withstand voltage (ACW)	5kVac/100mA (500VA output capacity, 200mA short-circuit current) (optional dynamic ACW)		
DC withstand voltage (DCW)	6kVdc/20mA		
Insulation resistance (IR)	3kVdc/50GΩ		
Ground resistance (GB)	40Aac/600mΩ		
Leakage current (LC)	20mA leakage current, MD-A network (IEC60990 Fig. 4, up to 8 networks), RMS measurement;		
Power test (PW)	300V/20A/6kW (optional 10kW)		
Starting test (ST)	300V/25A		
DUT power supply	External isolated power supply is required (optional built-in 500VA power supply) Standard 6kVA variable frequency power supply cabine		ble frequency power supply cabinet
Parallel test		Parallel GB, IR/ACW/DCW t	lest
Display operation	LCD display, n	umeric keypad	PC/ESRS measurement and control system
Control interface	RS232/LAN (optional)	/USB (store)/BARCODE/PLC//	ALARM/REMOTE interface
Standard accessories	Test box (3m), test clamp (3m), foot switch (2.5m), alarm lamp (0.8m), auxiliary power cable (1.9m)		
Optional accessories	Tester calibrator, barcode scanner, label printer		
Dimensions (W×H×D mm)	426×177×550	4	483×1350×600

Over 30 years of industry experience, meeting the test needs of more segmented industries and complete all tests with just one-click and one wiring.

Multiple start modes: button on front panel/remote control/barcode scanner/grounding clamp;





Electric fan/rice cooker/energy-saving lamp AC/DC withstand voltage/insulation/grounding Multi level power automatic judgment 0.10W low-power measurement



Parallel GB, IR/ACW/DCW test.

- AN9640H(F) Series Efficient Electrical Safety Comprehensive Terror
- With parallel GB, IR/ACW/DCW test.
- Significantly reducing the testing time, double the production capaof the production line.

Build information test platform with industrial PC and ESRS measurement and control software.

- This AN9651H-C(F) Series Efficient Electrical Safety Comprehensive Tester is designed with automation and information test functions:
- (1) Barcode scanning/barcode recognition/calling programs/starting test;
- (2) Local store/filter/export;
- (3) Optional MES connection, active data upload, query upload, and breakpoint continuation; downloading test programs from the server; multiple database connection, including SQL Server, Oracle, MySQL and other database intermediate table connection, Modbus TCP connection, Web API connection, as well as local TXT text and Access database connection.



Safety Analyzer Ainuo

ster.	Routine test 4s	G	B 2s	IR 1s	ACW 1s
	Domilal test 2a	G	B 2s		
acity	Parallel test 2s	IR 1s	ACW 1s		

Intelligent Safety Analyzer AN1640H(F)/AN1651H(F)/AN1651TH(F) Series





Product overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. The AN1640H(F) Series Intelligent Safety Analyzer features complete functions, high precision, high speed, automation, informatization, and intelligent, meeting the comprehensive testing needs of fast cycle, multi variety, and informatization safety performance of single-phase and three-phase household appliances, charging piles, and similar electrical product production lines.

Features

Eight-in-one

ACW/DCW/IR/GB/LC/PW/ST/Loop

High precision

1% accuracy for safety tester, 0.2% accuracy for power

High speed

J GB and ACW/DCW/IR in parallel, LC and PW in parallel

Automation

RS232/LAN/USB/BARCODE/PLC/ALARM/REMOTE/HDMI interface

Intelligent

Android platform, 10" touchscreen, scene recognition, intelligent matching, automatic test

Applications

Safety of household and similar electrical appliances (GB4706.1/IEC60335-1)

- Audio and video, information technology, and communication technology equipment (GB4943.1/ IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)
- Luminaires (GB/T7000.1/IEC60598-1)
- Electric vehicle conductive charging system (GB/T18487.1)

Specifications

Model	AN1640H(F)	AN1651H(F)	AN1651TH(F)
AC withstand voltage (ACW)	5kVac/100mA (50	0VA output capacity, 200mA short-circuit c	urrent) (optional dynamic ACW)
DC withstand voltage (DCW)	6kVdc/20mA		
Insulation resistance (IR)		3kVdc/50GΩ	
Ground resistance (GB)	40Aac/600mΩ (optional 64A)		
Leakage current (LC)	20mA leakage current, MD-A/F network (IEC60990 Fig. 4, Fig. 5, up to 8 networks); RMS and peak measurement;		20mA leakage current, MD-A network (IEC60990 Fig. 4, up to 8 networks); RMS and peak measurement;
Power test (PW)	Single-phase 300V/20A/6kW (Optional multiple power levels, low power, and 10kW)		Single-phase 300V/30A/6kW Three-phase 300V/30A/20kW (Optional 60kW, 90kW)
Startup test (ST)	300V/25A		300V/30A
Loop test (LN)	(Option	voltage AC, 1~999Ω)	
DUT power supply	External isolated power supplyis required(Optional built-in 500VA power supply)	Standard 6kVA variable frequency power supply cabinet	Built-in 20kVA isolation transformer, optionalexternal variable frequency power supply;(Optional 60KW or 90kW, standard external isolation transformer chassis
Parallel test	GB and ACW/DCW/IR in	GB and ACW/DCW/IR in parallel, LC and PW in parallel	
HMI	Android platform, 10" touchso	LARM/REMOTE/HDMI (optional) interface	
Standard accessories	Test box (3m), test clamp (3m), foot switch (2.5m), alarm lamp (0.8m), auxiliary power cable (1.9m)		
Optional accessories	Spot check device, barcode scanner	, label printer, industrial PC, ESRS software	; external HDMI monitor, wireless keyboard/mous
Dimensions (W×H×D mm)	426×177×550	520×1365×630	520×1365×630

- Over 30 years of industry experience, meeting the test needs of more segmented industries and complete test of all items with just one-click and one wiring.
- Multiple MDs: up to 8 MD options, covering various industry test standard requirements;
- Multiple start modes: button on front panel/remote control/barcode scanner/grounding clamp;





Safety Analyzer

Ainuo



Electric fan/rice cooker/energy-saving lamp AC/DC withstand voltage/insulation/grounding

Multi level power automatic judgment 0.10W low-power measurement





GB and IR/ACW/DCW/ in parallel, LC and PW in parallel.

* AN1640H(F) series Intelligent Safety Analyzer, with parallel GB, IR, ACW/DCW test, as well as parallel test of dynamic LC and PW parameters, significantly reducing the testing time, double the production capacity of the production line.

Stort Test	File: instValtRamp		16 P	
ⁿⁱ Ground	ing maiatance	1 m2 10	ACW	
Duigiat current	(\$ \$5,0,0e2 - 1960e8; 660	Output voltage	19094, 9.00m4 = 3.0	Pr4 61x 90.84 1.0
1	0.0	1	.500)
- Grounding resistance		Outpul current		
	0.4	0	.049)
Test time 2.1s		Test time 2.0s		
	lesting	1	In testing	_
Qualified/Total wo-or	V S/N 50000138660			13/44

Routine test 4s	GB 2s		IR 1s	ACW 1s
Dowellal to at Oa	G	B2s		
Parallel test 2s	IR 1s	ACW 1s		

Routine test 8s	LC 4s	PW 4s
Develle Head de	LC 4s	
Parallel test 4s	PW 4s	

The AN1640H(F) Series Intelligent Safety Analyzer can build information test platform and no PC is required:

①Support barcode scanning/barcode recognition/calling programs/startup test;

2 Local store, data filter, report generation, data export, and other functions;

③Real-time data upload/download through LAN interface and Manufacturing Information System (MES);

(1) Support HDMI LCD display and wireless keyboard/mouse, clear display, convenient.



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



Product overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. The AN9640B(F) Series Electrical Safety Comprehensive Tester features complete functions, high reliability, and high cost-effectiveness, meeting the comprehensive safety performance testing needs for various production lines such as household appliances.

Features

Six-in-one: ACW/IR/GB/LC/PW/ST

- Compliance: 500VA ACW/DCW capacity, 32A GB/LC test
- Convenience: one-click to start and complete all tests after one time wiring
- Rich interfaces: RS232/ALARM/REMOTE/PLC etc
- Informatization: industrial PC and ESRS software

Specifications

Model	AN9640B(F)	AN9651F(F)	
AC withstand voltage (ACW)	5kVac/100mA		
Insulation Resistance (IR)	1kVdc/2000ΜΩ		
Ground resistance (GB)	32Aac/	600mΩ	
Leakage current (LC)	300V/20A, MD-A (IEC60990 Fig. 4), RMS measurement		
Power test (PW)	300V/20A/6kW		
Starting test (ST)	300V/25A		
Operation interface	5.5" LCD display, R	S232\PLC interface	
Load power supply	External isolated power supply is required	Built-in 6kW variable frequency power supply	
Dimensions (W×H×D mm)	426×178×600	483×1355×600	



Applications

- Safety of household and similar electrical appliances (GB4706.1/IEC60335-1)
- Audio and video, information technology, and communication technology equipment (GB4943.1/ IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)
- Luminaires (GB/T7000.1/IEC60598-1)
- Electric vehicle conductive charging system (GB/T18487.1)

Intelligent Safety Analyzer

AN1651H-M(F)/AN1640H-M(F)/AN1620H-M(F) Series



Product overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. The AN1640H-M series Intelligent Safety Analyzer features complete functions, legal compliance, easy operation, and informatization, suitable for test of medical electrical equipment safety standards.

Features

- Six-in-one: ACW/IR/GB/LC/PW/ST
- Legal: Meet the safety test requirements of GB9706/IEC60601 Medical electrical equipment
- Convenience: automatic programming, multi network and multi-channel switching, automatic test of one-time wiring
- Informatization: PC/SRS software, local data management, MES database connection

Applications

- Medical electrical equipment
- (GB9706.1-2020/IEC60601-1:2012) Safety requirements for electrical equipment for measure-
- ment, control, and laboratory use (GB4793.1/IEC61010-1)

Specifications

Model	AN1651H-M(F)	AN1640H-M(F)	AN1620H-M(F)
AC withstand voltage (ACW)	5kVac/100mA (500VA output capacity, 200mA short	-circuit current) (optional dynamic ACW/DCW)	None
DC withstand voltage (DCW)	6kVdc/20mA		None
Insulation Resistance (IR)	3kVdc/50GΩ		None
Ground resistance (GB)	40Aac/600mΩ (O	40Aac/600mΩ (Optional 64A)	
Leakage current (LC)	20mA Leakage current, MD-C/unweighted C/E n	etwork (up to 8 networks); AC/DC RMS and peak	measurement;
Multi-channel switching	(Optional switching unit: 8 for ACW/DCW, 8 for LC, 1 for GB)	(Optional external switching unit: 8 for ACW/DCW, 8 for	LC, 1 for GB)
DUT power supply Auxiliary voltage	Standard 6kVA variable frequency power supply and auxiliary power supply	d External isolation power supply is required (optional built-in 500VA variablefrequency power suppl	
HMI	Android platform, 10" touchscreen, RS232/LAN/U	ISB/BARCODE/PLC/ALARM/REMOTE/HDMI (op	tional) interface
Standard accessories	Test box (3m), test clamp (3m), foot switch	h (2.5m), alarm lamp (0.8m), auxiliary power cable	e (1.9m)
Optional accessories	(PC, ESRS software, spot check device, barcode	scanner, label printer, HDMI monitor, wireless ke	yboard/mouse)
Dimensions (W×H×D mm)	520×1365×630	426×177×550	

- Specially designed for standard test of safety of medical electrical equipment, simple, one-click completion of all tests after one-time wiring.
- Multiple MDs: Standard medical electrical equipment (GB9706.1-2020/IEC60601-1:2012) MD network, up to 8 leakage MDs options, meeting various industry test standard requirements;
- Multi-channel switching: Standard 8-channel ACW/DCW/IR switching. Set HV/Off for the network power supply and patient connection. Set On/Off for PE, case, patient connection, signal I/O, display screen, keyboard, etc. Standard 1-channel GB test.
- Leakage contact current; meets the requirements for test of ground leakage current (Fig. 13), contact current (Fig. 14). patient leakage current (Fig. 15, 16, 17, 18), and patient auxiliary current (Fig. 19).
- Two shortcuts: The setting for LC test is complex. This analyzer provides manual/auto settings modes, with unique and quick operation to simplify the complexity and reduce the difficulty of operation for users.

6-step easy operation: 10" touchscreen, manual/auto LC test, illustrated with text.



Combination of the safety analyzer and the multi-channel switching unit, strong scalability, one-click completion of all tests after one-time wiring.

The test terminals of the safety analyzer are fixedly connected to the input terminals of the switching unit, without manual connection by operator.



 Switching unit outputs multi-channel ACW/DCW, IR, GB, and LC test terminals. The operator just connects the wires one time, and the test system automatically switches the test channel according to the test items, completing all tests with one-click.

- . The safety analyzer and the switching unit are controlled via industrial PC to build the test system.
- . The safety analyzer can also be directly connected to the communication control switching unit to build the minimum test system

Comprehensive Electrical Safety Analyzer AN9636HC(F)/AN9637HC(F)/AN9637HC8(F)

-	Filential - Local sent		Ainus	I DOWNED BARTY MALTINE
11015	1.75	- 0 0 0		
-	0.501-			
	0.4		K.	
	Nit Nit			

Product Overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. The AN963XHC(F) Series Comprehensive Electrical Safety Analyzer has the characteristics of complete functions, high performance, automation, and informatization, providing comprehensive safety test solutions for various electrical products.

Features

- Five-in-one: ACW/DCW/IR/ACGB/DCGB
- High performance: 1% basic accuracy for safety tester, ARC test, GUARD/RETURN mode
- Automation: RS232/LAN/USB/BARCODE/IO/ALARM interfaces
- Informatization: barcode scanning and automatic recognition, optional ESRS measurement and control software

Applications

- Audio and video, information technology, and communication technology equipment (GB4943.1/ IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)
- Safety Requirements of traction battery used by electric vehicles (GB38031-2020)
- Safety requirements of secondary lithium cells and batteries used in electrical energy storage systems (GB44240-2024)
- Technical requirements for power conversion system of electrochemical energy storage system (GBT34120-2023)
- Electric vehicle conductive charging system (GB/T18487.1)
- Terrestrial photovoltaic (PV) modules Design gualification and type approval (IEC61215-1-2021)
- Technical specifications of junction box for terrestrial solar-photovoltaic modules (GB/T 37410-2019)
- Technical requirements for photovoltaic gird-connected inverter (GB/T37408-2019)
- General principles low voltage switchgear and controlgear Part 1 (GBT14048.1/IEC60947-1)

Specifications		
Model Function	AN9636HC(F) ACW/DCW/IR	م
AC withstand voltage (ACW)		5kVac/
DC withstand voltage (DCW)		
Insulation Resistance (IR)		
AC ground bond resistance (GB)	None	
DC ground bond resistance (DCGB)		(Option
Multiple cards	Optional multi-channel ACW/DCW and DC (When more than one card is inse for each additional card	C low resistance ca rted, additional 1U
Operation interface	Color LCE), numeric keypad
Informatization	USB storage, barcode re optional ESRS measurement and co	
Dimensions (W×H×D mm)		

Flashover and arc

In relevant electrical safety regulations and standards, the general requirement for determining electrical strength test is that under the specified test voltage and test time conditions, the insulator should not experience breakdown or flashover. The destructive discharge along the surface of an insulator is called flashover, while the destructive discharge along the interior of the insulator is called breakdown. Arc is gas discharge phenomenon, where instantaneous spark is generated when current passes through certain insulating media (such as air).

The series analyzer has arc detection function (ARC), arc levels of 0~9 can be set in ACW and DCW, to detect flashover or arc discharge during ACW/DCW test process.



Current and voltage waves of pure resistive arc discharge

Multiple optional cards





DC low resistance card (0.1-20k Ω)

DCGB resistance card (40/60A/100A)

1000	And of the	ALC: NOT THE OWNER OF THE OWNER OWNER OF THE OWNER	COLUMN TWO IS NOT	
1.00	1-11	1 20 1	1 1 1 1	Vir Colli
- I - I		· # -	1111-1	yzer
		 Allowing 		C Description

AN9637HC(F)	AN9637HC8(F)
ACW/DCW/IR/GB	ACW/DCW/IR/GB
ac/100mA (optional 200mA)	
6kVdc/20mA	
6kVdc/50GΩ	
40Aac/600	mΩ
tional 40A, 60A, 100A card)	
, multi-channel GB scanning card, e card:	
I 1U chassis height shall be added the for 100A DCGB card)	Standard 5W3G card
pad, RS232\PLC\USB\LAN (optional)	interface;
recognition and automatic program ma	atching.
control software which can be integrate	
426×132×520	

- Protective design for operator safety
- When the Interlock control is enabled, this signal can be used as a detection signal for personnel entering the safety test area or for open grid gate of the test bench. Once the analyzer detects circuit break in this signal, the output will be stopped and the test cannot be started.
- DUT grounding. This series analyzer has two modes: DUT case grounding (Guard) or floating grounding (Return). When selecting Guard mode, the Return terminal of the analyzer will maintain safe conductive state with PE to prevent operators from accidentally touching the DUT housing and getting electric shock during ACW/DCW test process. In this mode, stray leakage current through the ground will pass through ammeter A1, causing higher leakage current and lower insulation resistance.
- Leakage protection GFI. When the leakage current of high-voltage output HV leaks to the safe PE terminal through the operator or DUT housing, the leakage current will be detected by ammeter A2. When it exceeds the limit, the analyzer will stop the high-voltage output and trigger GFI alarm.



Exceeding & Trustworthy

Safety Analyzer

Intelligent Safety Analyzer AN1636H(F)\AN1638H(F)\AN1639H(F) Series



Product Overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years. and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. This AN163XH(F) Series Intelligent Safety Analyzer features complete functions, high performance, automation, and informatization, providing comprehensive safety test solutions for various electrical products.

Features

- Five-in-one: ACW/DCW/IR/ACGB/DCGB
- High performance: 1% basic accuracy for safety tester, parallel ACW/DCW/IR and GB test
- Automation: RS232/LAN/USB/BAR-CODE/IO/ALARM/HDMI interfaces
- Informatization: Local store, data filter/export, MES database integration
- Intelligent: Android platform, 7" touchscreen, barcode recognition, intelligent matching, etc

Applications

- Audio and video, information technology, and communication technology equipment (GB4943.1/ IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)
- Safety Requirements of traction battery used by electric vehicles (GB38031-2020)
- Safety requirements of secondary lithium cells and batteries used in electrical energy storage systems (GB44240-2024)
- Technical requirements for power conversion system of electrochemical energy storage system (GBT34120-2023)
- Electric vehicle conductive charging system (GB/T18487.1)
- Terrestrial photovoltaic (PV) modules Design gualification and type approval (IEC61215-1-2021)
- Technical specifications of junction box for terrestrial solar-photovoltaic modules (GB/T 37410-2019)
- Technical requirements for photovoltaic gird-connected inverter (GB/T37408-2019)
- General principles low voltage switchgear and controlgear Part 1 (GBT14048.1/IEC60947-1)

Specifications

Model Function	AN1636H(F) ACW/DCW/IR	AN1638H(F) ACW/DCW/IR/GB	AN1639H(F) ACW/DCW/IR/GB/DCGB
AC withstand voltage (ACW)		5kVac/100mA (opt	ional 200mA)
DC withstand voltage (DCW)		6kVdc/20	ImA
Insulation Resistance (IR)		6kVdc/10	DGΩ
AC ground bond resistance (GB)	None		64Aac/600mΩ
DC ground bond resistance (DCGB)	(Optional 40A, 60A)	None	40A DCGB card (optional 60A, 100A)
Multiple cards			-channel GB scanning card, and DC low resistance card; Il be added for each additional card, and 2U height for 100A DCGB card)
Parallel	(Optional: Voltage division	ratio, parallel ACW/DCW test be	tween input-output-case; parallel GB and ACW/DCW test)
Operation interface	An	droid system, 7" touch screen, RS	S232\LAN\WIFI\PLC\USB interface
Informatization			d automatic program matching, MES system integration; ternal LCD display, keyboard/mouse;
Dimensions (W×H×D mm)		426×132	<520

Parallel GB and ACW/DCW/IR test

This series Intelligent Safety Analyzer is designed with parallel GB, IR, ACW/DCW test,

significantly shortening the testing time, double the production capacity of the production line.

Routine test for 4s	GB 2s		IR 1s	ACW 1s
Desile House	G	B 2s		
Parallel test for 2s	IR 1s	ACW 1s		

Protective design for operator safety

- When the Interlock control is enabled, this signal can be used as a detection signal for personnel entering the safety test area or for open grid gate of the test bench. Once the analyzer detects circuit break in this signal, the output will be stopped and the test cannot be started.
- DUT grounding. This series analyzer has two modes: DUT case grounding (Guard) or floating grounding (Return). When selecting Guard mode, the Return terminal of the analyzer will maintain safe conductive state with PE to prevent operators from accidentally touching the DUT housing and getting electric shock during ACW/DCW test process. In this mode, stray leakage current through the ground will pass through ammeter A1, causing higher leakage current and lower insulation resistance.
- Leakage protection GFI. When the leakage current of high-voltage output HV leaks to the safe PE terminal through the operator or DUT housing, the leakage current will be detected by ammeter A2. When it exceeds the limit, the analyzer will stop the high-voltage output and trigger GFI alarm.



Multiple optional cards



DC low resistance card (0.1-20k Ω)

5-channel high-voltage 3-channel GB scanning card

DCGB resistance card

(40/60A/100A)

Ainuo



The series tester can be equipped with optional built-in positive and negative high voltage dual output modules, setting the output voltage ratio of positive and negative voltage, to achieve three parallel tests for power supplies: input terminals (LN) - PE, output terminals (V+V-) - PE, and input terminals (LN) - output terminals (V+V -).



Flashover and arc

In relevant electrical safety regulations and standards, the general requirement for determining electrical strength test is that under the specified test voltage and test time conditions, the insulator should not experience breakdown or flashover. The destructive discharge along the surface of an insulator is called flashover, while the destructive discharge along the interior of the insulator is called breakdown. Arc is gas discharge phenomenon, where instantaneous spark is generated when current passes through certain insulating media (such as air).

The series analyzer has arc detection function (ARC), arc levels of 0~9 can be set in ACW and DCW, to detect flashover or arc discharge during ACW/DCW test process.



Current and voltage waves of pure resistive arc discharge





8-channel high-voltage scanning card



8-channel GB scanning card

Safety Analyzer

Intelligent Safety Analyzer AN1635H-10kV(F)/AN16310H(F)/AN16320A(F) Series



Product Overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers.

The AN1635H-10KV(F) Series Intelligent Safety Analyzer has the characteristics of complete functions, high voltage. automation, and informatization, providing comprehensive safety test solutions for various electrical products.



Features

- Multi-function: ACW/DCW/IR/BDV test
- High voltage: maximum output 20KV, maximum capacity 5kVA, multi-channel scanning
- Automation: RS232/LAN/USB/BARCODE/IO/ALARM/HD-MI interfaces
- Informatization: Local store, data filter/export, MES database integration
- Intelligent: Android platform, 7" touchscreen, barcode recognition, intelligent matching, etc

Applications

- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)
- Safety Requirements of traction battery used by electric vehicles (GB38031-2020)
- Safety requirements of secondary lithium cells and batteries used in electrical energy storage systems (GB44240-2024)
- Terrestrial photovoltaic (PV) modules Design qualification and type approval (IEC61215-1-2021)
- General principles low voltage switchgear and controlgear Part 1 (GBT14048.1/IEC60947-1)
- Insulating materials. Test methods for electric strength. Part 1:Test at power frequencies (GBT1408.1-2016)
- Insulating materials. Test methods for electric strength. Part 2: Additional requirements for tests using direct voltage (GBT1408.2-2016)
- Test and Certification Specification for Automotive Grade Semiconductor Power Devices (T/CASA 011.3-2021)
- Semiconductor Devices Part 5-5: Optoelectronic Devices Optocouplers (GB-T 15651.5-2024 IEC60747-5-5-2020)

Specifications

Model Function	AN1635H-10KV(F) ACW/DCW/IR(CE marking)	AN16310H(F) ACW/DCW/IR	AN16320A(F) ACW
AC withstand voltage (ACW)	10kVac/20mA 10kVac/40mA(optional 100mA 400mA)		20kVac/20mA
DC withstand voltage (DCW)	10kVdc/20mA 10kVdc/20m(optional 100mA)		1
Insulation Resistance (IR)	10kV	dc/50GΩ	1
DC ground bond resistance (DCGB)	Optional 40A/60A/100A DCGB card		1
Multiple cards	Optional 6-channel multi-channel scanning card		1
Operation interface	Android syste	m, 7* touch screen, RS232\LAN\WIFI\PLC\USB in	terface
Informatization	Local store, data filter MES system integration; opt		
Dimensions (W×H×D mm)	426×132×520	426×177×520 (The high current optional chassis is customized in size)	426×177×550

Intelligent Safety Analyzer AN1633A(F)/AN1633B(F) Series





AN1633A(F) 5-module 10-channel parallel

Product Overview

Ainuo Instrument Co., Ltd has been dedicated to the research and development of electrical safety analyzers for over 30 years, and has participated in drafting 16 national standards and industry calibration regulations for safety analyzers. The AN1633A(F) Series Intelligent Safety Analyzer has the characteristics of modular, 10-channel parallel, synchronous/asynchronous control, providing comprehensive and fast safety test solutions for various electronic components such as switching power supplies, inverters, transformers, relays, etc.

Features

- Three-in-one: ACW/DCW/IR test
- Multi-module: built-in 1~5 independent modules, plug-and-play
- Multi-channel: 5 modules with 10 independent channels, 5 modules * 3 channels for scanning
- Multiple operating conditions: synchronous/asynchronous, independent parameter settings, common loop test
- Multi-window: 10" touchscreen, independent windows for displaying results of each channel

Specifications

Model Function	AN1633A-10(F) The suffix -4\6\8\10 represents the number of channels	AN1633B-5(F) The suffix -2\3\4\5 represents the number of modules		
AC withstand voltage (ACW)	5kV/10mA	5kV/20mA		
DC withstand voltage (DCW)	6kV/8mA	6kV/10mA		
Insulation Resistance (IR)	2.5kV/100GΩ	2.5kV/100GΩ		
Module selection	2~5 modules, with 2 independent test units per module	2~5 modules, each module with 3-channel (H/L/X) for scanning		
Number of channels	4/6/8/10 independent channels per analyzer	6/9/12/15 scanning channels per analyzer		
Start mode	Synchronous/asynchronous test between channels	Synchronous/asynchronous test between modules		
Operation interface	10" touch screen, RS232/PLC/LAN interface, 8G memory, MES connection			
Dimensions (W×H×D mm)	426×	177×640		





AN1633B(F) 5-module parallel* 3-channel scanning

Applications

- Audio/video, information and communication technology equipment (GB4943.1/IEC62368-1)
- Multi-point ACW/DCW and common ground test scenario for a product: It can meet the needs of power supplies, inverters, transformers, new energy vehicle PDUs, and other one-time multi-point ACW/DCW and common case (PE) test applications.
- Test multiple products simultaneously: safety test of electronic components such as chargers, lithium batteries, relays, contactors, connectors, etc., parallel test of up to 10 products one time.

Comprehensive Electrical Safety Analyzer AN96XXB(F) Series



- ★ Four-in-one: ACW/DCW/IR/GB
- ★ High precision: 1% basic accuracy for safety tester
- ★ High efficiency: fast test, convenient

Product Overview

Ainuo AN96XXB(F) Series electrical safety tester has a multi-function combination including AC withstand voltage, DC withstand voltage, insulation resistance, and AC grounding, as well as auxiliary functions such as arc detection, open and short circuit detection, and low-pass filtering, and has a variety of interfaces including RS232\RS485\ PLC\LAN (optional) \USB (optional). This series of product features compact, light, rich interfaces, and suitable for desktop testing, system integration and other operating conditions.



Functions

- ACW/DCW/IR/GB
- Wide range
- ACW 5kV, DCW 6kV, IR 3kV/50GΩ
- Rich interfaces
- RS232/IO/INTERLOCK/ALARM/USB/LAN
- Auxiliary functions
- slow rise/hold/slow down, comprehension, ARC,OSC,WAIT

Applications

Safety of household and similar electrical appliances (GB4706.1/IEC60335-1)

- Audio/video, information and communication technology equipment (GB4943.1/IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)
- Safety test for switching power supply, transformer, low-voltage electrical appliances, electronic components and other electronic products

Specifications

Model Function	AN9637B(F) ACW/DCW/IR/GB	AN9635B(F) ACW/DCW/IR	AN9633B(F) ACW/DCW/IR		
AC withstand voltage(ACW)	5kV/4	OmA	5kV/20mA		
DC withstand voltage(DCW)	6kV/10mA				
Insulation resistance (IR)	3kV/50GΩ				
Ground bond resistance (GB)	40Aac/600mΩ	lone			
Operation interface	5-inch color LCD touch screen, standard RS232\IO interface, optional RS485\USB\LAN\ALARM interface				
Dimensions (W×H×D mm)	250×11	213×88×360			





Product Overview

The Ainuo AN1662H(F) New Energy Vehicle Safety Analyzer and the AN1662SD(F) New Energy Vehicle Safety Test System comply with GB18384-2020 Electric Vehicles Safety Requirements and GB38032-2020 Electric Buses Safety Requirements. AN1660B(F) New Energy Vehicle Operational Safety Analyzer is designed to meet the requirements of the operational safety performance inspection regulations for new energy vehicles.

The AN1662H(F) Analyzer features whole vehicle insulation, insulation resistance, insulation monitoring, and potential equalization test functions. It can be equipped with additional features such as AC withstand voltage, DC withstand voltage, and DC low resistance. It supports Safety Analyzer



Ainuo

 ★ Regulatory compliance: GB18384-2020 Electric Vehicles Safety
 Requirements and
 GB38032-2020 Electric Buses
 Safety Requirements
 ★ Four in one: whole vehicle insulation, insulation resistance, insulation monitoring, potential equalization, and multi-channel testing.
 ★ Systematic: professional test accessories, on-site devices, i nformatization system, and MES

database connection

multi-channel withstand voltage and multi-channel potential equalization scanning tests. By using test accessories such as AC charging gun, DC charging gun, platform test clip, high-voltage component test clip, etc., it can complete the test connections in one go and automatically or manually perform each step of the safety regulation test.

The AN1662SD(F) Test System integrates the test functions of AN1662H(F). Through industrial computer/ESRS measurement and control software, on-site device and remote control test, it realizes the automated, informatized, and intelligent test process for new energy vehicle safety regulation.

Ainuo // Safety Analyzer

Features

System digitistics

- Four-in-one safety regulation test for electric vehicles, with excellent system scalability
- One master unit integrating multiple functions for fast testing speed and high accuracy for safety analyzer
- Multi-channel scanning and one-time wiring, capable of completing all safety tests items

Hardware features

- Supports wireless scanning, automatic vehicle model recognition, and automatic retrieval of test programs
- Supports CAN communication and automatically presets vehicle status based on the test item
- Specifications
- AN1662H(F) AN1660B(F 0.1MΩ--999.9MΩ Measurement range whole vehicle 200Vdc---1000Vdc Measured voltage None insulation Double voltmeter method; battery DC+/DC- port test Test method and charging port test (optional) Resistance switching Insulation 5-gear automatic resistance switching detection None monitoring Judgment method Manual judgment and CAN communication (optional) Output voltage 100Vdc-1,000Vdc Insulation Measurement range 0.1MΩ-50GΩ resistance Test channel Channel 8 Channel 1 DC constant current source 1Adc (>200mA) and Output current DC constant current source 2-5Adc optional DC constant current source 1-40Adc; Potential 0.1mΩ--600mΩ Measurement range 0.1mΩ-600mΩ equalization Test channel Channel 10 Channel 1 Test method Four-terminal method Four-terminal method AC withstand voltage, DC withstand voltage, AC withstand voltage and **Optional functions** and DC low resistance DC withstand voltage

AN1662SD(F) System Allocation

S/N	Component name	Specification	Remarks
1.1	New energy vehicle safety analyzer	AN1662H(F)	Ainuo
1.2	Safety regulation measurement and control software	ESRS	Ainuo
1.3	Industrial computer	Intel-G1620/4G/120G	Advantech
1.4	Display	19-inch	DELL
1.5	UPS	1kW	Shante
1.6	Alarm lamp	Test/qualified/unqualified	Customized
1.7	Printer	Self-adhesive label printing	Zebra
1.8	Wireless scanning gun	1D/2D recognition	Zebra
1.9	Cabinet	White	Customized
1.10	Test accessories	Optional	Customized
1.11	On-site devices	Optional	Customized
1.12	Remote control	Optional	Customized
1.13	Can card	Optional	Customized

Customized dedicated test on-site devices, remote control panels, and testing accessories

Software features

- Workflow setting for electric vehicle safety test items, supporting a mix of automatic and manual tests
- Local storage of test information with no limit on the number of saved records during the product's lifecycle.
- Multiple MES database connections reserved for test condition download and test data upload.
- Software measurement and control system supports data guery, filtering, and export, as well as user permission management.





Product Overview

The Ainuo AN96XXB(F) Series is designed with ACW, IR, and GB test, as well as auxiliary functions such as arc detection, short circuit detection, low-pass filter, and waiting-for test (for AN9632M(F)), with RS232\RS485\PLC\LAN (optional)\USB (optional) interfaces.

This series of product features compact, light, rich interfaces, and suitable for desktop testing, system integration and other operating conditions.

Features

Main functions

- ACW, IR, GB, ARC
- Wide range
- ACW 5kV/200mA/100mA/20mA, IR 3kV/50GΩ, GB 32A/600mΩ
- Rich interfaces
- RS232/IO/INTERLOCK/ALARM/USB/LAN
- Auxiliary functions
- slow rise/hold/slow down, comprehension, ARC,OSC,WAIT

Applications

Safety of household and similar electrical appliances (GB4706.1/IEC60335-1)

General principles low voltage switchgear and controlgear Part 1 (GBT14048.1/1EC60947-1)

Safety test for switching power supply, transformer, low-voltage electrical appliances, electronic components and other electronic products

Specifications

Model	AN9632M(F)	AN9602B(F)	AN9632B(F)	AN9605B(F)	AN9671B(F)	AN9613B(F)	
Function	ACW/IR	ACW	ACW/IR	ACW	IR	GB	
AC withstand voltage(ACW)	5kV/200mA	5kV/100mA	5kV/	/20mA	None	None	
Insulation resistance(IR)	1kVdc/2000MΩ	None	3kV/50GΩ	None	3kV/50GΩ	None	
AC ground bond resistance(GB)			None				
Operation interface	VFD character display RS232\PLC interface		5" color LCD touch screen, standard RS232 Optional RS485\USB\LAN\ALARM inte				
Dimensions (W×H×D mm)	400×143×505	250×118×440	250×118×440 213×88×360				

Safety Analyzer

Safety Analyzer Ainuo

- Audio and video, information technology, and communication technology equipment (GB4943.1/ IEC62368-1)
- Safety requirements for electrical equipment for measurement, control, and laboratory use (GB4793.1/IEC61010-1)

Grounding Resistance Analyzer AN161XH(F) Series



- * ACGB: 64A/600mΩ
- * DCGB: 100A/600mΩ,60A/600mΩ
- * Multi-channel: 8-channel card,
- supporting channel expansion
- * Informatization: Android platform, data store, barcode recognition

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, environmental, load, operating conditions, fatigue test verification

Rich functions

Two modes: resistance/voltage mode, meeting industry standards

- Multi-channel card: Optional 8-channel GB switching card, multi-channel expansion
- Auto start: circuit detection; after the GB circuit are built, the test will be automatically started

Intelligent and automatic

- Smart safety tester: Android system, 7" touch screen, self-learning smart keyboard
- Barcode recognition: barcode scanning, program matching, automatic startup, package
- Data management: local storage, network transmission, direct connection with MES system
- Rich interfaces: RS232 (optional RS485), PLC, USB, LAN interfaces

Specifications

Model	AN1610D(F)	AN1616D(F)	AN1616HD(F)	AN1616H(F)		
DCGB	100Adc/8V	60Adc/8V	60Adc/8V	None		
ACGB	None		64Aac/10V	64Aac /10V		
Grounding resistance	MAX 600mΩ					
Operating Interface	Android platform, 7" touchscreen, RS232\LAN\WIFI\PLC\USB interface					
Output terminal	Rear panel output					
imensions (W×H×D mm)	426×177×520 426×132×520					





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, environmental, load, operating conditions, fatigue test verification

Compliance with regulations

- Multi network: up to 8 MD, multi state switching, multi industry standards
- Multi parameters: RMS, peak, AC component, DC component
- Wide band: DC, 10Hz ~ 1MHz contact current measurement

Specifications

Model	AN1620TH(F)	AN1620H(F)	AN1620H-M(F)
DUT specifications	Single-phase/three-phase 300V/20A	Single-Phase 300V/20A	Single-Phase 300V/20A
Test power supply	Optional external isolated power supply		
Test network	Standard three networks: A/F	F/H, up to 8 optional networks	Standard C/C unweighted/E medical equipment dedicated network
Current range	0—20mArms	020mArms, 30mApeak	
Impedance and frequency response		DC, 10Hz1MHz	
Power measurement	Optional: 30	00V/20A power measurement per phase	e, with accuracy of 0.5%
Operation interface	Android	system, 10" touchscreen, RS232\LAN	PLC\USB interface
Dimensions (W×H×D mm)		426×177×550	

Ainuo

Safety Analyzer

★ Multiple body area networks (BANs): ※up to 8 MD options, applicable to multiple industry safety standards * Multi measurements: RMS, peak, AC

component, DC component

★Wide frequency measurement: XDC, 10Hz

~ 1MHz contact current frequency measurement

★ Multiple power supply states: ※ Multiple power supply states, standard one-click settings for medical equipment.

Intelligent test

- Intelligent platform: Android system, 10" touch screen
- Data management: barcode recognition, local store, MES integration
- Rich interfaces: RS232, PLC, USB, CAN, WIFI

Exceeding & Trustworthy

Pulse Lithium Battery Cell Short Circuit Tester ANBTS7201(F) Series



Product Overview

Based on the first generation Pulse Battery Cell Short Circuit Tester in 2012, the second generation ANBTS7201(F) Series Pulse Lithium Battery Cell Short Circuit Tester from Ainuo Instrument Co., Ltd., by adopting a new generation test method of constant current charge, free discharge, and constant current discharge to monitor the slight voltage drop in real time and throughout the process, can effectively detect insulation short circuits, micro short circuits, low insulation resistance, etc. in unqualified and suspicious Lithium battery cells caused by damage, folds, perforation, foreign objects, burrs, etc., on the isolating membrane.

ANBTS7201(F) Series are widely applied in such processes as stacking, winding, cell assembly and before injection, applicable for insulation performance testing between the positive and negative electrode sheets of lithium battery cells, as well as between the positive and negative electrode tabs and the battery cell shell before injection under 0.1uF-100uF static capacity.



Features /

- Five-in-one: pulse short circuit test, insulation resistance test, BDV test, capacitance test, weak conductive resistance test
- Fast: Maximum 50mA constant adjustable charge mode, maximum 30mA constant adjustable discharge mode, multiple channel test
- Wide range: 25V-2000V voltage, 2kΩ-100GΩ insulation resistance test, excellent repeatability in lithium battery cell insulation resistance test
- Data storage: local test data and waveform storage, supporting to export to USB
- Easy to use: Small in size, with rich interfaces and simple operation, suitable for testing on lithium battery cell automated production lines



Figure 1\2 Test process of gualified and ungualified 5uF batery cell under 100V voltage (voltage rise time 54ms)

Specificatio	ons //			
	Model	ANBTS7201-R(F)	ANBTS7201-3R(F)	
	Functional configuration	Pulse short circuit, insulation resistance, single channel test	Pulse short circuit, insulation resistance, three-channel scanning	
	Output voltage	Range: (50~ 1000)VDC,Resolution 1V,Error ±(1	% x setting value+5V); [optional 2000V output]	
	Charge and discharge modes	Maximum 50mA constant current charge, m	aximum 30mA constant current discharge	
Pulse short circuit test	Test time	Charging time TK, discharging tim Resolution: 1ms;Error ±(0	-	
	Judgment parameters	Rise fall V1 (0-100%), hold fall V2 (0-100%),	discharge fall V3 (0-100%), resolution 0.1V	
	Cell static capacity	100nF-100),000nF	
	Output voltage	Range: (25-1,000)VDC, resolution	n: 1V, Error ±(1% x setting +2V)	
Insulation resistance test	Insulation resistance measurement	0.020MΩ-999.9MΩ, ±(2%×Reading value+2 digits); 1.000GΩ-9.999GΩ: ±(5%×Reading value+2 digits) 10.00GΩ-49.99GΩ: ±(15%×Reading value); 50.00GΩ-99.99GΩ: ±(20%×Reading value) Range: 0, (0.5-999.9)s, 0 is infinite,		
	Ramp up time	Range: 0, (0.1-999.9)s, 0 rep resolution: 0.1s, Error: ±(0.1		
	Ramp down time	Range: 0, (1-999.9)s, 0 represents ramp-down disabled, resolution: 0.1s, Error: ±(0.1%×setting value+2 digits)		
5	Upper/lower limit	Range: 0.002MΩ-99.99GΩ, 0 ir	dicates no upper limit setting	
	Charge and discharge modes	Maximum 50mA constant current charge maximum 30mA constant current discharge		
	Power supply	AC220V±10%	6, 47-63Hz	
Other	Display operation	LCD, 5 inch color dis	play, touch screen	
specifications	Output interface	RS232C, LAN, PLC USB (data	storage via USB flash drive)	
	Dimensions (W×H×D mm)	213×88	×360	

Safety Analyzer

Ainuo

Safety Analyzer

P24

Safety Analyzer

Large Capacity Pulse Lithium Battery Cell Short Circuit Tester ANBTS7202(F) Series

Product Overview

The ANBTS7202(F) Series Large Capacity Pulse Lithium Battery Cell Short Circuit Tester from Ainuo Instrument Co., Ltd., by adopting a step pulse boosting method and monitoring the slight voltage drop in real time and throughout the process, can effectively detect insulation short circuits, micro-short-circuits, etc. in unqualified and suspicious Lithium battery cells caused by damage, folds, perforation, foreign objects, burrs, etc., on the isolating membrane. (The step pulse boosting method meets the requirements of JISC 2110-1, IEC60243-1.ASTMD149-2009 "Test Method for Electrical Strength of Insulation Materials").

ANBTS7202(F) Series are widely applied in such processes as stacking, winding, cell assembly and before injection, applicable for insulation performance testing between the positive and negative electrode sheets of lithium battery cells, as well as between the positive and negative electrode tabs and the battery cell shell before injection under 100nF-100000nF static capacity.

Features

Whole-process monitoring: Monitor the step pulse waveform in real time and throughout the process to effectively recognize the local micro-short-circuit discharges

Fast: Millisecond-level test speed, high detection efficiency. Wide range: Output voltage 50~1000V adjustable, equivalent capacity 100~10000nF

Data storage: local test data and waveform storage, supporting to export to USB



Figure 1 Step boosting method Figure 2 Test process of 40uF battery cell under 400V voltage (boosting time 122ms)



Figure 3 Test process of 100uF battery cell under 400V voltage (boosting time 301ms)

Specifications

	Model	ANBTS7202(F)	ANBTS7202X(F)
Functi	onal configuration	Pulse short circuit	Pulse short circuit
	Output voltage	Range: (50~ 1,000)VDC,Resolution	n 1V,Error ±(1%xsetting value+5V)
Pulse short	Test time	Range: 50ms~3000ms;Resolution: 1	ms;Error ±(0.5% setting value +2ms)
circuit test (3-channel	Judgment parameters	Rise fall V1 (0-100%), hold fall V2 (0-100%),	discharge fall V3 (0-100%), resolution 0.1V
opuon) —	Cell static capacity	100nF-30,000nF	100nF-100,000nF
	Power supply	AC220V±10	%,47~63Hz
Other	Display operation	LCD, 5 inch color di	splay, touch screen
specifications	Output interface	RS232C,LAN ,PLC,USB(data	storage via USB flash drive)
	Dimensions (W×H×D mm)	213×8	8×360





Product Overview

For the ANBTS7101(F) Series Insulation Resistance Tester, addressing the weaknesses of conventional CV mode insulation resistance testers in the testing process of electrical products with relatively large static capacitance, such as lithium battery cells, including long ramp-up time, slow discharge process, large insulation resistance value fluctuations, and poor repeatability, the ANBTS7101(F) Series Tester uses an innovative mode of CC charging, CV pressure holding, and CC discharging to realize fast, accurate, and safe testing of insulation resistance for electrical products with large capacitance characteristics.

The ANBTS7101(F) Series Tester is suitable for insulation resistance testing of electrical products with relatively large static capacitance, such as power batteries, energy storage batteries, 3C batteries, super capacitors, aluminum electrolytic capacitors etc.

Features

- Wide range: Voltage 25V-2,000V and resistance 2kΩ-100GΩ, allowing for accurate testing of a wide voltage range and high insulation resistance values
- Fast: 50mA guick CC charging, CV pressure holding test and 30mA guick CC discharge mode, capable of conducting guick insulation test of super capacitor up to 500uF
- High accuracy: Support the double judgment of the resulting values and the process values, the automatic upload of the process data
- system integration use

Specifications

Model	ANBTS7101(F)	ANBTS7101-3(F)			
Output channel	Single channel (HV1, HV2 (return))	Three channels (HV1/HV2/HV3, configurable as H/L/X)			
Output voltage	Range: (25-1,000)VDC, resolution: 1V,	Error ±(1%×Set value+2V)); [optional 2000V output]			
Insulation resistance measurement	101V-499V: 0.010MΩ-199.9MΩ, ±(2%×Reading va 500V-1,000V: 0.020MΩ-999.9MΩ, ±(2%×Reading va	.9MΩ, ±(5%×Reading value±2 digits); lue±2 digits); 200.0MΩ-2.000GΩ: ±(5%×Reading value±2 digits) alue±2 digits); 1.000GΩ-9.999GΩ: ±(5%×Reading value±2 digits value); 50.00GΩ-99.99GΩ: ±(20%×Reading value)			
Test time	Range: 0, (0.5-999.9)s, 0 represents infinite duration, resolution: 0.1s, accuracy: ±(0.1%×Set value+2 digits)				
Ramp up time	Range: 0, (0.1-999.9)s, 0 represents ramp-up disabled, resolution: 0.1s, accuracy: ±(0.1%×Set value+2 digits)				
Ramp down time	Range: 0, (1-999.9)s, 0 represents ramp-down disabled, resolution: 0.1s, accuracy: ±(0.1%×Set value+2 digits)				
Resistance upper/lower limit setting	Range: 0.002MΩ-99.99	GΩ, 0 indicates no upper limit setting			
Charge and discharge modes	la contra de la cont	0mA, maximum constant current discharge 30mA dual voltage monitoring function.			
Power supply	AC220	V±10%, 50Hz/60Hz			
Display and operate	5-inch LCD color display, key and touch screen	operation; RS232C, LAN, PLC and USB (storage) interfaces			
Dimensions (W×H×D mm)		213×88×360			

Safety Analyzer





Easy to use: Small in size, with rich interfaces and simple operation, particularly convenient for automated production lines and

Safety Analyzer

High-accuracy Battery Tester ANBTS7501H(F)



Product Overview

The ANBTS7501H(F) High-accuracy Battery Tester integrates the functions of a 71/2-digit voltmeter, an AC internal resistance tester, and a multi-channel switcher (optional), meeting the comprehensive testing requirements for AC internal resistance, open-circuit voltage, and side voltage in the production processes such as the aging and sorting of lithium batteries, the feeding of battery modules, the off-line of battery modules, and the off-line of battery packs in a one-stop manner.







Features

High accuracy

- Test for internal resistance : 7-range test, maximum resolution 0.1uΩ, 0.5% basic accuracy
- Voltage test: 7½-digit display, 10nV resolution, 20ppm basic accuracy

High speed

- * Multiple test speeds: Quick/medium/slow speeds and customized sampling speed, average number of times
- Automatic switching: Automatically complete the internal resistance test, voltage test and channel switching
- One control instruction: The PC can complete all the switching tests with just one instruction

More convenient

- Convenient to use: Human and machine interaction of 5-inch touch screen + key + windowed menu, simple and easy to use
- Good compatibility: LAN, RS232, I/O interfaces, instructions compatible with similar products





Model		ANBTS7501H(F)						
Functional Configuration		MAX100V, ACIR						
		Inte	ernal Resistance Mea	surement				
Measurement Method			A	C four-terminal met	hod			
Current Frequency				1kHz±0.2Hz				
Measuring Current	100	mA	10mA	1mA	100mA	10	luA	
Resistance Range	3mΩ	30mΩ	300mΩ	3Ω	30Ω	300Ω	3000	
Maximum Display Value	3.1000mΩ	31.000m	nΩ 310.00mΩ	3.1000Ω	31.000Ω	310.00Ω	3100.0	
Resistance Resolution	0.1uΩ	1uΩ	10υΩ	10υΩ 100υΩ		10mΩ	100m	
Resistance Accuracy 3 mΩ range: ±(0.5% ×Reading value+10 digits); 3 mΩ or more range: ±(0.5% ×Reading value+5 digits)								
			Voltage Measurem	ent				
U-RANGE	100mV		1000mV		10V	100V		
Maximum Value Display	±120.000 00	mV	±1200.000 0mV		12.000 000V	±120.000 00V		
Voltage Resolution	10nV		100nV		1uV	10uV		
Resistance range	±(0.0030%rd+	-2uV)	±(0.0020%rd+3u	V) ±(0.0	020%rd+12uV)	±(0.0030%rd+0.8mV)		
		М	Other Specificatio	ns		-M		
Other Functions	Temperatur	e compensat			d selection, range sele annel switching cards	ction, function sele	ection,	
Instrument Interface			R	S232, LAN, USB, I	/0			
Operational Environment					80%rh (no-condensing pelow 80%rh (no-conde			
Power specifications			AC220	/±10%, 50Hz/60H;	z, 100VA			
Dimensions (W×H×D mm)				258×132×336				

Safety Analyzer \\

Battery Tester

7¹/₂-digit DC Voltmeter ANBTS7610(F) Series



Product Overview

ANBTS7610(F) Series DC Voltmeter, through a highly stable reference voltage source, automatic calibration technology and strong anti-interference capability, provides DC voltage measurement with 20PPM basic accuracy and 7½ high resolution; suitable for open circuit voltage measurement (OCV) of lithium battery cells, modules and packs.

Application Scenarios

- Scene 1: K value screening: Cell battery aging, high-accuracy voltage measurement, rapid screening of poor K-value, and improvement of test efficiency.
- Scene 2: consistency screening: For the batteries at the end of the production line and those in module and PACK when they are put into production, voltage consistency sorting is carried out to achieve precise matching.
- Scene 3: battery maintenance: With a wide measurement range from as low as 10 mV to as high as 1000 V and high-accuracy measurement, it can quickly locate the faulty batteries.
- Scene 4: battery R&D: with high accuracy, high resolution, high stability, and being simple and easy to use, it is an excellent tool for R&D, test and analysis.

Features

High precision measurement

7½-digit high resolution, 20PPM basic accuracy (10V voltage range).

High-stability reference

A high-stability reference voltage source with low temperature drift lays the foundation for precise measurement.

Self-calibration function

Eliminate the influences of circuit offset, noise, and temperature drift to ensure long-term stability.

Temperature compensation

Through the measurement of ambient temperature, the voltage is automatically corrected to the room temperature voltage.

Simple and easy to use

 Touch screen operation, provided with multiple interfaces including RS232, LAN, USB, I\O.

Specifications	
----------------	--

Marine .	ANBTS7610H(F) (7½-digit)		ANBTS7610B(F) (6½-digit)		3		
Model	Display Range	Resolution	Display Range	Resolution	Input Impedance	Measurement Accuracy	
100mV	±120.000 00mV	10nV	±120.000 0mV	100nV	$> 10 G\Omega / 10 M\Omega$	±(0.0030%rd+2uV)	
1000mV	±1200.000 0mV	100nV	±1200.000 mV	1uV	>10GQ/10MQ	±(0.0020%rd+3uV)	
10V	±12.000 000V	1uV	±12.000 00V	10uV	>10GΩ/10MΩ	±(0.0020%rd+12uV)	
100V	±120.000 00V	10uV	±120.000 0V	100uV	10ΜΩ	±(0.0030%rd+0.8mV)	
1000V	±1100.000 0V	100uV	±1100.000 V	1mV	10ΜΩ	±(0.0030%rd+2mV)	
Other Functions		Temperature compensation, contact detection, FIR data filtering etc.; RS232, LAN, USB, I\O, PLC and other interfaces, protocol compatibility					
Dimensions (W×H×D mm)		213×88×300					





Product Overview

The ANBTS7500(F) Series Battery Tester utilizes a 1kHz AC constant current source and four-terminal method to measure the AC internal resistance (ACIR) and open circuit voltage (OCV) of lithium batteries, providing the resolution of the AC impedance as low as $0.1u\Omega$ and excellent anti-interference ability.

The ANBTS7500(F) Series Battery Tester is widely applied in the processes such as the formation and grading of the cell, the on-line screening of the battery in the module and battery pack, and the off-line detection, etc.

Specifications

Model		ANBTS	7501(F)		ANBTS7503(F)			
Functional Configuration		MAX100V, ACIR				MAX300V, ACIR		
			AC Internal R	esistance				
Measurement method	_			AC four-terr	ninal method			
Current frequency		1kHz±0.2Hz						
Resistance range	3mΩ	30mΩ	300mΩ	3Ω	30Ω	300Ω	3000Ω	
Maximum display value	3.1000mΩ	31.000mΩ	310.00mΩ	3.1000Ω	31.000Ω	310.00Ω	3100.0Ω	
Resistance resolution	0.1uΩ	1uΩ	10uΩ	100uΩ	1mΩ	10mΩ	100mΩ	
Measuring current	100	100mA 10mA 1mA			100uA		10uA	
Resistance accuracy	3 r	nΩ range: ±(0.5	% ×Reading valu	e+10 digits); 3	mΩ or more rang	ge: ±(0.5%×Reading	g value+5 digits)	
			DC Volt	age				
U-RANGE	6V	60	V		100V		300V	
Voltage resolution	10µV	100	DμV		1mV		1mV	
Maximum display value	±6.00000V	±60.0	V000V		±100.000V		±310.000V	
Voltage accuracy			±(0.01% × Readir	ig value +3 digits	3)		
Panel function	w	ith the open circ	Touch screen o uit detection, cor	peration, storag nparator, speed	e of 100 sets of selection, range	test conditions, e selection, function	selection, etc.	
Interface function				RS232,	LAN, I/O			
Operational environment	Operatio	nal environment	:0℃-40℃, belov		ndensation); Acc no-condensing)	uracy guarantee en	vironment: 23°C±5°C,	
ower supply specifications)	AC220V±10%, 5	50Hz/60Hz, 20V/	4		
Dimensions (W×H×D mm)				213×8	8×300			

Features

- High-accuracy test
- Battery internal resistance ranges from 0.1uΩ to 3.1kΩ, with 0.5% accuracy, and 7 ranges.
- Open circuit voltage ranges from 10uV to 100\300V, with 0.01% accuracy, and multiple ranges.
- Comparator function
- The battery internal resistance and open circuit voltage have comparator function switches, which can be used to set upper and lower limits for resistance and voltage respectively, compensating for testing.
- Test reliabilty
- AC four-terminal method testing, with 4mm diameter coaxial contact points and interference-resistant testing cables. Contact detection function, with programmable anti-spark design.

Ainuo // Safety Analyzer

Exceeding & Trustworthy

Specifications

Model		ANBTS	7510(F)			ANBT	S7520(F)
Functional Configuration	MAX1000V, ACIR					MAX21	00V, ACIR
			AC Internal R	tesistance	•		
Measurement method	AC four-terminal method						
Current frequency	1kHz±0.2Hz						
Resistance range	3mΩ	30mΩ	300mΩ	3Ω	30Ω	300Ω	3000Ω
Maximum display value	3.1000mΩ	31.000mΩ	310.00mΩ	3.1000Ω	31.000Ω	310.00Ω	3100.0Ω
Resistance resolution	0.1uΩ	1uΩ	10uΩ	100uΩ	1mΩ	10mΩ	100mΩ
Measuring current	100mA 10mA 1mA 100uA					10uA	
Resistance accuracy	3 mΩ range: ±(0.5% ×Reading value+10 digits); 3 mΩ or more range: ±(0.5%×Reading value+5 digits)						
			DC Volt	age			
U-RANGE	10	v	100	V	10	100V	2100V
Voltage resolution	10	μV	100	μV	1	mV	10mV
Maximum display value	±10.0	V000V	±100.	000V	±1100.00V		±2100.00V
Voltage accuracy		±(0.01% × Reading	g value +3 digits	i)		±(0.05%×Reading value+3 digits
Panel function	w	ith the open circ			e of 100 sets of selection, range		, ction selection, etc.
Interface function				RS232,	LAN, I/O		
Operational environment	Operational environment: 0 °C-40 °C, below 80%rh (no condensation); Accuracy guarantee environment: 23 °C±5 °C, below 80%rh ((no-condensing)						
Power supply specifications			,	AC220V±10%, 5	50Hz/60Hz, 20V/	4	
Dimensions (W×H×D mm)				213×8	39×360		

Battery Tester ANBTS7520(F) Series



Product Overview

The ANBTS7520(F) Series Battery Tester utilizes a 1kHz AC constant current source and four-terminal method to measure the AC internal resistance (ACIR) and open circuit voltage (OCV) of lithium batteries, providing the resolution of the AC impedance as low as 0.1uΩ, excellent anti-interference ability and anti-spark design.

The ANBTS7520(F) Series Battery Tester is widely applied in such processes as the battery offline detection, etc. of the power batteries, the energy storage battery cabinets and other high-voltage large modules\battery packs.

Features

High-accuracy test

- Battery internal resistance ranges from 0.1uΩ to 3.1kΩ, with 0.5% accuracy, and 7 range levels.
- Open circuit voltage ranges from 10uV to 2100V, with 0.01% accuracy, and multiple range levels.

Comparator function

* The battery internal resistance and open circuit voltage have comparator function switches, which can be used to set upper and lower limits for resistance and voltage respectively, compensating for testing.

Test reliabilty

AC four-terminal method testing, with 4mm diameter coaxial contact points and interference-resistant testing cables. Contact detection function, with programmable anti-spark design.

Safety Analyzer

Lithium Battery-Intelligent Safety Regulation Comprehensive Analyzer ANBTS743xH(F) Series





Front panel output terminals available (default: none)

optional rear panel output for DC Ground Bond card

d b.

Product Overview

The ANBTS743xH(F) Series Intelligent Safety Regulation Comprehensive Analyzer from Ainuo Instrument Co., Ltd. combines functions such as AC withstand voltage, DC withstand voltage, insulation resistance, AC ground bond, DC ground bond, as well as auxiliary functions including voltage ramp-up and ramp-down, arc detection, capacitance test (Y-capacitor, open and short circuit detection).

Addressing the unique product features and test requirements of power batteries and energy storage batteries, the series of products have added special testing functions, including waveform display, grounding/floating ground, low-pass filtering, rapid discharge, residual voltage monitoring, and other special functions.

The series of products offer a wide range of measurement options, including AC withstand voltage 5kV/100mA, DC withstand voltage 6kV/20mA, insulation resistance 6kV/100G Ω , AC ground bond 64A/600m Ω , and DC ground bond 60A/600m Ω (rear panel plug-in card output), with multiple channel switching cards.



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
- Tomplete EMC, environmental, load, working conditions, and fatigue test verification

Convenient and efficient

- * Waveform Display: parameter waveform display, supporting cursors, zoom, and playback
- * Auxiliary functions: Floating ground/grounding mode, low-pass filtering and residual voltage monitoring
- Quick measurement and control: Quick test, quick switching and quick discharge

Intelligent test

- * Barcode Recognition: Barcode scanning, program matching, automatic startup, package
- Data management: local storage, network transmission, direct connection with MES system
- Rich ports: RS232,LAN, WIFI, USB, PLC and I/O control interfaces

Model	ANBTS7436H(F) ACW/DCW/IR
AC withstand voltage (ACW)	
DC withstand voltage (DCW)	
Insulation resistance (IR)	
Ground bond resistance (GB)	None
DC ground bond resistance (DCGB)	Opt
Capacitance test (C)	Option
Parallel function	Optional: Parallel fu
Multi-channel switching	Optional multi-channel
Operation interface	when selecting the DC ground t Android system, 7-inct
Dimensions (W×H×D mm)	

Safety Analyzer

 ANBTS7438H(F) ACW/DCW/IR/GB

 5kVac/100mA

 6kVdc/20mA

 6kVdc/100GΩ

 6kVdc/100GΩ

 64Aac/600mΩ

 ctional 60Adc/600mΩ DC grounding card

 nal: 10nF-300nF capacitance measurement

 unctions including grounding, insulation withstand voltage

 el high voltage and multi-channel grounding scanning card;

 bond card at the same time, the height needs to be increased by 1U

 chock screen, and RS2321LAN/WIFI/PLC/USB interfaces

426×132×520

AN965-15(F)

Lithium Battery Intelligent Safety Regulation Analyzer ANBTS7436H-12kV(F) Series



Product Overview

The 12kV High Voltage Series Intelligent Safety Regulation Comprehensive Analyzer from Ainuo Instrument Co., Ltd. possesses the features such as 12kV DC high voltage output, high accuracy and informatization, combines the functions such as AC withstand voltage, DC withstand voltage, insulation resistance, DC grounding, as well as arc detection, open and short circuit detection, low-pass filtering, waveform display etc.

The product features an intelligent platform, informatization functions and automated interfaces, which can better meet the needs of high-quality development, intelligent manufacturing and industrial upgrading.

The series of products can meet the safety regulation testing requirements of various electrical products, including energy storage battery cabinets, high-voltage relays, high-voltage plugs, wires and cables, insulation materials, and insulation films for electrical applications.



Optional rear panel output for DC grounding card

optional rear panel output for 6-channel card

Specifications

Model	ANBTS7435H-10KV(F)	ANBTS7436H-12KV(F)			
AC withstand voltage (ACW)	10kV/20mA	10kV/40mA			
DC withstand voltage (DCW)	10kV/20mA	12kV/20mA			
Insulation resistance (IR)	10kV/100GΩ	12kV/100GΩ			
DC ground bond (DCGB)	Optional 60A or 40A/600mΩ	Optional 100A/600mΩ			
Multiple channel switching	Optional 6-channel high voltage switching card (when selecting the DC grou	, and bond card at the same time, the height needs to be increased by 1			
Operation interface	Android platform, 7-inch color touch screen, RS232\PLC\USB\LAN				
Dimensions (W×H×D mm)	426×132×520	426×177×520			

- ★ Function: Multiple function combination including ACW/DCW/IR/DCGB/ multiple channel switching cards
- ★ High Precision: 1% accuracy
- * Informatization: Android platform, data storage, barcode recognition, MES connection

Features

High reliability

- 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
- Strict electromagnetic, environmental, load, working conditions simulation test platform

High speed

- Quick measurement and control: Quick test, quick switching and guick discharge
- Configure Flexible: multi-channel switching card, DC grounding card, plug and play

Intelligent

- Intelligent Safety Regulation: Android system, 7" touch screen, self-learning smart keyboard
- Automation: Barcode scanning and automatic recognition. PLC interface and I/O interface
- Informatization: Data storage, directly connect to MES system, RS232/WIFI/LAN interfaces





Features

- Four in one: combination of withstand voltage current, insulation resistance, grounding resistance, and leakage current calibration functions.
- Dual-gear spot inspection: two-level spot inspection for each spot inspection, complete confirmation for pass/fail.

Specifications

Ground bond resistance test	Stage	Input current	Grounding resistance	Duration	Test terminal
	Stage 0	≤25A	150mΩ±15mΩ	Less than 5 seconds	Ground bond stage 0+loop
spot inspection specifications	Stage 1	≤25A	75mΩ±8mΩ	Less than 5 seconds	Ground bond stage 1+loop

leave to the second state and	Stage	Input voltage	Insulation resistance	Measuring terminal
Insulation resistance test spot	Stage 0	≤1400V	120±12MΩ	High voltage+loop
inspection specifications	Stage 1	≤1400V	60±6MΩ	High voltage+loop

Withstand voltage	Stage	Input voltage	Current-limiting resistor	Reference current point input voltage 1,650V	Reference current point input voltage 1,800V	Test terminal
current test spot	Stage 0	≤2000∨	600kΩ±12kΩ	2.75mA	3.00mA	High voltage+loop
inspection specifications	Stage 1	≤2000V	200kΩ±4kΩ	8.25mA	9.00mA	High voltage+loop

Leakage current test spot	Stage	Input voltage	Load resistance	Reference current point input voltage 233V	Reference current point input voltage 244V	Test terminal
inspection specifications	Stage 0	≤290V	460kΩ±23kΩ	507µA	530µA	High voltage+loop
	Stage 1	≤290V	230kΩ±11.5kΩ	1013µA	1061µA	High voltage+loop

Electrical Safety Comprehensive Calibrator

* Four-in-one point inspection: withstand voltage, insulation resistance, grounding, and leakage. * Automatic switching: cooperate with the safety comprehensive inspection group to automatically switch items and complete spot inspection at one time. * Convenient to use: years of customer experience and site adaptable, easy to use, error-proof.

> Automatic identification: detects and switches between withstand voltage, insulation resistance, grounding, and leakage tests, automatically adapting to safety comprehensive inspection requirements.

Withstand Voltage Calibrator AN16015H(F)



* Various specifications: AC/DC withstand voltage and current verification and insulation resistance test voltage verification.

* Convenient usage: the company has accumulated years of on-site experience with the calibration instrument, making this product user-friendly, error-proof, and efficient.

Features

- Regulatory compliance: compliant with the JJG795-2016 Withstanding Voltage Testers
- Usability: multiple gear knobs with color-coded rings, easy to operate, error-free, and user-friendly
- Portability: optional professional protective trolley case is available, and the calibration device can be used horizontally or vertically

Specifications

Model Function	AN16015H(F) AC/DC Withstand Voltage Tester						
	Integrated with high voltage meter, current meter, and withstand voltage load resistance,						
	it can meet the me	asurement and calibration	requirements for AC/D	C withstand voltag	e and insulation resistance.		
Voltage measurement	(0.1000-9.9999)kV; (10.000-15.000)kV; 0.0001kV/0.001kV; ±(0.5%×Reading value+2 digits)						
Current measurement	(0.1000-9.999910.000-99.999100.00-240.00mA; 0.0001mA/0.001mA/0.01mA; ±(0.5%×Reading value+0.002mA)						
Frequency measurement	Measurement range	(45.00-65.00) Hz	Error ran	Error range ±0.5%×Reading			
Harmonic measurement	50 times of harmonics	Range	0.50%-10.00%	Error range	Less than 1% (absolute error)		
Ripple measurement	Measurement range	0.50%-10.00%	Error range	Less t	han 1% (absolute error)		
Time indicator		1.00s-999.99s, (0.01s, 0.5%±2 digits (0.2	% for over 10s)			
Pullin load	When using rough or fine load adjustment, the voltage does not exceed 1.5kV, and the continuous loading time does not exceed 30s.						
Built-in load	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);						

Safety Tester Remote Control Software ESRS

* Industrial control platform: industrial computer running on Windows environment, equipped with professional electrical safety regulation remote measurement and control software ESRS.

- * Intelligent test: supports barcode recognition, automatic program matching and automatic startup test, with automatic storage of test data.
- * Program editing: open-ended test program editing, supporting storage on local or server, and invocation of test programs from them.
- * Data traceability: synchronizes test data storage with local end, server end, or MES end, providing local test data management.

databases such as Sql Server, Oracle and Mysql, Modbus TCP connection method, Web Api interface connection method, as well as local TXT text, Access database and other connection methods.





Ainuo

★ MES connection: supports multiple MES connection functions, including intermediate table connection methods for

AC Power Supply ANFH(F) Series



Product Introduction

ANFH(F) series AC power supply adopts digital technologies including digital control, instantaneous waveform control, and high-frequency pulse width modulation (SPWM). The power supply has the ability to withstand impact of 3 times the rated current, featuring strong load adaptability, mainly for applications such as home appliances, motors, and production lines, power solutions meeting the essential needs of traditional industries as well as equipment replacement and updates. The power supply is designed suitable for 19" standardchassis, small size and rich interfaces, and can be directly installed in a standard cabinet for various applications such as testing, systemintegration, production line, etc.; as well as 4.3" color LCD touch screen + plastic shell panel, aesthetic and high-end appearance, and easy-to-use and intuitive operation.

Applications

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



n n n

Ainuo Product Catalogue





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



Regenerative Grid Simulator ANRGS(F) Series

-

1.4

=



Programmable High Power AC Power Supply ANFP(F) Series



Programmalbe AC Test Power Supply AN61(F) Series



Constant Current AC Power Supply ANCC(F) Series







Programmalbe Grid Simulator ANGS(F) Series

.

Bidirectional Grid Simulator ANBGS(F) Series

5100

.....

AC Power Supply

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



Adjustment of voltage/frequency in output state



Exceeding & Trustworthy

Start ramp up and online ramp up





4.3" color touch screen, convenient and intuitive



Normali	Run	G 0 Hi gh	Lock 🔒
U	97.0 _v	U 🥥 97.0] 🕣 v
Ι	10.00 A	Switch 0.0] s
Ρ	0.970 _{Kw}	• Uup	• Udown
F	400.0 _{Hz}	F 😑 400.0	🕒 🕂 Hz

Online monitoring function



PC control software



Sneci	fication	19
opeer	noution	

Cap								
	acity	500 VA	1 KVA	2 KVA	3 KVA	5KVA	10KVA	10KVA
Number	of phases			Sin	gle-phase two-wire	+PE		3-phase 4-wire+PE
Vol	tage			Pha	se voltage: 220V±	10%		Line Voltage:380V±104
Freq	uency				50/60Hz±3 Hz			
Number	of phases			s	ingle-phase two-w	ire		
		P	hase voltage: 1.0	~300.0V; Automa	ic state: (low-grade	e)1.0-150.0V,(high	-grade)150.1-300	V
Vol	tage			High-	grade lock: 1.0 ~ 3	V0.00		
Freq	uency			45.0Hz ~ 65.0Hz,	100Hz, 120Hz, 200	0Hz, 240Hz, 400H	z	
Rated	110 V	4.6A	9.2A	18.2A	27.4A	45.6A	91.0A	91.0A
current	220 V	2.3A	4.6A	9.1A	13.7A	22.8A	45.5A	45.5A
Setting	Voltage	F)
	Frequency						300)	
uccuracy	rioquorioj	F	Resolution: 0.1V	1.477.576.000			e (110/220 + 10%	2
Testing	Voltage							9
accuracy	Frequency			Resolutio	n: 0.1 Hz Precisi	on: 0.05%		
	Current	_	Resolution: 0.00	1A/0.01A/0.1A P	ecision: 0.3% × re	ading value+0.3%	×full scale value	
	Power	F	Resolution: 0.001	kW /0.01kW Pre	cision: 0.45% × rea	ading value+0.45%	6 × full scale valu	e
Frequence	cy stability	-			≤0.02%			
Voltage	distortion			L	inear load: THD<1	%		
Transient re	ecovery time				20 ms			
Voltage c	rest factor				1.41±0.1			
Source vo	Itage effect				≤1%			
Load effect					≤1%			
Overload	d capacity							
Shock re	esistance			Withstan	3 times rated cun	rent for 2S		
Protecti	on mode	Overh	eat protection, ov	er-current protect	on, output overloa	d protection, outpu	it short-circuit pro	tection
Effic	iency		>70%	%		, ,	>80%	
Displa	y mode			4.3*	color LCD touch se	creen		
100.02010	2/1///////////				0.0~99.9Sec.			
Online adjust	tment function		The output v				5.0~65.0Hz);	
Memor	function		Dowor day				narameters	
-			Power dow	minemory runctio		output mode and	parameters	
-				Standard RS2		CPIR/Ethernet		
				502020		12172-222		
128023424	20000000			Opt		(poir		
					10000000 200000000000			
. Hun	inarty	31	Ê.	311	DANG /	1111		13U
anniana Aturta	vD mm	1000	NO. 10 10 10	March 1999	1. 3577.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N 25 CANSS 15 10	
iensions (w×H	~U mm)	Ine (ine loot,	- 2000 0 M M M M M M M M M M M M M M M M		- The second second second second
	-	1A/Laters 1			andard chassion 44	1.000		
				1				82
	Freq Number Vol Rated current Setting accuracy Testing accuracy Frequent Voltage Transient re Voltage Transient re Voltage Source vo Load Overload Source vo Load Overload Source to Load Overload Source to Load Overload Source to Load Overload Source to Load Overload Shock re Protecti Effic Displa Soft-st Online adjust Memory Shortect Commu Remote Temp Hun	current 220 V Setting Voltage accuracy Frequency Testing Voltage accuracy Frequency Current Power Frequency Source voltage effect	Frequency Image: status in the set of phases Number of phases Pional set of phases Voltage Pional set of phases Voltage 110 V 4.6A current 220 V 2.3A Setting Voltage Pional set of phases Setting Voltage Pional set of phases Setting Voltage Pional set of phases accuracy Frequency Pional set of phases Testing Voltage Pional set of phases accuracy Frequency Pional set of phases Testing Voltage Pional set of phases accuracy Frequency Pional set of phases Testing Voltage Pional set of phases accuracy Frequency Pional set of phases Voltage distortion Pional set of phases Pional set of phases Voltage creating Image: Pional set of phases Pional set of phases Overload capacity Image: Pional set of phases Pional set of phases Overload set of phase set set of phases Image: Pional set of phases Pional set of phases Overload set of phase set set	Frequency Number of phases Number of phases Phase voltage: 1.0 Voltage Phase voltage: 1.0 Rated 110 V 4.6A 9.2A current 220 V 2.3A 4.6A Setting Voltage Resolution: 0.1V, accuracy Frequency 0.2 Frequency 0.2 0.2 accuracy Frequency 0.2 Garcent Resolution: 0.1V, 0.2 accuracy Frequency 0.2 Frequency Resolution: 0.00 0.2 Current Resolution: 0.00 0.2 Frequency stability 0.2 Voltage distortion 105% < output 5.00	Frequency S Number of phases S Voltage Phase voltage: 1.0~300.0V; Automat High- Frequency Frequency 45.0Hz ~ 65.0Hz Rated 110 V 4.6A 9.2A 18.2A current 220 V 2.3A 4.6A 9.1A Setting accuracy Voltage 0.2% × reading value 0.2% × reading value accuracy Frequency Resolution: 0.1V, Precision: 0.2% × 0.2% × reading value 0.2% × reading value Testing accuracy Frequency Resolution: 0.001A/0.01A/0.1A Precision: 0.2% × 0.2% × reading value 0.2% × reading value Voltage distortion Current Resolution: 0.001 A/0.01A/0.1A Precision: 0.2% × 0.2% × reading value Voltage crest factor Source voltage effect Load effect Load effect Voltage crest factor 105% < output ≤ 110%, turn off the output within 11 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300%, turn off the output within 12 200% < output ≤ 300% turn off the output within 12 200% < out	Frequency S060Hzt-3 Hz Number of phases Single-phase two-w Voltage Phase voltage: 1.0~300.0V, Automatic state: (low-grad High-grade lock: 10 - 3 Frequency 45.0Hz ~ 65.0Hz, 100Hz, 120Hz, 200 Rated 110 V 4.6A 9.2A 18.2A 27.4A current 220 V 2.3A 4.6A 9.1A 13.7A Setting Voltage 0.2% × reading value + 0.2% × full scalu 2.2% × reading value + 0.2% × full scalu accuracy Frequency Resolution: 0.1V, Precision: 0.2% × reading value + 0.2% × full scalu Gurrent Resolution: 0.01/A0.01A.01A Precision: 0.3% × re Precision: 0.3% × re Gurrent Resolution: 0.001/A0.01A.01A.01 Precision: 0.3% × re Prower Frequency stability sc0.02% Voltage St0.02% Voltage distorion Linear load. THDF1 St0.02% Voltage Voltage effect sc1% Sc0.02% Voltage Voltage offect sc1% Sc0.02% Voltage Voltage offect sc1% Sc0.02% Voltage Voltage offect	Frequency S060Hz23 Hz Number of phases Single-phase two-wire Voltage Phase voltage: 1.0-300.0V/ Automatic state: (low grade)1.0-150.0V/(hgh High-grade lock: 1.0 - 300.0V Red 110 V 4.6A 9.2A 18.2A 27.4A 45.6A current 220 V 2.3A 4.6A 9.1A 13.7A 22.8A setting accuracy Voltage Voltage 0.2% × reading value + 0.2% × full scale value 0.2% × reading value + 0.2% × full scale value (Other ran descuracy) Resolution: 0.1V, Precision: 0.2% × reading value + 0.5% × full scale value (Other ran descuracy) Resolution: 0.1V/ Precision: 0.2% × reading value + 0.5% × full scale value (Other ran descuracy) Resolution: 0.001 kW /0.01kW / Precision: 0.3% × reading value + 0.5% Yoltage 0.2% × reading value + 0.2% × full scale value (Other ran descuracy) Resolution: 0.001 kW /0.01kW / Precision: 0.3% × reading value + 0.5% Yoltage distorion Current Resolution: 0.001 kW /0.01kW / Precision: 0.45% × reading value + 0.5% Frequency stability store 20.0% store Yoltage distorion Linear load; TIDe(1% 114 Transient recovery time 20.7% store Yoltage distorion 105% < output ≤ 100%,	Frequency S000Hzz3 Hz Number of phases Single-phase two-wire Voltage Phase voltage: 1.0~300.0V, Automatio state: [0.0+rgrade) 15.0.1300.V((high-grade) 15.0.1300 Frequency 45.0Hz - 65.0Hz. 10.0Hz, 200Hz, 240Hz, 200Hz, 240Hz, 400Hz Rated 110.V 4.6A 9.1A 113.7A 22.8A 45.5A Quinty Resolution: 0.1V, Procision: 0.2% × reading value +0.2% × full scale value (100Z20 ± 10% 0.2% × reading value +0.2% × full scale value (100Z20 ± 10% 0.2% × reading value +0.2% × full scale value (100Z20 ± 10% 0.2% × reading value +0.2% × full scale value (100Z20 ± 10% 0.2% × reading value +0.2% × full scale value (100Z20 ± 10% 0.2% × reading value +0.2% × full scale value (100Z20 ± 10% 0.2% × reading value +0.2% × full scale value (100Hz = 10% 0.1% Precision: 0.05% Tensing Resolution: 0.01 MV /0.01MV /0.01MV Precision: 0.4% × reading value +0.4% × full scale value (100Hz = 10% 0.1% Precision: 0.4% × reading value +0.4% × full scale value (100Hz = 10% 0.1% Precision: 0.4% × reading value +0.4% × full scale value (100Hz = 10% 0.1% Precision: 0.4% × reading value +0.4% × full scale value value Frequency Resolution: 0.01 MV /0.01MV /0.01MV Precision: 0.4% × reading value +0.4% × full scale value value Frequency Instate trace value (100Hz = 10% 0.1% Precision: 0.2% × reading value +0.4% × full scale value Transient recover time 20 ms 20 ms 20 ms Voltage c

AC Power Supply

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: Can withstand 3 times the rated current shock for 2 seconds, impact load of 1/3 capacity of the power supply directly without soft start (below 1000KVA)



Adjustable voltage and frequency during output





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



Specifications

	M	lodel	ANFC015S(F)	ANFC020S(F)	ANFC030S(F)	ANFC045S(F)	ANFC060S(F)	ANFC090S(F)	ANFC120S(F)			
	Ca	pacity	15kVA	20kVA	30kVA	45kVA	60kVA	90kVA	120kVA			
Input	Voltage,	Frequency		3-phase 4-wire +	PE, Phase voltage	ge: 220V±33V, line	voltage: 380V±57	V, 50/60Hz±3Hz				
	Vo	oltage	single-phase two	wire, Automatic	state: (low-grade)	1.0 ~ 150.0V, (hig	h-grade) 150.1~300	0V; high-grade l	ock:1.0 ~ 300.0V			
	Fred	quency			40.00 ~70.00Hz	, 100Hz、120Hz	200Hz、240Hz					
	Rated	110V	136.3A	181.8A	272.7A	409.1A	545.4A	818.2A	1090.9A			
	current	220V	68.2A	90.9A	136.3A	204.5A	272.7A	409.1A	545.4A			
	Setting	Voltage		Resoluti	on: 0.1V; accura	cy: 0.2%xreading	value +0.2%xfull sc	ale value				
	accuracy	Frequency			Resolution	n: 0.1Hz; accura	cy: 0.05%					
		Voltage		Resoluti	on: 0.1V; accura	cy: 0.2%xreading	value +0.2%xfull sc	ale value				
	Testing	Frequency			Resolution	n: 0.1Hz; accura	cy: 0.05%					
	accuracy	Current		Resolution	: 0.1A/1A, accura	acy: 0.3%×readir	ig value+0.3%×full	scale value				
		Power	Resolution: 0.1kW/0.01kW/0.001kW, accuracy: 0.45% × reading value+0.45% × full scale value									
Dutput	Frequer	ncy stability				≤0.02%						
	Voltage	distortion			Lir	nearload: THD<	1%					
	Transient	recovery time				20ms						
	Cres	st factor				1.41±0.1						
	Source v	oltage effect				≤1%						
	Load	d effect				≤1%						
	Overloa	id capacity	/2=332.07 N	100000000 0000 00	17 - 18 - 18 - 18 - 18 - 18 - 18	6 70000000 000000	output≤200% the output the output	2. 201 2. 24	50			
	Protect	ion mode					tput under voltage ad- Output short o					
	Online adjus	stment function		The output vo	Itage and frequenc	y (45~65Hz) ca	n be adjusted onlin	e under status				
Func-	Memor	y function	Pow	er down memory	function, memory la	ast output mode a	nd parameters; S	hortcut group 7 g	roups			
tion	Line voltage dr	op compensation				$0.000\!\sim\!0.500\Omega$						
	Communication	n control interface		Standard:	RS232; Optional:	RS485, GPIB,	Ethernet, Analog	control port				
nviron- ment	Temperatur	e and humidity			0-	~40°C; 20~90%	RH					
	imensions (W×	H×D mm)		600×1130×1018			700×1330×1218		800×1768×141			
	Weight (K	(a)	175	190	250	370	500	560	970			





Exceeding & Trustworthy

180kVA

545.4A

272.7A

240kVA

727.2A

363.6A

) ANFC030T(F) ANFC045T(F) ANFC060T(F) ANFC090T(F) ANFC120T(F) ANFC180T(F) ANFC240T(F)

90kVA

272.7A

136.3A

120kVA

363.6A

181.8A

60kVA

181.8A

90.9A

3-phase 4-wire + PE, Phase voltage: 220V±33V, line voltage: 380V±57V, 50/60Hz±3Hz

3-phase 4-wire, Automatic state: (low-grade)1.0 ~ 150.0V, (high-grade) 150.1~300V, high-grade lock:1.0~300.0V

40.0 ~ 70.0Hz, 100Hz, 120Hz, 200Hz, 240Hz

Resolution: 0.1V, accuracy: 0.2%×reading value +0.2%×full scale value

Resolution: 0.1Hz, accuracy: 0.05%

Resolution: 0.1V, accuracy: 0.2%×reading value +0.2%×full scale value

Resolution: 0.1Hz, accuracy: 0.05%

Resolution: 0.1A/1A, accuracy: 0.3%×reading value +0.3%×full scale value

Resolution: 0.1kW/0.01kW/0.001kW, accuracy: 0.45%×reading value +0.45%×full scale value ≤0.02%

Linear load: THD < 1%

20ms

120°±2°

1.41±0.1

≤1%

≤1%

105% < outputs110% the output will be stopped within 15s; 110% < outputs200% 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

Output under voltage, Output over voltage, Output over load, Output short cirluit, output over current

The output voltage and frequency (45~65Hz) can be adjusted online under status

Power down memory function, memory last output mode and parameters; Shortcut group 7 groups

 $0.000 \sim 0.500\Omega$

Standard: RS232; Optional: RS485, GPIB, Ethernet, Analog control port

0~40°C; 20~90%RH

730

700×1330×1218

540

430

IGBT overheat, IGBT over current, Transformer overheat, Input under voltage, Input over voltage,

30kVA

90.9A

45.4A

45kVA

136.3A

68.2A

Specifications

	Mc	del	ANFC350T(F)	ANFC450T(F)	ANFC550T(F)	ANFC650T(F)	ANFC1000T(F)	ANFC1500T(F)	ANFC2000T(F)				
	Cap	acity	350kVA	450kVA	550kVA	650kVA	1000kVA	1500kVA	2000kVA				
Input	Voltage,	Frequency		3-phase 4-wire +	PE, Phase voltag	ge: 220V±33V, line	voltage: 380V±57	V, 50/60Hz±3Hz					
			3-phase 4-wire,										
	VOI	tage	Automatic state: (low-grade) 1.0 ~ 150.0V, (high-grade) 150.1~300V; high-grade lock:1.0 ~ 300.0V										
	Freq	uency	40.0 ~	70.0Hz, 100Hz	120Hz、200Hz、	240Hz		40.0 ~ 70.0Hz					
	Rated	110V	1060A	1363A	1666A	1970A	3030A						
	current	220V	530.3A	681.8A	833.3A	984.8A	1515A	2272A	3030A				
	Setting	Voltage		Resolution	n: 0.1V, accurac	y: 0.2%×reading	value +0.2%×full s	scale value					
	accuracy	Frequency			Resolution	n: 0.1Hz, accurac	cy: 0.05%						
		Voltage		Resolution	n: 0.1V, accurac	y: 0.2%×reading	value +0.2%×full s	cale value					
	Testing	Frequency			Resolution	0.1Hz, accurac	cy: 0.05%						
	accuracy	Current		Resolution:	: 0.1A/1A, accura	acy: 0.3%×reading	g value +0.3%×ful	l scale value					
		Power	Re	solution: 0.1kW/0	0.01kW/0.001kW,	accuracy: 0.45%	×reading value +0).45%×full scale val	ue				
	Frequenc	cy stability				≤0.02%							
	Voltage	distortion			Lir	near load: THD < 1	1%						
	Transient re	ecovery time	20ms										
	3 phase pha	3 phase phase difference				120°±2°							
Output	Crest	factor				1.41±0.1							
	Source vo	Itage effect				≤1%							
	Load effect					≤1%							
	Overload	f capacity	11	0% < output≤200% 0% < output≤300%	6 the output will be	stopped within 15 e stopped within 5s e stopped within 2s opped immediately	8. 8.:	110% < Output ≤ will be stopp 150% < Output ≤ will be stopp 200% < Outp	ed within 15s; 150% the output bed within 5s 200% the output ed within 2s;				
	Protectio	on mode				ormer overheat、In •、Output over loa		e, Input over vo cirluit, output over					
	Online adjust	ment function		The output vol	Itage and frequenc	y (45~65Hz) car	n be adjusted onlir	ne under status					
	Memory	function	Pow	er down memory f	function, memory l	ast output mode ar	nd parameters; S	Shortcut group 7 gro	oups				
tion	Line voltage dro	p compensation				$0.000\sim 0.500\Omega$							
	Communication	control interface		\$	Standard: RS232	Optional RS48	5、GPIB、Ethern	et					
	Remote	e control			Analo	og control port (opt	ional)						
nviron- ment	Temperature	and humidity			0	~ 40°C;20 ~ 90%R	н						
Di	imensions (W×H	×D mm)	1800×2000 ×1400	2400×2000 ×1400	3000 (140 ×1900	00+1600) ×1400	4200×2100 ×1400	-					
	2000 - 20		2730	3150	4270	4660	8000						

Speci	Specifications									
	Model	ANFC015T								
	Capacity	15kVA								
Input	Voltage, Frequency									

Voltage

Frequency

Rated

current

Setting

accuracy

Testing

accuracy

110V

220V

Voltage

Frequency

Voltage

Frequency

Current

Power

Frequency stability

Voltage distortion

Transient recovery time

3 phase phase difference

Crest factor

Source voltage effect

Load effect

Overload capacity

Protection Mode

Online adjustment function

Memory function

Line voltage drop compensation

Communication control interface

Temperature and humidity

600×1130×1018

300

260

Dimensions (W×H×D mm)

Weight (Kg)

45.4A

22.7A

Any changes to the above parameter specifications will not be notified separately.

970

800×1768×1418

1240

1390

Function

Environ-

ment

AC Power Supply

Ainuo

P46

ANFS(F) Series

AC Power Supply



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





Ainuo AC Power Supply

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

	Mode		ANFS015A(F)	ANFS030A(F)	ANFS045A(F)	ANFS060A(F)	ANFS090A(F)	ANFS120A(F)	ANFS180A(F)	ANFS240A(F		
	Capac	ity	15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	180kVA	240kVA		
Input	Voltage, Fre	equency		3-phase 4-v	vire + PE, Phas	e voltage: 220V±	33V, line voltage	e: 380V±57V, 5	50/60Hz±3Hz	bh		
	Mode		3 phas	e standard mod	e, 3 phase inde	pendent mode,	parallel single p	hase mode, 3 p	hase unbalance	i mode		
	Voltag	e	Phase voltage:	$0.0 \sim 300.0 V_{\star}$	Automatic state:	(low-grade) 0.0 ~	150.0V, (high-gra	ade) 150.1~300V	; high-grade loc	$k:0.0 \sim 300.0V$		
Ĩ	Freque	псу				40.00 ~2	40.00 Hz					
	3 phase	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A		
	standard mode rated current	220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A		
	3 phase inde-	110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A		
	pendent mode rated current	220V	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A		
	parallel single	110V	136.3A	272.7A	409.1A	545.4A	818.2A	1090.9A	1636.4A	2181.8A		
	phase mode rated current	220V	68.2A	136.3A	204.5A	272.7A	409.1A	545.4A	818.2A	1090.9A		
	Setting	Voltage		Res	olution: 0.1V, a	accuracy: 0.2%	×reading value+	0.2%×full scale	value			
	accuracy	Frequency			Res	solution 0.01Hz	, accuracy: 0.0	05%				
		Voltage		Res	olution: 0.1V, a	accuracy: 0.2%	reading value+	0.2%×full scale	value			
	Testing	Frequency			Res	solution : 0.01Hz	, accuracy: 0.0	05%				
	accuracy	Current		Resol	ution: 0.1A/1A,	accuracy: 0.3%	%×reading value	+0.3%×full scal	le value			
Output		Power	Resolution: 0.1kW/0.01kW/0.001kW, accuracy: 0.45%×reading value+0.45%×full scale value									
	Frequency	stability				≤0.(02%					
i i	Voltage distortion					Linear load	THD < 1%					
	Transient reco					20	ms					
	Three phase pha	se difference	Th	iree phase stand	lard mode: 120	°±2° ; Three-ph	ase unbalanced	mode: 0.0°~359	9.9°, 0.1° adjusta	ble		
	Crest fa	ctor					±0.1					
Ì	Source volta	ge effect	≤1%									
	Load eff	fect				≤1	%					
1			105% < outr	out≤110% the o	utput will be stop	ped within 15s ;	110% < output≤	200% the outp	ut will be stopped	within 5s		
	Overload c	apacity	200% < 0	output≤300% tł	ne output will be	stopped within 2:	s ; 300% < outp	out the output w	ill be stopped im	nediately		
			IGBT (overheat, IGB1	over current.	Transformer ove	rheat, Input un	der voltage.	Input over volta	ge.		
	Protection	mode	Outp	out under voltag	ge、Output over	voltage, Outpu	it over load. Or	utput short cirlui	t. output over cu	rrent		
	Display mod	le;Start		8	inch LCD display	, resolution: 8	00*600 Soft-st	art time:0.0 ~ 99	.9s			
	Online adjustme			In the	normal mode, th	ne output voltage	and frequency	can be adjusted	l online			
-	-				ver down memor			•				
Func- tion	Memory fu	nction				•	up:10 groups	•				
	Line voltage crop (compensation				0.000~	0.500Ω					
	Communie			Stand	ard: RS232; O			et, Analog con	trol port			
Environ-	Temperature ar						20 – 90%RH					
ment	imensions (W×H×	_	600×11	30×1018		700×1330×1218			800×1768×1418	1		
		- mm/	000411	00-1010		100-1000-1210	S		000-1700-1410			

Any changes to the above parameter specifications will not be notified separately.

Specifications

	Mode		ANFS350A(F)	ANFS450A(F)	ANFS550A(F)	ANFS650A(F)
	Capaci	ty	350kVA	450kVA	550kVA	650kVA
Input	Voltage, Fre	quency	3-phase 4-wire	PE, Phase voltage: 220V±33\	/, line voltage: 380V±57V, 50/	50Hz±3Hz
	Mode	S.	3 phase star	idard mode, 3 phase independe	ent mode, 3 phase unbalanced	mode
	Voltag	e	Automatic state: (low-	grade) 0.0 ~ 150.0V, (high-grade) 150.1~300V; high-grade loc	k:0.0 ~ 300.0V
	Frequer	icy		40.00 ~240.0	00 Hz	
	3 phase	110V	1060A	1363A	1666A	1970A
	standard mode rated current	220V	530.3A	681.8A	833.3A	984.8A
	3 phase inde-	110V	1060A	1363A	1666A	1970A
	pendent mode rated current	220V	530.3A	681.8A	833.3A	984.8A
	Setting	Voltage	Resolutio	on: 0.1V, accuracy: 0.2%×rea	ding value +0.2%×full scale val	ue
	accuracy	Frequency		Resolution: 0.01Hz, a	ccuracy: 0.05%	
		Voltage	Resolutio	on: 0.1V, accuracy: 0.2%×rea	iding value +0.2%×full scale val	lue
	Testing	Frequency		Resolution: 0.01Hz, a	ccuracy: 0.05%	
	accuracy	Current	Resolution	0.1A/1A, accuracy: 0.3%×re	eading value +0.3%×full scale v	alue
		Power	Resolution: 0.1kW	/0.01kW/0.001kW, accuracy: 0	0.45%×reading value +0.45%×f	ull scale value
Dutput	Frequency s	tability		≤0.02%		
	Voltage distortion			Linear load - Th	HD < 1%	
	Transient reco	very time		20ms		
	Three phase phas	se difference	Three phase standard	mode: 120°±2°; Three-phase	unbalanced mode: 0.0°~359.9	°, 0.1° adjustable
	Crest fac	tor		1.41±0.1	1	
	Source voltag	je effect		≤1%		
	Load eff	ect		≤1%		
			105% < output≤110% the output	t will be stopped within 15s; 110	0% < output≤200% the output v	will be stopped within 5s;
	Overload ca	apacity	200% < output≤300% the ou	tput will be stopped within 2s ;	300% < output the output will b	e stopped immediately
			IGBT overheat、 IGBT over	er current、 Transformer overhea	at, Input under voltage, Inp	out over voltage.
	Protection	mode	Output under voltage,	Output over voltage. Output ov	ver load、 Output short cirluit、	output over current
	Display mod	e;Start	8 inch	LCD display, resolution: 800*6	600; Soft-start time:0.0 ~ 99.9s	
	Online adjustme	nt function	In the non	mal mode, the output voltage an	d frequency can be adjusted or	line
Func-			Power d	own memory function, memory I	ast output mode and paramete	rs;
tion	Memory fur	nction		shortcut group:1	10 groups	
	Line voltage crop o	ompensation		0.000 ~ 0.5	Ω00	
	Communic	ation	Standard :	RS232; Optional: RS485, G	PIB、Ethernet、Analog control	port
nviron- ment	Temperature an	d humidity		0~40°C; 20~	90%RH	
) Dimensions (W×H×	D mm)	1800×2000×1400	2400×2000×1400	3000 (1400+160	00) ×1900×1400
	Weight (Kg)		2730	3150	4270	4660

AC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Programmable High Power

AC Power Supply

ANFP(F) Series

AC Power Supply



Product Introduction

The ANFP(F) series Programmable High Power 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, varations 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



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



Programmable Output(Step,Stage,Varations)





Agilent Technologi

Harmonic



Agilent Technologies







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



Step		List	00-99	StirtStop
	Standard Mode	No. Vol. Fing. Trim. Ware 00 220 EV 50 Order 00 0005 00 Sime 01 220 EV 50 Order 00 0005 00 Sime 02 220 EV 50 Order 00 0005 500 Nime 03 220 EV 50 Order 00 0005 500 Nime 03 220 EV 50 Order 00 0005 500 Nime 03 220 EV 50 Order 00 0005 00 Nime 04 220 EV 50 Order 00 0005 00 Nime	999999	Corcie 1
Mode Standard Wilve Sine Stantvol 116.5V StepVol - 11.6V Stantreg 55.0V1z	Sine Wave	07 225.0/ 50.004/ 00.90.0050 Sine 08 226.0/ 50.004/ 00.0050 Sine 09 226.0/ 50.004/ 00.00350 Sine 10 227.0/ 50.004/ 00.00350 Sine 11 226.0/ 50.004/ 00.00350 Sine	Standard	Mote
StapFreq + 10.034z Degree 1000 Time 00.00.05.00	Parmera	12 220.0V 00.001e 00.0015 Mol 31me 13 220.0V 00.0016 Mol 31me 31me 14 220.0V 50.001e 00.0016 Mol 31me 15 220.0V 50.001e 00.0005 Mol 31me 15 220.0V 50.001e 00.0005 Mol 31me 16 220.0V 50.001e 00.0005 Mol 31me 17 220.0V 50.001e 00.0005 Mol 31me		Program
Esc. Return START Start	?	Esc Return \$TANT Start		
Ramp	UC-99 StartStop	System-Wave Set	02	Viare
No. Vol Final Time Weins 00 2200 V2000 VE000 VE0000 VE000 VE0000 VE000 VE000	959999 Circle	THI Fear Jule THO Fear Jule HI 0.0 <th>0,0</th> <th>He.</th>	0,0	He.
05 220.0 V220.0 V50.00 H56.00 H00.00 55.00 \$ 06 220.0 V220.0 V50.00 H56.00 H00.00 56.00 \$ 17 220.0 V220.0 V50.00 H56.00 H00.00 55.00 \$ 18 220.0 V220.0 V50.00 H56.00 H00.00 55.00 \$ 18 220.0 V220.0 V50.00 H56.00 H00.00 55.00 \$ 19 220.0 V220.0 V50.00 H56.00 H00.00 55.00 \$ 19 220.0 V220.0 V50.00 H56.00 H00.00 55.00 \$ 10 220.0 V50.00 H00.00 H00.00 \$ 10 220.0 V50.00 \$ 10 200.0 V50.0	Standard Mode	02 0.0 0.0 25 0.0 0.0 26 0.6 0.0 26 6.0 0.0 25 6.6 0.0 27 6.0 0.0 10 0.0 0.0 28 6.0 0.0 11 8.0 9.0 2.0 6.0 0.0	0/0	Percent
09 220.0 4220.0 V50.00 Hz50.00 Hz00.00.05.00 5ime				
10 220.0 420.0 490.00 485.00 480.00 65.00 849.00	Program	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Argle

AC Power Supply





PC control software





Exceeding & Trustworthy

Specifications

	Mode	1	ANFP015A(F)	ANFP030A(F)	ANFP045A(F)	ANFP060A(F)	ANFP090A(F)	ANFP120A(F) ANFP180A(F)	ANFP240A(I
	Capac	ity	15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	180kVA	240kVA
Input	Voltage, Fr	equency		3-phase 4-w	ire + PE,Phase	voltage: 220V±	33V, line voltag	e: 380V±57V,	50/60Hz±3Hz	54.
	Mode	el	3 pha	se standard mod	le, 3 phase unba	lanced mode, 3	phase indepen	dent mode, par	rallel single phase	e mode
	Voltag	le	Phase voltage	e: 0.0 ~ 300.0V, /	Automatic state: (low-grade) 0.0 ~	150.0V, (high-gr	ade) 150.1~300	IV; high-grade lock	$c.0.0 \sim 300.0$
	Freque	ncy				40.00 ~24	10.00 Hz			
	3 phase standard	1/ 110V	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
	3 phase unbalanc mode rated curre	220 020000	22.74	45.44	69.94	00.00	106.04	104.05	070 74	252.64
	3 phase independ	RAIT CONTRACTOR	22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	77. 951.97	0	45.4A	90.9A	136.3A	181.8A	272.7A	363.6A	545.4A	727.2A
	mode rated curre		22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A
	Parallel single-pha	115530//	136.3A	272.7A	409.1A	545.4A	818.2A	1090.9A	1636.4A	2181.8A
	mode rated curre		68.2A	136.3A	204.5A	272.7A	409.1A	545.4A	818.2A	1090.9A
	Setting	Voltage		Reso		couracy: 0.2%×			e value	
	accuracy	Frequency				olution 0.01Hz				
		Voltage		Resc		ccuracy: 0.2%×			e value	
	Testing	Frequency		10000	0-228-0	olution 0.01Hz				
Output	accuracy	Current		Resolu	ition: 0.1A/1A,	accuracy: 0.3%	5×reading value	e+0.3%×full sca	ale value	
		Power		Resolution: 0.1	1kW/0.01kW/0.0	01kW, accuracy	/: 0.45%×read	ling value+0.45	%×full scale valu	e
	Frequency	stability				≤0.0	2%			
	Voltage dis	tortion				Linear load :	THD < 1%			
	Transient reco	overy time				20r	ns			
	3 phase phase	difference			3	phase standard	mode: 120°±2	2°		
					3 phase unba	lanced mode: 0).0°~359.9°, (0.1°adjustable		
	Crest fa	ctor				1.41:	£0.1			
	Source volta	ge effect				≤1	%			
	Load ef	fect				≤1	%			
	Overload c	apacity							tput will be stoppe will be stopped in	
			IGBT	overheat, IGB1	Fover current,	Transformer ove	rheat, Input u	inder voltage.	Input over volta	ige.
	Protection	mode	Outp	ut under voltag	e、Output over	voltage, Outpu	tover load、 O	utput short cirlu	uit, output over o	urrent
	Display r	node			8 inch LCD dis	olay, resolution: 8	00*600; Soft-	start:0.0 ~ 99.9	s	
	Output wa	Contractory and a second			Sine wave, ha	rmonic (superpo	sition 2~40 sec	ond harmonic)		
		Step mode				9999	- 07.5			
Func-	Programming	Stage mode				100 stage 99				
tion	function	arations mode				100 stage99				
	Online adjustm		Under no	rmal mode. the c	outout voltage ar	-		sted online. wh	ich can be switch	ed on line.
	Memory function/			1755 (A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.A.		tion, memory las	·	1.0	11.12	
	Line voltage crop				in the second seco	0.000~			.,	
	Communi		RS232	(standard) PS	485 (options)			tions) Anal	og control port (c	options)
nviron-	Temperature/		1.0202	, chandardy, ric	(opiona)	0~40°C; 2	-		-9 como por (c	1.10.10.1
	ionperature/	- minuty				0.100; 2	e ee artin			
ment	Dimensions (W×H>	D mm)	5	1000×1990×800	<u>}</u>	1200~10	990×800		1200×1990×100	0

Any changes to the above parameter specifications will not be notified separately.

Specifications

	Model		ANFP350A(F)	ANFP450A(F)	ANFP550A(F)	ANFP650A(F)						
	Capacit	χ.	350kVA	450kVA	550kVA	650kVA						
Input	Voltage, Free	quency	3-phase 4-wi	ire + PE, Phase voltage: 220V±3	33V, line voltage: 380V±57V, 5	0/60Hz±3Hz						
	Mode		3 phase	standard mode, 3 phase unbalan	nced mode, 3 phase independe	nt mode						
	Voltage		Phase voltage: 0.0 \sim 300.0V, A	Phase voltage: 0.0 \sim 300.0V, Automatic state: (low-grade) 0.0 \sim 150.0V, (high-grade) 150.1 \sim 300V; high-grade lock:0.0 \sim 300.0V								
	Frequen	sy .		40.00 ~24	0.00 Hz							
	3 phase standard /	110V	1060A	1363A	1666A	1970A						
	3 phase unbalanced mode rated current		530.3A	681.8A	833.3A	984.8A						
	3 phase independer	t 110V	1060A	1363A	1666A	1970A						
	mode rated current		530.3A	681.8A	833.3A	984.8A						
	Setting	Voltage	Reso	lution: 0.1V, accuracy: 0.2%×r	reading value +0.2%×full scale	value						
	accuracy	Frequency		Resolution: 0.01Hz,	accuracy 0.05%							
		Voltage	Reso	lution: 0.1V, accuracy: 0.2%×r		value						
	Testing	Frequency		Resolution: 0.01Hz,								
utput	accuracy	Current	Resolu	tion: 0.1A/1A, accuracy: 0.3%	×reading value +0.3%×full scale	e value						
		Power	Resolution: 0.1	IkW/0.01kW/0.001kW, accuracy	 0.45%×reading value+0.45% 	5×full scale value						
	Frequency sl			≤0.02								
	Voltage distortion			Linear load:	THD < 1%							
	Transient recovery time			20m	ns							
				3 phase standard	mode: 120°+2°							
	3 phase phase of	lifference		3 phase unbalanced mode: 0								
	Crest fac	or		1.41±								
	Source voltag	e effect		≤19	%							
	Load effe	11		≤19	%							
	Overload ca	pacity		utput will be stopped within 15s; putput will be stopped within 2s;								
	Protection r	node		BT over current、Transformer ov over voltage、Lack output phase								
	Display m	ode		8 inch LCD display, r	esolution: 800*600							
	s	tep mode		9999	set							
	Programming	age mode		100 stage 99	9999 cycle							
unc- tion	function Var	ations mode		100 stage99	9999 cycle							
	Online adjustmer	nt function	Under normal mode, the o	utput voltage and output frequen	cy can be adjusted online, whic	h can be switched on line.						
	Memory function/ SI	nortcut group	Power dow	n memory function, memory last	output mode and parameters;	10 groups						
	Line voltage crop co			0.000 ~ 0	0.500Ω							
	Communica		RS232 (standard), RS	485 (options), GPIB (options)	、Ethernet (options) 、Analog	control port (options)						
nviron- ment				0~40℃; 20								
	Dimensions (W×H×I		1800×2000×1400	2400×2000×1400		00) ×1900 ×1400						
			1800×2000×1400 2400×2000×1400 3000 (1400+1600) ×1900 ×1400									

P53

AC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy

Programmalbe AC Test Power Supply AN61(F) Series



Product Introduction

The AN61(F) Series Programmable AC Test Power Supply adopts SPWM technology, digital processing technology and high-power switching power supply technology, and it can output AC, DC, and AC+DC power supply, providing precise power input for AC load, DC load, rectifier load, etc. With the ability to provide 3-4 times peak current, it is the best test instrument for measuring surge current and can set waveform switch-on and switch-off angles for testing surge current and output maintenance time. It can also set the rate of change of voltage and frequency to scan the range of power input specifications for the object to be tested. The power supply can simulate abnormal instantaneous rise, drop, short circuit, jitter and other phenomena in the power grid, and simulate distortion of the mains power waveform through harmonic or interharmonic overlay functions. It can also provide accurate and fast measurement of power parameters and harmonics. The AN61(F) Series Programmable AC Test Power Supply has excellent power output quality and is widely us. ed in power electronics, military, aviation electronics, IEC standard tests and other industry laboratories and production lines

The AN61(F) Series Programmable AC Test Power Supply has powerful programmable functions and can complete IEC61000-4-11 (pre-certification test)/-4-13/-4-14/-4-28 regulatory immunity tests. In addition, with programmable output impedance, it can be combined with a power analyzer to achieve IEC 61000-3-2/-3-3 harmonic current limitation and flicker regulatory tests, making it the best choice for IEC regulatory tests.





Features

- It has advanced SPWM technology, DSP and FPGA digital processing technology and high-power switching power
- It has output modes include AC, DC, and AC+DC;
- It provides programmable output impedance for IEC61000-3-3 tests;
- It provides voltage and frequency variation tests for IEC61000-4-11, IEC61000-4-14, and IEC61000-4-28;
- It provides harmonic and sub-harmonic waveform synthesis tests for IEC61000-4-13:
- It provides high output peak current for ideal surge current testina:
- It has the pulse output function for voltage dip tests and simulating interference in actual grids;
- It has a step output function, and the step test mode provides a simple automatic switching function to change the output voltage, which changes in a step-like manner instead of gradually;
- It has the sequence output function and the output waveform in the sequence test mode is a combination of all configured serial numbers. Users can edit the required output voltage sequence based on their needs;
- It provides external analog signal input interface for power amplification of external input signals; (available in 615 and 618 Series only)
- It features an LCD, small size, and lightweight, meeting the requirements for standard cabinet installation;
- The 615 and 618 Series is equipped with RS232 communication interface as standard, with optional RS485, GPIB, and Ethernet communication interfaces;
- The AN619(F) Series is equipped with RS485 and Ethernet communication interfaces as standard, with optional RS232 and GPIB communication interfaces.

Applications

Analog power supply input interference

Through pulse, step, sequence, and other output modes, it can simulate arbitrary output waveforms in single-step or continuous mode, simulating grid fluctuations and interference for testing the DUT (device under test).



Step output waveform

Switching power supply surge current test

By setting startup and stop angles and providing up to 3-6 times peak current output capability through the output waveform, the AN61 Series Power Supply is an ideal device for testing switching power supply surge currents.





Harmonic and interharmonic synthesis (available in 615 and 619 Series only) Can superimpose 2-40 harmonics and interharmonics for more comprehensive harmonic simulation tests.



Harmonic output waveform



Interharmonic output waveform

AC Pow

AC Power Supply Ainuo

Sequence voltage variation test

Sequence Test Angle Trigger







			Model	AN615 00S-350(F)	AN615 01S-350(F)	AN615 02S-350(F)	AN615 04S-350(F)	AN615 06S-350(F)	AN618 00S-350(F)	AN618 01S-350(F)	AN618 02S-350(F)	AN618 04S-350(F)	AN618 06S-350(F
		Power s	upply capacity	500VA	1000VA	2000VA	4000VA	6000VA	500VA	1000VA	2000VA	4000VA	6000VA
							Phase	Voltage:				Phase	Voltage:
		1	/oltage		90~250V		198-	-250V		90~250V		198~250V	
AC				single-p	phase two-w	vire +PE	3-phase	4-wire +PE	single-	single-phase two-wire +PE		3-phase 4-wire +PE	
Input	-	12		8A Max	16A Max	28A Max	18A Max	25A Max	8A Max	16A Max	28A Max	18A Max	25A Max
		(Current	@90V	@90V	@90V	@198V	@198V	@90V	@90V	@90V	@198V	@198V
		Fr	equency					47 ~	-63Hz				
		Pow	er factor #1		≥0.97		≥(.98	13	≥0.97		≥().98
	_	Pha	se number					Single	e-phase				
	_	Tot	tal Power	500VA	1000VA	2000VA	4000VA	6000VA	500VA	1000VA	2000VA	4000VA	6000VA
			Gear range		Low g	rade: 0.0 \sim 1	75.0V, High	grade: 0.0 ~	-350.0V; Lo	w gear/high	gear/autom	atic gear	
			Resolution					0.	.01V				
	Vo	ltage	Accuracy					0.2%+	0.2%F.S.				
AC		8	Distortion #2				0.3%	@50/60Hz;	1%@15~	1000Hz			
19. C. K			Source voltage effect #3					0400	0.1%				
Output			Load effect H				2000		0.2%	-			
		Effective value	0-175V	5A	10A	20A	40A	60A	5A	10A	20A	40A	60A
	/phase_	range	0-350V	2.5A	5A	10A	20A	30A	2.5A	5A	10A	20A	30A
		Peak value	0-175V	20A	40A	80A	160A	240A	20A	40A	80A	160A	240A
		range	0-350V	10A	20A	40A	80A	120A	10A	20A	40A	80A	120A
	Free	quency	Range/Resolution /Accuracy				15	~1000Hz,	0.001Hz, 0	.15%			
	Power		250W	500W	1000W	2000W	3000W	250W	500W	1000W	2000W	3000W	
	Voltage Gear range Resolution Accuracy							Low gear/hi	2.020.000			A 8 9 4 8 1 1 1	
DC Output			-247.5~247.5V	2.5A	5A	10A	20A	30A	2.5A	5A	10A	20A	30A
• adp at	Cu	urrent	-495.0~495.0V	1.25A	2.5A	5A	10A	15A	1.25A	2.5A	5A	10A	15A
			Range/Resolution									1.0000000000	
	Vo	oltage	/Accuracy *5			AC	C: 350.00V,	DC: 495.0	00V; 0.01V	0.2%+0.2%	%F.S.		
Measure			Range	24A	48A	96A	160A	240A	24A	48A	96A	160A	240A
-ment	Cu	urrent	Resolution					0.	.01A				
accuracy		arrent.	Effective value accuracy*6					0.4%+	0.6%F.S.				
			Peak value accuracy*6					0.4%+	0.6%F.S.				
	Po	ower	Resolution/Accuracy *7					0.01W; 0.	4%+0.6%F.8	S.,			
	Dis	play/Wa	veform selection	5-ii	nch color tou	uch screen L	.CD/Sine wa	ve, square v	vave, clippe	d sine wave,	30 sets of b	uilt-in wavef	orms
	Start	t-stop an	gle/Knob function/		0-359.9	l⁰/Knob adju	stment avail	able for conv	ventional mo	de voltage a	and frequence	y settings	
	Progr	rammabl	e output impedance					/0Ω+0µH	~1Ω+1mH				
		Ha	armonics			2~40 times	6				None		
Fun-	Harmonia	c and interha	armonic simulation bandwidth			2400Hz					None		
ction			ence mode		100 steps wi	th 9,999 loo	ps. Voltage,	frequency, a	and phase a	ngle can be p	programmat	ically output	led
			lse mode						age amplitu				
	-	200	ep mode						ording to the				
			gulation function						can be adjus				
	Due drop	-	tion/Communication interface	The de	vice has Sense	lerminals that allo			n/RS232 (standar		nai), GPIB (option	al), and Ethernet	(optional)
Work-ing			ote control ature/Humidity				A		ol port (stand 30~90%RH	aru)			
environment			/ *8 /Protection	>02%/lines	it abnormality	hus menulter	ie outout ovco		dervoltage, out	ut overeverent	output overla	ad and module	overheating
			Height	-or white	3U	Sas overvollag		5U		3U	, super overlo		SU
Shape			mensions	4	32×134×63	0		22×640		30 32×134×63	0		22×640
			H×D mm)			suspension ear, a	and the width of su	spension ear is 24	4mm; The height (loes not include th	ie feet, the feet an	10.38 T	THE SECOND
		We	ight (Kg)		≤21		he depth does no		le, and the depth (40
		110	0				100	107-11					100

IEC regulatory test

The power supply can output test voltages that meet IEC test conditions. The upper computer software also includes the test process for relevant IEC regulations, making it convenient for customers to quickly set up and use.



Arbitrary waveform amplification (available in 615 and 618 Series only)

The AN61(F) Series Programmable AC Test Power Supply can amplify any waveform through an external port. Customers can record the actual waveform on-site using a waveform recorder; send it to the external port of the AN61 power supply for amplification using a waveform generator, thereby achieving a realistic simulation of using the actual on-site waveform to test the DUT (device under test).



Computer control software







AC Power Supply \\

		Model		AN61906A -350(F)	AN61909A -350(F)	AN61912A -350(F)	AN61915A 350(F)	AN61918A -350(F)	AN61920A -350(F)	AN61925A -350(F)	AN61930/ 350(F)
	Powers	supply capac	city	6000VA	9000VA	12000VA	15000VA	18000VA	20000VA	25000VA	30000VA
		Voltage			9000720720		tage: 342V-480			10	
AC	Curr	ent(@342V)		20A Max	25A Max	30A Max	35A Max	40A Max	45A Max	55A Max	65A Max
input	F	requency					47~6	53Hz			
	Pow	/er factor #1					≥0	.98			
	Pha	ise number				95	Three-phase &	& single-phase			
	Power		power	6000VA	9000VA	12000VA	15000VA	18000VA	20000VA	25000VA	30000VA
			se power	2000VA	3000VA	4000VA	5000VA	6000VA	6667VA	8333VA	10000VA
			nge					50.00V			
			lution				0.0	01V			
	Voltage		tion *2			0	.3%@50/60Hz		47		
AC			effect #3					02%	12		
Output			effect #4					02%			
			Three phase mode	35A	35A	35A	35A	35A	60A	60A	60A
	Gumanthabasa	Effective value range	Singlephasemode	105A	105A	105A	105A	105A	180A	180A	180A
	Current/phase	Peak value range	Three phase mode	105A	105A	105A	105A	105A	180A	180A	180A
		Peak value range	Single-phasemode	315A	315A	315A	315A	315A	540A	540A	540A
		Ra	nge				30.000~1	00.000Hz			
	Frequency		olution)1Hz			
			Iracy					1%			
	Power		power	6000W	9000W	12000W	15000W	18000W	20000W	25000W	30000W
		Power pe	0.00	2000W	3000W	4000W	5000W	6000W	6667W	8333W	10000W
DC	Voltago		nge olution					-495.00V			
output	Voltage		iracy	-				6F.S.			
			Single channel	35A	35A	35A	35A	35A	60A	60A	60A
	Current	Range	Parallel connector	0.000	105A	105A	105A	105A	180A	180A	180A
		Ra	nge				AC: 350V; E	DC: 495.00V		0.5850.004	20000000
	Voltage	Reso	olution				0.0)1V			
Measur -ement acc -uracy	1214	Accur	acy #				0.1%	6F.S.			ç
	Current	Range	Effective value	105A	105A	105A	105A	105A	180A	180A	180A
			Peak value	315A	315A	315A	315A	315A	540A	540A	540A
-uracy	Current		olution)1A			2
		Statistic Statistics of the Statistics	e accuracy **					6F.S.			
		Contract of Contractor Contractor	accuracy #8				0.5%				
	Power	1,1,2,5,7,7,7,7	acy #7				07267	1W 6F.S.			
		Display	acy	-		8	5-inch color tou				
		form selectio	n	Sine wave, tria	nole wave, sou	are wave, clippe				and 6 sets of cu	stom wavefo
	-	t-stop angle					0-35	or other and a particular a series			
		ob function			Knob adj	ustment availab	le for conventio	nal mode volta	ge and frequer	ncy settings	
	Parallel o	peration fun	ction			Can ach	nieve parallel op	peration of mult	iple units	322 0.0228	
Fun-		armonics					2-50	times			
ction		and interhan					300	OHz			
		tion bandwid	th						1		
		ience mode		200		9 loops. Voltage	and the second se		and the second se	and the second se	utted
		lse mode ep mode		0.0		9 loops. Cyclic o ge the voltage fi	The second s				lues
		gulation func	tion			utput voltage/fre					u church ann an th
		compensat		500027 G 55		the output voltage	1 1		the second se		3360 - 7
		ication interf				ernet (standard),		and the second se	and the second se		
	Rem	note control					the second s	ne			
Working	Ter	nperature					0~4	10 C			
nvironment		lumidity					30~90	0%RH			
	Efficien	27						2%			
	Protec			Input abnormalit	y, bus overvoltag	e, output overvolt		and some residence is one of the second s	ercurrent, output	overload, and m	odule overhea
		Height		100 177 700	100 100 000	100 177 74-	Contract of the Contract of th	U	100 170 7-	100 100 000	100 100
	D	mensions				432×175×700					432×175×7
		mensions		The width of 43	32mm is the star	ndard 19-inch ch	assis size witho	ut handles, with	handles the w	oth is 480mm.	
Shape		≪H×D mm)			75mm is withou 00mm/735mm is	t feet, with feet t s the front and re	he height is 188	mm. The feet a		ve parts, the dep	oth including

specifications	

	Model Power supply capacity			AN61903S -350(F)	AN61905S -350(F)	AN61906S -350(F)	AN61910S -350(F)	AN61912S -350(F)	AN61915S -350(F)	AN61920S -350(F)			
				-350(F) 3000VA	5000VA	6000VA	10000VA	12000VA	15000VA	20000VA			
	Voltage			3000VA	3000VA			phase 3-wire +PE	100007A	20000VA			
1787	Cur	Current(@342V)			22A Max	25A Max	39A Max	40A Max	50A Max	65A Max			
AC		Frequency	1	15A Max	22A IVIAA	20A Max	47~63Hz	40A Ivida	JUA Max	USA Wax			
input	Power factor #1						≥0.98						
	NPhase number			Cinale abase	Single phase	Single phase	I THE REPORT OF	Single phose	Single phase	Single phase			
	INF I	Power	A	Single-phase	Single-phase 5000VA	Single-phase 6000VA	Single-phase 10000VA	Single-phase 12000VA	Single-phase 15000VA	Single-phase 20000VA			
		0.00	inge	3000VA 5000VA 6000VA 10000VA 12000VA 15000VA 20000VA 0.00~350.00V									
			olution	0.00~350.000									
			cision	0.1%F.S.									
			rtion *2	0.3%@50/60Hz; 1%@30-100Hz									
	Voltage		effect #3	0.3%@30/60HZ, 1%@30-100HZ ≤0.02%									
AC		Load effect #4		≤0.02%									
Output	-	Effective value range		35A	35A	35A	60A	70A	120A	120A			
output	Current/phase	Peak value range		105A	105A	105A	180A	210A	360A	360A			
		and the second se		IUSA	1004	1004	1			300A			
	Frequency	Range Resolution		30.000~100.000Hz 0.001Hz									
		Accuracy					0.01%						
	Power	3		200014/	5000W	6000W	10000W	12000W	15000W	20000W			
	FOwer	Range Range		3000W	500077	000077	-495.00~495.0	and the second sec	130007	2000077			
DC							-495.00~495.0 0.01V	10 V					
output	Voltage	Resolution Accuracy					0.1%F.S.						
output	Current			254	35A	35A	60A	70A	120A	120A			
	Current		nge	35A	JOA		1		1204	1204			
	Voltage	Range AC: 350V; DC: 495.00V Resolution 0.01V											
	voltage		acy *5				0.1%F.S.						
Measur		Accui		054	35A	35A	60A	70A	120A	120A			
-ement		Range	Efective valuePeak Peak value	35A	105A	105A	180A	210A	360A	360A			
acc	Current	Pere		105A	IUDA	IUDA		ZIUA	300A	300A			
-uracy	Guilen	Resolution Effective value accuracy*6		0.01A									
		Peak value accuracy*6		0.2%F.S.									
		Resolution		0.5%F.S.									
	Power		sites in	0.01W									
		Accuracy *7		0.3%F.S.									
	Mour	Display form selecti	lon	Cine université			ch color touch so		and Cards of				
	-		2001	Sine wave, that	ngle wave, square	e wave, clipped s		of built-in waveto	rms, and 6 sets of (custom waveforms			
	Start-stop angle Knob function		0-359.9° Knob adjustment qualitable for conventional mode uptrate and forguency actions										
	Parallel operation function		Knob adjustment available for conventional mode voltage and frequency settings Can achieve parallel operation of multiple units										
			ICUOIT			Can achieve		in or multiple units					
Fun-	Harmonics		2-50th 3000Hz										
ction	Harmonic and interharmonic simulation bandwidth Sequence mode			200 steps with 9,999 loops. Voltage, frequency, and phase angle can be programmatically outputted									
		ulse mode	0	200	C200100100			nplitude, frequenc		nputted			
		Step mode		0.0			<u> </u>			values			
			n						and frequency step				
	Online regulation Line drop compensation			Under the conventional mode, the output voltage and frequency can be adjusted online, and the waveform can be switched online The device has Sense terminals that allow remote sampling compensation									
	and the second s	nication inte	(AM BADA)	DC/95						P (optional)			
				RS485 (standard), Ethernet (standard), synchronization signal (standard), RS232 (optional), GPIB (optional)									
Weddee	Remote control			0~40°C									
Working environmen	Temperature			0~40 C 30~90%RH									
GIVEOIETIGIT	and the second			30~90%RH ≥92%									
1	Efficiency ** Protection		la contra la consta Ch	. have a second being		14122737323		a david a surface of sourd	and to an describe				
	FIOLEC			input abnormality	, ous overvoitage,	ouiput overvoitage	and undervoltage,	ouiput overcurrent,	output overload, and	module overneating			
Shape	Height		100.175 70-	122-175-700	432×175×700	400-475-705	432×175×700	432×175×735	432×175×735				
	Dimensions (W×H×D mm)		The width of 432mm is the standard 19-inch chassis size without handles, with handles the width is 480mm. The height of 175mm is without feet, with feet the height is 188mm. The feet are detachable. The depth of 700mm/735mm is the front and rear panel size excluding terminals and protective parts, the depth including										
		Mainte (Ka)		terminals is 77	ALL THINKING OF LODI CAT	-01	-00	-05	-00				
	Weight	(Kg)		≤25	≤25	≤25	≤26	≤35	≤38	≤38			

Any changes to the above parameter specifications will not be notified separately.

AC Power Supply

Any changes to the above parameter specifications will not be notified separately.

		Model			AN61960B-350(F	AN61975B-350(F)						
	Power	supply capad	city	50kVA	60kVA	75kVA	90kVA	100kVA	120kVA			
		Voltage			1	Lin voltage: 342V-480	V; 3-phase 3-wire +	PE				
AC	Curr	ent(@342V)	()	110A Max	130A Max	165A Max	195A Max	220A Max	260A Max			
input	F	requency				47~	63Hz					
	Power factor *1			≥0.98								
AC	Phase number			Three-phase& Single-Phase								
	Total power		nower	50kVA	60kVA	75kVA	90kVA	100kVA	120kVA			
	Power	Per phase power		16.66kVA	20kVA	25kVA	30kVA	33.33kVA	40kVA			
		Range		0.00~350.00V								
		Resolution										
				0.01V								
	Voltage	Accuracy Distortion #2		0.1%F.S.								
		Distortion #2		0.3%@50/60Hz; 1%@30-100Hz								
		Source effect #3		≤0.02%								
Output		Load effect #4					.02%					
		Effective Three-phase mode		120A	120A	180A	180A	240A	240A			
	Current		⁹ Single-phaserroote	360A	360A	540A	540A	720A	720A			
	- un offic	Peak value	Three-phase mode	360A	360A	540A	540A	720A	720A			
		range	Single-phase-mode	1080A	1080A	1620A	1620A	2160A	2160A			
		Range		30.000~100.000Hz								
	Frequency	Resolution				0.0	01Hz					
		Accuracy		0.01%								
	1 and the second		power	50kW	60kW	75kW	90kW	100kW	120kW			
	Power	Power per channel		16.66kW	20kW	25kW	30kW	33.33kW	40kW			
		Range					~495.00V					
DC	Voltage	Resolution		0.01V								
output	ronago	Accuracy		0.11V								
			Single channel	120A	120A	180A	180A	240A	240A			
	Current	Range	Paralelconnection	360A	360A	540A	540A	720A	720A			
		Pa	nge	360A	JOUA			7204	720A			
				AC: 350V; DC: 495.00V								
	Voltage	Resolution		0.01V								
		Accuracy *5		0.1%F.S.								
Veasur -ement		Range	Effective value	360A	360A	540A	540A	720A	720A			
acc		-	Peak value	1080A	1080A	1620A	1620A	2160A	2160A			
-uracy	Current	Resolution				0.	01A					
		Effective value accuracy #6		0.2%F.S.								
		Peak value accuracy #		0.5%F.S.								
	Power	- C7-4555	olution	0.01W								
	FOWEI	Accuracy #7		0.3%F.S.								
	Display			5-inch color touch screen LCD								
	Waveform selection		ท	Sine wave, triangle wave, square wave, clipped sine wave, 30 sets of built-in waveforms, and 6 sets of custom waveform								
	Start-stop angle			0-359.9°								
	Kn	ob function		Knob adjustment available for conventional mode voltage and frequency settings								
Ī	Parallel c	peration fun	ction	None								
-	2015/12/04/12/10/2	armonics	140 007.4	2-50th								
Fun-	Harmonic	and interhan	monic									
GUON		tion bandwid		3000Hz								
		uence mode		200 steps with 9,999 loops. Voltage, frequency, and phase angle can be programmatically outputted								
	Pulse mode			9,999 loops. Cyclic changes in voltage amplitude, frequency, and angle								
	Step mode			9,999 loops. Change the voltage frequency according to the set voltage and frequency step values								
			Under the conventional mode, the output voltage and frequency can be adjusted online, and the waveform can be switched online									
	Online regulation function			Under the conventional mode, the output voltage and requercy can be adjusted online, and the wavelorm can be switched online The device has Sense terminals that allow remote sampling compensation								
	Lead drop compensation Communication interface											
	a sa	in the second second	lace	RS485 (standard), Ethernet (standard), synchronous signal (standard), RS232 (optional) and GPIB (optional)								
10.11	Remote control Temperature			None								
Working				0~40°C								
nvironment	Humidity			30~90%RH								
	Efficiency #8			≥92%								
	Protection			Input abnormality, bus overvoltage, output overvoltage and undervoltage, output overcurrent, output overload, and module overheating								
Shape	e Dimensions (W×H×D mm)			600x1,230 (the height with casters is 118)x 1,000								
	Weight	(Ka)		≤330 ≤330 ≤380 ≤380 ≤440 ≤440								

Any changes to the above parameter specifications will not be notified separately,

Notes:

#1. Power factor is the measurement result of resistive load at rated power with input rated voltage of 380VLL and output usage;

#2. Distortion is the measurement result of resistive load at rated power with an output voltage of 250V;

during no-load;

#4. Load effect is calculated by the measured output voltage under no-load and the output measurement at rated power using a resistive load with an output voltage of 250V;

and DC maximum output voltage values of the voltage measurement range of the corresponding model machine.

value and peak value of the current measurement range of the corresponding model machine.

corresponding model machine;

#8. The efficiency is the measurement result of resistive load measured at rated power with input voltage set at the input rated voltage of 380VLL and output voltage at 250V;

Any changes to the above parameter specifications will not be notified separately. The power supply parameters at the time of shipment shall prevail.

AC Power Supply Ainuo

- #3. Source effect is calculated by the measured output voltage under two conditions: input rated voltages of 380VLL and 420VLL
- #5. The FS appearing in parameters related to AC voltage and DC voltage in the parameter table refers to the corresponding AC
- #6. The FS appearing in parameters related to current in the parameter table refers to the maximum measured current effective
- #7. The FS appearing in parameters related to power in the parameter table refers to the maximum measured power value of the

Applications

High and low voltage ride-through: The programmed output mode set for the photovoltaic industry is used to simulate the process of grid fall and recovery, and is capable of simulating a variety of modes such as zero voltage ride-through, low voltage ride-through, high voltage ride-through, and a combination of high and low voltage ride-through, and arbitrarily setting the voltage, maintenance time, ride-through angle, recovery voltage, etc.



Zero voltage ride-through

Low voltage ride-through





High voltage ride-through

Combination of high and low voltage ride-through

Unbalance: U, V and W phases and voltages can be set separately, or the degree of unbalance can be set directly.



Transient change: An output method that simulates transient change in voltage, able to perform 1ms zero voltage ride-through.



1ms ride-through

Programmalbe Grid Simulator

ANGS(F) Series



Product Introduction

The ANGS(F) Series Programmalbe Grid Simulator is specially developed for the new energy industries such as photovoltaic and wind power, applicable to inverter testing and verification. The power supply adopts FPGA digital control technology, able to completely realize the intelligent test process of inverters; With sine wave output mode and a variety of harmonic superposition output mode, single-phase, two-phase or three-phase low (zero) voltage ride-through, it is capable of fully simulating various abnormal grid conditions, able to assist in completing the overvoltage/undervoltage, overfrequency/underfrequency, unbalance and anti-islanding protection function tests, meeting the testing requirements of the relevant laws and regulations.

Features

- It adopts FPGA digital control technology, able to completely realize the intelligent test process of inverters.
- It has high-performance high and low (zero) voltage ride-through, step, dip, flicker and other test functions, capable of performing 1ms ride-through test.
- It can set complex programming modes for voltage and frequency, able to easily realize the overvoltage/undervoltage, overfrequency/underfrequency tests.

- It has the function of 2-50 harmonic outputs and interharmonic outputs.
- It has the three-phase unbalance mode, capable of adjusting three-phase voltage and three-phase phase difference, realizing the three-phase unbalance test.
- It is able to withstand 2S for 3 times the rated current impact, with strong load capacity.
- It has complete measurement functions: voltage, current, current peak value, frequency, active power, apparent power, power factor, and voltage peak factor.
- It has the online monitoring function: monitor parameters such as IGBT temperature, transformer temperature, fan speed and input voltage under output state.
- It has the "black box" function: automatically record power supply status, alarm codes, etc. to greatly reduce maintenance time.
- The fan speed is automatically adjusted according to the power supply temperature, reducing noise.
- It provides a Lock key, with a user-friendly design that automatically locks after 5 minutes of inactivity to prevent misoperation.
- The chassis is in the form of a combination cabinet, with an 8-inch large-screen color LCD display.
- It is equipped with a standard RS232 communication interface and can be optionally equipped with RS485, GPIB, Ethernet communication interfaces or analog control mode.

AC Power Supply

Programming: It has universally programmable settings, where voltage, frequency and phase can be changed according to single-step settings. Trigger phase and loop count can be set, and parameters of three-phase outputs can be separately configured. Any phase jump/ride-through test can be achieved.





Ainuo

Gradual change in voltage + sudden change in voltage + sudden change in frequency

Sudden change in frequency at 0°

■ Harmonics: The power supply has the harmonic editing function (2 - 50 times), able to add harmonics based on the standard sine wave, and set the harmonic content and angle, with single harmonic up to 30%, and the total harmonic content and number of harmonic superpositions unlimited. Moreover, it has 50 harmonic storage groups for quick call.





Exceeding & Trustworthy

Interharmonics: The power supply has the interharmonic editing function, allowing addition of interharmonics based on the standard sine wave. Interharmonic trigger angle, frequency, content, and scan time can be set, with an interharmonic frequency range of 16 - 2,400Hz.



Flicker: The power supply can simulate the flicker characteristics of the power grid and test the flicker adaptation of the DUT.

Settledhillet FrcTunn) Invotod



Large-size color LCD: numeric key input, knob operationt.







Unbalance Mode - Standby State

High and Low Voltage Ride-through - Main Menu

				Parent
	ù II			
user:		ă	W.	Berlad.
NU WW	100	220.00	074 2000 2001 00	
gia/*		240.0	1280	
15	0.000	0.001	0.000	
34	\$,022	10.005	0,303	
septer"		6.0		

Transient Mode - Standby State



Computer control software











Specifications

	Model		ANGS015T(F)	ANGS030T(F)	ANGS045T(F)	ANGS060T(F)	ANGS090T(F)	ANGS120T(F)	ANGS180T(F)	ANGS240T(
Power Supply Capacity		15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	180kVA	240kVA		
input	Voltag	ge, Frequency	Three-p	hase four-wire	+PE; Phase volt	age: 220V±33V,	line voltage: 38	0V±57V, and fre	quency: 50/60Hz	±3Hz	
	Output Mode		Three-phase four-wire standard mode, three-phase unbalance mode								
	Voltage, Frequency		Phase voltage: 0.0 ~ 300.0V, frequency: 40.00 ~ 70.00Hz								
	Rated 220V Current		22.7A	45.4A	68.2A	90.9A	136.3A	181.8A	272.7A	363.6A	
[Setting Accuracy	Voltage		Resol	ution: 0.1V, accu	uracy: 0.2% × re	ading value + 0.	2% × full range	value		
2		Frequency			Re	solution: 0.01Hz	, accuracy: 0.05	%			
	Measure- ment Accuracy	Voltage		Resol	ution: 0.1V, accu	uracy: 0.2% × re	ading value + 0.1	2% × full range	value		
ľ		Frequency			Re	solution: 0.01Hz	, accuracy: 0.05	%			
		Current	Resolution: 0.1A/1A, accuracy: 0.3% × reading value + 0.3% × full range value								
		Power	Resolution: 0.1kW/0.01kW/0.001kW, accuracy: 0.45% × reading value + 0.45% × full range value								
1	Frequency Stability		≤ 0.02%								
utput	Voltage Distortion Degree		Linear load: THD < 1%								
Jupor	Response Time		1ms								
	Three-phase		Three-phase standard mode: 120°±2°								
	Phase Difference		Three-phase unbalance mode: 0.0° ~ 359.9°, adjustable by 0.1°								
	Phase Voltage Wave Peak Facto		1.41±0.1								
	Source Voltage Effect		<u>≤1%</u>								
1	Load Effect		s 1%								
	Overload Capacity Protection Device		When 105% < Output ≤ 110%, the output will be shut off after 15s;								
_	DisalarMada		output overload, output short circuit, bus recharge prevention								
-	Display Mode		8-inch LCD display, resolution: 800*600								
	Output Waveform		Sine wave, harmonic (2 ~ 50 harmonic superpositions)								
	Online Regulation Function		Under the conventional mode, the output voltage and frequency can be adjusted online								
	Transient Mode		Available. Capable of achieving voltage step (voltage dip) from high voltage to low voltage or from low voltage to high voltage								
1	Flicker Mode		Available. Capable of calling any one set of flicker parameters from 1 to 39 groups								
Fun-	High/Low (Zero) Voltage Ride-through Mode		Available. Users need to make personalized adjustments.								
ctions	Unbalance Mode		Available. Capable of adjusting three-phase voltage and three-phase phase difference separately or directly set three-phase unbalance degree								
[Programming Mode		200 steps with 999,999 loops. Voltage, frequency, and phase angle can be programmatically outputted								
1	Startup Slow Rising Time		0.0 ~ 99.9s								
[Memory Function		Power-off memory function capable of remembering the last output mode and parameters								
	Line Drop Compensation		0.000 ~ 0.500Ω								
	Communication Interface		RS232 (standard), RS485 (optional), GPIB (optional), Ethernet (optional)								
nviron ment		Temperature, Humidity 0 ~ 40 °C, 20 ~ 90%RH									
Dimensions (W×H×D mm)				1,000×1,990×80	00	1,200×1	990×800	1	,200×1,990×1,00	00	
	Weigh	nt (Ka)	310	360	500	620	810	1,060	1,350	1,520	

P65

AC Power Supply

The above specifications are subject to change without notice.
ANRGS(F) Series

Regenerative Grid Simulator

Exceeding & Trustworthy



AC+DC output mode: Three output modes: AC, DC, and AC+DC





AC+DC mode

AC+DC mode

Start-stop angle: In the conventional mode, the start-stop angles of the waveform can be set to facilitate surge current tests.



U-phase starts at 90° and stops at 270° waveform

Output waveform options: The three-phase output waveform can be independently set to select sine wave. square wave, triangular wave, clipped sine wave, 30 sets of built-in waveforms, and 6 sets of user-defined waveforms.



Square wave

Triangular wave







Product Introduction

The ANRGS(F) Series Regenerative Grid Simulator adopts advanced SPWM technology, FPGA digital processing technology and high-power switching power supply technology, and it can output AC, DC, and AC+DC power supply, providing precise power input for AC load, DC load, rectifier load, etc. The power supply has the function of 100% rated power feedback to the grid, enabling four-guadrant operation and significant energy savings to reduce operating costs. It can set waveform switch-on and switch-off angles for testing surge current and output maintenance time. It can also set the rate of change of voltage and frequency to scan the range of power input specifications for the object to be tested. The power supply can simulate abnormal instantaneous rise, drop, short circuit, jitter and other phenomena in the power grid, stimulate distortion of the mains power waveform and provide accurate and fast measurement of power parameters. The ANRGS Series Regenerative Grid Simulator adopts advanced SPWM technology with excellent power output quality, widely used in laboratories and production lines in the photovoltaic, new energy vehicle, and other industries.

Features

- It has advanced SPWM technology and FPGA digital processing technology and high-power switching power supply technology with high power density.
- It has output modes include AC, DC, and AC+DC.
- It has 100% rated power feedback to the grid, and the power supply can operate in all four quadrants.
- It can realize three-phase and single-phase parallel operation, and the single-phase output after parallel connection can reach the maximum capacity of the whole unit.
- It has harmonic synthesis function for 2-50 times interharmonics with a synthesis bandwidth of 3,000Hz.
- It has three programming functions: sequence, pulse, and step, which simulate the interference in the actual grid, with a minimum programming step size of 1ms.
- It has a 5-inch LCD, which is small in size, light in weight and 4U in height, meeting the installation requirements of standard cabinets.
- It is equipped with RS485 and Ethernet communication interfaces as standard, with optional RS232 and GPIB communication interfaces.
- It comes with upper computer software, which can import and export arbitrary waveforms and set parameters through the upper computer.

AC Power Supply





Ainuo

Clipped sine wave

Built-in waveform



Different waveforms set for three phases

Sequence mode: It has universally programmable settings, where each phase of AC voltage, DC voltage, frequency, phase, waveform, and time can be independently set according to single-step settings. Trigger phase and loop count can be set, and parameters of three-phase outputs can be separately configured. Any phase abrupt change/crossing test can be achieved. Rich sequence combinations with high degree of freedom in parameter settings. By setting different combined sequence parameters, high and low voltage crossing tests can be completed. Minimum programming setting time is 1ms, capable of completing a 1ms stop test. Each sequence in each phase can independently set one of the 6 waveforms.



Zero voltage crossing test





High voltage crossing test

High and low voltage crossing tests

P68

Exceeding & Trustworthy

AC Power Supply



Pulse mode: it periodically changes the output state, where the power output will cyclically vary between regular power supply and pulse voltage. Each phase of AC voltage, DC voltage, frequency, angle, waveform, time, etc. can be independently set.



Pulse output waveform

Pulse output waveform

Step mode: also known as staircase mode, where the output voltage gradually increases or decreases according to the set step size from the initial value. Each phase's AC voltage, DC voltage, and frequency can be independently set for initial value and change amount. Angle, waveform, step count, and step time for each phase can also be set independently.



Step output waveform

Harmonic synthesis: the power supply has harmonic editing function (2-50 times), and various harmonic components can be added to the standard sine wave. It has 3 sets of percentage harmonic storage groups and 3 sets of amplitude harmonic storage wave voltage, harmonic content, angle, etc., of each phase can be independently set. Under the percentage mode, the content and angle of each harmonic can be set, with a single harmonic up to 30%, no limit on total harmonic content, and no limit on thenumber of harmonic superimpositions. Under the amplitude mode, specific voltage values can be set for harmonic components, without any percentage relationship with fundamental wave voltage.



Harmonic output waveform

Interharmonic synthesis: the power supply has interharmonic editing function, allowing addition of interharmonic components to the standard sine wave. Interharmonic trigger angle, start-stop frequencies, content, and scan time can be set, with an interharmonic frequency range of 16-3,000Hz.



Interharmonic output waveform

Operation: 5-inch color capacitive touch screen and knobs can be used to set the voltage and frequency in the conventional mode, with buttons responsible for starting and stopping the conventional mode.



Upper computer: It is equipped with the standard upper computer software, with a graphical user interface for convenient and efficient operation.



Selection List	/
----------------	---

Model	Complete machine Power	Output phase number	AC voltage	Frequency	DC voltage	Per-phase current	Overall Dimensions W×H×D(mm)
ANRGS003S-350(F)	3kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS005S-350(F)	5kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS006S-350(F)	6kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS010S-350(F)	10kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	60A	432×175×735
ANRGS012S-350(F)	12kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	70A	432×175×700
ANRGS015S-350(F)	15kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	70A	432×175×700
ANRGS020S-350(F)	20kVA	Single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	120A	432×175×735
ANRGS006A-350(F)	6kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS009A-350(F)	9kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS012A-350(F)	12kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS015A-350(F)	15kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS018A-350(F)	18kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	35A	432×175×700
ANRGS020A-350(F)	20kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	60A	432×175×735
ANRGS025A-350(F)	25kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	60A	432×175×735
ANRGS030A-350(F)	30kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	60A	432×175×735
ANRGS050B-350(F)	50kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	120A	600×1230×1000
ANRGS060B-350(F)	60kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	120A	600×1230×1000
ANRGS075B-350(F)	75kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	180A	600×1230×1000
ANRGS090B-350(F)	90kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	180A	600×1230×1000
ANRGS100B-350(F)	100kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	240A	600×1230×1000
ANRGS120B-350(F)	120kVA	Three-phase & single-phase	0~350.00V	30.000~100.000Hz	-495.00~495.00V	240A	600×1230×1000

Specifications

	N	lodel	ANRGS 003S -350(F)	ANRGS 005S -350(F)	ANRGS 006S -350(F)	ANRGS 010S -350(F)	ANRGS 012S -350(F)	ANRGS 015S -350(F)	ANRGS 018A -350(F)				
	Power sup	oply capacity	3000VA	5000VA	6000VA	10000VA	12000VA	15000VA	20000VA				
		Voltage		Line voltage: 342V-480V; 3-phase 3-wire+ PE									
AC	Curre	ent (@342V)	15A Max	22A Max	25A Max	39A Max	40A Max	50A Max	65A Max				
input	F	requency	47~63Hz										
	Pow	ver factor *1			n	≥0.98							
	Pha	se number	Single-phase	Single-phase	Single-phase	Single-phase	Single-phase	Single-phase	Single-phase				
	Power		3000VA	5000VA	6000VA	10000VA	12000VA	15000VA	20000VA				
	Range Resolution		0.00~350.00V										
				0.01V									
	Voltage	Accuracy				0.1%F.S.							
AC	Tonugo	Distortion *2		0.3%@50/60Hz; 1%@30-100Hz									
output		Source effect *3		≤0.02%									
		Load effect *4			0	≤0.02%							
	Current	Effective value range	35A	35A	35A	60A	70A	120A	120A				
	/phase	Peak value range	105A	105A	105A	180A	210A	360A	360A				
		Range				30.000~100.000	Hz						
F	Frequency	Resolution				0.001Hz							
		Accuracy				0.01%							
	Power	Range	3000W	5000W	6000W	10000W	12000W	15000W	20000W				

P69

AC Power Supply

Exceeding & Trustworthy

	N	lodel		ANRGS 003S	ANRGS 005S	ANRGS 006S	ANRGS 010S	ANRGS 012S	ANRGS 015S	ANRGS 018A				
				-350(F)	-350(F)	-350(F)	-350(F)	-350(F)	-350(F)	-350(F)				
		Ran	ge				-495.00~495.00	/						
DC	Voltage	Resolu	ution				0.01V							
utput		Accur	racy				0.1%F.S.		m					
	Current	Ran	ige	35A	35A	35A	60A	70A	120A	120A				
		Ran	ge		AC: 350.00V; DC: 495.00V									
	Voltage	Resolu	ution		0.01V									
Mea- sure-		Accura	cy *5	32.55			0.1%F.S.			123.22				
ment accu-		Range	ctive value	35A	35A	35A	60A	70A	120A	120A				
racy	Current	Pe	ak value	105A	105A	105A	180A	210A	360A	360A				
		Resol	ution				0.01A							
		Effective					0.2%F.S.							
		Peak accura					0.5%F.S.							
	Power	Resol	ution				0.01W							
		Accura	icy *7				0.3%F.S.							
		Display 5-inch color touch screen LCD												
	Wave	form select	ion	Sine wave, t	riangle wave, squar	re wave, clipped sir	ne wave, 30 sets of	built-in waveforms	, and 6 sets of cust	om waveform:				
10	Sta	rt-stop angl	e				0-359.9°							
	Kn	ob function	Ę.		Knob adjus	stment available for	conventional mode	e voltage and frequ	ency settings					
	Parallel o	operation fu	inction			Can achieve	parallel operation of	of multiple units						
	H	larmonics			2-50 times									
Mea- sure-		and internation bandw					3000Hz							
ment accu-	Seq	uence mod	le	200 steps with 9,999 loops. Voltage, frequency, and phase angle can be programmatically outputted										
racy	P	ulse mode		9,999 loops. Cyclic changes in voltage amplitude, frequency, and angle										
	S	tep mode		9,999 loops. Change the voltage frequency according to the set voltage and frequency step values										
	Online re	gulation fu	nction	Under the conve	Under the conventional mode, the output voltage and frequency can be adjusted online, and the waveform can be sw									
	Line dro	p compens	sation		The dev	vice has Sense terr	ninals that allow rer	note sampling con	npensation					
	Commu	nication inte	erface	RS48	5 (standard), Etherr	net (standard), synd	chronous signal (sta	andard), RS232 (o	ptional) and GPIB (optional)				
	Re	mote contro	ol				None							
Work- ing envi-	Te	mperature					0~40°C							
ron- ment		Humidity					30~90%RH							
0.0000000	Efficien	cy *8					≥92%							
	Protec	tion		Input abnormality	y, bus overvoltage, c	output overvoltage a	nd undervoltage, ou	tput overcurrent, ou	tput overload, and n	nodule overhea				
		Height					4U							
				432×175× 700	432×175× 700	432×175× 700	432×175× 735	432×175× 700	432×175× 735	432×175× 735				
Shape	-115	limensions '×H×D mm)	E		The height of 1	75mm is without fee is the front and rea	h chassis size witho t, with feet the heigh r panel size excludin minals is 779mm/81	t is 188mm. The fe g terminals and pro	et are detachable.					
	Weight	(Ka)		≤25	≤25	≤25	≤26	≤35	≤38	≤38				

	м	odel		ANRGS 006A -350(F)	ANRGS 009A -350(F)	ANRGS 012A -350(F)	ANRGS 015A -350(F)	ANRGS 018A -350(F)	ANRGS 020A ~350(F)	ANRGS 025A -350(F)	ANRGS 030A -350(F)				
	Power sup	ply capacity	ê	6000VA	9000VA	12000VA	15000VA	18000VA	20000VA	25000VA	30000VA				
		Voltage			1	Line	voltage: 342V-4	80V; 3-phase 3-	wire+ PE						
	CL	irrent (@342	2V)	20A Max	25A Max	30A Max	35A Max	40A Max	45A Max	55A Max	65A Max				
AC		Frequency	8	10	.0.		47	~63Hz	1						
input	P	ower factor	*1					≥0.98							
	P	hase numbe		00001/4	00001/4	400001/4		e & single-phase		050001/4	200001/4				
	Power		Power	6000VA 2000VA	9000VA 3000VA	12000VA 4000VA	15000VA 5000VA	18000VA 6000VA	20000VA 6667VA	25000VA 8333VA	30000VA 10000VA				
			oer phase ange	200074	3000 VA	40007A		~350.00V	0007 VA	0333VA	1000074				
			olution	0.01V											
		1	uracy	0.1%F.S.											
	Voltage	Disto	rtion *2		0.3%@50/60Hz; 1%@30-100Hz										
		Source effect *3					≤	0.02%							
AC		Load	effect *4				5	0.02%	,						
output		Effective value range	Three-phase mode	35A	35A	35A	35A	35A	60A	60A	60A				
	Current	Effective value range	Single-phase mode	105A	105A	105A	105A	105A	180A	180A	180A				
	/phase	range	Three-phase mode	IUSA	105A	105A	105A	105A	180A	180A	180A				
	-	Peak value range	Single-phase mode	315A	315A	315A	315A	315A	540A	540A	540A				
		Ra	ange		30.000~100.000Hz										
	Frequency	Res	olution					.001Hz							
		1722/00120	uracy					0.01%							
	Power		Power	6000W	9000W	12000W	15000W	18000W	20000W	25000W	30000W				
-	_		er channel ange	2000W	3000W	4000W	5000W	6000W 0~495.00V	6667W	8333W	10000W				
3	Voltage		olution				100000	0.01V							
	. A		curacy		0.1%F.S.										
			Single	35A	35A	35A	25.4	35A	60A	60A	604				
DC	Current	Range	channel Parallel		77245		35A		2276-22 2276-35(1)	2010	60A				
output			connection	105A	105A	105A	105A	105A	180A	180A	180A				
		Ra	ange	AC: 350.00V; DC: 495.00V											
	Voltage		olution	0.01V 0.1%F.S.											
-		Accu	racy *5 Effective												
<i>Aeasure</i>		Range	value	105A	105A	105A	105A	105A	180A	180A	180A				
ment	Current		Peak value	315A	315A	315A	315A	315A	540A	540A	540A				
ccuracy			olution					0.01A		A SI					
			ue accuracy*6 e accuracy*6					2%F.S. 5%F.S.							
	Power	Res	olution aracy *7				(0.01W 3%F.S.							
		Display		~			5-inch color t	touch screen LCD		0					
		veform select tart-stop angl		Sine w	ave, mangle wa	ve, square wave,		, 30 sets of built-in -359.9°	waveforms, and	6 sets of custom w	avetorms				
		Knob function operation fu			Kr		vailable for conven an achieve parallel			settings					
		Harmonics						50 times							
unction	simu	nic and interha ulation bandw	idth			1		000Hz							
	S	equence mode Pulse mode	le		200 steps w		oltage, frequency, volic changes in vo								
	0.1	Step mode	nation	palor the		s. Change the vol	tage frequency ao	cording to the set	voltage and freque	ency step values	dished as la -				
	Line o	regulation fu frop compens	sation			The device has	Sense terminals th	at allow remote sa	ampling compensa						
		nunication inte Remote contro		F	RS485 (standar	d), Ethernet (stan		s signal (standard None), RS232 (optional) and GPIB (option	nal)				
Working		Temperature					0	~40°C							
		Humidity						~90%RH ≥92%							
nvironment	Efficie	ency o													
nvironment		ection Height		nput abnorm	ality, bus overvo	oltage, output ove	rvoltage and under	rvoltage, output o 4U	vercurrent, output (overload, and mod	lule overheatin				

AC Power Supply \\ Ainuo

Exceeding & Trustworthy

Bidirectional Grid Simulator ANBGS(F) Series



Product Introduction

The ANBGS(F) series Regenerative AC Power Supply 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.

ре	cifi	cat	ion	IS

	N	1odel	ANRGS	ANRGS	ANRGS	ANRGS	ANRGS	ANRGS				
	D		050B-350(F)	060B-350(F)	075B-350(F)	090B-350(F)	100B-350(F)	120B-350(F				
	Power su	pply capacity	50KVA	60kVA	75kVA	90kVA	100kVA	120kVA				
10		Voltage	110/11		Line voltage: 342V-480							
AC	Cu	irrent (@342V)	110A Max	130A Max	165A Max	195A Max	220A Max	260A Max				
input		Frequency			47-6							
		ower factor *1			≥0.							
	Nu	umber of phase			Three-phase &							
	Power	Total power	50kVA	60kVA	75kVA	90kVA	100kVA	120kVA				
1		Power per phase	16.66kVA	20kVA	25kVA	30kVA	33.33kVA	40kVA				
		Range Resolution			0.00-35							
		Accuracy		0.01V 0.1%F.S.								
	Voltage	Distortion *2			0.3%@50/60Hz:							
		Source effect *3										
		Load effect *4		≤0.02% ≤0.02%								
	-	Effective value range			30.0	2 70		1				
		(three-phase mode)	120A	120A	180A	180A	240A	240A				
AC		Effective value range										
output	Current	single-phase mode)	360A	360A	540A	540A	720A	720A				
opene		Peak value range										
		(three-phase mode)	360A	360A	540A	540A	720A	720A				
		Peak value range										
		single-phase mode)	1080A	1080A	1620A	1620A	2160A	2160A				
	-	Range			30.000-10	0.000Hz						
	Frequ-	Resolution	0.001Hz									
	ency	ency Accuracy 0.01%										
		Total Power	50kW	60kW	75kW	90kW	100kW	120kW				
	Power	Power per channel	16.66kW	20kW	25kW	30kW	33.33kW	40kW				
		Range			-495.00-							
DC	Voltage	Resolution			0.0	54.04031424-0.045						
output		Accuracy			0.1%	F.S.						
-	Current	Single channe	120A	120A	180A	180A	240A	240A				
	range	Parallel connection	360A	360A	540A	540A	720A	720A				
		Range		AC: 350V: DC: 495.00V								
	Voltage	Resolution	0.01V									
		Accuracy *5			0.1%	F.S.						
Measu-		Effective value	360A	360A	540A	540A	720A	720A				
rement		Range Peak value	1080A	1080A	1620A	1620A	2160A	2160A				
accu-	Current	Resolution			0.0	1A						
racy		Effective value accuracy*6	0.2%F.S.									
	-	Peak value accuracy*6			0.5%	F.S.						
	Power	Resolution			0.0	IW						
		Accuracy *7			0.3%							
		Display			5-inch color tou							
		eform selection	Sine wave, triang	le wave, square wave	e, clipped sine wave, 30		orms, and 6 sets of c	ustom waveforms				
	1.000	art-stop angle			0-35							
		nob function		Knob adjustment a	available for conventior		frequency settings					
		operation function			No							
	115	Harmonics			2-50 t	mes						
Fun-		c and interharmonic			300)Hz						
ction		lation bandwidth	000			2002.4	e 11 - 3					
-x001021121		quence mode	200 st	Personal and a contract of the second s	Voltage, frequency, and			Dutted				
		Pulse mode	0000		Cyclic changes in voltage	and the second se		aluas				
		Step mode			oltage frequency accord			and the second se				
			Under the convention		oltage and frequency of			an be switched o				
		rop compensation unication interface	DC/05 /		Sense terminals that a			(optional)				
		emote control	R0400 (Sta	andard), Ethernet (sta	ndard), synchronous si		(opuonal) and GPIE	(opuonal)				
Madine	19775				No							
Working environment	1	femperature/			0-4							
caminaninent.	Effect	humidity ency *8			A set of the set of th							
	EIIICI	ency o	lanut aluan	molity bus susperly	≥92		autoussaurset entre	rt ouordoard				
	Pro	tection	input abno	mainty, bus overvolta	ge, output overvoltage		iput overcurrent, outpl	at ovenoad,				
Shape	Dimons	ions(W×H×D mm)			and module		00					
Suape		aht (Kg)	≤330	1000 CONTRACTOR 1000	00×1230 (the height wi			~110				
		111 (16 (11)	<330	≲330	≤380	≤380	≤440	≤440				

Any changes to the above parameter specifications will not be notified separately.

Ainuo

High-performance High/Low (zero) Voltage Ride-Through (H/LVRT), step, sag, flicker and other test functions, ride-through test within 1ms;

AC Power Supply

- 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.

Exceeding & Trustworthy

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)







m

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/ridethrough 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.



P75

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





400TH(F)

400kVA

Yes, adjustable three-phase voltage/phase difference separately, or direct setting of three-phase unbalance;

200 steps of 999999 cycles, voltage/frequency/phase angle programmed freely for output

0.0~99.9Sec.

Online adjusting of output voltage/frequency and switch of wave in normal mode

Power down memory function, memory last output mode and parameters.

RS485 (standard), Ethernet (standard), synchronous signal (standard), RS232 (optional), GPIB (optional)

0~40°C, 20~90%RH

1000×1900 (including

caster height 190)×1000

1000×1900 (including

base height 100)×1000

Specifications

			ANBGS	ANBGS	ANBGS	ANBGS	ANBGS	ANBGS	ANBGS				
			500TL(F)	600TL(F)	800TL(F)	1000TL(F)	1200TL(F)	1500TL(F)	2000TL(F)				
	'	Model	ANBGS	ANBGS	ANBGS	ANBGS	ANBGS	ANBGS	ANBGS				
			500TH(F)	600TH(F)	800TH(F)	1000TH(F)	1200TH(F)	1500TH(F)	2000TH(F)				
	Ci	apacity	500kVA	600kVA	800kVA	1000kVA	1200kVA	1500kVA	2000kVA				
	V	oltage	3-phase 4-wires + PE, Phase voltage: 220V±33V, line voltage: 380V±57V, frequency 50/60Hz±3Hz										
	Feedba	ack function			With energ	y feedback grid fu	Inction						
nput -	Input p	ower factor		>0.9	9(input rated voltage	and input 50%-10	00% of rated cur	rent)					
	Input cur	rent distortion	<3% (at rated condition)										
	Out	out mode		Th	ree-phase standard r	node, three-phase	e unbalanced mo	ode					
	Voltage,	L version			ase voltage: 0.0~3								
	frequency	H version		11000	ase voltage: 0.0~7								
-	Rated	L version 220V	757.5A	909.0A	1212A	1515A	1818A	2272A	3030A				
	current	H version 440V	378.7A	454.5A	606.0A	757.5A	909.0A	1136A	1515A				
-	Setting	Voltage			Resolution: 0.01V,			1.0.0.000					
	accuracy	Frequency			2000 DO 20 10	.001Hz, Accurac	1002.000	8					
	decuracy	Voltage			Resolution: 0.01V,								
	Testing	Frequency			350 1/ 25 8	1.001Hz, Accurac	24.527.223	<u>.</u>					
	accuracy	Current											
	accuracy	Power		Resolution: 0.1A/1A, Accuracy: 0.2%×full scale value Resolution: 0.1kW/0.01kW/0.001kW, Accuracy: 0.3%×full scale value									
Output				Resolutio	0.1KW/0.01KW/0		5y: 0.5%*1011 SC	ale value					
	00000	ncy stability			17	≤0.01%	1						
-		Voltage distortion			Linea	ar load: THD<1%	0						
	Transient recovery time		1ms 3-phase standard mode: 120°±2°; 3 phase unbalanced mode: 0.0°~359.9°, 0.1°Adjusted										
-	3 phase phase difference		3-1	ohase standard r	node: 120°±2°; 3 pr		node: 0.0°~35	9.9°, 0.1°Adjusted					
	Crest factor		1.41±0.1 ≤0.02%										
-	20000000000	Source voltage effect											
	Loa	ad effect	≤0.02%										
	Overlo	ad capacity	105% <output≤110% 110%<output≤150%="" 150%<output≤200%="" 200%<output="" 2s;="" 600s;="" 60s;="" be="" immediately<="" output="" stopped="" td="" the="" will="" within=""></output≤110%>										
-			•										
	Protec	ction mode			ent, Transformer ove	101058-0000ALE-0940-0948-08605-0000			· · · · · · · · · · · · · · · · · · ·				
-		isplay	Output under vo	tage, Output ove	er voltage, Output lac	. resolution: 800*6		put over load, Outpu	t short circuit				
-				Cine un									
	24234141.727	t waveform ient mode	-		ave, harmonic (super								
-	C MAL DAV	ker mode		18.00	ps (sag) from high v								
	0.0000000			CARL STOLL IN	s, call of any group of	200.000 /// 8	s an 101 pea	2 - 5386					
Func-	19. \$7.9	LVRT mode	No. of		andard curve can be			MARK IN ME					
tion	5.82	nced mode		and the second	e voltage/phase diffe	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	28	N 26. 5 2 20 20	liance;				
		nming mode	2	00 steps of 9995	999 cycles, voltage/fr		ngle programme	d freely for output					
	12 12 12	start time		0 " "	277. 35. 35. 35. 35.9	0.0~99.9Sec.							
-		istment function	-		ting of output voltage		36 - 5						
	2	emory		1	wn memory function								
nviron-		nunication	RS485 (:	standard), Etherr	net (standard), synch		A	optional), GPIB (opt	ional)				
nviron- ment	Temp	./Humidity			1	0℃, 20~90%RH	1	7505 5105	5000 04				
ſ	Dimensions(W	×H×D mm)	3000×1900 the base heigh		4000×1900 (including the base height	5000×3 (includin) base height 1	g the	7500×2100 (including the base height 100)×1400	5000×2100 (including the base heig 100)×1400× 2 parallel				

	,	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	
	C	apacity	15kVA	30kVA	45kVA	60kVA	90kVA	120kVA	150kVA	200kVA	300kVA	400kVA	
	V	oltage		3-phase 4-w	vires + PE, Ph	nase voltage:	220V±33V,	ine voltage:	380V±57V, fr	equency 50/	60Hz±3Hz	10	
Input _	Feedba	ack function				With e	energy feedb	ack grid func	tion				
	Input p	ower factor			>0.99(ir	nput rated vo	Itage and inp	ut 50%-1009	% of rated cu	rrent)			
	Input cur	rent distortion					<3% (at rated	d condition)					
	Out	out mode			Three	-phase stand	ard mode, th	iree-phase u	nbalanced m	ode			
	Voltage,	L version			Phase	voltage: 0.	0~350.0V;	frequency:	40.00~70.0	0Hz			
	frequency	H version		v	Phase	voltage: 0.	0~700.0V;	frequency:	40.00~70.0	OHz			
	Rated	L version 220V	22.7A	45.4A	68.1A	90.9A	136.4A	181.8A	227.2A	303.0A	454.5A	606.0A	
	current	H version 440V	-	-	-	(.	-	-	113.6A	151.5A	227.2A	303.0A	
	Setting	Voltage			Re	solution: 0.0	1V, Accura	cy: 0.1%×fu	ull scale value	е			
	accuracy	Frequency				Resolutio	n: 0.001Hz,	Accuracy:	0.01%				
		Voltage		Resolution: 0.01V, Accuracy: 0.1%×full scale value									
	Testing	Frequency		Resolution: 0.001Hz, Accuracy: 0.01%									
	accuracy	Current			Res	olution: 0.1/	V1A, Accur	acy: 0.2%×	full scale valu	le			
Output		Power			Resolution:	0.1kW/0.01	kW/0.001kW	, Accuracy:	0.3%×full s	cale value			
output _	Freque	ncy stability					≤0.0°	1%					
	Voltag	e distortion					Linear loa	id<1%					
	Transient	recovery time					1m	s					
	3 phase pl	hase difference		3-phase	standard mod	le: 120°±2°;	3 phase unt	alanced mo	de: 0.0°~38	59.9°, 0.1°A	djusted		
	Cre	st factor					1.41±	0.1					
	Source	voltage effect					≤0.02	2%					
	Loa	ad effect					≤0.02	2%					
	Overlo	ad capacity			he output will)% the outpu					· · · · · · · · · · · · · · · · · · ·			
	Protec	ction mode			^г over current Output over v								
	۵	lisplay				8"	LCD, resolut	ion: 800*600	1				
	Outpu	t waveform			Sine wave,	, harmonic (s	uperimposed	1 2~50th han	monic), interf	narmonic			
	Trans	ient mode		Yes, V	/oltage steps	(sag) from hi	gh voltage to	low voltage	or low voltag	e to high vol	tage		
	Flick	ker mode			Yes, ca	all of any gro	up of flicker p	parameters f	rom Group 1-	~39.			

800×1790 (including

caster height 190)×800

800×1700 (including base height 100)×800

Any changes to	the above parameter	specifications will	I not be notified	separately.
----------------	---------------------	---------------------	-------------------	-------------

1500×1900 (including 2000×1900 (including

base height 100)×1000 base height 100)×1150

P77

Func-

tion

Environ-ment

Unbalanced mode

Programming mode

Soft-start time

Online adjustment function

Memory

Communication

Temp./Humidity

Dimensions(W×H×D mm)

AC Power Supply

ANBGS(F) Series (Pro)

Bidirectional Grid Simulator (Pro)



Features

- Support for arbitrary angle abrupt change/crossing test.
- 10.1-inch large color LCD with touch control operation support.

Applications

Programming: it has universally programmable settings, where voltage, frequency and phase can be changed according to single-step settings. Trigger phase and cycle count can be set, and parameters of three phase outputs can be separately configured. Any phase shift/crossing test can be achieved.



180° abrupt change of three phase's



Abrupt change from 90° to 270°



U-phase undergoes an abrupt change from 0° to 180°



90° abrupt change of U-phase and W-phase

10.1-inch large color LCD with touch control operation support



interface data display



Normal waveform preview regular





Programming mode



High and low voltage crossing mode





Harmonic mode

Black box recording

PC control software



						• • • • •
12 12	0	Ant	Atole	01	 · cha	
					1 mar 11.5	
					W. Then	
					a tinin-	
					total (ME	
					Second Sec.	-
· Bann Barris						

Almuo	Dennis Artema	
	1.00	
	ter Stati	
2-		-





	and the local data							
								The second
and a second								_
								ē
								-
								1000
	Same Bartist							1000

Exceeding & Trustworthy

Exceeding & Trustworthy

Specifications

	Mc	odel	ANBGS100T-450(F)	ANBGS150T-450(F)	ANBGS200T-450(F)	ANBGS300T-450(F					
	Сар	acity	100kVA	150kVA	200KVA	300kVA					
	Volt	tage	3-phase 3-wire+P	E Phase voltage 220V±33V, line	voltage 380V±57V, and freque	ncy 50/60Hz±3Hz					
Input	Feedback	k function	Has the function of energy feedback to the grid								
para-	Input pov	ver factor	>0.99 (rated voltage input and 50%-100% rated current input)								
meter	Input currer	nt distortion		<3% (under rat	ed conditions)						
	Output	t mode	9 <u>5</u>	Three-phase standard mode and	three-phase unbalanced mode	3					
	Voltage and	d frequency	Phase voltage: 0.0-450.0V: frequency: 40.00-70.00Hz								
	Rated current	166V	200.8A	200.8A 301.2A 401.6A 6							
	Setting	Voltage		and the second second	Contractor Income						
	accuracy	Frequency	Resolution: 0.01V, accuracy: 0.1%×Full range value Resolution: 0.001Hz, accuracy: 0.01%								
	acouracy	Voltage		Resolution: 0.01V, accura							
					de la constante						
	Measurement	Frequency		Resolution: 0.101HZ, accuracy: 0.01% Resolution: 0.1A/1A, accuracy: 0.2%×Full range value							
	accuracy	Current									
		Power	Res	olution: 0.1kW/0.01kW/0.001kV		alue					
		cy stability		≤0.(
		ortion degree		Linear load	THD<1%						
10	Respon	ise time		1r							
AC output	Three-phase phase difference		Three-phase standard mode: 120°±2°								
ouipui			Three-phase unbalanced mode: 0.0°-359.9°, adjustable by 0.1°								
	Phase voltag	e peak factor		1.41	±0.1						
	Source vol	tage effect		≤0.()2%						
	Load	effect	≤0.02%								
			100% <output≤110% 600s;<="" be="" output="" stopped="" td="" the="" will="" within=""></output≤110%>								
	Overload capability		110% <output≤120% 60s;<="" be="" output="" stopped="" td="" the="" will="" within=""></output≤120%>								
			120% <output≤150% 2s;<="" be="" output="" stopped="" td="" the="" will="" within=""></output≤150%>								
			150% <output be="" immediately<="" output="" stopped="" td="" the="" will=""></output>								
			IGBT overheat, IGBT over current, Transformer overheat, Input under voltage,								
	Protectio	on device	Input ove	er voltage, bus anti-recharge, Ou	tput under voltage, Output over	voltage,					
			Output	lack phase, Output over curren	t, Output over load, Output shor	t circuit					
	Display	y mode		10.1-inch large color LCD with	ouch control operation support						
	Output w	vaveform	Sine wave,	harmonics (superimposed with	2-50 times harmonics), and inte	rharmonics					
	Transier	nt mode	Yes, Voltag	e steps (sag) from high voltage	o low voltage or low voltage to	high voltage					
	Flicker	r mode	Yes, call of any group of flicker parameters from Group 1~39.								
	High/low (z	ero) voltage	227 - 22								
		g mode	Yes, the standard curve can be called or customized as required for the user								
Func-		3		/es, adjustable three-phase volt	age/ohase difference separately	,					
tion	Unbalanc	ced mode									
	Programm	ning mode	or direct setting of three-phase unbalance 200 steps of g99999 cycles, voltage/frequency/phase angle programmed freely for output								
		mp-up time	200 3(0)3 01	0.0-9		iony for output					
		djustment	Online adjusting of output voltage/frequency and								
		tion	3 4 0000	switch of wave							
		function		er down memory function, memo							
inviron		tion interface	RS485 (standard), Ethe	ernet (standard), synchronous s		al) and GPIB (optional)					
ment	Temperature	and humidity		0-40°C,2	0-90%RH						
	Dimensions(W׳	H×D mm)	1200 × 1900 (including a base height	1500 × 1900 (including a b	ase height of 100) × 1000	2000 × 1900 (including a base hei of 100) × 1400					

Any changes to the above parameter specifications will not be notified separately.

Specifications

	Me	odel	ANBGS400T-900(F)	ANBGS500T-900(F)	ANBGS600T-900(F)	ANBGS750T-900(F)	ANBGS1000T-900(F)	ANBGS1200T-900			
	Cap	pacity	400KVA	500KVA	600KVA	750KVA	1,000KVA	1,200KVA			
	Vol	tage	3-pha	ase 3-wire; Phase vo	ltage 220V±33V, line	voltage 380V±57V, ar	nd frequency 50/60Hz	z±3Hz			
Input	Feedbac	k function		3-phase 3-wire; Phase voltage 220V±33V, line voltage 380V±57V, and frequency 50/60Hz±3Hz Has the function of energy feedback to the grid							
para-	Input po	wer factor		>0.99 (ra	ated voltage input and	50%-100% rated cur	rent input)				
meter		nt distortion				ted conditions)	* *				
		t mode		Three-pha		NA 10 10 10	nced mode				
	Voltage and frequency		Three-phase standard mode and three-phase unbalanced mode Phase voltage: 0.0-900.0V: frequency: 40.00-70.00Hz								
	Rated current 333V		400.4A	500.5A	600.6A	750.7A	1,001.0A	1,201.2A			
	Setting	Voltage			solution: 0.01V, accura			1,000			
	accuracy	Frequency	Resolution: 0.001HZ, accuracy: 0.1%								
	uccuracy	Voltage		Res	solution: 0.01V, accura		value				
	Measurement	Frequency		Resolution: 0.001HZ, accuracy: 0.01% Resolution: 0.1A/1A, accuracy: 0.2%×Full range value							
		Current									
	accuracy	16		1400		100 Contraction (1997)	20 22				
	English	Power		Resolution: 0	0.1kW/0.01kW/0.001k		un range value				
	1 3532-071 72532	cy stability				01%					
		ortion degree			2	ITHD<1%					
AC output	Response time			1ms							
	Three-phase phase difference			Three-phase standard mode: 120°±2°							
oupur	B		Three-phase unbalanced mode: 0.0°-359.9°, adjustable by 0.1° 1.41±0.1								
	· · · · · · · · · · · · · · · · · · ·	Phase voltage peak factor			0.00	1.0000					
		Source voltage effect				02%					
	Load effect			≤0.02%							
				100% <output≤110% 600s;<="" be="" output="" stopped="" td="" the="" will="" within=""></output≤110%>							
	Overload capability		110% <output≤120% 60s;<="" be="" output="" stopped="" td="" the="" will="" within=""></output≤120%>								
			120% <output≤150% 2s;<="" be="" output="" stopped="" td="" the="" will="" within=""></output≤150%>								
			150% <output be="" immediately<="" output="" stopped="" td="" the="" will=""></output>								
			IGBT overheat, IGBT over current, Transformer overheat, Input under voltage,								
	Protectio	on device	Input over voltage, bus anti-recharge, Output under voltage, Output over voltage,								
				Output lack phase	se, Output over currer	t, Output over load, 0	Dutput short circuit				
	Displa	y mode		10.1-inch	a large color LCD with	touch control operation	on support				
	Output v	vaveform		Sine wave, harmonic	s (superimposed with	2-50 times harmonic	s), and interharmonic	s			
	Transie	nt mode		Yes, Voltage steps (sag) from high voltage to low voltage or low voltage to high voltage							
	Flicke	r mode		Yes, call	of any group of flicker	parameters from Gr	oup 1~39.				
	High/low (z	zero) voltage		Yes the standar	rd curve can be called	or customized as rea	uired for the user				
	crossin	ig mode	Yes, the standard curve can be called or customized as required for the user								
Func- tion	Linhalan	ced mode		Yes, adjus	stable three-phase volt	age/phase difference	separately,				
usti	Unbaian	oed mode			or direct setting of th	ree-phase unbalance	í.				
	Programm	ning mode	20	0 steps of g99999 c	ycles, voltage/frequen	cy/phase angle progr	ammed freely for out	put			
	Startup ra	mp-up time			0.0-9	99.9s					
	Online a	djustment		O	nline adjusting of outp	ut voltage/frequency	and				
	fun	function			switch of wave	in normal mode					
	Memory function			Power down memory function, memory last output mode and parameters.							
		tion interface	RS485 (star		ndard), synchronous s			PIB (optional)			
nviron- ment	SS 202200103201	and humidity				0-90%RH					
mont			2000 ×	1900	7	× 1900	4000	0 × 2100			
	Dimensions(W>	(H×D mm)	(including			ng a base		ling a base			
Dimensions(W×H×D mm)			height of 10			00) × 1400	height of				

P81

AC Power Supply

Any changes to the above parameter specifications will not be notified separately.

ANCC(F) Series

Constant Current AC Power Supply



It replaces traditional voltage and current regulation methods, with precise control and simple operation.



Product Introduction

The ANCC(F) Series Constant Current AC Power Supply adopts FPGA digital control, instantaneous waveform control, high-frequency pulse width modulation (SPWM) technology, etc. It has the advantages of fast response speed, high output accuracy, superior waveform quality, strong load adaptability, etc. The power supply is capable of outputting a constant current alternating waveform with strong load adaptability.

Featuring an 8-inch color LCD, the product has an exquisite and high-end appearance, coupled with number keys for more convenient operation. Under the condition of low voltage, it can output a constant large current, meeting the low-voltage distribution device inspection such as air switches, contactors, and transformers, and the design and production verification of transformers and inductors. It is ideal testing equipment for device manufacturers, quality inspection centers, and certification centers, which can reduce energy waste caused by load consumption under large current test conditions.

Features

- It adopts FPGA digital technology for precise control and high-quality sine wave output.
- It provides low voltage and large current AC output, meeting the test requirements of relevant regulations.

- It has the "Black box" function: automatically record power supply status, alarm codes, etc., and other information to greatly reduce maintenance time.
- The fan speed is automatically adjusted according to the power supply temperature, reducing noise.
- It adjusts voltage and frequency under output state with immediate frequency change without transition time.
- Its output frequency ranges from 45 to 65Hz, adapting to the test requirements of different grids and devices.
- It has complete measurement functions: voltage, current, current peak value, frequency, active power, apparent power, power factor, and voltage peak factor.
- It has the online monitoring function: monitor parameters such as IGBT temperature, transformer temperature, fan speed, and input voltage under output state.
- It provides a Lock key, with a user-friendly design that automatically locks after 5 minutes of inactivity to prevent misoperation.
- It features an 8-inch large screen color LCD display and number key operation.
- It is equipped with a standard RS232 communication interface and can be optionally equipped with RS485, GPIB, Ethernet communication interfaces or analog control mode.
- It can be customized to adopt current sources of any voltage level and current range.



Constant current source

Adjusting current and frequency in output state.



Large screen, number key input and knob operation.









Object under test





Specifications

	ķ	Model	ANCC1000-15S(F)	ANCC2000-15S(F)	ANCC4000-7.5S(F)	ANCC4000-15S(F)				
	c	Capacity	15 kVA	30 kVA	30 kVA	60 kVA				
	1	Phase		3-phase 4-wire+PE						
Input	Ņ	Voltage	Phase voltage: 220V±33V, line voltage: 380V±57V							
	Frequency			50/60Hz±3Hz						
		Phase		Single-phase	and two-wire					
	1	Current	10-1000A	20-2000A	40-4000A	40-4000A				
	,	Voltage	15V	15V	7.5V	15V				
	Fr	equency		45.0-6	5.0Hz					
		Current	Reso	lution: 0.1A, accuracy: 0.3%×Re	eading value+0.3%×Full range v	value				
	Testing	Frequency	Resolution: 0.1Hz, accuracy: 0.1%							
Output	accuracy	Voltage	Resolution: 0.01V, accuracy: 0.3%×Reading value+0.3%×Full range value							
		Power	Resolution: 0.1k	×Full range value						
	Frequ	ency stability	≤0.02%							
	Volta	ge distortion	Linear load THD<2%							
	Voltag	e crest factor	1.41±0.1							
	Prote	ection mode	IGBT	IGBT overheat, IGBT overcurrent, transformer overheat, input overvoltage,						
	TION		input une	dervoltage, output overvoltage,	output overcurrent, and output o	overload				
	1	Display		8-inch	LCD					
Fun-	Online adj	ustment function		Output current and frequer	ncy can be adjusted online					
ction	n	Memory	Power-off memory function. Capable of remembering the last output mode and parameters							
	Com	munication		RS232 (standard) and RS485 (optional)						
Ope- rating	Ter	mperature		0-4	0°C					
enviro- nment	٢	łumidity		20-90	%RH					
C)imensions(W×	H×D mm)		600×1130×1018		700×1330×1218				

Any changes to the above parameter specifications will not be notified separately.



DC Voltage-stabilized Power Supply AN50(F) Low Power Series



Wide Range Programmable DC Power Supply AN53(F) Series



High Power Bidirectional DC Power Supply ANEVT(F) Series



Battery Simulator ANEVS(F) Series





Programmable DC Power Supply AN51(F) Series



Programmable Bidirectional DC Power Supply ANEVH(F) Series



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



Dual-channel Battery Simulator ANEVS DA(F) Series

DC Voltage-stabilized Power Supply AN50(F) Low Power Series





Ordering and function expansion

AN5010-100(F): 10V/100A/1000W AN5035-30(F): 35V/30A/1000W AN5035-50(F): 35V/50A/1500W AN5035-100(F): 35V/100A/3000W AN5060-25(F): 60V/25A/1500W AN5060-50(F): 60V/50A/3000W AN50120-12(F): 120V/12.5A/1500W AN50120-25(F): 120V/25A/3000W AN50300-5(F): 300V/5A/1500W AN50300-10(F): 300V/10A/3000W AN5035-170(F): 35V/172A/6000W AN5035-285(F): 35V/286A/10000W AN5035-570(F): 35V/572A/20000W AN5080-75(F): 80V/75A/6000W AN5080-125(F): 80V/125/10000W

AN5080-250(F): 80V/250A/20000W

Specifications

Model		AN5010-100(F)	AN5035-30(F)	AN503			
Input Power S	upply			Single ;			
	Voltage	0~10V		0~			
Output	Current	0~100A	0~30A	0~			
	Power	0~1000W	0~1000W	0~1			
Resolution and	Voltage	ζh.	Resoluti	on 0.001V ((
accuracy	Current	Resolution 0.001A					
Ripple and Noise	Vrms		30	mV			
20Hz~20MHz	Vpp	200mV					
Voltage		Load effect ≤0.					
Effect	Current	Load effect st					
Transient respor	nse time						
Maximum lead							
Communication	function			RS-232			
Protection fur	nction	Output short-circuit protection, output overvoltage, internal overhe					
Analog interface(optional)		Start, st	op, alarm, 0-			
Working Environment		Temperature					
Volume W×H×I	D(mm)	210×133	×325				
Weight		6kg					

Product Overview

AN50(F) small power series DC power supply adopts high-frequency PWM control and full-bridge converter technology to be featured by fast dynamic response, strong overcurrent capability, and low output ripple. It has the advantages of small size, low weight, low noise, high efficiency and simple operation, making it a cost-effective power supply. It can be used for the manufacturing, testing, and maintenance of military electronic equipment such as motors, power tools, automotive electronics, breaking-closing coils, DC switches, aircraft and airborne equipment, radar and navigation, while being used in industrial and mining enterprises, college laboratories, research institutes, among others.

Features

- The full range of standard chassis, with a depth of only 350mm, is suitable for system integration and portable applications
- The adopted high-frequency PWM and full-bridge converter technology makes the whole machine become more efficient.
- It supports up to 110% current/power overload.
- It also has excellent output stability.
- The lead voltage drop compensation terminal enables output lead voltage drop compensation for high-current operation.

- The complete protection function can ensure the normal operation of the power supply equipment and the safety of the load.
- The Nixie tube display is available. It is simple, intuitive and user-friendly.
- It supports SCPI, MODBUS-RTU standard communication protocols.

P87

DC Power Supply Ainuo

- AN50120-50(F): 120V/50A/6000W AN50120-80(F): 120V/84A/10000W AN50120-165(F): 120V/167A/20000W AN50300-20(F): 300V/20A/6000W AN50300-30(F): 300V/34A/10000W AN50300-65(F): 300V/67A/20000W AN50600-10(F): 600V/10A/6000W AN50600-17(F): 600V/17A/10000W AN50600-30(F): 600V/34A/20000W AN50700-9(F): 700V/9A/6000W AN50700-14(F): 700V/14.5A/10000W AN50700-29(F): 700V/29A/20000W AN501200-17(F): 1200V/17A/20000W
- AN501400-14(F): 1400V/14A/20000W

35-50(F)	AN5035-100(F)	AN5060-25(F)	AN5060-50(F)
phase, 220	V±22V, 47-63Hz		
-35V		0~1	50V
-50A	0~100A	0~25A	0~50A
1500W	0~3000W	0~1500W	0~3000W
(0.01V when	≥ 10V), accuracy ≤ 0.4%	6Umax	
(0.01A when	a ≥ 10A), accuracy ≤ 0.5°	%Imax	
		60r	mV
		300	mV
.1%Umax, s	ource effect ≤0.05%Uma	ix	
0.2%lmax, s	ource effect ≤0.1%Imax		
≤5r	ns		
21	,		
2	v		
32 (standard)	/RS485 (optional)		
neating protect	tion, S-terminal over-comp	ensation protection, S-term	ninal reversal protection
0-5V/0-10V o	r 4-20mA analog control	output	
: 0~40°C;	Humidity: 20~90%RH	I	
	440×13	3×350	
9kg	12kg	9kg	12kg

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy

Exceeding & Trustworthy

Specifications

Model		AN50120-12(F)	AN50120-25(F)	AN50300-5(F)	AN50300-10(F)			
Input Power S	upply		Single phase, 220	V±22V, 47-63Hz				
	Voltage	0~1	20V	0~300V				
Output	Current	0~12.5A	0~25A	0~5A	0~10A			
	Power	0~1500W	0~3000W	0~1500W	0~3000W			
Resolution/	Voltage		Resolution 0.001V/0.01V/0.	1V, accuracy ≤ 0.4%Umax				
Accuracy	Current		Resolution 0.001A/0.01A	, accuracy ≤ 0.5%Imax				
Ripple and Noise	Vrms	80r	nV	100	VmV			
20Hz~20MHz	Vpp	400	mV	500mV				
Load effect	Voltage		Load effect ≤0.1%Umax, s	x, source effect ≤0.05%Umax				
Load ellect	Current		Load effect ≤0.2%Imax, source effect ≤0.1%Imax					
Transient respor	nse time		≤51	ns				
Maximum lead v drop compens			10	V				
Communication	function		RS-232 (standard)	RS485 (optional)				
Protection	n	Output short-circuit protection, output	overvoltage, internal overheating protec	ion, S-terminal over-compensation pro	ection, S-terminal reversal protection			
Analog interface(optional)		Start, stop, alarm, 0-5V/0-10V o	r 4-20mA analog control output				
Working Enviro	nment	Temperature: 0~40 C; Humidity: 20~90%RH						
Volume W×H×I	D(mm)		440×13	3×350				
Weight 9kg 12kg				9kg	12kg			

Any changes to the above parameter specifications will not be notified separately.

Specifications	
specifications	7 .

Moo	del	AN5035-170(F)	AN5035-285(F)	AN5035-570(F)	AN5080-75(F)	AN5080-125(F)	AN5080-250(F)				
	Phase number			Three-	phase						
Input	Voltage			380V	±38V						
	Frequency	47-63HZ									
	Voltage		0~35V 0~80V								
Output	Current	0~172A	0~286A	0~572A	0~75A	0~125A	0~250A				
	Power	0~6KW	0~10KW	0~20KW	0~6KW	0~10KW	0~20KW				
Display	mode		5-bit Nixie tube display								
Voltage re	solution	0.01V (0.1V when ≥ 100V)									
Curr	ent										
resolu	ution			0.01A (0.1A w	nen ≥ 100A)						
Setting error (programming	Voltage			≤0.2%	Umax						
accuracy)	Current			≤0.2%	ólmax						
Measurement error (readback	Voltage			≤0.2%	Umax						
accuracy)	Current			≤0.2%	álmax						
Ripple and noise	Vms		60mV								
20Hz-20MHz	Vpp			500	mV						
Load effect Voltage		≤0.1%Umax									
Edda eneor	Current		≤0.2%lmax								
Source effect	Voltage	≤0.05%Umax									
Course check	Current	≤0.1%lmax									
Transient res	sponse time	≤2ms (50%-100%, or 100%-50%, error returns to 0.75% of stable value)									
Temperature drift	Voltage	0.05% setting value									
iomportatare ame	Current	0.05% setting value									
Nois	se			≤68d	B (A)						
Scope o	of OVP			1109	%F.S						
Maximum lead dro	op compensation			2	V						
Communicati	ion function		RS	5-232 (standard)/485 (s	standard)/LAN (standa	ard)					
Protection	functions	Short-circuit protection, reverse protection, output overvoltage, current-limiting protection, internal overheating protection, S-terminal over-compensation protection									
Analog interfa	ce (optional)		Start	stop, alarm, 0-5V or 0	-10V analog control o	utput					
Efficie	ency			≥8	5%						
Operating te	emperature			0~4	0 °C						
Storage ter	mperature			-20~	70°C						
Humi	dity			<80%, without	condensation						
Volur	me			444*132.	5*641mm						
Weig	ght	24kg	24kg	34kg	23.5kg	23.5kg	33kg				
Rema	arks	2. Time red	The second s	ng accuracy/read-back hange from 100% to 5 within "rated v	0% or in reverse, and	States and States and	to return to				

Any changes to the above parameter specifications will not be notified separately.

DC Power Supply

Exceeding & Trustworthy

Specifications

Mod	lel	AN50600-10(F)	AN50600-17(F)	AN50600-30(F)	AN50700-9(F)	AN50700-14(F)	AN50700-29(F)				
	Phase	12.10		Three	-phase						
Input	number			innee	phase						
mpor	Voltage			380V	/±38V						
	Frequency			47-6	63HZ						
	Voltage		0~600V 0~700V								
Output	Current	0~10A	0~17A	0~34A	0~9A	0~14.5A	0~29A				
	Power	0~6KW	0~10KW	0~20KW	0~6KW	0~10KW	0~20KW				
Display	mode		5-bit Nixie tube display								
Voltage re	solution			0.01V (0.1V v	when ≥ 100V)						
Curre	ent			0.014 /0.14 1	(hon > 1004)						
resolu	ition			0.01A (0.1A w	men < 100A)						
Setting error (programming ≤0.2%Umax											
accuracy)	Current			≤0.2%	6lmax						
Measurement error (readback	Voltage			≤0.2%	Umax						
accuracy)	Current			≤0.2%	6lmax						
Ripple and noise	Vrms		200mV								
20Hz-20MHz	Vpp		1000mV								
Load effect	Voltage	≤0.1%U max									
Load effect	Current			≤0.2%	6lmax						
Source effect	Voltage	≤0.05%Umax									
Source ellect	Current	≤0.1%lmax									
Transient resp	oonse time 2	≤2ms (50%-100%, or 100%-50%, error returns to 0.75% of stable value)									
Temperature drift	Voltage	0.05% setting value									
emperature unit	Current			0.05% setting value							
Nois	se	≤68dB (A)									
Scope of	fOVP			110	%F.S						
Maximum lead dro	p compensation		10V								
Communicati	on function		RS	5-232 (standard)/485 (standard)/LAN (standa	ard)					
Protection	functions	5	Short-circuit protection	n, reverse protection, o	output overvoltage, cu	rrent-limiting protection	4				
0.20000.000			internal overheating protection, S-terminal over-compensation protection								
Analog interfa	ce (optional)		Start	stop, alarm, 0-5V or 0	0-10V analog control o	output					
Efficie	ncy			≥8	5%						
Operating te	mperature			0~4	10°C						
Storage ten	nperature			-20~	70°C						
Humid	dity			<80%, without	t condensation						
Volur	ne			444*132.	5*641mm						
Weig	jht	21kg	21kg	28.5kg	21kg	21kg	28.5kg				
Rema	ırks	2	 1.Programming accuracy/read-back accuracy test condition (25 C±5 C); 2. Time required for the load to change from 100% to 50% or in reverse, and for the output voltage to return to within "rated value±100mV" 								

Specifications	8

Moo	del	AN50120-50(F)	AN50120-80(F)	AN50120-165(F)	AN50300-20(F)	AN50300-30(F)	AN50300-65(F)	
	Phase		and the second	These	nhasa			
Input	number			Three-	phase			
input	Voltage			380V	±38V			
	Frequency							
	Voltage		0~120V 0~					
Output	Current	0~50A	0~84A	0~167A	0~20A	0~34A	0~67A	
	Power	0~6KW	0~10KW	0~20KW	0~6KW	0~10KW	0~20KW	
Display	mode			5-bit Nixie ti	ube display			
Voltage re	esolution			0.01V (0.1V v	/hen ≥ 100V)			
Curr	rent	0.01A (0.1A when ≥ 100A)						
resolu	ution							
Setting error (programming	Voltage			≤0.2%	Umax			
accuracy)	Current			≤0.2%	Imax			
Measurement error (readback	Voltage			≤0.2%	Umax			
accuracy)	Current			≤0.2%	ilmax			
Ripple and noise	Vrms			80r	πV			
20Hz-20MHz	Vpp		500mV					
Load effect	Voltage	≤0.1%Umax						
Load eneor	Current	≤0.2%Imax						
Source effect	Voltage			≤0.05%	6Umax			
Source ellect	Current			≤0.1%	Imax			
Transient res	ponse time ²	≤2ms (50%-100%, or 100%-50%, error returns to 0.75% of stable value)						
Femperature drift		0.05% setting value						
emperature unit	Current			0.05% sett	ing value			
Noise		≤68dB (A)						
Scope o	of OVP	110%F.S						
Maximum lead dro	op compensation	10V						
Communicati	ion function	RS-232 (standard)/485 (standard)/LAN (standard)						
Protection	functions	Short-circuit protection, reverse protection, output overvoltage, current-limiting protection, internal overheating protection, S-terminal over-compensation protection						
Analog interfa	ice (optional)	Start, stop, alarm, 0-5V or 0-10V analog control output						
Efficie	ency	≥85%						
Operating te	emperature	0~40°C						
Storage ter		-20~70 °C						
Humi	idity			<80%, without	condensation			
Volu	me			444*132.5	5*641mm			
Weig	ght	22kg	22kg	30kg	22kg	22kg	30kg	
Rema	arks	2	Time required for the	ng accuracy/read-back load to change from 1 oltage to return to withi	00% to 50% or in reve	erse, and for the outpu	ıt	

Any changes to the above parameter specifications will not be notified separately.

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy





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.

Specifications	

Model		AN501200-17(F) AN501400-14(F)					
1000	Phase number	Three	e-phase				
Input	Voltage	380V±38V					
	Frequency	47-6	63HZ				
	Voltage	0~1200V	0~1400V				
Output	Current	17A	14.5A				
	Power	0~20KW	0~20KW				
Display	mode	5-bit Nixie t	tube display				
Voltage re	solution	0.01V (0.1V	when ≥ 100V)				
Current resolution		0.01A (0.1A when ≥ 100A)					
Setting error (programming	Voltage	s0.2%	6Umax				
accuracy)	Current	≤0.25	%lmax				
Measurement error (readback	Voltage	≤0.29	6Umax				
accuracy)	Current	≤0.29	%lmax				
Ripple and noise	Vrms	40	0mV				
20Hz-20MHz	Vpp	200	00mV				
	Voltage	≤0.19	6Umax				
Load effect Current		≤0.2%lmax					
o	Voltage	≤0.05	%Umax				
Source effect	Current	≤0.19	%Imax				
Transient res	ponse time	≤2ms (50%-100%, or 100%-50%, error returns to 0.75% of stable value)					
Voltage		0.05% setting value					
emperature drift	Current	0.05% setting value					
Nois	e	≤68dB (A)					
Scope of OVP		110%F.S					
Maximum lead dro	p compensation	28.5V					
Communicati	on function	RS-232 (standard)/485 (standard)/LAN (standard)					
Protection	functions	Short-circuit protection, reverse protection, output overvoltage, current-limiting protection, internal overheating protection, S-terminal over-compensation protection					
Analog interfa	ce (optional)	Start, stop, alarm, 0-5V or 0-10V analog control output					
Efficie	ncy	≥8	35%				
Operating te	mperature	0~40°C					
Storage ter	nperature	-20~70 °C					
Humi	dity	<80%, without	it condensation				
Dimensions(W	/×H×D mm)	444*13	32.5*641				
Weig	Iht	28.5kg	28.5kg				
Rema	irks	2. Time required for the load to change from 100% to 5	k accuracy test condition (25 C ±5 C); 50% or in reverse, and for the output voltage to return to value±100mV*				

Any changes to the above parameter specifications will not be notified separately.



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.



Exceeding & Trustworthy

Specifications

Model		AN5135-50(F)	AN5135-100(F)	AN5160-25(F)	AN5160-50(F)		
Input		104 A 94	Single phase, 220	V±22V, 47-63Hz	- Alox		
	Voltage	0~3	5V	0~	60V		
Output	Current	0~50A	0~100A	0~25A	0~50A		
	Power	0~1500W	0~3000W	0~1500W	0~3000W		
Resolution/ Voltage			Resolution 0.01V, Ad	curacy≤0.2%Umax			
Accuracy	Current		Resolution 0.01A, Ac	uracy≤0.35%lmax			
lipple and Noise	Vrms	30m	v	60	mV		
20Hz~20MHz	Vpp	200mV		300mV			
Voltage		Load effect≤0.1%Umax, Source effect≤0.05%Umax					
Effect	Current		Load effect≤0.2%Imax, S	lmax, Source effect≤0.1%lmax			
Transient response time		≤5ms(50%-100%,or 100%-50%,error returns to 0.75% of stable value)					
Rise time 100%		On line voltage adjustment: 50ms (10%-90%) ; Start slow rise time: 1S					
Communica	tion	RS-232 (Standard) /485(Optional) / Analog interface (Optional)					
Protection		Output short circuit protection ,output overvoltage, overheat, S-terminal over compensation protection, S-terminal reversal protection					
List test function		Capable of storing 50 sequences, each sequence contains 20 steps,					
(Optional)		each step of the function can be set independently, a total of 13 independent functions.					
Environment			Temperature: 0~40°C; Humidity: 20~90%RH				
Dimension W×H	×D(mm)		440×133	3×350			
Weight		9kg	13.5kg	9kg	13.5kg		

Any changes to the above parameter specifications will not be notified separately

Model		AN51120-12(F)	AN51120-25(F)	AN51300-5(F)	AN51300-10(F)		
Input			Single phase, 220V±22V, 47-63Hz				
	Voltage	0~12	OV	0~300V			
Output	Current	0~12.5A	0~25A	0~5A	0~10A		
	Power	0~1500W	0~3000W	0~1500W	0~3000W		
Resolution/ Voltage			Resolution : 0.1V/0.01V	, Accuracy≤0.2%Umax			
Accuracy	Current	Resolution : 0.01A, Accuracy≤0.35%Imax		Resolution : 0.001A,	Accuracy≤0.35%Imax		
Ripple and Noise	Vrms	80mV		100mV			
20Hz~20MHz	Vpp	400m	400mV		500mV		
F#	Voltage	Load effect≤0.1%Umax, Source effect≤0.05%Umax					
Effect	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 adjustment: 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 reversal protection					
List test function		Capable of storing 50 sequences, each sequence contains 20 steps,					
(Optional)		each step of the function can be set independently, a total of 13 independent functions.					
Environme	ent	Temperature: 0~40 C; Humidity: 20~90%RH					
Dimensions(W×H	I×D mm)		440×13	3×350			
Weight	5	9kg	13.5kg	9kg	13.5kg		

Any changes to the above parameter specifications will not be notified separately.

Wide Range Programmable DC Power Supply AN53(F) Series



Product Introduction

The AN53(F) Series Wide Range Programmable DC Power Supply adopts active power factor correction technology and high-frequency LLC multi-resonant soft switching inverter technology. It features high power factor, fast dynamic response, low output ripple, and high power density. It has the characteristic performance of constant power wide-range output, as well as advantages such as small size, light weight, low noise, high efficiency, and simple operation.

The AN53(F) Series expands the power output curve, providing users with a wider range of voltage and current combinations, making it more flexible than traditional "matrix" output range power supplies. The output range of a single constant power DC power supply may be several times that of a conventional rectangular power supply. For example, the AN53(F) Series 1500V/40A/5kW model can provide an output of 1500V 10A at 15kW power, or 375V 40A output. In comparison, for a traditional "matrix" output power supply, the output specification is 1500V/10A/15kW, and when the output voltage is 375V, the maximum current is still 10A, with a power of only 3.75kW.



The AN53(F) Series simulates the output characteristics of solar batteries, with fast response, stable and accurate I-V curve simulation capability. It comes with built-in standard models such as SAS, EN50530, and Sandia lab for single unit operation, allowing precise simulation of photovoltaic I-V curves. Additionally, users can edit the parameters of solar battery panels through upper computer software or download a set of 1024-point V&I data into the power supply for operation, supporting dynamic, shading, and other operation modes.

As a programmable power supply, the AN53(F) Series supports multiple communication interfaces and complies with the SCPI standard protocol, making it easy to understand and program control.

Features

- It has the wide-range output capability, expanding the output range to 3 times that of "matrix" power supplies at the same power level.
- It utilizes active power factor correction technology, with full load power factor exceeding 0.99.
- It uses high-frequency LLC multi-resonant inversion, achieving a high overall efficiency of up to 0.95.
- It boasts the industry's best transient response speed.
- It features three working modes: constant voltage, constant current, and constant power, meeting a wide range of test requirements.
- It has powerful programmable functions and flexible settings.

Exceeding & Trustworthy



Output Voltage Rise Rate Test

ISO16750-2 Startup Voltage Curve Test









Built-in precise voltage and current measurement, excellent output stability.

- Lead drop compensation terminal to compensate for lead drop compensation during high current operation.
- Comprehensive protection functions to ensure the normal operation of power supply equipment and the safety of loads.
- High-brightness color LCD with exquisite appearance and simple and intuitive operation.
- It supports multiple units for parallel output to expand power/current range.



as single output or parallel output

Sno	oifica	itions	
SDE		luons	

Model		AN5380-120S(F)	AN5380-170S(F)	AN5380-170(F)	AN5380-340(F)	AN5380-510(F)	
Voltage		Single phase+Pf	E, 198V-242VAC	Three-pl	ase three-wire+PE, 340V-	420VAC	
Input	Frequency			47-63Hz			
	Voltage			0-80V			
Output	Current	0-120A	0-170A	0-170A	0-340A	0-510A	
	Power	0-1.8KW	0-3KW	0-5KW	0-10KW	0-15KW	
Display mo	de	4.3-inch color LCD					
	Voltage		≤0	.05%Umax, resolution 0.0*	V		
Measurement error	Current		≤0.1%Imax, resolution 0.01A (>1000A, 0.1A)				
(readback accuracy)	Power	≤1%Pmax, resolution 0.001kW (>100kW, 0.01kW)					
Ripple and Noise	Vrms	30	mV	40mV			
20Hz-20MHz	Vpp	200mV 250mV					
Load effec	t		Voltage≤0.01%Umax, current≤0.05%lmax				
Power effe	ot	Voltage≤0.01%Umax, current≤0.01%Imax					
Transient respon	se time	≤2ms					
Maximum lead drop compensation		6.5V					
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB					
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function					
Parallel connection function		It supports multiple units for parallel output to expand power/current range.					
Working enviror	nment		Temper	ature 0-40°C; Humidity 20-	90%RH		
Dimensions(W×H	×D mm)	440×1	33×350		440×133×600		
Weight		16	ika	17kg	27kg	37kg	

Model AN53300-15S(F) AN53300-30S(F Single phase+PE, 198V-242VAC Voltage Input Frequency Voltage Output Current 0-15A 0-30A 0-1.8kW Power 0-3kW Display mode Voltage Measurement error Current ≤0.1% (readback accuracy) Power ≤1%Pm Ripple and Noise Vrms 20Hz-20MHz Vpp Load effect Volta Power effect Volt Transient response time Maximum lead drop compensation Standard: RS232, RS4 Communication control interface Input undervoltage protei Protection functions output overvoltage and current-limiting Parallel connection function It supports multiple u Tem Working environment Dimensions(W×H×D mm) 440×133×350 Weight 16kg

Any changes to the above parameter specifications will not be notified separately.

Supply

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

	AN53300-50(F)	AN53300-100(F)	AN53300-150(F)
	Three-p	hase three-wire+PE, 340V	-420VAC
	47-63Hz		
	0-300V		
	0-50A	0-100A	0-150A
	0-5kW	0-10kW	0-15KW
	4.3-inch color LCD		1
≤(0.05%Umax, resolution 0.01	IV	
%lm	nax, resolution 0.01A (>1000	DA, 0.1A)	
ıax,	resolution 0.001kW (>100k	W, 0.01kW)	
	60mV		
	450mV		
tage	s≤0.01%Umax, current≤0.05	5%Imax	
tage	s≤0.01%Umax, current≤0.0′	1%lmax	
	≤2ms		
	6.5V		
185,	CAN, and LAN, optional: G	PIB, analog port, and USB	1
	n, short-circuit protection, re tection, overheating protect	e contra de Tr	
unit	s for parallel output to expan	nd power/current range.	
mpe	rature 0-40℃; Humidity 20-	90%RH	
		440×133×600	

Specifications

Exceeding & Trustworthy

Specifications

Model		AN531000-40(F)	AN531500-40(F)	AN532250-20(F)		
1000	Voltage	Three-phase three-wire+PE, 340V-420VAC				
Input	Frequency		47-63Hz			
	Voltage	0-1,000V	0-1,500V	0-2,250V		
Output	Current	0-4	AOA	0-20A		
	Power	0-10kW	0-15kW	0-15kW		
Voltage			≤0.05%Umax, resolution 0.01V			
Measurement error	Current		≤0.1%Imax, resolution 0.01A (>1000A, 0	D.1A)		
(readback accuracy)	Power	≤1%P	'max,	≤3%Pmax,		
	Power	resolution 0.001kW (>100kW, 0.01kW)		resolution 0.001kW(>100kW, 0.01kW)		
Ripple and Noise	Vms	350mV	400mV	500mV		
20Hz-20MHz	Vpp	1600mV	2400mV	2800mV		
Load effec	t	Voltage≤0.01%Umax, current≤0.05%Imax				
Power effect	x	Voltage≤0.01%Umax, current≤0.01%Imax				
Transient respons	se time	≤2ms				
Maximum lead drop co	mpensation	25	28.5V			
Communication contr	ol interface	Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB				
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.				
Parallel connection function		It supports multiple units for parallel output to expand power/current range.				
Working environment		Temperature 0-40 C; Humidity 20-90%RH				
Dimensions(W×H	×D mm)	440×133×600				
Weight		27kg	1	37kg		

Model		AN53500-40(F)	AN53500-80(F)	AN53500-120(F)				
105140	Voltage	Three-phase three-wire+PE, 340V-420VAC						
Input	Frequency		47-63Hz					
Output	Voltage		0-500V					
	Current	0-40A	0-40A 0-80A 0-120A					
	Power	0-5kW	0-10kW	0-15kW				
Display mo	de		4.3-inch color LCD					
Measurement error	Voltage		≤0.05%Umax, resolution 0.01V					
20.00020000012.00000.00000	Current	≤0	≤0.1%Imax, resolution 0.01A (>1000A, 0.1A)					
readback accuracy)	Power	≤1%Pmax, resolution 0.001kW (>100kW, 0.01kW)						
Ripple and Noise 20Hz-20MHz	Vrms	80mV						
	Vpp	700mV						
Load effect		Voltage≤0.01%Umax, current≤0.05%lmax						
Power effect		Voltage≤0.01%Umax, current≤0.01%Imax						
Transient response time		≤2ms						
Maximum lead drop compensation		25V						
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB						
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.						
Parallel connection function		It supports multiple units for parallel output to expand power/current range.						
Working enviror	nment	1	Temperature 0-40 C; Humidity 20-90%RH					
Dimensions(W×H	×D mm)		440×133×600					
Weight		17kg	27kg	37kg				

Any changes to the above parameter specifications will not be notified separately.

Model		AN53750-20(F)	AN53750-40(F)	AN53750-60(F)			
Innut	Voltage	Th	Three-phase three-wire+PE, 340V-420VAC				
Input	Frequency	47-63Hz					
	Voltage		0-750V				
Output	Current	0-20A	0-40A	0-60A			
	Power	0-5kW	0-10kW	0-15kW			
Display mo	de		4.3-inch color LCD				
Voltage Voltage			≤0.05%Umax, resolution 0.01V				
readback accuracy)	Current	≤0.1%Imax, resolution 0.01A (>1000A, 0.1A)					
	Power	≤1%Pmax, resolution 0.001kW(>100kW, 0.01kW)					
Ripple and Noise	Vrms	200mV					
20Hz-20MHz	Vpp	800mV					
Load effect		Voltage≤0.01%Umax, current≤0.05%Imax					
Power effect		Voltage≤0.01%Umax, current≤0.01%Imax					
Transient respon	se time	≤2ms					
Maximum lead drop compensation		25V					
Communication control interface		Standard: RS232, RS485, CAN, and LAN, optional: GPIB, analog port, and USB					
Protection functions		Input undervoltage protection, short-circuit protection, reverse connection protection, output overvoltage and current-limiting protection, overheating protection, and S-terminal compensation function.					
Parallel connection	n function	It supports multiple units for parallel output to expand power/current range.					
Working enviro	nment	Ten	nperature: 0-40℃; Humidity: 20%-90%RH				
Dimensions(W×H	×D mm)		440×133×595				
Weight		17kg	27kg	37kg			

Any changes to the above parameter specifications will not be notified separately.

Ordering and function expansion

- AN5380-120S(F): 80V/120A/1800W AN5380-170S(F): 80V/170A/3000W AN5380-170(F): 80V/170A/5000W AN5380-340(F): 80V/340A/10000W AN5380-510(F): 80V/510A/15000W AN53300-15S(F): 300V/15A/1800W AN53300-30S(F): 300V/30A/3000W AN53300-50(F): 300V/50A/5000W
- AN53300-100(F): 300V/100A/10000W
- AN53300-150(F): 300V/150A/15000W
- AN53500-40(F): 500V/40A/5000W

DC Power Supply

- AN53500-80(F): 500V/80A/10000W
- AN53500-120(F): 500V/120A/15000W
- AN53750-20(F): 750V/20A/5000W
- AN53750-40(F): 750V/40A/10000W
- AN53750-60(F): 750V/60A/15000W
- AN531000-40(F): 1000V/40A/10000W
- AN531500-40(F): 1500V/40A/15000W
- AN532250-20(F): 2250V/20A/15000W
- It supports multiple units for parallel output to expand power/current range.

Ainuo

P100

Programmable Bidirectional DC Power Supply **ANEVH(F)** Series



Product Introduction

The ANEVH(F) Series is a programmable DC power supply that integrates DC power and feedback load. It can function as a source, outputting power to the outside world, and as a sink, absorbing power and returning it cleanly to the grid, achieving standard bidirectional operation.

The ANEVH(F) Series of bidirectional programmable DC test power supplies include 7 voltage levels, covering a voltage range from 0V to 2250V, supporting the parallel operation of multiple units, and expandable up to 1MV in maximum power. The energy flows bidirectionally, with automatic seamless switching, high power density, fast dynamic response characteristics, built-in function generators and standard test curves, and the ability to generate multiple waveforms freely. It can be used in laboratories, automotive electronics, new energy battery-motor-electronic control, microgrids, high-power tests, and other testing scenarios.

Features

- Integrates source and load functions in a 3U standard chassis across the entire series.
- Integrates high-frequency PWM rectification and bidirectional DCDC technology, comprehensively eliminating the noise of conventional high-power bidirectional power supplies, rendering it a silent power supply.
- Higher power density, smaller size, and faster speed. Energy flows bidirectionally, with automatic seamless switching in both directions.
- Feedback efficiency up to 95%, with outstanding energy-saving and environmentally friendly advantages.
- Voltage range: covers 7 voltage levels from 0V to 2250V, the highest in the industry, with unique high-voltage series connection technology.
- Has a built-in function generator that supports arbitrary waveform generation.
- Has built-in DIN40839, ISO-16750-2, and ISO21848 standard automotive power grid voltage curves (optional).
- Has the electronic load function, with multiple load modes such as CV, CC, CP, CR, CV+CC, CV+CR, CC+CR, and CV+CC+CP+CR.

- Has the ability to simulate the output characteristics (Fill Factor) of various solar batteries.
- It can test maximum power point tracking (MPPT) capability and efficiency.
- It has the ability of accurate voltage and current measurement.
- Sequence output can be set to test the operating voltage range of photovoltaic inverters.
- It has comprehensive protection functions, including OTP, OVP, OCP, and OPP.
- It has the S-terminal compensation function.
- It has the solar battery I-V curve simulation function. It has a standard RS232/RS485/CAN/LAN/USB communication interface.
- It is equipped with the standard graphical upper computer operational software, and can be operated as a single unit.
- It has the battery simulation function, simulating the output characteristic curves of various batteries.
- It can simulate I-V curves under different temperature and illumination conditions.

Application

- Microgrid and micro-inverter tests
- Automotive motor, controller and power battery tests.
- Fuel battery test and fuel battery DCDC test.
- Uninterruptible power supply (UPS), on-board charger (OBC), charging station, and bidirectional DC-DC tests.
- Industrial tests such as electrolysis, electroplating, and welding.
- Communication power supply and LED product tests.
- Tests of automotive electronics, military electronics, and aviation electronics.
- High-power test and DC feedback load demand scenarios.



The switch time from maximum reverse current to maximum forward current is as low as 1.4ms.

Ordering and function expansion

3U Model

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 ANEVH300-225(F) 300V/225A/21kW ANEVH300-300(F) 300V/300A/30kW ANEVH500-40(F) 500V/40A/5kW ANEVH500-80(F) 500V/80A/10kW ANEVH500-120(F) 500V/120A/15kW ANEVH500-160(F) 500V/160A/21kW ANEVH500-240(F) 500V/240A/30kW ANEVH750-25(F) 750V/25A/5kW ANEVH750-50(F) 750V/50A/10kW ANEVH750-75(F) 750V/75A/15kW ANEVH750-120(F) 750V/120A/21kW ANEVH750-180(F) 750V/180A/30kW ANEVH1000-40(F) 1000V/40A/10kW ANEVH1000-80(F) 1000V/80A/21kW ANEVH1000-100(F) 1000V/100A/30kW

Supply

DC Power

DC Power Supply Ainuo

		Ann. 100 10 (9.64) (100	and the last of the line	Balling lines.	
	4	Ainuo			9 ur
			1.000		Barrer recentered
					24
	THE .				Arrist .
	(a)	1002010 (4.102)	2.000		And in Party
			100		
	8.4				To all the state of the state o
Top of the second sec				10 10	A REAL COLORS
	ap .				
	Test 0.00	0.ctt 8.0			
	Davie (1.00)	- auto 14	Pile Sect		11 A
	Re-194 18-006				and a
			and the second s		
	AL \$ AX		10	14	
	* * *		1 in 1	14	
The second secon	nd 2 Not late 1			11	
State State and State St		64			411

3U Model

- ANEVH1500-40(F) 1500V/40A/15kW
- ANEVH1500-60(F) 1500V/60A/21kW
- ANEVH1500-80(F) 1500V/80A/30kW
- ANEVH2250-25(F) 2250V/25A/15kW
- ANEVH2250-50(F) 2250V/50A/21kW
- ANEVH2250-60(F) 2250V/60A/30kW

4U Model

- ANEVH80-680(F) 80V/680A/20kW
- ANEVH80-1020(F) 80V/1020A/30kW
- ANEVH300-450(F) 300V/450A/50kW
- ANEVH500-390(F) 500V/390A/50kW
- ANEVH750-300(F) 750V/300A/50kW
- ANEVH1000-150(F) 1000V/150A/50kW
- ANEVH1500-130(F) 1500V/130A/50kW
- ANEVH2250-100(F) 2250V/100A/50kW
- Support multiple parallel outputs to extend power/current range

Exceeding & Trustworthy

Specifications

N	Nodel	ANEVH500-40(F)	ANEVH500-80(F)	ANEVH500-120(F)	ANEVH750-25(F)	ANEVH750-50(F)	ANEVH750-75(
	Phase number			Three-phase t	hree-wire+PE				
Input	Voltage			342V-5	28VAC				
mput	Frequency			45-6	6Hz				
	Power factor			≥0.	99				
	Voltage	0-500VDC	0-500VDC	0-500VDC	0-750VDC	0-750VDC	0-750VDC		
Output	Current	-40A-40A	-80A-80A	-120A-120A	-25A-25A	-50A-50A	-75A-75A		
	Power	-5kW-5kW	-10kW-10kW	-15kW-15kW	-5kW-5kW	-10kW-10kW	-15kW-15kW		
Displ	ay mode			4.3-inch c	olor LCD		A		
Voltage	e resolution			0.01V (0.1V w	/hen >1000V)				
Curren	t resolution			0.01A (0.1A w	/hen >1000A)				
Power	resolution			0.001kW (0.01kW	/ when >100kW)				
Setting error	Voltage			≤0.05	%F.S				
(programming	Current			≤0.19	%F.S				
accuracy)	Power			≤1%					
Measurement error	Voltage			≤0.05					
(Read-back	Current			≤0.19	270.07				
accuracy)	Power			≤1%					
Ripple and noise			70mvrms	217		90mvrms(750V)			
20Hz-20MHz	Vpp		500mvPP			800mvPP(750V)			
	Voltage			≤0.01%	Umax				
Load effect	Current			≤0.05%					
	Voltage			≤0.01%					
Source effect	Current		≤0.01%lmax						
Transient r	esponse time 2			≤21					
				221	115				
Forward and reverse switching speed				2ms (+90	0%-90%)				
5000	Voltage	-	0.05% setting value						
Temperature drift	Current		0.05% setting value						
N	Voise	≤65dB(A) (Measuring distance≥2m)							
	e of OVP								
	age drop compensation	110%F.S ≤5% Umax (300V 6.5V)							
	cation function	Standard: CAN/232/485/LAN/USB, optional: GPIB							
Communie									
Protecti	on functions	Input undervoltage protection, short-circuit protection, output overvoltage,							
Analaa ista	rface (ontional)		current-limiting protection, internal overheating protection. Startup, stop, alarm, 0-5V or 0-10V analog control output						
~	rface (optional) mal interfaces		Startup			output			
				Standard configurat					
EII	Erequency	~90%							
	Frequency Power factor			45-6					
Feedback				≥0.					
parameters	Switching time			≤2					
	Feedback function			Full power rar					
A	Feedback efficiency			~90					
	g temperature			0~4					
	temperature			-20-1					
Hu	umidity				t condensation				
Volume	Enclosure size			444×132.5					
244	Overall dimension			444×132.5	and the second second				
N	/eight				i31kg 15kw≤38kg				
				g accuracy/read-back					
Re	emarks		2. Time require	ed for the load to chan	ge from 100% to 50%	6 or in reverse,			
			and for the	output voltage to retu	rn to within "rated val	ue±0.75%"			

Any changes to the above parameter specifications will not be notified separately.

Specifications

	Nodel Phase number	ANEVH100-170(F)	ANEVH100-340(F)	ANEVH100-510(F)	ANEVH300-75(F)	ANEVH300-150(F)	ANEVH300-225		
			Three-phase three-wire+PE						
Input	Voltage	342V-528VAC							
	Frequency	45-66Hz							
	Power factor			≥0.					
C L L	Voltage	0-100VDC	0-100VDC	0-100VDC	0-300VDC	0-300VDC	0-300VDC		
Output	Current	-170A-170A	-340A-340A	-510A-510A	-75A-75A	-150A-150A	-225A-225A		
	Power	-5KW-5KW	-10KW-10KW	-15KW-15KW	-5kW-5kW	-10kW-10kW	-15kW-15kW		
	ay mode			4.3-inch c	79 CA 65 75 CA				
	resolution			0.01V (0.1V w					
1999-000-000	t resolution			0.01A (0.1A w					
1.1.1.1.4.4.1.5.1.0.4.5.5	resolution			0.001kW (0.01kW	-				
Set up error	Voltage			≤0.05					
(programming	Current			≤0.1%	VTUGOT				
accuracy)	Power			≤1%					
Measurement error				≤0.05					
(Read-back	Current			≤0.1%					
accuracy)	Power			≤1%	FS				
Ripple and noise			40mvrms(100V)			100mvrms			
20Hz-20MHz	Vpp		250mvPP(100V)			650mvPP			
Load effect	Voltage	≤0.01%Umax							
	Current			≤0.05%					
Source effect	Voltage			≤0.01%					
	Current			≤0.019	%lmax				
Transient r	response time			≤21	ns				
Forward and reverse				2ms (+90	0%-90%)				
switch	ing speed								
Temperature drift		0.05% setting value							
en per en	Current			0.05% set	tting value				
N	loise	≤65dB(A) (Measuring distance≥2m)							
OVE	^o range			1109	6F.S				
Aaximum lead volta	age drop compensation	≤5% Umax(300V 6.5V)							
Communic	ation function	Standard: CAN/232/485/LAN/USB, optional: GPIB							
Protocili	on functions	Input undervoltage protection, short-circuit protection, output overvoltage,							
Protectio	on idilouons	current-limiting protection and internal overheating protection.							
Analog inter	rface (optional)	Start, stop, alarm, 0-5V or 0-10V analog control output							
Other exter	rnal interfaces	Standard configuration for parallel ports							
Effi	ciency	~90%							
	Frequency			45-6	6Hz				
Feedback	Power factor			≥0.	99				
parameters	Switching time			≤21	ns				
parameters	Feedback function			Full power ran	ige feedback				
	Feedback efficiency			~90	0%				
Operating	temperature			0~4	0.0				
Storage	temperature			-20-7	70°C				
Hu	midity			<80%, without	t condensation				
	Enclosure size			444×132.5	×705.5mm				
Volume	Overall dimensions			444×132.5	5×768mm				
W	/eight			5kw≤23kg 10kw≤	31kg 15kw≤38kg				
			1. Programmi	ng accuracy/read-back		ion (25°C±5°C);			
Re	marks		The state of the second s	ed for the load to chan					
	0.000.000			e output voltage to retu					

P103

Д

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy

Specifications

M	lodel	ANEVH300-225P(F)	ANEVH500-160(F)	ANEVH750-120(F)	ANEVH1000-80(F)	ANEVH1500-60(F)	ANEVH2250-50		
	Phase number			Three-phase three	e-wire+PE				
Input	Voltage	342V-528VAC							
	Frequency	45-66Hz							
	Power factor			≥0.99					
	Voltage	0-300VDC							
Output	Current	-225A-225A	-160A-160A	-120A-120A	-80A-80A	-60A~60A	-50A-50A		
	Power	-21KW-21KW	-21KW-21KW	-21KW-21KW	-21KW-21KW	-21KW-21KW	-21KW-21KW		
Displa	ay mode			4.3-inch colo					
	resolution			0.01V (0.1V whe					
	resolution			0.01A (0.1A when					
115.02011.0201	resolution			0.001kW (0.01kW w					
Set up error	Voitage			≤0.05%F					
(programming	Current			≤0.1%F.					
accuracy)	Power			≤1%FS	545 C				
Accuracy)	Voltage			≤1%F3 ≤0.05%F	200				
(Read-back	Current			≤0.05%F. ≤0.1%F.					
accuracy)									
	Power	100	00	≤1%FS		222	400		
Ripple and noise	Vms	100mvrms	80mvrms	80mvrms	220mvrms	220mvrms	400mvrms		
20Hz-20MHz	Vpp	650mvPP	750mvPP	800mvPP	1600mvPP	1800mvPP	2400mvPP		
Load effect	Voltage	≤0.01%Umax							
	Current	≤0.05%lmax							
Source effect	Voltage			≤0.01%Ur					
Current				≤0.01%lm	lax				
Transient r	esponse time			≤2ms					
Forward and reverse				2ms (+90%-	90%)				
switchi	ing speed								
emperature drift	Voltage	0.05% setting value							
	Current	0.05% setting value							
N	oise	≤65dB(A) (Measuring distance≥2m)							
Scope	e of OVP	110%F.S							
Maximum lead o	drop compensation	≤5% Umax (300V 6.5V)							
Communic	ation function	Standard: CAN/232/485/LAN/USB, optional: GPIB							
Protectic	on functions	Input undervoltage protection, short-circuit protection, output overvoltage,							
FIDIECIK		current-limiting protection and internal overheating protection.							
	face (optional)	Startup, stop, alarm, 0-5V or 0-10V analog control output							
Other exter	nal interfaces	Standard equipped parallel port							
Effic	ciency	~90%							
	Frequency		45-66Hz						
Foodbook	Power factor			≥0.99					
Feedback	Switching time			≤2ms					
parameters	Feedback function			Full power range	feedback				
	Feedback efficiency			~90%					
Operating	temperature			0~40°C					
	emperature			-20-70	;				
	midity			<80%, without co	ndensation				
	Enclosure size			444×132.5×70					
Volume	Overall dimension			444×132.5×7					
W	eight			21kw≤39					
			1. Programming	accuracy/read-back ac		25 C±5 C):			
Per	marks			Charles and the Charles of the Charl					
1101		 Time required for the load to change from 100% to 50% or in reverse, and for the output voltage to return to within "rated value±0.75%" 							

Specifications

M	odel	ANEVH1000-40(F)	ANEVH1000-75(F)	ANEVH1500-40(F)	ANEVH2250-25(F)			
	Phase number		Three-phase th					
Input	Voltage	342V-528VAC						
	Frequency		45-6					
	Power factor		≥0.					
	Voltage	0-1000VDC	0-1000VDC	0-1500VDC	0-2250VDC			
Output	Current	-40A-40A	-75A-75A	-40A-40A	-25A-25A			
	Power	-10KW-10KW	-15KW-15KW	-15KW-15KW	-15KW-15KW			
Displa	ay mode		4.3-inch co					
Voltage	resolution		0.01V (0.1V w	hen >1000V)				
Current	resolution		0.01A (0.1A wi	hen >1000A)				
Power	resolution		0.001kW (0.01kW	/ when >100kW)				
Set up error	Voltage		≤0.05°	%F.S.				
(programming	Current		≤0.1%	6F.S.				
accuracy)	Power		≤1%	FS				
Measurement error	Voltage		≤0.05%	%F.S.				
(Read-back	Current		≤0.1%	6F.S.				
accuracy)	Power		≤1%	FS				
Ripple and noise	Vrms	300mvrms	100mvrms	200n	nvrms			
20Hz-20MHz	Vpp	1600mvPP	1000mvPP	2000	mvPP			
Load effect	Voltage		≤0.01%	Umax				
Load ellect	Current		≤0.05%	6lmax				
Source effect	Voltage		≤0.01%	Umax				
Source ellect	Current		≤0.01%	6lmax				
Transient r	esponse time		≤2r	ns				
Forward	and reverse		0 //00					
switchi	ing speed		2ms (+90	%-90%)				
	Voltage		0.05% set	ting value				
lemperature drift	Current		0.05% set	ting value				
N	oise		≤65dB(A) (measur	ing distance≥2m)				
OVF	range		110%	F.S				
Maximum lead o	frop compensation		≤5% Umax (300V 6.5V)				
Communic	ation function		Standard: CAN/232/485/L	AN/USB, optional: GPIB				
_		Inpu	t undervoltage protection, short-c	ircuit protection, output overvo	ltage,			
Protectio	on functions		current-limiting protection and in	ternal overheating protection.				
Analog inter	face (optional)		Startup, stop, alarm, 0-5V or	0-10V analog control output				
Other exter	nal interfaces	Standard equipped parallel port						
Effi	ciency	~90%						
	Frequency	45-66Hz						
	Power factor		≥0.	99				
Feedback	Switching time		≤2r	ns				
parameters	Feedback function		Full power ran	ge feedback				
	Feedback efficiency		~90	•				
Operating	temperature		0~40					
	emperature		-20-7	OC.				
	midity		<80%, without					
	Enclosure size		444×132.5					
Volume	Overall dimensions		444×132.5					
NA/	eight	5L	w: ≤23kg 10kw: ≤32kg 15kw≤38k		5kw: ≤23kg 10kw: ≤31kg 15kw≤38k			
vv			rogramming accuracy/read-back					
Por	marks				100-0052			
Remarks		 Time required for the load to change from 100% to 50% or in reverse, and for the output voltage to return to within "rated value±0.75%" 						

Any changes to the above parameter specifications will not be notified separately.

A

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy

Specifications

N	lodel	ANEVH1000-100(F)		
	Phase number			
100000 A	Voltage			
Input	Frequency			
	Power factor			
	Voltage	0-1000VDC		
Output	Current	-100A-100A		
	Power	-30KW-30KW		
Displa	ay mode		1	
Voltage	resolution			
-	resolution			
Power	resolution		0.0	
Set up error	Voltage			
(programming	Current			
accuracy)	Power			
Measurement error	Voltage			
(Read-back	Current			
accuracy)	Power			
Ripple and noise	Vrms	200mvrms		
20Hz-20MHz	Vpp	1600mvPP		
Lood offerst	Voltage			
Load effect	Current			
C	Voltage			
Source effect	Current			
Transient r	esponse time			
Forward	and reverse			
switch	ing speed			
Temperature drift	Voltage			
remperature unit	Current			
N	oise		≤65	
Scope	e of OVP			
Maximum lead of	drop compensation			
Communic	ation function		Standard: (
Protectiv	on functions	Input und	ervoltage pro	
Protectio	on functions	curr	ent-limiting p	
Analog inter	face (optional)	s	tartup, stop,	
Other exter	mal interfaces		Stand	
Effi	ciency		~90%	
	Frequency			
Feedback	Power factor			
parameters	Switching time			
parametero	Feedback function			
	Feedback efficiency		~90%	
Operating	temperature			
Storage t	emperature			
Hu	midity			
Volume	Enclosure size	444×	132.5×705.5	
	Overall dimension	444	×132.5×768m	
W	eight		30kw≤40kg	
			imming accu	
Dec	marks	2. Time I	required for th	
Rei			or the output	

opeometric

Specif	ica	tions	1

- M	odel	ANEVH80-680(F)	ANEVH80-1020(F)	ANEVH500-240(F)	ANEVH750-180(F)			
	Phase number		Three-phase t					
Input	Voltage	342V-528VAC						
1000 ACT 100	Frequency		45-66Hz					
	Power factor		≥0					
	Voltage	0~80VDC	0~80VDC	0~500VDC	0~750VDC			
Output	Current	-680A~680A	-1020A~1020A	-240A~240A	-180A~180A			
	Power	-20kW~20kW	-30kW~30kW	-30kW~30kW	-30kW~30kW			
Displa	ay mode		4.3-inch c	olor LCD				
Voltage	resolution		0.01V (0.1V v	vhen >1000V)				
	resolution		0.01A (0.1A w	/hen >1000A)				
0500030000	resolution		0.001kW (0.01kV					
Set up error	Voltage		≤0.05					
(programming	Current		≤0.19	%F.S.				
accuracy)	Power			6FS				
easurement error			≤0.05					
(Read-back	Current		≤0.19					
accuracy)	Power		≤19	6FS				
lipple and noise	Vrms	25r	nvms	80mvrms	80mvrms			
20Hz-20MHz	Vpp	400)mvPP	750mvPP	800mvPP			
Load effect	Voltage	≤0.02	2%Umax	≤0.01%	Umax			
	Current	≤0.0	5%lmax	≤0.05%lmax				
Source effect	Voltage	≤0.02	2%Umax	≤0.01%	Jumax			
	Current	≤0.0	5%lmax	≤0.01%lmax				
Transient n	esponse time		≤2	ms				
Forward	and reverse		2me (+0	0%-90%)				
switchi	ng speed	2ms (+90%-90%)						
emperature drift	Voltage	0.05% setting value						
importation diffe	Current		0.05% se	etting value				
N	oise		≤65dB(A) (Measu	ring distance≥2m)				
Scope	e of OVP		1109	%F.S				
Maximum lead o	drop compensation		≤5% Umax	(300V 6.5V)				
Communic	ation function		Standard: CAN/232/485/I	AN/USB, optional: GPIB				
Protectic	on functions	Inpu	t undervoltage protection, short-	circuit protection, output overvolta	ige,			
, roteout	and a second		current-limiting protection and i	nternal overheating protection.				
Analog inter	face (optional)		Startup, stop, alarm, 0-5V or	0-10V analog control output				
Other exter	nal interfaces		Standard configurat	ion for parallel ports				
Effic	ciency	≤93	.5%	~9	0%			
	Frequency		45-6	66Hz				
Feedback	Power factor	≥0.99						
parameters	Switching time		≤2	ms				
P si di li di di di	Feedback function		Full power ran	nge feedback				
	Feedback efficiency	≤93	.5%	~9	0%			
Operating	temperature		0~4	0°C				
Storage t	emperature		-20-	70°C				
Hu	midity		<80%, without	t condensation				
Volume	Enclosure size	444*177*696.5mm	444×177×696.5mm	444×132.5×705.5mm	444×132.5×705.5mm			
volume	Overall dimension	444*177*768mm	444×177×768mm	444×132.5×768mm	444×132.5×768mm			
W	eight	20kw≤41kg	30kw≤53.5kg	30kw≤40kg	30kw≤40kg			
Remarks		20kws41kg 30kws40kg 30kws40kg						

Any changes to the above parameter specifications will not be notified separately.

F

DC Power Supply

ANEVH1500-80(F)	ANEVH2250-60(F)
Three-phase three-wire+PE	
342V-528VAC	
45-66Hz	
≥0.99	
0~1500VDC	0~2250VDC
-80A~80A	-60A~60A
-30kW~30kW	-30kW~30kW
4.3-inch color LCD	
0.01V (0.1V when >1000V)	
0.01A (0.1A when >1000A)	
.001kW (0.01kW when >100kW)	
≤0.05%F.S.	
≤0.1%F.S.	
≤1%FS	
≤0.05%F.S.	
≤0.1%F.S.	
≤1%FS	
220mvrms	400mvrms
1800mvPP	2400mvPP
≤0.01%Umax	
≤0.05%Imax	
≤0.01%Umax	
≤0.01%lmax	
≤2ms	
2ms (+90%-90%)	
0.05% setting value	
0.05% setting value	
5dB(A) (Measuring distance≥2m)	
110%F.S	
≤5% Umax (300V 6.5V)	
CAN/232/485/LAN/USB, optional: GPIB	
rotection, short-circuit protection, output o	
protection and internal overheating prote	
, alarm, 0-5V or 0-10V analog control out	
ndard configuration for parallel ports	
, , ,	≤95%
45-66Hz	
≥0.99	
≤2ms	
Full power range feedback	
Turperter turge recubuon	≤95%
0~40°C	10070
-20-70 C	
<80%, without condensation	
	111-100 5-705 5
5mm	444×132.5×705.5mm
Bmm	444×132.5×768mm
manufered back second first in 197	30kw≤40kg
uracy/read-back accuracy test condition	
the load to change from 100% to 50% or	in reverse,

t voltage to return to within "rated value±0.75%"

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy

High Power Bidirectional DC Power Supply ANEVT(F) Series



Product Introduction

The ANEVT(F) Series High Precision bidirectional DC test power supply is a high-tech product integrated with high-frequency PWM rectification technology, bidirectional DC conversion technology, and FPGA digital control technology. It has adaptive grid feedback capability and can meet the continuous energy feedback requirements in the full power range. It also offers seamless switching between forward and reverse outputs, enabling seamless connection of energy transfer. With dual-loop control technology, it achieves ultra-high control precision, rapid response to customer device applications, ensuring equipment test stability and data precision. With its wide range of voltage and current output capabilities and rich output programming test functions, it better meets the diverse testing needs of customers' products. The device also includes multiple protection programming functions to better protect the safety of customer equipment during testing. Additionally, numerous additional product features enhance the stability and reliability of equipment operation.

Features

It is a battery simulation, bidirectional output multifunctional integrated machine.

Specifications	/

M	odel	ANEVH300-450(F)	ANEVH500-390(F)	ANEVH1000-150(F)	Million Contractor Contractor	ANEVH750-300(F)	ANEVH2250-100(F)		
	Phase number	Three-phase three-wire+PE							
Input	Voltage			342V-	528VAC				
mput	Frequency	45-66Hz							
	Power factor		<u></u>	≥	0.99		10		
	Voltage	0~300VDC	0~500VDC	0~1000VDC	0~1500VDC	0-750VDC(expandable to 800V)	0~2250VDC		
2 8 9	Current	-450A~450A	-390A~390A	-150A~150A	-130A~130A	-300A~300A	-100A~100A		
Output	Power	-50kW~50kW	-50kW~50kW	-50kW~50kW	-50kW~50kW	-50kW~50kW	$-50 kW{\sim}50 kW$		
	Internal resistance	0.033~150Ω	0.051~500Ω	0.226~1000Ω	0.384~1500Ω	0.1~750Ω	0.6~2250Ω		
Displa	ay mode			4.3-inch	color LCD				
Voltage	resolution			0.01V (0.1V	when >1000V)				
Current	resolution			0.01A (0.1A	when >1000A)				
Power	resolution			0.001kW (0.01k	W when >100kW)				
Internal resist	ance resolution		0.	001Ω (0.01Ω when >1	00Ω, 0.1Ω when>100	0Ω)			
	Voltage			≤0.0	5%F.S.				
Set up error	Current			≤0.1	1%F.S.				
(programming	Power			1.10.100	%FS				
accuracy)1	Internal resistance	≤0.3% of maximum	≤ 0.3% of maximum resistance ± 0.1% of maximum current (note: applicable to feedback current above 2A)						
58.635	Voltage				5%F.S.				
Aeasurement error	Current				1%F.S.				
(Read-back	Power				%FS				
accuracy)	Internal resistance	< 0.3% of maximum	recistance + 0.1% of maximu	ہ ہے m current (note: applicable to f	No. 1 August				
Ripple and noise	Vrms	≤80mVrms	≤100mVrms	≤170mVrms	≤200mVrms	≤120mVrms	≤240mVrms		
20Hz-20MHz	Vpp								
2012-2010112		≤800mVpp	≤1000mVpp	≤1800mVpp	≤2200mVpp	≤1200mVpp	≤2400mVpp		
Load effect	Voltage		≤≤0.02%Umax						
	Current				5%lmax				
Source effect	Voltage				%Umax				
	Current				2%lmax				
	sponse time ²				2ms				
Forward and reve	rse switching speed			2ms (+9	90%-90%)				
emperature drift	Voltage	0.05% setting value							
•	Current			0.05% s	etting value				
Scope	e of OVP			110)%F.S				
Maximum lead o	trop compensation	≤5% Umax							
Communic	ation function	Standard: CAN/232/485/LAN/USB, optional: GPIB							
Protectio	on functions	Input undervoltage protection, short-circuit protection, output overvoltage, current-limiting protection and internal overheating protection.							
Waveform edi	iting (sequence)				Conventional waveform editing function and integrated testing standards, which can be graphica	1	Conventional waveform editing function and integrated testing standards, which can be graphi		
Analog inter	face (optional)		Startu	ip, stop, alarm, 0-5V o	r 0-10V analog contro	l output			
	nal interfaces			Standard equip	ped parallel port				
	ciency				3.5%				
	Frequency			45	66Hz				
-	Power factor		45-06⊓2 ≥0.99						
Feedback	Switching time				2ms				
parameters	Feedback function				ange feedback				
	Feedback efficiency				94%				
Operating	temperature			100	40°C				
					-70°C				
le la	emperature				ut condensation				
Hui	midity Enclosure size								
Volume	Overall dimension				/×705.5mm				
					7×805mm		-50		
14/	eight		5	53kg		50kW	l≤53kg		

Any changes to the above parameter specifications will not be notified separately.

- It provides the source load integral mode with adjustable parameters.
- It has high voltage, large current, and wide range output capabilities.
- It features adaptive grid feedback function for full power continuous energy feedback.
- It supports CV, CC, CP, and CR working modes. Voltage 0.05%FS and current 0.1%FS.
- Response time≤3ms; forward and reverse switching time≤ 4ms.
- Power factor≥0.99, current harmonic distortion≤3%.
- It simulates 7 types of batteries such as lithium, nickel-hydrogen, lead-acid, etc.
- It has 1st, 2nd, and 3rd order battery simulation functions, supporting import and export of data in mat and csv data formats.
- It provides 900-step programming function with a minimum programming time of 1mS.
- It features independent air duct heat dissipation design, supporting long-term continuous operation of the equipment.
- It is equipped with standard CAN, RS232/RS485, LAN and other communication interfaces.
- It offers a three-in-one operation mode of buttons, knobs, and touch operation.
- It provides a high-brightness large-screen LCD display.

Exceeding & Trustworthy

Specifications

F	roduct name		High Power Bidirectional DC Power Supply			
	Input	method	Three-phase four-wire+PE			
Input - parameter -	Input voltage		Line voltage: 380V±15%			
	Input f	requency	50/60Hz±5Hz			
	Input po	ower factor	0.99			
	Input elec	tric harmony	3% (under rated conditions)			
	Voltage	accuracy	0.05%F.S			
	Current accuracy		0.1%F.S			
	Power	accuracy	0.2%F.S			
Output	Powe	er effect	0.1%F.S			
parameter	Load	d effect	0.1%F.S			
	Rippl	le (Vpp)	0.2%F.S			
Ì	Transient r	ecovery time	≤3ms (10%-90% rated resistive load switching)			
-	Current rise time		≤3ms (loading test after starting output)			
	Feedba	ck voltage	323-437V			
	Feedbac	k frequency	Grid frequency (45Hz-65Hz)			
		er factor	≥0.99			
Feedback	102002	onic content	≤3% (tested under conditions of standard AC power input with distortion within 1.5%)			
parameter	Forward	and reverse				
	output switching time		≤4ms			
-	Feedback function		Full power continuous energy feedback			
	100000000	ng mode	CV, CC, CP and CR			
	Training mode		It provides programmable output voltage waveform, including voltage and current slope, step,			
	Output programming		cyclic control, and jump control; 900-step programming function, with the minimum programming time of 1			
	Emero	ency stop	With emergency stop button, it can quickly disconnect the connection with the load equipment			
	Linerg	ency stop	It can simulate functions of 7 types of batteries including ternary lithium, lithium manganese oxide,			
	Battery simulation		lithium titanium oxide, lithium cobalt oxide, lithium iron phosphate, lead-acid, and nickel-metal hydride.			
Product						
feature			It has customizable battery cell capacity, series and parallel connection quantities, SOC,			
			and temperature parameters with 1st, 2nd, and 3rd order battery simulation functions,			
-	Output remo-up function		supporting import and export of data in mat and csv data formats.			
-	Output ramp-up function		Programmable output voltage ramp-up			
-	Self-discharge function		It has a built-in discharge unit, which automatically discharges upon shutdown.			
	Protection function		It has multiple protection devices, input protection devices, OCP, OVP, OPP, OTP,			
	14 h 1		bus overvoltage protection, output short circuit protection, etc.			
	Voltage drop	compensation	It features automatic voltage drop compensation terminals, automatically compensating for cable voltage d			
	Display	Voltage	0.001V			
Display and	resolution	Current	0.001A			
operation	-	Power	0.001kW			
		ay mode	LCD			
		ion mode	Number key, knob and touch screen three-in-one			
Communication		interface	Standard RS232/RS485 (select one)			
interface	2603401610	interface	Supports CAN2.0 protocol (AORB). Communication data update frequency ≥50Hz			
	C 100 2005 C	iernet	Supports Ethernet communication (standard)			
A	nalog interface		Supports external analog emergency stop switch quantity input control			
Safety	0.000.000.000	n resistance	≥2MΩ (tested at 1,000V insulation voltage)			
performance	002000000000	sive strength	2000VDC 5mA/min			
paronianoo	Groundin	g resistance	≤100mΩ			
	Working t	temperature	0°C-40°C			
Working	Working	g humidity	20-90%RH (no condensation)			
environment	Alt	itude	≤2,000m			
	Storage t	emperature	-10 °C -70 °C			
	Noise		≤75dB			
c	ooling method		Temperature-controlled air cooling. It has a built-in temperature-controlled variable speed fan.			
	Protection level		IP21			

Sp	beci	fica	tior	ns	

Product series	Product model	Rated current	Rated power	Peak current	Peak power	Voltage range	Dimension /mm (W×D×H)
	ANEVT500-200C(F)	200A	60kW	300A	90KW	24V-500V	1000×1000×2100
500V Series	ANEVT500-300C(F)	300A	90kW	450A	135KW	24V-500V	1000×1000×2100
	ANEVT500-400C(F)	400A	120kW	500A	150KW	24V-500V	1000×1000×2100
	ANEVT800-200C(F)	200A	60kW	300A	90KW	24V-800V	1000×1000×2100
	ANEVT800-300C(F)	300A	90kW	450A	135KW	24V-800V	1000×1000×2100
	ANEVT800-400C(F)	400A	120kW	500A	150KW	24V-800V	1000×1000×2100
	ANEVT800-500C(F)	500A	160kW	625A	200KW	24V-800V	1500×1000×2100
800V Series	ANEVT800-600C(F)	600A	200kW	750A	250KW	24V-800V	1500×1000×2100
	ANEVT800-800C(F)	800A	300kW	1000A	375KW	24V-800V	1500×1200×2200
	ANEVT800-900C(F)	900A	400kW	1125A	500KW	24V-800V	2000×1200×2200
	ANEVT800-1000C(F)	1000A	500kW	1250A	625KW	24V-800V	2000×1200×2200
	ANEVT800-1200C(F)	1200A	600kW	1500A	750KW	24V-800V	2000×1200×2200
	ANEVT800-2000C(F)	2000A	1000kW	2500A	1300kW	24V-800V	4000×1200×2200
	ANEVT1000-150C(F)	150A	60kW	225A	90kW	24V-1000V	1000×1000×2100
	ANEVT1000-200C(F)	200A	90KW	300A	135KW	24V-1000V	1000×1000×2100
	ANEVT1000-300C(F)	300A	120kW	375A	150KW	24V-1000V	1000×1000×2100
	ANEVT1000-500C(F)	500A	160kW	625A	200KW	24V-1000V	1500×1000×2100
1000V Series	ANEVT1000-600C(F)	600A	200kW	750A	250KW	24V-1000V	1500×1000×2100
	ANEVT1000-800C(F)	800A	300kW	1000A	375KW	24V-1000V	1500×1200×2200
	ANEVT1000-900C(F)	900A	400kW	1125A	500KW	24V-1000V	2000×1200×2200
	ANEVT1000-1000C(F)	1000A	500kW	1250A	625KW	24V-1000V	2000×1200×2200
	ANEVT1000-1200C(F)	1200A	600kW	1500A	750KW	24V-1000V	2000×1200×2200
	ANEVT1000-2000C(F)	2000A	1000kW	2500A	1300KW	24V-1000V	4000×1200×2200
	ANEVT1200-150C(F)	150A	60kW	225A	90kW	24V-1200V	1000×1000×2100
	ANEVT1200-200C(F)	200A	90kW	300A	135KW	24V-1200V	1000×1000×2100
	ANEVT1200-300C(F)	300A	120kW	375A	150KW	24V-1200V	1000×1000×2100
	ANEVT1200-500C(F)	500A	160kW	625A	200KW	24V-1200V	1500×1000×2100
1200V Series	ANEVT1200-600C(F)	600A	200kW	750A	250KW	24V-1200V	1500×1000×2100
	ANEVT1200-800C(F)	800A	300kW	1000A	375KW	24V-1200V	1500×1200×2200
	ANEVT1200-900C(F)	900A	400kW	1125A	500KW	24V-1200V	2000×1200×2200
	ANEVT1200-1000C(F)	1000A	500kW	1250A	625KW	24V-1200V	2000×1200×2200
	ANEVT1200-1200C(F)	1200A	600kW	1500A	750KW	24V-1200V	2000×1200×2200
	ANEVT1200-2000C(F)	2000A	1000kW	2500A	1300KW	24V-1200V	4000×1200×2200

Any changes to the above parameter specifications will not be notified separately.

Application

- Testing of electric vehicle motors and controllers.
- Tests of electric vehicle transmission systems and powertrain systems.
- Tests of special electric vehicle motors, controllers, electric vehicle transmission systems, and powertrain systems.
- Fuel battery test.
- New energy motor system test.
- Tests of vessel electric transmission and electric drive systems.
- Charger and charging station tests.

Battery packs charging and discharging tests.

- Capacitor and super capacitor charging and discharging tests.
- Energy storage system inverter test.
- UPS and EPS system tests.
- Hybrid power test.
- It has simulated batteries for alternative real battery power supply testing scenarios.
- Suitable for high power DC test power supply applications.

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Exceeding & Trustworthy

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



DC Power Supply

Product Introduction

The ANEVT DA(F) Series Bidirectional Dual-channel Bidirectional DC Power Supply is a dedicated test power supply developed for the new energy vehicle industry. It is a high-tech product integrating high-frequency PWM rectification technology, bidirectional DC conversion technology, and FPGA digital control technology. It has adaptive grid feedback capability and can meet the continuous energy feedback requirements in the full power range. It also offers seamless switching between forward and reverse outputs, enabling seamless connection of energy transfer. With dual-loop control technology, it achieves ultra-high control precision, rapid response to customer device applications, ensuring equipment test stability and data precision. It provides independent dual-channel outputs, each of which is controllable, offering a concise and reliable test scheme for different tests such as tests of motors, electronic controls, hybrids, etc.

Features

- It provides dual-channel outputs, with power freely allocated to each channel.
- Each channel has independent control and protection functions that do not interfere with each other.

- It is a battery simulation, bidirectional output multifunctional integrated machine.
- It provides the source load integral mode with adjustable parameters.
- It has high voltage, large current, and wide range output capabilities.
- It features adaptive grid feedback function for full power continuous energy feedback.
- It supports CV, CC, CP, CR working modes. Voltage 0.05%FS and current 0.1%FS.
- Response time≤3ms; forward and reverse switching time≤ 4ms.
- Power factor≥0.99, current harmonic distortion≤3%.
- It simulates 7 types of batteries such as lithium, nickel-hydrogen, lead-acid, etc.
- It has 1st, 2nd, and 3rd order battery simulation functions, supporting import and export of data in mat and csv data formats.
- It provides 900-step programming function with a minimum programming time of 1mS.
- It features independent air duct heat dissipation design. supporting long-term continuous operation of the equipment.
- It is equipped with standard CAN, RS232/RS485, LAN and other communication interfaces.
- It offers a three-in-one operation mode of buttons, knobs, and touch operation.

Speci	fications	
opeer	neutions	- 7

Product series	Product model	Single channel	Single channel rated power	Single channel peak current	Single channel peak power	Single channel voltage range	Dimension /mm (W×D×H)
	ANEVT800-300DA(F)	300A	90kW	450A	135KW	24V-800V	1500×1000×210
	ANEVT800-400DA(F)	400A	120kW	500A	150KW	24V-800V	1500×1000×210
	ANEVT800-500DA(F)	500A	160kW	625A	200KW	24V-800V	2000×1000×210
800V Series	ANEVT800-600DA(F)	600A	200kW	750A	250KW	24V-800V	2000×1000×210
	ANEVT800-800DA(F)	800A	300kW	1000A	375KW	24V-800V	2000×1200×220
	ANEVT800-900DA(F)	900A	400kW	1125A	500KW	24V-800v	2500×1200×220
	ANEVT800-1000DA(F)	1000A	500kW	1250A	625KW	24V-800v	2500×1200×220
	ANEVT800-1200DA(F)	1200A	600kW	1500A	750KW	24V-800V	2500×1200×220
	ANEVT1000-200DA(F)	200A	90kW	300A	135KW	24V-1000V	1500×1000×210
	ANEVT1000-300DA(F)	300A	120kW	375A	150KW	24V-1000V	1500×1000×210
	ANEVT1000-500DA(F)	500A	160kW	625A	200KW	24V-1000V	2000×1000×210
	ANEVT1000-600DA(F)	600A	200kW	750A	250KW	24V-1000V	2000×1000×210
1000V Series	ANEVT1000-800DA(F)	800A	300kW	1000A	375KW	150KW 24V-1000V 200KW 24V-1000V 250KW 24V-1000V 375KW 24V-1000V 500KW 24V-1000V	2000×1200×220
	ANEVT1000-900DA(F)	900A	400kW	1125A	500KW		2500×1200×220
	ANEVT1000-1000DA(F)	1000A	500kW	1250A	625KW	24V-1000V	2500×1200×220
	ANEVT1000-1200DA(F)	1200A	600kW	1500A	750KW	24V-1000V	2500×1200×220
	ANEVT1200-200DA(F)	200A	90kW	300A	135KW	24V-1200V	1500×1000×210
	ANEVT1200-300DA(F)	300A	120kW	375A	150KW	24V-1200V	1500×1000×210
1200V Series	ANEVT1200-500DA(F)	500A	160kW	625A	200KW	24V-1200V	2000×1000×210
	ANEVT1200-600DA(F)	600A	200kW	750A	250KW	24V-1200V	2000×1000×210
	ANEVT1200-800DA(F)	800A	300kW	1000A	375KW	24V-1200V	2000×1200×220
	ANEVT1200-900DA(F)	900A	400kW	1125A	500KW	24V-1200V	2500×1200×220
	ANEVT1200-1000DA(F)	DA(F) 1000A 500kW 1250A 625kW DA(F) 1200A 600kW 1500A 750kW DA(F) 1200A 90kW 300A 135kW DA(F) 200A 90kW 300A 135kW DA(F) 300A 120kW 375A 150kW DA(F) 500A 160kW 625A 200kW DA(F) 600A 200kW 750A 250kW DA(F) 600A 300kW 1000A 375kW DA(F) 800A 300kW 1000A 375kW DA(F) 900A 400kW 1125A 500kW DA(F) 1000A 500kW 1250A 625kW	625KW	24V-1200V	2500×1200×220		
	ANEVT1200-1200DA(F)	1200A	600kW	1500A	750KW	24V-1200V	2500×1200×220
	Remarks	Two channel	s can freely allocate	power within the over	all power range of th	e whole unit.	

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

Specifications

Exceeding & Trustworthy





Product Introduction

The ANEVS(F) Series Battery Simulator has both battery simulation and photovoltaic simulation functions. It can simulate the charging and discharging characteristics of power lithium batteries, meeting the test requirements of new energy vehicle motors, electric drive systems, whole vehicle systems, energy storage inverters, and other devices or systems. It can also simulate the characteristics of photovoltaic cell panels, meeting the test requirements of photovoltaic inverters and photovoltaic energy storage inverter integrated machines.

It adopts high-frequency PWM rectification technology, bidirectional DC conversion technology, and FPGA digital control technology. It features bidirectional energy flow, seamless switching between forward and reverse directions, and adaptive grid capabilities. It also has programmable protection parameter settings and output parameter limit settings, ensuring better safety for the device under test.

Features

It is a photovoltaic simulation and battery simulation integrated machine. It supports CV, CC, CP and CR working modes.

P	roduct name		Dual-channel Bidirectional DC Power Supply				
	Input	method	Three-phase four-wire+PE				
Input	Input	voltage	Line voltage: 380V±15%				
co-considerative	Input f	requency	50/60Hz±5Hz				
Product feature Contput programming a Product feature Emergency stop It Battery simulation It It Output ramp-up function It Self-discharge function It Voltage drop compensation It feature Display and operation Display resolution Voltage Display and operation Display resolution Voltage Communication interface Serial interface Communication interface CAN interface Ethernet It	0.99						
	Current	put power factor 0.99 urrent harmonics 3% (under rated conditions) /oltage accuracy 0.05%F,S Durrent accuracy 0.1%F,S Power accuracy 0.2%F,S Power effect 0.1%F,S Load effect 0.1%F,S Ripple (Vpp) 0.2%F,S steint recovery time ≤3ms (10%-90% rated resistive load switching) Current rise time ≤3ms (loading test after starting output) eedback voltage 323-437V edback frequency Grid frequency (45Hz-65Hz) Power factor ≥0.99 al harmonic content ≤3% (tested under conditions of standard AC power input with distortion within 1.5%) wward and reverse ≤4ms put switching time ≤4ms eedback function Full power continuous energy feedback Working mode CV, CC, CP, and CR utput programming It provides programmable output voltage waveform, including voltage and current slope, step, cyclic and jump control: 900-step programming function, with the minimum programming time of 1ms Emergency stop With emergency stop button, it can quickly disconnect the connection with the load equipmen					
	Voltage	accuracy	0.05%F.S				
	Current	t accuracy	0.1%F.S				
	Power	accuracy	0.2%F.S				
Output	Powe	er effect	0.1%F.S				
parameter	Loa	d effect	0.1%F.S				
	Ripp	le (Vpp)	0.2%F.S				
	Transient	recovery time	≤3ms (10%-90% rated resistive load switching)				
	Curren	t rise time	≤3ms (loading test after starting output)				
	Feedba	ck voltage	323-437V				
	Feedbac	k frequency	Grid frequency (45Hz-65Hz)				
Feedback	Powe	er factor	≥0.99				
1.220222311	Total harm	nonic content	≤3% (tested under conditions of standard AC power input with distortion within 1.5%)				
parameter _	Forward and reverse						
	output switching time		≤4ms				
1	Feedback function		Full power continuous energy feedback				
	Working mode		CV, CC, CP, and CR				
-			It provides programmable output voltage waveform, including voltage and current slope, step, cyclic control,				
	Output programming		and jump control; 900-step programming function, with the minimum programming time of 1ms.				
	Emergency stop						
	Battery simulation						
			lithium titanium oxide, lithium cobalt oxide, lithium iron phosphate, lead-acid, and nickel-metal hydride bat				
feature							
-	Output ramp-up function		Programmable output voltage ramp-up				
-			It has a built-in discharge unit, which automatically discharges upon shutdown.				
-	Con cloon	argo lanoton	It has a utility a solution devices, input protection devices, OCP, OVP, OPP, OTP,				
	Protecti	on function	it has multiple protection devices, input protection devices, OCP, OVP, OVP, OVP, OVP, OVP, OVP, OVP, OV				
-	Voltage drog	compensation	It features automatic voltage drop compensation terminals, automatically compensating for cable voltage drop				
	vonage drop	The second second	0.001V				
	Display		0.001A				
Display and	resolution		0.001kW				
operation _	Dienk		LCD				
-		-					
			Number key, knob and touch screen three-in-one				
Communication _	100000000000		Standard RS232/RS485 (select one)				
interface			Supports CAN2.0 protocol (AORB). Communication data update frequency ≥50Hz				
	S 25 807 93		Supports Ethernet communication (standard)				
P	- Charles and		Supports external analog emergency stop switch quantity input control				
Safety -	1001100-0000000000000000000000000000000		≥2MΩ (tested at 1,000V insulation voltage)				
performance		sive strength	2,000VDC 5mA/min				
	Contraction of the second second	g resistance	≤100mΩ				
Working		mperature and	0°C-40°C				
environment		g humidity	20-90%RH (no condensation)				
onvironment		ude and	≤2000m				
		emperature	-10℃-70℃				
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Noise		≤75dB				
	Cooling method		Temperature-controlled air cooling. It has a built-in temperature-controlled variable speed fan.				
	Protection level		IP21				

Any changes to the above parameter specifications will not be notified separately.



- Voltage 0.05%FS and current 0.1%FS.
- Response time≤3ms; switching time≤4ms.
- Power factor≥0.99, current harmonic distortion≤3%.
- It supports simulation of 7 types of batteries including ternary lithium, lithium iron phosphate, lithium titanium oxide, lithium cobalt oxide, lithium manganese oxide, nickel-metal hydride, and lead-acid batteries.
- It supports custom battery modes, with 1st, 2nd, and 3rd order battery models and internal resistance models, and allows for import and export of data in CSV and mat formats.
- It features photovoltaic characteristic V curve simulation function, supporting various types of solar battery panels and realistic simulation under different environmental conditions, with built-in standard curves such as Sandia and EN50530. It supports static and dynamic photovoltaic simulation.
- It provides 900-step programming function with a minimum programming time of 1ms.
- It supports standard CAN, RS232/RS485, LAN and other communication interfaces.

Exceeding & Trustworthy

#### Application

- Testing of electric vehicle motors and controllers.
- Tests of electric vehicle transmission systems and powertrain systems.
- Tests of special electric vehicle motors, controllers, electric vehicle transmission systems, and powertrain systems. New energy motor system test.
- Tests of vessel electric transmission and electric drive systems.
- Charger and charging pile tests.
- Capacitor and super capacitor charging and discharging tests.
- Energy storage system inverter test. UPS and EPS system tests.
- Hybrid power test.
- Suitable for high power DC test power supply applications. Battery pack charging and discharging tests.
- It has simulated batteries for alternative real battery power supply testing scenarios.









#### Output VI characteristic curve

It features advanced IGBT parallel connection technology, delivering higher peak power and peak current output, as demonstrated by ANEVS1000-600C(F) and ANEVS1000-600C(F).



#### Fast dynamic response characteristics





pecifications
---------------

Product series	Product model	Rated current	Rated power	Peak current	Peak power	Voltage range	Dimension /mm (W×D×H)
	ANEVS800-200C(F)	200A	60KW	300A	90KW	24V-800V	/mm           (W×D×H)           1000×1000×21           1000×1000×21           1000×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1000×1000×21           1000×1000×21           1000×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1000×1000×21           1500×1000×21           1000×1000×21           1000×1000×21           1000×1000×21           1000×1000×21           1000×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21           1500×1000×21
	ANEVS800-300C(F)	300A	90KW	450A	135KW	24V-800V	1000×1000×210
	ANEVS800-400C(F)	400A	120KW	500A	150KW	24V-800V	1000×1000×210
	ANEVS800-500C(F)	500A	160KW	600A	200KW	24V-800V	1500×1000×210
800V Series	ANEVS800-600C(F)	600A	200KW	750A	250KW	24V-800V	1500×1000×210
	ANEVS800-800C(F)	800A	300KW	1000A	375KW	24V-800V	1500×1200×220
	ANEVS800-900C(F)	900A	400KW	1125A	500KW	24V-800V	2000×1200×220
	ANEVS800-1000C(F)	1000A	500KW	1250A	625KW	24V-800V	2000×1200×220
	ANEVS800-1200C(F)	1200A	600KW	1500A	750KW	24V-800V	2000×1200×220
	ANEVS800-2000C(F)	2000A	1000KW	2500A	1250KW	24V-800V	4000×1200×220
	ANEVS1000-150C(F)	150A	60KW	225A	90KW	24V-1000V	1000×1000×210
	ANEVS1000-200C(F)	200A	90KW	300A	135KW	24V-1000V	1000×1000×210
	ANEVS1000-300C(F)	300A	120KW	375A	150KW	24V-1000V	1000×1000×210
	ANEVS1000-500C(F)	500A	160KW	625A	200KW	24V-1000V	1500×1000×210
1000V Series	ANEVS1000-600C(F)	600A	200KW	750A	250KW	24V-1000V	1500×1000×210
	ANEVS1000-800C(F)	800A	300KW	1000A	375KW	24V-1000V	1500×1200×220
	ANEVS1000-900C(F)	900A	400KW	1125A	500KW	24V-1000V	2000×1200×220
	ANEVS1000-1000C(F)	1000A	500KW	1250A	625KW	24V-1000V	2000×1200×220
	ANEVS1000-1200C(F)	1200A	600KW	1500A	750KW	24V-1000V	2000×1200×220
	ANEVS1000-2000C(F)	2000A	1000KW	2500A	1250KW	24V-1000V	4000×1200×220
	ANEVS1200-150C(F)	150A	60KW	225A	90KW	24V-1200V	1000×1000×210
	ANEVS1200-200C(F)	200A	90KW	300A	135KW	24V-1200V	1000×1000×210
	ANEVS1200-300C(F)	300A	120KW	375A	150KW	24V-1200V	1000×1000×210
	ANEVS1200-500C(F)	500A	160KW	625A	200KW	24V-1200V	1500×1000×210
1200V Series	ANEVS1200-600C(F)	600A	200KW	750A	250KW	24V-1200V	1500×1000×210
	ANEVS1200-800C(F)	800A	300KW	1000A	375KW	24V-1200V	1500×1200×220
	ANEVS1200-900C(F)	900A	400KW	1125A	500KW	24V-1200V	2000×1200×220
	ANEVS1200-1000C(F)	1000A	500KW	1250A	625KW	24V-1200V	2000×1200×220
	ANEVS1200-1200C(F)	1200A	600KW	1500A	750KW	24V-1200V	2000×1200×220
	ANEVS1200-2000C(F)	2000A	1000KW	2500A	1250KW	24V-1200V	4000×1200×220
	ANEVS1500-160C(F)	160A	90KW	240A	135KW	48V-1500V	1200×1200×210
	ANEVS1500-300C(F)	300A	200KW	375A	250KW	48V-1500V	2000×1000×210
1500V Series	ANEVS1500-500C(F)	500A	300KW	625A	375KW	48V-1500V	3000×1000×210
Toody Genes	ANEVS1500-600C(F)	600A	400KW	750A	500KW	48V-1500V	3000×1000×210
	ANEVS1500-800C(F)	800A	600KW	1000A	750KW	48V-1500V	3000×1200×220
	ANEVS1500-1000C(F)	1000A	1000KW	1250A	1250KW	48V-1500V	4000×1200×220
	ANEVS2000-160C(F)	160A	90KW	240A	135KW	48V-2000V	1200×1200×210
	ANEVS2000-200C(F)	200A	200KW	250A	250KW	48V-2000V	2000×1000×210
2000V Series	ANEVS2000-500C(F)	500A	300KW	625A	375KW	48V-2000V	3000×1000×210
20001 001108	ANEVS2000-600C(F)	600A	400KW	750A	500KW	48V-2000V	3000×1000×210
	ANEVS2000-800C(F)	800A	600KW	1000A	750KW	48V-2000V	3000×1200×220
	ANEVS2000-1000C(F)	1000A	1000KW	1250A	1250KW	48V-2000V	4000×1200×220

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

DC Power Supply

Exceeding & Trustworthy

#### **Dual-channel Battery Simulator** ANEVS DA(F) Series



#### Product Introduction

The ANEVS DA(F) Series Battery Simulator has both battery simulation and photovoltaic simulation functions. It can simulate the charging and discharging characteristics of power lithium batteries, meeting the test requirements of new energy vehicle motors, electric drive systems, whole vehicle systems, energy storage inverters, and other devices or systems. It can also simulate the characteristics of photovoltaic cell panels, meeting the test requirements of photovoltaic inverters and photovoltaic energy storage inverter integrated machines.

It adopts high-frequency PWM rectification technology, bidirectional DC conversion technology, and FPGA digital control technology. It features bidirectional energy flow, seamless switching between forward and reverse directions, and adaptive grid capabilities. It also has programmable protection parameter settings and output parameter limit settings, ensuring better safety for the device under test.

#### Features

- It provides dual-channel outputs, with power freely allocated to each channel.
- Each channel has independent control and protection functions that do not interfere with each other.

Ð	roduct name		Battery simulator					
	And the second sec	method	Three-phase four-wire+PE					
		voltage	Line voltage: 380V±15%					
Input	Input frequency		50/60Hz+5Hz					
Feedback		wer factor	0.99					
		ric harmony	3% (under rated conditions)					
	and a second second		0.05%F.S					
-	Voltage accuracy Current accuracy		0.1%ES					
		accuracy	0.2%ES					
Output		r effect	0.1%F.S					
parameter -	101/2000	effect	0.1%F.S					
-		e (Vpp)	0.1%F.S					
-		ecovery time						
		rise time	≤3ms (10%-90% rated resistive load switching)					
	1955 000		≤3ms (loading test after starting output)					
Feedback voltage Feedback frequency Power factor		-	323-437V					
			Grid frequency (45Hz-65Hz)					
Feedback			≥0.99					
parameter		onic content	≤3% (tested under conditions of standard AC power input with distortion within 1.5%)					
		and reverse switching	≤4ms					
-		k function	Full power continuous energy feedback					
	Workin	ig mode	CV, CC, CP and CR					
Ē	Output programming		It allows programmable output voltage waveforms, including voltage and current slopes,					
			steps, cyclic control, and jump control.					
	Emerge	ency stop	With emergency stop button, it can quickly disconnect the connection with the load equipment					
	<u> </u>		It can simulate models of 7 types of batteries including ternary lithium, lithium manganese oxide,					
			lithium titanium oxide, lithium cobalt oxide, lithium iron phosphate, lead-acid, and nickel-metal hydride.					
	Battery simulation		It has customizable battery cell capacity, series and parallel connection quantities, SOC,					
			and temperature parameters with 1st, 2nd, and 3rd order battery models and internal resistance models,					
-			supporting import and export of data in mat and CSV data formats.					
Product			It can set parameters such as VOC, ISC, VMP, IMP, FF, etc.,					
feature	Photovolta	ic simulation	with built-in standard curves such as Sandia and EN50530.					
			It supports static and dynamic photovoltaic curves, as well as settings for temperature,					
	2.00		shading, and other environmental parameters.					
_		p-up function	Programmable output voltage ramp-up					
	Self-discha	irge function	It has a built-in discharge unit, which automatically discharges upon shutdown.					
			It has input undervoltage protection, input overcurrent protection, input phase loss protection,					
	Protectic	on function	output overcurrent protection, output short-circuit protection, bus overvoltage protection,					
	1 lotoolit	interiori	internal overheating protection, programmable OVP LVP OCP LVP OPP protection parameter values,					
			and enable protection functions.					
	Line drop o	ompensation	It features automatic voltage drop compensation terminals, automatically compensating for cable voltage drop					
	Display	Voltage	0.001V					
Display and		Current	0.001A					
	resolution	Power	0.001kW					
operation	Displa	y mode	LCD					
		on mode	Number key, knob and touch screen three-in-one					
	1000000000	nterface	Standard RS232/RS485 (select one)					
ommunication	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	nterface	Supports CAN2.0 protocol. Communication data update frequency ≥50Hz					
interface		ernet	Supports the Ethernet communications					
And	alog interface	Sinci	Supports external analog emergency stop switch quantity input control					
Alla		resistance						
		ive strength	≥2MΩ (tested at 1,000V insulation voltage) 2,000VDC 5mA/min					
Safety -		talata -						
erformance -		resistance	≤100mΩ					
working	and the second second second second	emperature	0C-40C					
environment		humidity	20-90%RH (no condensation)					
		tude	≤2,000m					
	Storage t	emperature	-10 C-70 C					
	Noise		≤75dB					
	oling method		Temperature-controlled air cooling. It has a built-in temperature-controlled variable speed fan.					

Any changes to the above parameter specifications will not be notified separately.

- It is a multifunctional integrated machine for photovoltaic simulation, battery simulation, and bidirectional output.
- It provides the source load integral mode with adjustable parameters.
- It has high voltage, large current, and wide range output capabilities.
- It features adaptive grid feedback function for full power continuous energy feedback.
- It supports CV, CC, CP, CR working modes.
- Voltage 0.05%FS and current 0.1%FS.
- Response time≤3ms; forward and reverse switching time≤ 4ms.
- Power factor≥0.99, current harmonic distortion≤3%.
- It simulates 7 types of batteries such as lithium, nickel-hydrogen, lead-acid, etc.
- It has 1st, 2nd, and 3rd order battery simulation functions, supporting import and export of data in mat and csv data formats.
- It provides 900-step programming function with a minimum programming time of 1ms.
- It features independent air duct heat dissipation design, supporting long-term continuous operation of the equipment.
- It is equipped with standard CAN, RS232/RS485, LAN and other communication interfaces.
- It offers a three-in-one operation mode of buttons, knobs, and touch operation.

Exceeding & Trustworthy

Specifications

P	roduct name		Dual-channel Battery Simulator				
	and the second	method	Three-phase four-wire+PE				
270002	Input	voltage	Line voltage: 380V±15%				
Input		requency	50/60Hz+5Hz				
parameter		wer factor	0.99				
		tric harmony	3% (under rated conditions)				
		accuracy	0.05%F.S				
-		accuracy	0.1%FS				
100		accuracy	0.2%F.S				
Output		er effect	0.1%F.S				
parameter		l effect	0.1%FS				
-		e (Vpp)	0.2%FS				
		ecovery time	≤3ms (10%-90% rated resistive load switching)				
	Current rise time Feedback voltage		≤3ms (loading test after starting output)				
-			323-437V				
-		k frequency	Grid frequency (45Hz-65Hz)				
Feedback	1, 27, 10, 2	r factor	≥0.99				
parameter		onic content	≤3% (tested under conditions of standard AC power input with distortion within 1.5%)				
10		and reverse	≤4ms				
	output switching						
		ck function	Full power continuous energy feedback				
	Working mode		CV, CC, CP and CR				
	Output programming		It allows programmable output voltage waveforms, including voltage				
			and current slopes, steps, cyclic control, and jump control.				
	Emergency stop		With emergency stop button, it can quickly disconnect the connection with the load equipment				
	Battery simulation		It can simulate models of 7 types of batteries including ternary lithium, lithium manganese oxide				
			lithium titanium oxide, lithium cobalt oxide, lithium iron phosphate, lead-acid, and nickel-metal hydride.				
			It has customizable battery cell capacity, series and parallel connection quantities, SOC,				
			and temperature parameters with 1st, 2nd, and 3rd order battery models and internal resistance models,				
			supporting import and export of data in mat and CSV data formats.				
			It can set parameters such as VOC, ISC, VMP, IMP, FF, etc., with built-in standard curves such as				
Product	Photovoltaic simulation		Sandia and EN50530. It supports static and dynamic photovoltaic curves, as well as				
feature	THOROTONIA	ie ennandren	· · · ·				
	Output rome up function		settings for temperature, shading, and other environmental parameters. Programmable output voltage ramp-up				
	Output ramp-up function Self-discharge function		It has a built-in discharge unit, which automatically discharges upon shutdown.				
-	Sell-discha	arge runcuon					
			It has input undervoltage protection, input overcurrent protection, input phase loss protection,				
	Protectio	on function	output overcurrent protection, output short-circuit protection,				
			bus overvoltage protection, internal overheating protection, programmable OVP LVP OCP LVP OPP				
_			protection parameter values, and enable protection functions.				
	Line drop c	ompensation	It features automatic voltage drop compensation terminals, automatically compensating for cable voltage drop				
	Display	Voltage	0.001V				
Display and	resolution	Current	0.001A				
operation	-6.5.23(0):126.58()	Power	0.001kW				
		ay mode	LCD				
	Operati	ion mode	Number key, knob and touch screen three-in-one				
ommunication	Serial	interface	Standard RS232/RS485 (select one)				
interface	CAN i	nterface	Supports CAN2.0 protocol. Communication data update frequency ≥50Hz				
interface	Eth	ernet	Supports the Ethernet communications				
A	nalog interface		Supports external analog emergency stop switch quantity input control				
	Insulation	resistance	≥2MΩ (tested at 1,000V insulation voltage)				
Safahi	Compress	sive strength	2,000VDC 5mA/min				
Safety	- 2 6 7 FOX FOX FOX FOX FOX	g resistance	≤100mΩ				
performance		emperature	0C-40C				
working		a humidity	20-90%RH (no condensation)				
environment		itude	<2,000m				
		emperature	-10C-70°C				
	Noise	ampointuite	≤75dB				
			Temperature-controlled air cooling. It has a built-in temperature-controlled variable speed fan.				
-	ooling method						

Product series	Product model	Single channel	Single charinel	Single channel peak current	Single channel peak power	Single channel voltage range	Dimension /mm (W×D×H)
	ANEVS800-300DA(F)	300A	90KW	450A	135KW	24V-800V	1500×1000×210
	ANEVS800-400DA(F)	400A	120KW	500A	150KW	24V-800V	1500×1000×210
	Product model         rated current         rated current         rated power         peak current         peak power           ANEVS800-300DA(F)         300A         90KW         450A         135H           ANEVS800-400DA(F)         400A         120KW         500A         150H           ANEVS800-600DA(F)         600A         200KW         750A         250H           ANEVS800-600DA(F)         600A         200KW         750A         250H           ANEVS800-600DA(F)         600A         300KW         1000A         375H           ANEVS800-900DA(F)         800A         300KW         1125A         500H           ANEVS800-1000DA(F)         900A         400KW         1125A         500H           ANEVS800-1000DA(F)         1000A         500KW         1250A         625H           ANEVS800-1000DA(F)         1200A         600KW         135H         625H           ANEVS1000-200DA(F)         200A         90KW         300A         135H           ANEVS1000-200DA(F)         200A         90KW         300A         135H           ANEVS1000-300DA(F)         500A         160KW         625A         200H           ANEVS1000-300DA(F)         600A         300KW         100A	200KW	24V-800V	2000×1000×210			
	ANEVS800-600DA(F)	rated current         rated power         peak current         peak power         voltage range           00DA(F)         300A         90KW         450A         135KW         24V-800V           00DA(F)         400A         120kW         500A         160kW         24V-800V           00DA(F)         400A         120kW         500A         150kW         24V-800V           00DA(F)         500A         160kW         625A         200kW         24V-800V           00DA(F)         600A         200kW         1750A         250kW         24V-800V           00DA(F)         600A         300kW         1000A         375kW         24V-800V           00DA(F)         900A         400KW         1125A         500KW         24V-800V           00DA(F)         1000A         500KW         1250A         625KW         24V-800V           00DA(F)         1000A         600KW         1500A         750KW         24V-800V           200DA(F)         1200A         600KW         150A         750KW         24V-100V           200DA(F)         300A         120kW         375A         160kW         24V-100V           300DA(F)         600A         200kW         1125A	2000×1000×210				
800V Series	ANEVS800-800DA(F)	800A	300KW	1000A	375KW	voltage range           24V-800V           24V-1000V           24V-1200V           24V-1200V           24V-1200V           24V-1200V           24V-1200V           24V-1200V           24V-1200V           24V-1200V           24V-1200V           24V-1200V	2000×1200×210
	ANEVS800-900DA(F)	900A	400KW	1125A	500KW	24V-800V	2500×1200×2200
	ANEVS800-1000DA(F)	1000A	500KW	1250A	625KW	24V-800V	2500×1200×2200
	ANEVS800-1200DA(F)	1200A	600KW	1500A	750KW	24V-800V	2500×1200×2200
	ANEVS1000-200DA(F)	200A	90KW	300A	135KW	24V-1000V	1500×1000×2100
000V Series	ANEVS1000-300DA(F)	300A	120KW	375A	150KW	24V-1000V	1500×1000×2100
	ANEVS1000-500DA(F)	500A	160KW	625A	200KW	24V-1000V	2000×1000×2100
	ANEVS1000-600DA(F)	600A	200KW	750A	250KW	24V-1000V	2000×1000×210
1000V Series	ANEVS1000-800DA(F)	800A	300KW	1000A	375KW	24V-1000V	2000×1200×210
	ANEVS1000-900DA(F)	900A	400KW	1125A	500KW	24V-1000V	2500×1200×220
	ANEVS1000-1000DA(F)	1000A	500KW	1250A	625KW	24V-1000V	2500×1200×2200
	ANEVS1000-1200DA(F)	1200A	600KW	1500A	750KW	24V-1000V	2500×1200×2200
	ANEVS1200-200DA(F)	200A	90KW	300A	135KW	24V-1200V	1500×1000×2100
	ANEVS1200-300DA(F)	300A	120KW	375A	150KW	24V-1200V	1500×1000×2100
	ANEVS1200-500DA(F)	500A	160KW	625A	200KW	24V-1200V	2000×1000×2100
	ANEVS1200-600DA(F)	600A	200KW	750A	250KW	24V-1200V	2000×1000×2100
1200V Series	ANEVS1200-800DA(F)	800A	300KW	1000A	375KW	24V-1200V	2000×1200×210
	ANEVS1200-900DA(F)	900A	400KW	1125A	500KW	24V-1200V	2500×1200×2200
	ANEVS1200-1000DA(F)	1000A	500KW	1250A	625KW	24V-1200V	2500×1200×2200
	ANEVS1200-1200DA(F)	1200A	600KW	1500A	750KW	24V-1200V	2500×1200×2200
	Remarks	Two channel	s can freely allocate	power within the over	all power range of th	e whole unit.	

Any changes to the above parameter specifications will not be notified separately.

DC Power Supply

Any changes to the above parameter specifications will not be notified separately.

## Multi-channel High Precision Power Analyzer ANPA4000(F)



Multi-channel High Precision Power Analyzer ANPA4000(F)



Multi-channel High Precision Power Analyzer AN87660(F)





Single Phase Power Analyzer AN87310(F)



8-channel synchronous power analysis

Accuracy:0.03% x display + 0.05% x range)

Sampling rate: 2MS/s

Maximum voltage 1000V (DC1500V)

Rich specifications: 30A (standard)/5A, standard BNC interface, optional sensor

Motor measurement: optional motor measurement channel

LCD display: full touch screen experience, custom display interface entries, multiple wave displays Data storage: custom data storage items, CSV format export, local storage/screenshot saving

Perfect size Standard 4U height, suitable for integration

Di	splay	interface	//
1000	and address of	A CONTRACTOR OF A CONTRACTOR	



9.853) 6.8530 5.8530 6.8530 0.0000-+ 0.0000-+ 0.0000-+ 31009 13880 0.000× 6,000m 44 0.0009 HS ICODE 0.10004 0.0000 E 2300% 1.0088-0.003 0.0000 0.1000 1.1330 0.0030 1.1000 0.0000 0.000 0 1000 0.0000

List display

0.000

0



Waveform Display Trend Graph

Waveform Display Vector Graph

#### Ainuo Power Analyzer



Split screen display

Exceeding & Trustworthy

#### Application

- Motor frame, variable frequency motor power consumption and mechanical efficiency test
- Measurement of electrical performance of electric vehicles, OBC, charging stations
- Renewable energy power, efficiency, and harmonic analysis
- Switching power supply power/harmonic/inrush current analysis.
- Harmonic analysis of power electronics and transformers



#### Channel configuration

Wiring	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6	Channel 7	Channel 8
Single-phase photovoltaic inverter	1P2W DC	1P2W AC	1P2W DC	1P2W AC	1P2W	1P2W	1P2W	1P2W
Three-phase photovoltaic inverter	3	P3W/3V3A/3P4V AC	N	1P2W DC	3	P3W/3V3A/3P4V AC	3W/3V3A/3P4W AC	
Electric vehicle	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W
Inverter	3	P3W/3V3A/3P4V	N	1P2W	1P2W	1P2W	Torque	/speed
UPS	1P2W Mains input	1P2W Battery		P3W/3V3A/3P4V Three-phase inpu	-		P3W/3V3A/3P4V Three-phase inpu	

The above specifications are subject to change without prior notice.

#### Application





#### Photovoltaic inverter power measurement

- Comply with GB/T 18488-2024 Drive Motor System for Electric Vehicles
- Up to 4 motors can be measured simultaneously, supporting 500th harmonic and distortion analysis
- Pulse signal and analog signal speed/torque sensors (optional)
- Torque, speed, mechanical power, efficiency, electric phase angle measurement (optional)

#### Electric vehicle electrical performance measurement

- Up to 8 channels can be measured simultaneously, and multiple parameters can be detected: OBC, charging stations efficiency test, battery charging/discharging performance, power supply conversion performance, motor performance, etc.
- Support high voltage/current measurement, maximum voltage 1000V (DC1500V), maximum current 30A, expandable for larger current sensors
- Accuracy: 0.03% x display + 0.05% x range, power resolution 0.1mW
- Measure signal ripple ratio, three-phase imbalance ratio, power factor, fundamental reactive power etc.



#### Power supply/UPS power measurement/

- Current: 0~30A/5A.
- Power bandwidth DC, 0.5Hz~1MHz
- Simultaneous measuring input/output (single-phase, three-phase) power, monitoring battery charge/discharge.
- Automatic efficiency calculation

#### Specifications

Model		ANPA4000(F)		
Current specifications	30A (optional 50A 5A)			
Wiring method	1P3W (single-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: About 10MΩ Direct input of current: 30A: About 10mΩ 5A: About 100mΩ Current sensor input: About 1MΩ			
Sampling rate	2MS/s			
Full scale crest factor		3 or 6		
Rated voltage range(Direct input)	15/30/60/100/150/300/600/1000*[V] (peak factor 3) 7.5/15/30/50/75/150/300/500*[V] (peak factor 6) *The crest factor of 1000V full scale is 1.5			
Rated current range(Direct input)	30A: 1/2/5/10/20/30*[A](peak factor 3) 5A: 100m/200m/500m/1/2/5*[A](peak factor 3) 30A: 500m/1/2.5/5/10/15*[A](peak factor 6) 5A: 50m/100m/250m/0.5/1/2.5*[A](peak factor 6)			
Rated current range(Sensor input)	200m/500m/1/2/5/10 [V] (peak factor 3) 100m/250m/500m/1/2.5/5 [V] (peak factor 6)			
Voltage/Current Precision scope	(1%~110%) × range			
Power factor Range		±(0.0001-1.0000)		
Voltage measurement accuracy	DC 0.5Hz≤f<45Hz 45Hz≤f≤66Hz 66Hz <f≤1khz 1kHz<f≤50khz 50kHz<f≤100khz 100kHz<f≤500khz 500kH<f≤11mhz< td=""><td>$\begin{array}{l} \pm (0.05\% \times display + 0.05\% \times range) \\ \pm (0.03\% \times display + 0.05\% \times range) \\ \pm (0.03\% \times display + 0.05\% \times range) \\ \pm (0.1\% \times display + 0.1\% \times range) \\ \pm (0.3\% \times display + 0.1\% \times range) \\ \pm (0.6\% \times display + 0.2\% \times range) \\ \pm [(0.006 \times f)\% \times display + 0.5\% \times range] \\ \pm [(0.022 \times f - 8)\% \times display + 1\% \times range] \end{array}$</td></f≤11mhz<></f≤500khz </f≤100khz </f≤50khz </f≤1khz 	$\begin{array}{l} \pm (0.05\% \times display + 0.05\% \times range) \\ \pm (0.03\% \times display + 0.05\% \times range) \\ \pm (0.03\% \times display + 0.05\% \times range) \\ \pm (0.1\% \times display + 0.1\% \times range) \\ \pm (0.3\% \times display + 0.1\% \times range) \\ \pm (0.6\% \times display + 0.2\% \times range) \\ \pm [(0.006 \times f)\% \times display + 0.5\% \times range] \\ \pm [(0.022 \times f - 8)\% \times display + 1\% \times range] \end{array}$		
Current precision	DC 0.5Hz≤f<45Hz 45Hz≤f≤66Hz 66Hz <f≤1khz 1kHz<f≤50khz 50kHz<f≤100khz 100kHz<f≤500khz 500kHz<f≤500khz< td=""><td>$\begin{array}{l} \pm (0.05\% \times \text{display} + 0.05\% \times \text{range}) \\ \pm [(0.03\% \times \text{display} + 0.05\% \times \text{range}) + (2\mu\text{A}^*)] \\ \pm [(0.03\% \times \text{display} + 0.05\% \times \text{range}) + (2\mu\text{A}^*)] \\ \pm (0.1\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.3\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.6\% \times \text{display} + 0.2\% \times \text{range}) \\ \pm [(0.006 \times f)\% \times \text{display} + 0.5\% \times \text{range}] \\ \pm [(0.022 \times f - 8)\% \times \text{display} + 1\% \times \text{range}] \end{array}$</td></f≤500khz<></f≤500khz </f≤100khz </f≤50khz </f≤1khz 	$\begin{array}{l} \pm (0.05\% \times \text{display} + 0.05\% \times \text{range}) \\ \pm [(0.03\% \times \text{display} + 0.05\% \times \text{range}) + (2\mu\text{A}^*)] \\ \pm [(0.03\% \times \text{display} + 0.05\% \times \text{range}) + (2\mu\text{A}^*)] \\ \pm (0.1\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.3\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.6\% \times \text{display} + 0.2\% \times \text{range}) \\ \pm [(0.006 \times f)\% \times \text{display} + 0.5\% \times \text{range}] \\ \pm [(0.022 \times f - 8)\% \times \text{display} + 1\% \times \text{range}] \end{array}$		
Active power measurement accuracy	DC 0.5Hz≤f<45Hz 45Hz≤fs66Hz 66Hz <f≤1khz 1kHz<fs50khz 50kHz<fs500khz 100kHz<fs500khz 500kHz<fs500khz< td=""><td>$\begin{array}{l} \pm (0.05\% \times \text{display} + 0.05\% \times \text{range}) \\ \pm (0.08\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.05\% \times \text{display} + 0.05\% \times \text{range}) \\ \pm (0.2\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.3\% \times \text{display} + 0.2\% \times \text{range}) \\ \pm (0.7\% \times \text{display} + 0.3\% \times \text{range}) \\ \pm [(0.02 \times f)\% \times \text{display} + 1\% \times \text{range}] \\ \pm [(0.04 \times f)\% \times \text{display} + 3\% \times \text{range}] \end{array}$</td></fs500khz<></fs500khz </fs500khz </fs50khz </f≤1khz 	$\begin{array}{l} \pm (0.05\% \times \text{display} + 0.05\% \times \text{range}) \\ \pm (0.08\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.05\% \times \text{display} + 0.05\% \times \text{range}) \\ \pm (0.2\% \times \text{display} + 0.1\% \times \text{range}) \\ \pm (0.3\% \times \text{display} + 0.2\% \times \text{range}) \\ \pm (0.7\% \times \text{display} + 0.3\% \times \text{range}) \\ \pm [(0.02 \times f)\% \times \text{display} + 1\% \times \text{range}] \\ \pm [(0.04 \times f)\% \times \text{display} + 3\% \times \text{range}] \end{array}$		

Power Analyzer



#### Renewable energy measurement

- GB/T 37409-2019 Testing specifications for photovoltaic grid-connected inverter
- Comply with GB/T 34133-2023 Testing Code for Power Conversion System of Energy Storage System
- Support high voltage/current measurement, maximum voltage 1000V (DC1500V), maximum current 30A, expandable for larger current sensors
- Harmonic measurement and flicker measurement based on standard IEC
- Up to 500th harmonic and distortion analysis
- Simultaneous measurement of bidirectional power for buying and selling electricity

AINUO // Power Analyzer

Specifications

Model

Active power measurement accuracy

Active power resolution Frequency range

Frequency measurement accuracy

Harmonic measurement

Electric energy measurement range

Electric energy measurement accuracy

Power meter

Filter function

Voltage/current ratio

External input ratio

Data update cvcle

Control interface Protocol

Outline dimension

Size of the opening

Foot height

Machine weight

Power consumption of whole machine

ANPA4000(F) 0.02W-6.6kW/phase @ 220V, PF=0.01-1 (30A board card)

30A/50A: 1mW; 5A:0.1mW

DC, 0.5Hz -1MHz

±0.06% x display 110Hz ~ 2.6kHz, up to 500th harmonic content, total distortion

0-99999MWh (resolution: 1mWh/0.01mAh)

±0.2% * display

9999 hours 59 minutes 59 seconds

Frequency filtering is available in 500Hz, 10kHz, 100kHz, and 1MHz options.Line filtering 100~10kHz (step 100Hz), 50kHz, 100kHz optional

1 00~50000 00

0.10~100.00

10m / 20m / 50m / 100m / 200m / 500m / 1/ 2 / 5 / 10[s] Test cycle synchronization interface (compatible with trigger lock), standard: RS-232, LAN; Optional RS-485

MODBUS\TCP MODBUS\SCPI

426 (W) x 175 (H) x 462 (D) mm

426 (W) x 175 (H)

17.5 mm

About 20kg

66W

#### Multi-channel High Precision Power Analyzer AN87660(F) Series



Туре	Motor board					
Input Interface	Insulation BNC					
Input resistance	About 1MΩ					
	Single motor(speed: Pulse)					
	ChA(Torque)	Analog/pulse input				
	ChB(SpeedA)	Pulse phase-A (rotation speed)				
	ChC(SpeedB)	Pulse phase-B (steering)				
	ChD(SpeedZ)	Pulse phase-Z (electrical angle reference)				
	Single motor(speed: analog)					
	ChA(Torque)	Analog/pulse input				
Input channel	ChB()					
	ChC(Speed)	Analog/pulse input				
	ChD()					
	Dual-motor					
	ChA(Torque)	Analog/pulse input				
	ChB(Speed)	Pulse input				
	ChC(Torque)	Analog/pulse input				
	ChD(Speed)	Pulse input				
	Analog input					
	Rated range	1/2/5/10/20*[V]				
	Range	(1%~110%) * range				
	Maximum allowable input	22V				
	Sampling rate	About 200KS/s				
	measurement accuracy	±(0.05% * display + 0.05% * range)				
Input type	Pulse input					
	Rated range	10V				
	Amplitude range	±12Vpeak				
	Detection level - H	≥2V				
	Detection level - L	≤0.8V				
	Pulse width	≥500ns				
	Frequency range	$2 \text{ Hz} \sim 1 \text{ MHz}$				
	measurement accuracy	±(0.05% * display + 0.001Hz)				

The above specifications are subject to change without prior notice.

[Conditions]

Temperature: 23±5 C, humidity: 30%~75%RH, input wave: Sine wave, common-mode voltage: 0V, Line filter: OFF, Frequency filter: OFF, Power factor λ: 1, peak factor: 3. After preheating. After zeroing or changing the range in wiring state.

The f in the measurement accuracy formula is the frequency in kHz.

When the data update rate is 10ms, 20ms, 50ms, 100ms, all accuracies are increased by 0.03% x display.

Impact due to change to Temp. after resetting or changing the scale:

Plus 0.02% x scale/C for voltage DC accuracy, 500µA/C for current DC accuracy, 50µV/C for external sensor DC accuracy, product of voltage impact and current impact for power DC accuracy.

- Six-channel synchronous power analysis.
- Basic Accuracy: 0.05% of reading + 0.05% of range
- Measurement Bandwidth: DC, 0.5Hz~100kHz
- Sampling Rate: 200kSps
- Maximum Voltage: Standard 1000V (DC1500V)
- Maximum Current: 20A (standard) 50A/5A (optional), support for mixed configurations, optional sensors available
- LCD Display: Full touchscreen experience, customizable display interface, waveform display
- Data Storage: Customizable storage items, export in CSV format

#### Production Application

- Analysis of standby power consumption and power for single-phase/three-phase household and commercial appliances
- Analysis of power, efficiency, and harmonics for photovoltaic inverters
- Measurement of electrical performance for electric vehicles and charging piles
- Power and harmonics analysis for power electronics, transformers, and generators
- Power and harmonics analysis for variable frequency drives and variable frequency motors
- Analysis of power, harmonics, and surge current for switching power supplies
- Power analysis for lighting systems and LED lighting

Analyzer

	- 44	
-		
61		
60		

Perfect Size: Standard 3U height, meets system integration requirements

#### Features

- Multi-channel Configuration: Configurable with 1 to 6 channels for synchronous measurement units, adaptable for various load measurement needs such as single-phase,
- three-phase three by two, three-phase four by two. four-phase (DC + three-phase three), etc. (applicable to loads like air conditioners, inverters, variable frequency drives, motors).
- High Accuracy: Utilizes high-speed FPGA + ARM dual-core processing, 16-bit high-speed high-precision AD converter, achieving a basic accuracy of up to 0.1%, with a fastest data update cycle of 100ms.

Wide Power Range: Each channel can measure currents up to 50A (optional specifications include 20A, 5A, 1A, etc., supporting mixed configurations), with a minimum power resolution of 0.1mW, meeting requirements for standby power consumption measurement and rated power measurement.

Wide Bandwidth: Dual-use for AC and DC signals, with a power measurement bandwidth ranging from DC, 0.5Hz to 100kHz, suitable for measuring power of various standard and non-standard sinusoidal waveform loads.

- Multi-channel Harmonic Analysis: Capable of simultaneous harmonic analysis on six channels, measuring up to 50th harmonic, distortion analysis, and displaying harmonic content of each order and total content intuitively.-
- Multi-channel Frequency Measurement: Six channels can perform frequency measurements simultaneously.
- Line Filtering: Employs low-pass filters of 500Hz and 5.5kHz, capable of measuring the fundamental value of PWM waveforms and filtering out high-frequency interference from switch mode power supplies.
- Sensors: Ratio function, supports conventional I-I, V-V type voltage/current transformers; supports BNC interface I-V type current sensors, with a maximum input voltage of 10V, optional high-current sensors available.
- Efficiency Calculation: Simultaneously measures input and output energy consumption of devices, and calculates their efficiency.
- Energy Accumulation: Capable of separately accumulating forward energy, reverse energy, and comprehensive energy, facilitating measurement for energy transactions.



PEAK UT 02 03 04 05 06 OVER 11 12 13 14 15 18	HOLDI MAXHOLDI (AVCI STORE) WIRM	IG 1 2 3 1P3W	4 5 6 NTEG 1P3W 🦻
Urms1 Irms1	0.000 V 0.00mA	2	ELEMENT I UT 15V SO LINE II 1000m A SO FREG LEMENT 2 U2 15V SO LINE I2 100m A SO FREG ILEMENT 3 U3 15V SO LINE
P1	0.0000 W	4 5 6 7	IS 100mA & SD FREE ELEMENT 4 U4 15V & SC LINE I4 500mA & SC FREE ELEMENT 5 U5 15V & SC LINE I5 500mA & SC FREE
UPDATE 0001424(500ms)	0.0000	ة • •	ELEMENT 4 US 15V 8 SC 1URE IS 500mA 8 SC FRED 2006-02-07 14:35:06



WIRING 1P3W 0.000 V 11 15V A SO 0.00mA Irms1 U2 15V A SE 0.0000 W 4 U3 15V 8 0.0000 VA 0.0000 var U4 15V 8 SC 14 500mA 8 SC 0.0000 U5 15V 2 50 0.0000 Hz U6 15V 4 90 0.0000 Hz fi 1 UPDATE 0000666(500ms) 2006-02-07 14:28:47

8-item display

Urms1	0.000 V	Urms2	0.000 V		LIMINT I
Irms1	0.00mA	irms2	0.00mA	2	LEMENT 2
P1	0.0000 W	P2	0.0000 W		12 100mA SC FIEL
S1	0.0000 VA	S2	0.0000 VA		U3 15V SO LINE 13 100mA SO FREE
01	0.0000 var	02	0.0000 var		ELEMENT 4 U4 15VIA SCI LLNE 14 500mAIA SCI FREE
PF1	0.0000	PF2	0.0000		ELEMENTS IUS 15VIN SCIEN
101	0.0000 Hz	1U2	0.0000 Hz	7	15 500mA BC FRE
fi1	0.0000 Hz	f12	0.0000 Hz		U6 15V 85 (18
DATE 00	00699(500ms)				2006-02-07 14:29:03

Exceeding & Trustworthy

16-item display

ELEM	ENT						6	٨	LEMENT T
ürms	V	0.000	0.000	0.000	0.000	0.000	0.000	1	It 100mA B ISO FREE
rms	A	0,00m	0.00m	0.00m	0.00m	0.00m	0.00m	2	LU2 15V A SO LINE 12 100mA A SO FRE
	W	0.000	0.0000	0.0000	0.0000	0.0000	0.0000		ELEMENT S
9	WA	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		U3 15V SO LING 13 100mA SO EEE
8	yar	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		U4 15V SC UN
PF		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	6	14 500mA 18 SC FEE
PH	- 60	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		US 15VA SC UN IS 500mAA SC EES
	Hz	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		ELEMENT &
1	Ha	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		16 500mA 2 50 FEE

Full numerical

PEAK OVER			MAXHOLO (673) STREE (TOUCHLOCK) (REYLOCK)	WIRING 1 2 3 1P3W	4 5 6 INTEG
-					ELEMENT 1
8428		局所		0	U1 15V SC LINE I1 100mA SC EEED
		THD	0.00%	0.00%	EULMENT 2
Urmal	0.000 V	次數	含量百分比	含量百分比	U2 15VE SO LNE
and the second second			0.00%	0.00%	12 100mA Z SC FIED
Irms1	0.00mA		0.00%	0.00%	TUTIONT'S
E1	0.0000 W		0.00%	0.00%	U3 15V SO LINE
191	0.0000		0.00%	0.00%	13 100mA SO FIED
54	0.0000 VA	5	0.00%	0.00%	FLEMENT &
100		6	0.00%	0.00%	U4 15V A SO LINE I4 500mA A SO FREQ
06	0.0000 var	7	0.00%	0.00%	ILEMENT 5
		8	0.00%	0.00%	US 15VI SO LINE
UmsG1	0.000 V	9	0.00%	0.00%	15 500mA B SQ FIEG
-	1101000		0.00%	0.00%	ELEMENT 6
irmsG2	0.00mA	11	0.00%	0.00%	U6 15V 50 LINE 16 500mA 50 FEED
UPDATE	0001073(500ms)				2006-02-07 14:32:10

List display



Waveform Display

通道	1 2 3	4 5 6	2 8	18 <b>1</b> 8 (9)
B/B				用此设
8880 131	PÁW 3PÁW 3PÁW	AEVE AEVE AEVE	1P2W 11P2W	151219
		2		
计算周期	15 🔻	平均值开关	<b>GIPON</b>	Mostal.
计算周期 同步激试	15 V 100ms 200ms	平均值开关		R912
	100ms		ALC: NO PERSONNEL	

Touchscreen setting

#### Channel configuration

The multi-channel power analyzer supports various wiring configurations, including 1P2W, 1P3W, 3P3W, 3V3A, 3P4W, etc. In these configurations, adjacent input units with numbers greater than the currently selected unit are grouped together as a wiring set.

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
1P2W	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W
1P3W	1P3W	1P3W	1P3W	1P3W	1P3W	
3P3W	3P3W	3P3W	3P3W	3P3W	3P3W	
3V3A	3V3A	3V3A	3V3A	3V3A		
3P4W	3P4W	3P4W	3P4W	3P4W		

## Application

#### Photovoltaic inverter power measurement

- Complies with "GB/T 37409-2019 Technical Specification for Testing of Photovoltaic Grid-Connected Inverters"
- Voltage range: 0~1000V (DC1500V)
- Current range: 0~50A/current sensor
- Capable of simultaneously measuring input, output (single-phase, three-phase) power, and power factor
- Automatic efficiency calculation
- 50th harmonic, distortion analysis
- Bidirectional power measurement for buying and selling electricity



Power Analyzer

#### Power Analyzer Ainuo

通道	(1)	2	6			6		ALL	
电压量程	AUTO	۸U		AUTO	AUTO	AUTO	AUTO	AUTO	
	AUTO	AU		AUTO	AUTO	AUTO	AUTO	AUTO	No. of the local division of the local divis
电流量程	OFF	A0		OFF	OFF	OFF	OFF	OFF	<b>Width</b>
出路加坡								COMP.	-18-30-50 W
新年建設	(diff the	PT	DN	<b>97</b> 94	REP. CH	and an		THE CH	
电流源	CUI						LUR	CUR	কাও থেনা
同步派	10	1	2	3	+/-	- Del	U1	NONE	15/0/69
电压变出	1.0	<u> </u>	-	, ľ	-		1.0	1000.0	建带计算
电流变比	1.0	4	5	6	1	Esc	1.0	1000.0	
BNCCt	1.00						1.000	100.000	
	_	7	8	9	0	Ę			

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Single-phase	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W
PV inverters	DC	AC				
Three-phase	3P3	W/3V3A/3	P4W	1P2W	1P2W	1P2W
PV inverters		AC		DC		

- Electric vehicle electrical performance measurement
- Multi-channel, capable of simultaneously detecting multiple parameters: OBC (On-Board Charger), charging piles efficiency testing, battery charge and discharge performance, power conversion performance, motor performance, etc.
- AC/DC, maximum current 50A, expandable with larger current sensors.

- High accuracy, basic accuracy 0.1%, minimum power resolution 0.1mW
- Capable of measuring instantaneous effective value, average value, peak value, energy consumption, etc., of AC and DC signals.

#### Power supplies, UPS power measurement

- Current range: 0~1A/5A/20A/50A
- Power bandwidth: DC, 0.5Hz~100kHz
- Capable of simultaneously measuring input, output (single-phase, three-phase) power, monitoring battery charge and discharge
- Automatic efficiency calculation

	relay	tuse	charger	Charging piles
DC/DC converte	ers		1	
navigation		1		
motor				BALB BALD
	E.A.	1		
		1		
	Sol-	1	1	
~ /	5	1	1	
wire 0	<i>i</i> Connector	Contro	oller bat	tery
wite	Sonnector		Uner Der	iter y
		11111	1	
	-			
	a 📕			

from phonese Charting all

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
UPS	1P2W	1P2W	1P2W	3P3	W/3V3A/3	P4W
042	Mains Input	Battery	Battery	Powe	er Supply C	Output

#### Household appliance performance evaluation, standby power consumption measurement

- Complies with IEC 62301-2011 standard
- Current range: 0~1A/5A/20A/50A, capable of measuring rated power and standby power
- Minimum power resolution: 0.1mW
- 50th harmonic, distortion analysis

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Electric Vehicle	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W

#### Frequency converters power measurement

- Complies with GB12668 standard
- Power bandwidth: DC, 0.5Hz~100kHz
- Current range: 0~50A/current sensor
- Capable of simultaneously measuring input and output power

Wiring method Channel 1 Channel 2 Channel 3 Channel 4 Channel 5 Channel 6

3P3W/3V3A/3P4W

3P3W/3V3A/3P4W

▼ 50th harmonic, distortion analysis

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Household	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W
appliances	A CONTRACTOR		100-2010/	100036212		1124212517510
Commercial		3P4W			3P4W	
appliances		01 411			01 411	

#### Measurement of lighting and LED power

- Current range: 0~1A/5A/50A
- Minimum power resolution: 0.1mW
- Can measure input and output power, power factor, efficiency of the driver power supply
- ▼ 50th harmonic, distortion analysis

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4	Channel 5	Channel 6
Lighting	1P2W	1P2W	1P2W	1P2W	1P2W	1P2W

### Specifications

Model	AN87660(F)				
Measurement Channels - x	1~6				
	1P2W (Single-phase 2-wire) 1P3W (Single-phase 3-wire) 3P3W (3-phase 3-wire, 2 voltage 2 current)				
Wiring Method	3P3W (3V3A) (3-phase 3-wire, 3 voltage 3 current) 3P4W (3-phase 4-wire)				
	Voltage (U), Current (I), Active Power (P), Reactive Power (Q), Apparent Power (S), Power Factor (λ),				
	Voltage Frequency (fU), Current Frequency (fl), Phase Angle (Φ), Efficiency (η), Total Energy (Wh),				
Measurement Parameters	Forward Energy (Wh+), Reverse Energy (Wh-), Current Integration (Ah), 50th Harmonic Analysis (HDF),				
	Voltage and Current Total Harmonic Distortion (THD), Peak Voltage (Vpk), Peak Current (lpk),				
	Voltage Peak Factor (CfU), Current Peak Factor (CfI)				
Input Impedance	Voltage: Approximately 2MΩ, Direct Current Input: Approximately 2.5mΩ (50A specification),				
input impedance	Current Sensor Input: Approximately 100kΩ				
AD Sampling Rate	Around 200kS/s				
Peak Crest Factor at Full Range	3 or 6				
	When the crest factor is 3: 15/30/60/100/150/300/600/1000*[V],				
/oltage Rated Range (direct input)	When the crest factor is 6: 7.5/15/30/50/75/150/300/500*[V],				
	*The maximum range crest factor is 1.5				
	When the crest factor is 3:				
	20A current: 500m/1/2/5/10/20*[A]				
	Optional:				
	50A current: 1/2/5/10/20/50*[A]				
	5A current: 100m/200m/500m/1/2/5*[A]				
	1A current: 20m/50m/100m/200m/500m/1*[A]				
Current Rated Range (direct input)	When the crest factor is 6:				
	20A current: 250m/0.5/1/2.5/5/10*[A]				
	Optional:				
	50A current: 0.5/1/2.5/5/10/25*[A] 2				
	5A current: 50m/100m/250m/0.5/1/2.5*[A]				
	1A current: 10m/25m/50m/100m/250m/0.5*[A]				
	*The maximum range crest factor is 1.5				
Current Rated Range (BNC sensor)	Optional: 200m/500m/1/2/5/10[V]				
Voltage, Current Range	(1%~110%)*×range				
Accuracy Range	*For voltage 1000V and current maximum range, the accuracy range is (1% to 100%) * range				
Bower Footer Bones	±(0.001 ~ 1.000)				
Power Factor Range	· · ·				
	DC ±(0.05% × display value + 0.05% × range)				
Voltage Measurement Accuracy	0.1Hz≤f≤66Hz ±(0.05% × display value + 0.05% × range)				
Tomage measurement Autouracy	66Hz <f≤1khz +="" 0.1%="" display="" range)<="" td="" value="" ±(0.1%="" ×=""></f≤1khz>				
	1kHz <f≤10khz (f="" +="" -="" 0.05="" 0.2%="" 1)}%="" display="" range)<br="" value="" ±({0.1="" ×="">10kHz<f≤100khz (f="" +="" -="" 0.04="" 0.3%="" 10)}%="" display="" range)<="" td="" value="" ±({0.5="" ×=""></f≤100khz></f≤10khz>				

er Analvzer

Frequency

Converter

Power Analyzer

Exceeding & Trustworthy

Exceeding & Trustworthy

#### Compact Multi-channel Power Analyzer AN87400(F)



Basic accuracy: 0.05% of re	ading + 0.05% of range
-----------------------------	------------------------

Measurement bandwidth: DC, 0.5Hz - 100kHz

Sampling rate: 200kSps

Maximum voltage: standard 1500VDC

Maximum current: 20A (standard) 1A (optional), supports mixed combinations, optional sensor configuration LCD Display: touch screen experience, customizable display interface items, and waveform display

Data storage: customizable storage projects, CSV format export

Perfect size: 3U half-width size, meeting system integration requirements

#### Channel Configuration

Wiring method	Channel 1	Channel 2	Channel 3	Channel 4
Single-phase	1P2W	1P2W	10010	10011/
photovoltaic inverter	DC	AC	1P2W	1P2W
Three-phase		3P3W/3V3A/3P4W		1P2W
photovoltaic inverter		AC		DC
Electric vehicles	1P2W	1P2W	1P2W	1P2W

	DC	±(0.05% × display value + 0.05% × range)	
	0.1Hz≤f≤66Hz	±(0.05% × display value + 0.05% × range)	
Current Measurement Accuracy	66Hz <f≤1khz< td=""><td>±(0.1% × display value + 0.1% × range)</td></f≤1khz<>	±(0.1% × display value + 0.1% × range)	
20	1kHz <f≤10khz< td=""><td>$\pm((0.1 \times f)\% \text{ display value} + 0.2\% \times \text{range})$</td></f≤10khz<>	$\pm((0.1 \times f)\% \text{ display value} + 0.2\% \times \text{range})$	
	10kHz <f≤100khz< td=""><td>±({1 + 0.08 × (f - 10)}% × display value + 0.3% × range)</td></f≤100khz<>	±({1 + 0.08 × (f - 10)}% × display value + 0.3% × range)	
	DC	±(0.05% × display value + 0.05% × range)	
	0.5Hz≤f<45Hz	±(0.1% × display value + 0.1% × range)	
	45Hz≤f≤66Hz	±(0.05% × display value + 0.05% × range)	
Power Measurement Accuracy	66Hz <f≤1khz< td=""><td>±(0.2% × display value + 0.1% × range)</td></f≤1khz<>	±(0.2% × display value + 0.1% × range)	
	1kHz <f≤10khz< td=""><td>$\pm({0.2 + 0.1 \times (f - 1)}\% \times display value + 0.2\% \times range)$</td></f≤10khz<>	$\pm({0.2 + 0.1 \times (f - 1)}\% \times display value + 0.2\% \times range)$	
	10kHz <f≤50khz< td=""><td>±({0.2 + 0.1 × (f - 1)}% × display value + 0.3% × range)</td></f≤50khz<>	±({0.2 + 0.1 × (f - 1)}% × display value + 0.3% × range)	
	50kHz <f≤100khz< td=""><td>$\pm(\{5.1+0.18\times(f-50)\}\%\times display value + 0.3\%\times range)$</td></f≤100khz<>	$\pm(\{5.1+0.18\times(f-50)\}\%\times display value + 0.3\%\times range)$	
Active Power Resolution		0.1mW	
Frequency Measurement Range		DC, $0.5Hz \sim 100 kHz$	
Frequency Measurement Accuracy		±0.1% × display value	
Harmonic Measurement	11Hz to 60	0Hz, 1 to 50th harmonic content, total distortion	
Energy Measurement Range	0 to 99	99999MWh (Resolution: 1mWh / 0.01mAh)	
Energy Measurement Accuracy	±(0	.1% × display value + 0.1% × full scale)	
Extended Uncertainty	Voltage, currer	nt, power, frequency, and energy accuracy ≤ 0.20%	
Filtering Function	500Hz and 5.5	kHz voltage line, current line, and frequency filtering	
Ratio Function		1 ~ 50000	
Data Update Cycle		100m / 200m / 500m / 1/ 2 / 5 /10[s]	
Control Interface	Standard: RS-232, Digital	Input/Output Interface, Ethernet Port; Optional: RS-485, GPIB	
Display		7-inch LCD touchscreen	
Dimensions	426×132.5×430.3 (W,front panel)×(H, front pane)×(D,excluding terminal posts)mm		
Cutout Dimensions	42	2×128.5 (W, chassis)×(H, chassis) mm	
Base Height		17.5 mm	
		Around7.5 kg	

Any changes to the above parameter specifications will not be notified separately.

#### [Conditions]

Temperature: 23±5 C, Humidity: 30%~75%RH, Input Waveform: Sinusoidal Wave, Common Mode Voltage: 0V, Line Filter: OFF, Frequency Filter: ON below 440Hz,

Power Factor λ: 1, Crest Factor: 3. After preheating, under wiring conditions, zero adjustment or change of range.

In the measurement accuracy formula, f represents frequency, with unit kHz.

When the data update rate is 100ms, all accuracies are added to 0.05% of the reading.

Due to the influence of temperature changes after zero adjustment or range change:

Voltage DC accuracy increases by 0.02%/C of the range, Current DC accuracy increases by 500µA/C, External sensor DC accuracy increases by 50µV/C, Power DC accuracy increases by the product of voltage and current influences.

#### Power Analyzer

Exceeding & Trustworthy

Product Application



#### Photovoltaic inverter power measurement

- Complying with Testing Specification for Photovoltaic Grid-connected Inverter (GB/T 37409-2019)
- ▼ Voltage range: 0-1,500V
- Current range: 0-20A/current sensor
- Tapable of simultaneous measuring input, output (single-phase and three-phase) power, and power factor
- Automatic efficiency calculation
- Analysis of 100 times harmonics and distortion.
- Bidirectional power measurement for buying and selling electricity



#### Electric vehicle electrical performance measurement

- Multi-channel, capable of simultaneously detecting multiple parameters: OBC efficiency testing, charging station efficiency testing, battery charging and discharging performance, power conversion performance, motor performance, etc.
- AC/DC, with maximum current 20A, expandable to larger current sensors.
- High precision, with basic precision 0.05% and minimum power resolution 0.1mW.
- Capable of measuring instantaneous effective value, average value, peak value of AC/DC signals, energy consumption, etc.

Model		
Measurement Channels - x		
Wiring Method	1P2W (single-phase 2-wire 3P3W (3V3A) (three-phase	
Measurement Parameters	Voltage (U), current (I), acti voltage frequency (fU), curr forward energy (Wh+), reve total harmonic distortion (T voltage peak factor (CfU), c	rent frequen erse energy HD) of voltag
Input Impedance	Current direct in	۷ put: approxir
AD Sampling Rate		
Full range peak factor		
Voltage rated ranges (direct input)		the peak fac n the peak fa *
Current rated ranges (direct input)	When the peak factor is 3: 20A current specifications: 5A current specifications: 1 1A current specifications: 2 When the peak factor is 6: 20A current specifications: 5A current specifications: 5 1A current specifications: 1 * Full range peak factor of a	00m/200m/5 0m/50m/100 250m/0.5/1/ 0m/100m/25 0m/25 m/50
Current rated ranges	i dii rungo pour ruotor or t	When the
(BNC sensor)		When the p
Voltage and current range accuracy range	* The accuracy r	
Power factor range		
Voltage Measurement Accuracy	DC 0.1Hz≤f≤66Hz 66Hz <f≤1khz 1kHz<f≤10khz 10kHz<f≤100khz< td=""><td>* * * *</td></f≤100khz<></f≤10khz </f≤1khz 	* * * *
Current Measurement Accuracy	DC 0.1Hz≤f≤66Hz 66Hz <f≤1khz 1kHz<f≤10khz 10kHz<f≤100khz< td=""><td>* * * *</td></f≤100khz<></f≤10khz </f≤1khz 	* * * *
Power Measurement Accuracy	DC 0.5Hz≤f<45Hz 45Hz≤f≤66Hz 66Hz <f≤1khz 1kHz<f≤10khz 10kHz<f≤50khz< td=""><td>± ± ± ± ±</td></f≤50khz<></f≤10khz </f≤1khz 	± ± ± ± ±

Power Analyzer

# Ainuo

4	N8	74	00	VE.	1-X
	110		~~~	ч.	<u> </u> -~

	4	1	.1	
			-	

single-phase 3-wire), 3P3W (three-phase 3-wire, 2 voltage 2 current),

voltage 3 current), 3P4W (three-phase 4-wire)

(P), reactive power (Q), apparent power (S), power factor ( $\lambda$ ),

ency (fl), phase angle ( $\Phi$ ), efficiency ( $\eta$ ), total energy (Wh),

y (Wh-), current integration (Ah), 100 times harmonic distortion factor (HDF),

tage and current, peak voltage (Vpk), peak current (lpk),

ak factor (Cfl) ...

Voltage: approximately 2MQ,

ximately  $10m\Omega$  Current sensor input: approximately  $100k\Omega$ 

Approximate 200kS/s 3 or 6

factor is 3: 15/30/60/100/150/300/600/1000 * [V] factor is 6: 7.5/15/30/50/75/150/300/500 * [V] * Full range peak factor is 1.5

```
5/10/20 * [A]
n/500m/1/2/5 * [A]
00m/200m/500m/1 * [A]
```

```
(1/2.5/5/10 * [A]
(250m/0.5/1/2.5 * [A]
50m/100m/250m/0.5 * [A]
colfications is 1.5
the peak factor is 3: 200m/500m/1/2/5/10 [V]
the peak factor is 6: 100m/250m/0.5/1/2.5/5 [V]
(1% - 110%) * × range
```

voltage of 1,000V and current of 20A is (1% - 100%) × range.

```
± (0.001 - 1.000)
```

```
\begin{array}{l} \pm (0.05\% \times display \ value + 0.05\% \times range) \\ \pm (0.05\% \times display \ value + 0.05\% \times range) \\ \pm (0.1\% \times display \ value + 0.1\% \times range) \\ \pm (\{0.1 + 0.05 \times (f - 1)\}\% \times display \ value + 0.2\% \times range) \\ \pm (\{0.5 + 0.04 \times (f - 10)\}\% \times display \ value + 0.3\% \times range) \end{array}
```

```
\begin{array}{l} \pm (0.05\% \times display \ value + 0.05\% \times range) \\ \pm (0.05\% \times display \ value + 0.05\% \times range) \\ \pm (0.1\% \times display \ value + 0.1\% \times range) \\ \pm ((0.1 \times f)\% \ display \ value + 0.2\% \times range) \\ \pm (\{1 + 0.08 \times (f - 10)\}\% \times display \ value + 0.3\% \times range) \end{array}
```

```
\begin{array}{l} \pm (0.05\% \times display \ value + 0.05\% \times range) \\ \pm (0.1\% \times display \ value + 0.1\% \times range) \\ \pm (0.05\% \times display \ value + 0.05\% \times range) \\ \pm (0.2\% \times display \ value + 0.1\% \times range) \\ \pm (\{0.2 + 0.1 \times (f - 1)\}\% \times display \ value + 0.2\% \times range) \\ \pm \{\{0.2 + 0.1 \times (f - 1)\}\% \times display \ value + 0.3\% \times range) \\ \pm (\{5.1 + 0.18 \times (f - 50)\}\% \times display \ value + 0.3\% \times range) \\ \end{array}
```

Exceeding & Trustworthy

Active power resolution	0.1mW
Frequency measurement range	DC, 0.5Hz - 100kHz
Frequency measurement accuracy	± 0.1% × display value
Harmonic measurement	11Hz - 600Hz, with maximum 100 times harmonic content and total distortion
Energy measurement range	0 - 99,999MWh (Resolution: 1mWh/0.01mAh)
Energy measurement accuracy	± (0.1% × display value + 0.1% × range)
Filter function	500Hz and 5.5kHz voltage and current line filters, as well as frequency filtering
Transformation ratio functionality	1 - 50,000
Data update cycle	100m/200m/500m/1/2/5/10 [s]
Control interface	Standard: RS-232, network interface; optional: RS-485, GPIB
Communication protocol	MODBUS protocol and SCPI protocol
Displayer	7-inch LCD touch screen
Appearance size	215 (W) × 133 (H) × 374 (D) mm
Opening size	215 (W) × 133 (H) mm
Foot height	15mm
Machine weight	Approximate 4kg

Any changes to the above parameter specifications will not be notified separately.

#### [Conditions]

- Temperature: 23 ± 5 C, humidity: 30%-75% RH, input waveform: sine wave, common mode voltage: 0V, line filter: OFF, frequency filter: ON for frequencies below 440Hz, power factor λ: 1, peak factor: 3. After warming up. Under wiring conditions, after zero adjustment or range change.
- In the accuracy formula, f represents frequency in kHz.
- When the data update rate is 100ms, add 0.03% of the reading to all accuracies.
- Due to the effect of temperature changes after zero adjustment or range change:

add 0.02%/C to voltage DC accuracy and range, add 500µA/C to current DC accuracy, add 50µV/C to external sensor DC accuracy, and for power DC accuracy, add the product of the voltage and current effects.

#### Three-phase Power Analyzer 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 lines 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.
- 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



Standard RS232, LAN port, standard MODBUS protocol, to meet the customization needs of multiple protocols, optional

- 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
Ainuo // Power Analyzer

Exceeding & Trustworthy

### Specifications

Model	AN87330(F)			
Current	20A			
	1P3W (1-phase 3-wire)、3P3W (3-phase 3-wire,2 voltage 2 current)、			
Wiring	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]			
	(1%~110%) × range;*voltage:1000V range、 current 20A			
Voltage/current accuracy	accuracy range(1%~100%) × range			
Power factor	±(0.001 ~ 1.000)			
	DC:±(0.1% × display + 0.2% × range)			
	0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range)			
500 B	45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range)			
Voltage accuracy	66Hz <f≤1khz: +="" 0.2%="" display="" range)<="" td="" ±(0.1%="" ×=""></f≤1khz:>			
	1kHz <f≤10khz: +="" 0.3%="" display="" f}%="" range)<="" td="" ±({0.07="" ×=""></f≤10khz:>			
	10kHz <f≤100khz: (f–10))%="" +="" 0.5%="" display="" display]<="" range),="" td="" ±(0.5%="" ±[(0.04="" ×=""></f≤100khz:>			
	DC: ±(0.1% × display + 0.2% × range)			
	0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range)			
Correct economic	45Hz≤f≤66Hz: ±(0.1% × display +0.1% × range)			
Current accuracy	66Hz <f≦1khz: +0.2%="" display="" range)<="" td="" ±(0.1%="" ×=""></f≦1khz:>			
	1kHz <f≤10khz: +0.3%="" display="" f}%×="" range)<="" td="" ±({0.07="" ×=""></f≤10khz:>			
	10kHz <f≤100khz: (f−10)}%="" +="" 0.5%="" display="" display]<="" range),="" td="" ±(0.5%="" ±[{0.04="" ×=""></f≤100khz:>			
	DC: ±(0.1% × display + 0.2% × range)			
	0.5Hzsf<45Hz: ±(0.3% × display + 0.2% × range)			
	45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range)			
Active power accuracy	66Hz <f≤1khz: +="" 0.2%="" display="" range)<="" td="" ±(0.2%="" ×=""></f≤1khz:>			
	1kHz <f≤10khz: (f–1)}%="" +="" 0.3%="" display="" display]<="" range),="" td="" ±(0.1%="" ±[{0.067="" ×=""></f≤10khz:>			
	10kHz <f≤100khz: (f−10))%="" +="" 0.5%="" display="" display]<="" range),="" td="" ±(0.5%="" ±[(0.09="" ×=""></f≤100khz:>			
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 $\sim$ 600Hz, 1 $\sim$ 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			

Any changes to the above parameter specifications will not be notified separately.

#### Single-Phase Power Analyzer AN87310(F)



#### 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.

#### 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

#### 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

Power Analyzer

Ainuo // Power Analyzer

### Specifications

Modet	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)
	DC: ±(0.1% × display + 0.2% × range)
	0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range)
Voltage accuracy	45Hz≤f≲66Hz: ±(0.1% × display + 0.1% × range)
voltage accuracy	66Hz <f≤1khz; +="" 0.2%="" display="" range)<="" td="" ±(0.1%="" ×=""></f≤1khz;>
	1kHz <f≤10khz: +="" 0.3%="" display="" range)<="" td="" ±({0.07×f}%="" ×=""></f≤10khz:>
	10kHz <f≤100khz: (f–10)}%="" +="" 0.5%="" display="" display]<="" range),="" td="" ±(0.5%="" ±[{0.04="" ×=""></f≤100khz:>
	DC: ±(0.1% × display + 0.2% × range)
	0.5Hz≤f<45Hz: ±(0.1% × display + 0.2% × range)
0	45Hz≤f≤66Hz: ±(0.1% × display + 0.1% × range)
Current accuracy	66Hz <f≤1khz: +="" 0.2%="" display="" range)<="" td="" ±(0.1%="" ×=""></f≤1khz:>
	1kHz <f≤10khz: +="" 0.3%="" display="" range)<="" td="" ±({0.07×f}%="" ×=""></f≤10khz:>
	10kHz <f≤100khz: +="" 0.5%="" display="" display),="" display]<="" td="" ±(0.5%="" ±[(0.04×(f–10)]%="" ×=""></f≤100khz:>
	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)
Active power accuracy	66Hz <f≤1khz: +="" 0.2%="" display="" range)<="" td="" ±(0.2%="" ×=""></f≤1khz:>
	1kHz <f≤10khz: (f−1)}%="" +="" 0.3%="" display="" display]<="" range),="" td="" ±(0.1%="" ±[{0.067="" ×=""></f≤10khz:>
	10kHz <f≤100khz: +="" 0.5%="" display="" range),="" range]<="" td="" ±(0.5%="" ±[{0.09×(f–10)}%="" ×=""></f≤100khz:>
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	1~5000
Current Sensor Ratio Range	0.010~100.000 mV/A
Data update cycle	100m/250m/500m/1/2/5[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





Any changes to the above parameter specifications will not be notified separately.

Motor Stator/Complete Machine Comprehensive Tester AN8A10RT(F) Series

Power Analyzer



Partial Discharge (PD) Tester AN8A10PD(F) Series

#### Exceeding & Trustworthy

# Partial Discharge(PD) Tester AN8A10PD(F) Series



#### Product Overview

The tester utilizes advanced RF, high-frequency, and weak signal processing technologies to develop a unique high-frequency partial discharge detection solution. It employs high precision digital signal processing chips to accurately capture the partial discharge signals of the products under test. It is suitable for local discharge test of new energy main drive motor of industrial motor.

### Features

- Measurable It provides the industry's exclusive PD-UHF measurement and testing solutions.
- Multi-function: One device can support both interturn PD (DC-PD) and withstand voltage PD (AC-PD) at the same time.
- Multi-channel: It supports multi-channel switching, and automatically completes all tests at one wiring to meet the test needs of multi-winding motors.
- High performance: It adopts a high signal-to-noise ratio identification algorithm to achieve high sensitivity testing of partial discharge.
- High reliability: It has undergone strict working condition tests and millions of tests in complex environments.
- High stability: The test results are stable and not easily affected by the environmental conditions of the production site Multi-interface.
- The system supports USB, RS232, LAN and other interfaces, supports PLC communication, TCP/IP network protocol, etc., supports MES docking customization, database upload, etc.

#### Test items

#### PDIV, RPDIV, PDEV, and RPDEV

- **PDIV:** It refers to the lowest voltage when the test voltage gradually increases from the lower voltage that does not produce partial discharge, and the partial discharge amount exceeds a certain specified value in the test.
- **RPDIV:** It refers to the lowest voltage when the test voltage gradually increases from the lower voltage that does not produce partial discharge, and the partial discharge amount in the test repeatedly exceeds a specified value.
- PDEV: It refers to the maximum voltage when the test voltage gradually decreases from the higher value exceeding the initial voltage of partial discharge, and the partial discharge amount in the test is less than a specified value.
- **RPDEV:** It refers to the maximum voltage when the test voltage gradually decreases from a higher value exceeding the initial voltage of partial discharge, and the partial discharge amount is repeatedly less than a certain specified value in the test.

#### Software interface









Specifications
----------------

Produ	ct Name	Partial Discharge (PD) Tester	
1	Model	Customized Parameter	
		Range: ( 300-5000) VAC	Energy Boost
	Output Voltage	Allowable Error: ±(2.5%×Setting value+10V);	
	Step Voltage	10V/step	
Impulse PD	Pulse Count	1-32 times	
(DC-PD)	Combo Interval	20ms	
(50+5)	Step Interval	0.1s-99.0s, Allowable Error: ±(1%×Setting Value+0.1s)	
	Peak Value Range	(0-120)mV	-
	Determination Methods	Discharge Level Comparison	
		Range: ( 300~5000) VAC	
	Output Voltage	Allowable Error: ±(1%×Setting Value+2V)	
	Step Voltage	10V/step	
Sine PD	Duration	1-99s	_
(AC-PD)	Step Interval	0.1s-99.0s, Allowable Error: ±(1%×Setting Value+0.1s)	-
	Peak Value Range	(0-120) mV	
	Determination Methods	Discharge Level Comparison	
	Microwave Sensor	Senses electromagnetic waves generated by discharge	]
	Test Range	Distance from the object under test: 10-30cm	
Others	Background Noise	Provide background noise compensation	
	Ambient	Operating Temperature Range: 5-40 C, Working Humidity Range: 20-80%RH	
	Conditions	Storage Temperature Range: -10-50 C, Storage Humidity Range: 5-90%RH	1

#### Motor Test Scheme

The above specifications are subject to change without notice.

Ainuo

#### P144

#### Exceeding & Trustworthy

#### Motor Stator/Complete Machine Comprehensive Tester AN8A10RT(F) Series



#### Product Overview

This tester features resistance, inductance, insulation, withstand voltage, interturn tests and other functions, with all functions tested in one wiring connection. It is a new comprehensive tester with high integration, high precision, practicality, and safety. It is suitable for stator/complete machine test requirements of new energy vehicle motors, household appliance motors, servo motors, stepper motors, fan motors, pump motors, large industrial motors, BLDC motors, etc.

#### Features

- High integration: It can integrate 7 test functions and complete all tests with one wiring connection.
- Multi-channel: The system can support up to 32 channels, meeting the needs of testing multiple windings, multiple attachments and other multiple taps of the motor.
   Wide range: The extendable resistance measurement range is 0.1m2~20,000K2; the upper limit of the insulation testing range reaches 50GΩ.
- High performance: In view of the low inductance characteristics of the new energy main drive motor, special constant voltage, impact and oscillation technologies are developed, and the interturn detection ability is many times higher than that of traditional technology.
- High precision: The accuracy of the module can reach up to 1% level, which is the measurement level of the same type of international single-function meter in the United States.
- High reliability: It has undergone strict working condition tests and millions of tests in complex environments.
- Multiple interfaces: The system supports USB, RS232, LAN and other interfaces, supports PLC communication, TCP/IP network protocol, etc., which is convenient for data interaction and instrument control, and meets the requirements of automatic production line docking.

		and the second		
SI	ecit	icat	ion	
		10 car		-

Pro	duct Name	Motor Stator/Complete Machine Comprehensive Te	ester
	Model	AN8A10RT(F) Series	Customized Paramete
		Range: (300-3,000)VAC, step size: 10V/step	5,000VAC
	Output voltage	Allowable Error: ±(1%×Setting value+5V)	DCW
Withstand voltage test		Range: (0.01-20.0)mA	100mA
	Breakdown current	Allowable Error: ±(1% × Reading value + 5 digits)	
	Duration	Range: (1.0-99.9)s, allowable error: ±(1%×Setting value+0.1s)	
	Output voltage	Range: (200-1,000)VDC, step: 5V/step	2,500V
	Output voitage	Allowable Error: ±(1%×Setting value+5V)	
	Ripple coefficient	<5%	
Insulation test	Devision	Range: 1.0-500MΩ	50GΩ
	Resistance measurement	Allowable Error: ±(2%×Reading value+2 digits)	
	Duration	Range: (1.0-99.9)s, allowable error: ±(0.1% × Setting value + 2 digits)	
	Testing and measurement	Range: (0.1-20k) Ω, unit Ω	1mΩ~2MΩ
Resistance test	resurg and measurement	Allowable Error: ±(0.3%×Reading value+0.1%×Range)	
	Temperature measurement	(-10.0-60.0)°C, Allowable error: ±0.5 C	
	Calculation formula	Resistance value - Average resistance  / Average resistance*100%	Others
Resistance balance	Display range	0.0%~99.9%	
Interturn test	Impulse voltage	Range: (300-3,000)V, Step: 10V/step Allowable Error: ±(2.5%×Setting value+10V)	5000V
	Combo Interval	20ms	
	Waveform Sampling	100MHz	
Inductance test	Testing Range	1.0uH-1,000.0mH	99.99kH
	Basic Accuracy	0.5%	
	Test Frequency	100Hz, 120Hz, 1kHz, 10kHz	
	Test Level	0.1, 0.3, 1.0 (V)	
Rotation test	Decision Parameter	Forward rotation, reverse rotation, and non-rotation	

#### Test items

AC withstand voltage, DC withstand voltage, insulation resistance, DC resistance, resistance balance, interturn, inductance, inductance balance, reverse embedding, steering, etc.

Test	Pres				Q regarder and			
Item	Parameters			Values	Result			
DCR	Gh2-1 U-L-0 TempOfectual Lowert-Dired Japan-000.00mG	292.64m	۵		OK			
DCR	Drift-E WitchD TempOlation LowerLobert Gent-W 2-8140	289.97m	0		OK			
DCR.	Sold Strange States Lower Long Strates Section	291.81m	0		OK			
LCR	CHART ADMENDER FAMILIE TO THE	2.89mH			OK			
LOR	01:0-2 Love 8:00:10 Rule 103:20181	2.89mH			OK.			
LCR	CHA-2 Love EXc # Exce 302 2019	2.89mH			OK			
ACW	diverserver without the later and the second	0.30mA			OK.			
IR	chologiae-sector (101) - Vectorial Laws 19843 (downsolw)	500MQ			OK			
WI.	(hidea Voltacov Annolis, antiko	0.2%	0.3%		OK.			
IW	unore vortaum analars lattars	0.2%	0.3%		OK			
1WI	O-4-2 VARTERIA ANN AN AN AN AN AN	0.0%	0.4%		OK			
						® ST-1		O ST:
						T TRUCS OK	2 6.04 NE	
A							OK	



#### Motor Test Scheme

The above specifications are subject to change without notice.

Lower Power DC Electronic Load AN235(F) Series



Lower Power DC Electronic Load AN235(F) Series



High Power DC Electronic Load AN236(F) Series



High Power Bidirectional DC Electronic Load ANEL(F) Series

AC/DC Electronic Load AN29(F) Series



#### Product Introduction

The AN235(F) Series is a line of low-power DC electronic loads launched by Ainuo Instrument. It comes in two voltage ranges, 150V and 600V, with power ranges from 150W to 1200W. This series of electronic loads is primarily used for testing a variety of products in fields such as chargers, adapters, batteries, LED drivers, low-power switch power supplies, components, relays, military, aerospace, and more.Featuring a new-generation digital controller, the AN235(F) Series offers both conventional and multiple compound modes, along with serialization and automation capabilities. This caters to various needs such as programming and automated testing, making it capable of partially replacing testing systems.

#### Features

- Precision measurement technology supports 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 load-pull mode, with a dynamic frequency up to 25kHz, and equipped with Vpk+/- testing capability.
- Built-in LED mode, capable of simulating LED loads for testing LED power supplies.
- Tiny dynamic overshoot magnitude, less than 30% of the set current.
- Built-in constant current(CC), constant voltage(CV), constant resistance(CR), constant power(CP), short circuit simulation, over-current protection testing, serialization testing, and various other functions including automatic testing.

### Electronic Load



- Comprehensive protection features, supporting over-current, over-voltage, over-temperature, and reverse connection protection, among others.
- Built-in temperature acquisition circuitry and variable-speed fan control.
- Built-in battery mode suitable for discharging tests for energy integration.
- Flexible interface options, standard RS232, optional RS485.
- Lightweight design, featuring an injection-molded casing made of ABS+PC material, providing an elegant and aesthetically pleasing appearance while enhancing overall quality.

#### Serialized Models

AN235(F) Series offers a complete range of serialized models for selection, as shown in the following table:

Model	Features	Height	Width
AN23511 V2(F)	150V/30A/150W	20	half width
AN23512 V2(F)	150V/60A/300W	2U	half width
AN23512B V2(F)	600V/15A/300W	2U	half width
AN23513(F)	150V/120A/600W	2U	half width
AN23513B(F)	600V/30A/600W	2U	half width
AN23514(F)	150V/240A/1200W	2U	half width
AN23514B(F)	600V/60A/1200W	2U	half width

#### Exceeding & Trustworthy

#### Applications

- Switching power supply testing
- Adapter, charger, and power bank testing
- Automotive electronics testing, such as fuses, control boxes, etc.
- Military and aerospace power supply testing
- Testing server power supplies and communication power supplies
- Battery discharge testing
- Relay simulation load testing
- Testing DC power supplies and power electronic components



#### Basic Mode

The AN235(F) load incorporates four major basic modes: constant voltage mode(CV), constant current mode(CC), constant resistance mode(CR), and constant power mode(CP), meeting a wide range of testing needs.



#### Composite Mode

The AN235(F) load integrates four major compound modes: soft start mode, load-unload mode, CC+CV mode, and CR+CV mode, meeting a wide range of testing needs.



#### BATY Mode - Dedicated Battery Test Mode

The AN235(F) Series load has a constant battery capacity test 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 a real-time display of the 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 rates can be set for AN235(F) series loads as required. Current change rate: 2.5A/us; time.20us-999999ms,resolution: 20us.

#### LED Mode - Simulate LED Load Mode

The AN235(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 unstable parameters of LED strips and resistive loads.



#### CCD Mode - Fast Dynamic Testing

The AN235(F) Series loads have built-in high-speed dynamic loading test function, with a 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 a sampling frequency of up to 25kHz.



#### LIST Mode - Serialized Loading Function

The AN235(F) Series load has built-in simulated LED load mode, loading as shown below to simulate the characteristic 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 unstable parameters of LED strips and resistive loads.



#### AutoMode - Automatic Test Function

Up to 8 groups of data can be edited via built-in series test of AN235(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

AN235(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/240Aproviding more accurate current measurements for various applications. High-precision AD, and 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.

Exceeding & Trustworthy

Specifications

#### Remote Measurement

AN235(F) Series loads have remote measurement functions. When the current consumption on the load is high, the voltage drop generated by the load terminal, and the connection line between the load and the source under test is high and cannot be ignored. To ensure 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 operation panel, convenient for wiring.



#### I Monitor - Current Monitoring

AN235(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 problems.

#### All-Round Protection

The AN235(F) Series load features high reliability and multiple protection and alarm mechanisms, including OVP (Over Voltage Protection), OCP (Over Current Protection), OTP (Over Temperature Protection), OPP (Over Power Protection), RVP (Reverse Voltage Protection), and SSP (Sense Protection).

#### Precisely Lock The Power Protection Point

AN235(F) Series loads have OCP/OPP functions. Too large an output current of the source under test may cause damage. Therefore, most of the power sources under test have an 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.





No.	Name	Description
(Th)	Device ernelis evitele	AC power supply switch of
1	Power supply switch	the electronic load master unit
2	F1-F5 Menu	F1-F5, shortcut menu
3	Display screen	Shows settings and measured data
4	Direction key	Direction key
(5)	Knob	Used for moving cursor up and
9	Khob	down and adjusting parameters
6	Tricolor light	Indicator light for load working status
$\langle 7 \rangle$	Vsense terminal	Remote detection of power supply voltage
8	Number keys	Number keys 0-9 and undo key
(9)	Control button	LOAD, MENU, ESC, ENTER
1	DC load terminal	Load terminal



Model		AN2	3511V2(F)	
	Range	0-3A	0-30A	
Constant Current Mode(CC)	Set Resolution	0.1mA	1mA	
	Accuracy	0.03%+0.05%F.S.		
	Range	0.1-20V	0.1-150V	
Constant Voltage Mode(CV)	Set Resolution	1mV	10mV	
	Accuracy	0.03%+0.02%F.S.		
Constant Resistance Mode(CR)	Range	0.03Ω-99.999Ω / 100Ω	2-999.99Ω / 1000Ω-9999.9Ω	
(When input voltage and	Set Resolution	0.001Ω	/ 0.01Ω / 0.1Ω	
current values ≥ 10% of full range)	Accuracy	Vin/Rset*(	0.2%)+0.2%IF.S.	
Constant Power Mode(CP)	Range	100	0W/150W	
(When input voltage and	Set Resolution	1mW/10mW		
current values ≥ 10% of full range)	Accuracy	0.1%	+0.1%F.S.	
Voltage Measurement	Range	0-20V	0-150V	
	Measurement Resolution	1mV 10mV		
	Accuracy	0.015%+0.03%F.S.		
	Range	0-3A	0-30A	
Current Measurement	Measurement Resolution	0.01mA	0.1mA	
	Accuracy	0.03%+0.05%F.S.	0.03%+0.08%F.S.	
Power Measurement	Range	100W/150W		
(When input voltage and	Measurement Resolution	1mW/10mW		
current values ≥ 10% of full range)	Accuracy	0.1%	5+0.1%F.S.	
Battery Test			ent resolution: Resolution for this range of currenters of the second seco	
Dynamic Test		Testing frequency: 0-25kHz, Current change rate: 2.5A/µs, Time range: 20µs - 999,999ms, with a resolution of 20µs		
Current Soft Start Time			me accuracy is 20µs.	
Short Circuit Function			range of this stage.	
_	Working Temperature	0~40 C		
Temperature	Storage Temperature	-2	25~70°C	
Dimension	W×H×D (mm)	213	3×88×401	
Weight	Kg	6.7	6.6	

Model		AN2351	12V2(F)	AN23512BV2(F)		
TURKS SOL	Range	0-6A	0-60A	0-3A	0-15A	
Constant Current Mode(CC)	Set Resolution	0.1mA	1mA	0.1mA	1mA	
5.3	Accuracy		0.03%+0	0.05%F.S.		
	Range	0.1-20V	0.1-150V	0.1-60V	0.1-600V	
Constant Voltage Mode(CV)	Set Resolution	1mV	10mV	1mV	10mV	
<b>3</b> ( )	Accuracy	0.03%+0	0.02%F.S.	0.03%+0.02%F.S.	0.03%+0.05%F.S	
Constant Resistance Mode(CR)	Range		0.03Ω-99.999Ω / 100Ω-9	99.99Ω / 1000Ω-9999.9Ω		
When input voltage and	Set Resolution		0.001Ω/0	.01Ω/0.1Ω		
current values ≥ 10% of full range)	Accuracy		Vin/Rset*(0.2	?%)+0.2%IF.S.		
Constant Power Mode(CP)	Range		100W	//300W		
When input voltage and	Set Resolution	1mW/10mW				
current values ≥ 10% of full range)	Accuracy	0.1%+0.1%F.S.				
Voltage Measurement	Range	0-20V	0-150V	0-60V	0-600V	
	Measurement Resolution	1mV	10mV	1mV	10mV	
57. 	Accuracy	0.015%+0.03%F.S.		0.015%+0.03%F.S.	0.015%+0.05%F.S	
	Range	0-6A	0-60A	0-3A	0-15A	
Current Measurement	Measurement Resolution	0.01mA	0.1mA	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	
Power Measurement	Range	100W/300W				
When input voltage and	Measurement Resolution	1mW/10mW				
current values ≥ 10% of full range)	Accuracy	0.1%+0.1%F.S.				
Battery Test		Input voltage: Maximum voltage setting, Current resolution: Resolution for this range of current Time range: 0-99.999 hours				
Dynamic Test		Testing frequency: 0-25kHz, Current change rate: 2.5A/µs, Time range: 20µs - 999,999ms, with a resolution of 20µs				
Current Soft Start Time		0-999999ms, time accuracy is 20µs.				
Short Circuit Function		≥1.1 times the range of this stage.				
	Working Temperature		0~-	40 C		
Temperature	Storage Temperature		-25-	-70°C		
Dimension	W×H×D (mm)		213×0	38×401		
Weight	Kg	6	.7	6	6	

#### Electronic Load Ainuo

#### High Power DC Electronic Load AN236(F) Series

Model		AN23513(F) AN23513B(F)				
	Range	0-12A	0-120A	0-3A	0-30A	
Constant Current Mode(CC)	Set Resolution	1mA	10mA	0.1mA	1mA	
18 - 51	Accuracy	0.05%+0.05%F.S.	0.1%+0.05%F.S.	0.03%+0	.05%F.S.	
	Range	0.1-20V	0.1-150V	0.1-60V	0.1-600V	
Constant Voltage Mode(CV)	Set Resolution	1mV	10mV	1mV	10mV	
	Accuracy	0.03%+0	0.03%+0.02%F.S. 0.03%+0.02%F.S.		0.03%+0.05%F.S.	
Constant Resistance Mode(CR) (When input voltage and current values ≥ 10% of full range)	Range		0.03Ω-99.999Ω / 100Ω-	999.99Ω / 1000Ω-9999.9Ω		
	Set Resolution	0.001Ω / 0.01Ω / 0.1Ω				
	Accuracy		Vin/Rset*(0.	2%)+0.2%IF.S.		
Constant Power Mode(CP)	Range		100V	V/600W		
(When input voltage and	Set Resolution	1mW/10mW				
current values ≥ 10% of full range)	Accuracy	0.1%+0.1%F.S.				
	Range	0-20V	0-150V	0-60V	0-600V	
Voltage Measurement	Measurement Resolution	1mV	10mV	1mV	10mV	
	Accuracy	0.015%+0.03%F.S. 0.015%+0.03%F.S. 0.01			0.015%+0.05%F.S.	
	Range	0-12A	0-120A	0-3A	0-30A	
Current Measurement	Measurement Resolution	0.1mA	1mA	0.01mA	0.1mA	
	Accuracy	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	Range	,	100V	V/600W		
(When input voltage and	Measurement Resolution	1mW/10mW				
current values ≥ 10% of full range)	Accuracy	0.1%+0.1%F.S.				
Battery Test		Input voltage: Maximum voltage setting, Current resolution: Resolution for this range of current ime range: 0-99.999 hours				
Dynamic Test		Testing frequency: 0-25kHz, Current change rate: 2.5A/µs, Time range: 20µs - 999,999ms, with a resolution of 20µs				
Current Soft Start Time		0-999999ms, time accuracy is 20µs.				
Short Circuit Function		≥1.1 times the range of this stage.				
-	Working Temperature		0~	40°C		
Temperature	Storage Temperature		-25	~70°C		
Dimension	W×H×D (mm)		426×	88×460		
Weight	Kg	12	2.4	12	2.0	

Any changes to the above parameter specifications will not be notified separately.

Model		AN235	14(F)	AN235	AN23514B(F)		
	Range	0-24A	0-240A	0-6A	0-60A		
Constant Current Mode(CC)	Set Resolution	1mA	10mA	0.1mA	1mA		
	Accuracy	0.05%+0.05%F.S.	0.1%+0.05%F.S.	0.03%+0	.05%F.S.		
	Range	0.1-20V	0.1-150V	0.1-60V	0.1-600V		
Constant Voltage Mode(CV)	Set Resolution	1mV	10mV	1mV	10mV		
	Accuracy	0.03%+0	.02%F.S.	0.03%+0.02%F.S.	0.03%+0.05%F.S.		
Constant Resistance Mode(CR)	Range		0.03Ω-99.999Ω / 100Ω-	999.99Ω / 1000Ω-9999.9Ω			
When input voltage and	Set Resolution		0.001Ω/(	0.01Ω/0.1Ω			
current values ≥ 10% of full range)	Accuracy		Vin/Rset*(0.	2%)+0.2%IF.S.			
Constant Power Mode(CP)	Range		100W	//1200W			
When input voltage and	Set Resolution		1mV	V/0.1W			
current values ≥ 10% of full range)	Accuracy		0.1%+	0.1%F.S.			
	Range	0-20V	0-150V	0-60V	0-600V		
/oltage Measurement	Measurement Resolution	1mV	10mV	1mV	10mV		
	Accuracy	0.015%+0	0.03%F.S.	0.015%+0.03%F.S.	0.015%+0.05%F.S		
	Range	0-24A	0-240A	0-6A	0-60A		
Current Measurement	Measurement Resolution	0.1mA	1mA	0.01mA	0.1mA		
	Accuracy	0.05%+0.05%F.S.	0.1%+0.1%F.S.	0.03%+0.05%F.S.	0.03%+0.08%F.S.		
Power Measurement	Range		100W	//1200W			
When input voltage and	Measurement Resolution		1mV	V/0.1W			
surrent values ≥ 10% of full range)	Accuracy		0.1%+	0.1%F.S.			
Battery Test		Input voltage: Maximi		nt resolution: Resolution fo 0-99.999 hours	r this range of current,		
Dynamic Test				Current change rate: 2.5A 9ms, with a resolution of 20			
Current Soft Start Time			0-999999ms, tim	e accuracy is 20µs.			
Short Circuit Function			≥1.1 times the r	ange of this stage.			
	Working Temperature		0~	40 C			
Temperature	Storage Temperature		-25	~70°C			
Dimension	W×H×D (mm)		426×	88×460			
Weight	Kg	12	.4	12	.0		

Any changes to the above parameter specifications will not be notified separately.

#### Product Introduction

The AN236(F) Series is a new high power DC electronic load introduced by Ainuo Instrument Co., Ltd. It offers voltage ranges of 150V, 600V, and 1,200V, with power ranges from 2kW to 60kW. This series of electronic loads are mainly used for testing products in various fields such as new energy vehicle OBCs, power batteries, charging stations, power electronics, servo/server power supplies, high voltage UPS, military, photovoltaics, grid energy storage, aerospace, and more. Featuring a new generation digital controller, it comes with five basic modes, seven advanced modes, and sequence function to meet users' programming and automation test requirements.

#### Features

- High power density: 6kW in 4U height, and 24kW in 13U height. Compact, light, convenient.
- With precision measurement technology, it supports voltage accuracy of 0.015%+0.015%F.S., current accuracy of 0.04%+0.04%F.S., and power accuracy of 0.1%+0.1%F.S. (maintained constant at high temperatures).
- Built-in dynamic loading mode with a dynamic frequency of up to 25kHz and Vpk+/- test function.
- Built-in FLEX mode for simulating capacitive loads, inductive loads, and complex impedance loads.
- Wide range, offering nearly twice the current range of traditional high power loads with the same capacity.
- Excellent dynamic characteristics, with a maximum current slew rate of 96A/us.
- Built-in functions include constant current(CC), constant voltage(CV), constant resistance(CR), constant power(CP), short circuit simulation, overcurrent protection test, sequence test, etc.
- It has comprehensive protection features including overcurrent, overvoltage, overtemperature, reverse connection, SENSE protection, etc.
- It has a built-in temperature sensing chip and a speed-controlled fan.
- It has a built-in battery mode for discharging tests for energy integration and timing.
- Versatile Interfaces Standard configurations include six communication interfaces: LAN, GPIB, USB, CAN, RS232, and RS485, ensuring seamless integration with various test systems.

Electronic Load



Electronic Load

Serialized Models



The AN236(F) Series offers a complete range of models to choose from, as shown in the table below.

	150V	600V	1200V	Heigh
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)	26U
36kW	AN23636E-150-2400(F)	AN23636E-600-2400(F)	AN23636E-1200-1440(F)	26U
42kW	AN23642E-150-2400(F)	AN23642E-600-2400(F)	AN23642E-1200-1680(F)	34U
48kW	AN23648E-150-2400(F)	AN23648E-600-2400(F)	AN23648E-1200-1920(F)	34U
54kW	AN23654E-150-2400(F)	AN23654E-600-2400(F)	AN23654E-1200-2160(F)	38U
60kW	AN23660E-150-2400(F)	AN23660E-600-2400(F)	AN23660E-1200-2400(F)	33U

Any changes to the above parameter specifications will not be notified separately.

#### Applications

- DC charging pile/on-board charger and power electronics tests.
- Smart manufacturing and industrial motor tests.
- Automotive electronics tests, such as fuses, control boxes, etc.
- Relay simulation load test.
- Military aerospace power test.
- Server power supplies, high voltage UPS, and communication power tests.
- Battery discharge test.
- Virtual load tests for photovoltaic component array and wind power generation.
- Simulation test for energy storage systems.
- DC power supply and power electronic components.



# High Power Density, Compact and Wide Voltage

The AN236(F) Series load features a wide input voltage and current range, meeting various testing needs for high current, low voltage, or high voltage, low current. With a high power density design, it has half the volume and one-third of the weight compared to traditional electronic loads.



### Basic Mode

Built-in basic constant voltage(CV), constant current(CC), constant resistance(CR), and constant power(CP) modes, which can meet a wide range of testing needs.



#### Master/Slave Parallel Connection – Flexibl Power Configuration

The 23600E(F) series employs digital parallel technology to achieve master/slave parallel functionality, supporting arbitrary parallel connection of different models within the same voltage rating. The maximum number of parallel units is 16, with a maximum combined power of 960 kW and a maximum combined current of 38.4 kA.

In parallel mode, only the master unit requires operation and control, providing the same convenience as a single unit. The master and slave units automatically distribute current and support multiple modes of load testing.



#### BATY Mode - Battery Test Dedicated Mode

For batteries, the AN236(F) Series load provides three discharge modes: constant current, constant resistance, and constant power modes. By setting voltage thresholds and test times (1s-100,000s), the electronic load can control the load to prevent over-discharge and battery damage. Additionally, the load also provides a display of the discharged energy. The BATY mode is also suitable for super capacitors and similar discharge testing scenarios.



#### SWD Mode – Sine Wave Loading

The AN23600E(F) electronic load features a sine wave current loading function, where the current is output in a fixed-frequency sine wave. Users can control the output waveform by adjusting the DC current component (I_DC), the AC sine wave component (I_AC), and the sine wave frequency (Frequency). The minimum point of the sine wave loading current must not fall below zero amperes, and the frequency adjustment range is 0–20 kHz. This function is widely used in fuel cell ACIR testing.



#### CCD Mode - Rapid Dynamic and Vpp Testing

The AN236(F) Series of loads feature built-in high-speed dynamic loading testing capabilities, with dynamic changes possible up to 25kHz. Users can set a repeating number of cycles for a specified period, ranging from 1 to 100,000, or conduct continuous dynamic loading. As illustrated in the diagram below, users can set the high and low loading values of the current, loading time, rise and fall slopes, etc. While conducting dynamic loading, the load also provides measurements of the peak-to-peak voltage, with a sampling frequency of up to 500kHz.



#### CRD Mode - Rapid Dynamic and Vpp Testing

The AN236(F) Series features built-in high-speed dynamic load testing capabilities, with dynamic changes possible up to 25kHz. Users can set a repeating number of cycles for a specified period, ranging from 1 to 100,000, or conduct continuous dynamic loading. As shown in the diagram below, users can set the high and low loading values of the resistance, loading time, rise and fall slopes, etc. While conducting dynamic loading, the load also provides measurements of the peak-to-peak voltage, with a sampling frequency of up to 500kHz.



# CC Mode - Ultra-Fast Loading Speed and Ultra-Low Overshoot

For example, the AN23606E-1200-240(F) can provide a rise speed of 12A/uS. While addressing fast loading issues, the load's built-in digital controller ensures minimal overshoot. The figure below shows the comparison of the current rise waveforms during full-speed loading between the AN236(F) Series load and a certain brand of electronic load.



# CV Mode - High-performance Controller with Adjustable Loop Speed

With the increasing application scenarios of constant current sources, the AN236(F) Series load is equipped with an optimized zero-point compensation controller. While meeting the requirements for fast, stable, and accurate loading, it offers three adjustable loop speeds, greatly expanding the load's adaptability. Unlike the ordinary integral lag control, as shown in the figure on the right, there is a distinct predictive control section. The current waveform below shows the "prediction" of the tested power supply at the earliest time, enabling a rapid and stable CV loading process.



#### LIST Mode - Sequence Loading Function

The AN236(F) load features a built-in sequence test function that can edit up to 8 sets of data, with each set editable for 200 steps. Each step can be edited for execution time within the range of 0-100s. In scenarios such as battery discharge, server, and communication power mixed load modulation, providing different load current waveforms as an effective supplement for dynamic current tests.



#### High Precision Measurement

The AN236(F) Series load offers three grade for voltage and current measurements. Taking the AN23606E-1200-240 as an example, it provides voltage ranges of 150V/600V/1,200V, catering to the needs of low, medium, and high voltage ranges. For current measurement, it offers 24A/120A/240A, providing more accurate measurement values for different application scenarios. Utilizing high-precision A/D and D/A chips, it supports accuracies 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 Function

The AN236(F) Series load has an instant 2 times overpower capability, allowing the load to withstand a load capacity exceeding the rated power for a short period of time. This effectively solves the selection issue for impact-type products. Users can select based on the rated power of the power supply or battery, rather than the maximum power, which saves costs and improves 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.



#### Von/Voff Function - Flexible Voltage Protection

During the power-on moment of the DUT (Device Under Test) when the output hasn't stabilized yet, immediate loading by the load can lead to the failure of the DUT's startup, risking voltage oscillations or damage to the DUT. Some DUTs cannot tolerate excessively low operating voltages, such as battery systems, where over-discharge can cause irreversible damage to the batteries. Therefore, the load provides a flexible automatic load and unload function - Von/Voff. Once the voltage judgment is set, the load will remain unloaded when the voltage detected is lower than the Von voltage. It will start loading only when the voltage rises above the Von voltage, thus ensuring the startup voltage protection of the DUT. The automatic unload depends on the setting of Von Latch. If set to ON, the load unloads when the voltage is below Voff, and it won't load again. If set to OFF, the load unloads when the voltage is below Von, and it will reload when the voltage is higher than Von.



#### Visual Programming Software

Users can test by using the PC software programming load. It will be troublesome to set the series test (List) via 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.



## Ainuo

Data Acquisition Function

Users can utilize the load's data acquisition function in conjunction with a trigger source to capture instantaneous voltage and current data.

The upper computer software can then plot the data points into waveforms, and the test data can be exported to excel.

Sampling time: 1-40 microsecond; resolution: 1 microsecond; Number of sampling points: 1-1,024 (total number of sampling points);

Trigger source: Load on/Load off/TTL/BUS/Manual.





No.	Name	Description
1	Power supply switch	AC power supply switch of the electronic load master unit
2	F1-F5 Menu	F1-F5, shortcut menu
3	Display screen	Shows settings and measured data
4	Direction key	Left and right key
5	Knob	Used for moving cursor up and down and adjusting parameters
6	Tricolor light	Indicator light for load working status
Ø	Control button	LOAD, MENU, ESC, ENTER
8	Number key	Number keys 0-9 and undo key



No.	Name	Description
1	DC load terminal	Load terminal
2	Vsense terminal	Remote detection of power supply voltage
3	RS485&CAN	485 Communication Interface, CAN Communication Interface
4	GPIB	GPIB Communication
5	LAN	Standard Ethernet Communication Interface
6	USB-B	Standard USB Communication Interface, PC Connectable
0	RS232	Standard RS232 Communication Interface
8	1 Monitor	Load current waveform detection
9	V Monitor	Load voltage waveform detection
10	Digtal IO	Multiple input/output signals
1	Parallel terminal	Parallel connection port
12	Ground terminal	Connected to the ground
3	Power socket	Power supply input

Exceeding & Trustworthy

		anc
Specific	Jau	0115

Mod	iel	AN23630E -150-2400(F)	AN23636E -150-2400(F)	AN23642E -150-2400(F)	AN23648E -150-2400(F)	AN23654E -150-2400(F)	AN23660E -150-2400(F)
	Voltage			0-1	50V		
Working range	Current	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A
0.110.000.000.000.000000000000000000000	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum wor	king voltage	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A
Constant current	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
loading	Accuracy			0.05%+0	.05%F.S.	I	Alternation and Alternation
Complement of the second	Range			16/80	/150V		
Constant voltage	Resolution			0.1/0.5	5/1mV		
loading	Accuracy			0.025%+0	.025%F.S.		
		1.3mΩ-12.5Ω(16V)	1.3mΩ-12.5Ω(16V)	1.3mΩ-12.5Ω(16V)	1.3mΩ-12.5Ω(16V)	1.3mΩ-12.5Ω(16V)	1.3mΩ-12.5Ω(16V)
Constant	Range	5mΩ-50Ω(80V)	5mΩ-50Ω(80V)	5mΩ-50Ω(80V)	5mΩ-50Ω(80V)	5mΩ-50Ω(80V)	5mΩ-50Ω(80V)
resistance		0.125Ω-250Ω(150V)	0.125Q-250Q(150V)	0.125Ω-250Ω(150V)	0.125Q-250Q(150V)	0.125Q-250Q(150V)	0.125Ω-250Ω(150V
load	Resolution	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy			Vin/Rset*(0.2	%)+0.2%IF.S.		
0	Range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000W
Constant power	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
loading	Accuracy			0.2%+0	.2%F.S.		
		2mA/us-24A/us (240A)	2mA/us-24A/us (240A)	2mA/us-24A/us (240A)	2mA/us-24A/us (240A)	2mA/us-24A/us (240A)	2mA/us-24A/us (240A)
Current change rate	Setting range	10mA/us-48A/us (1200A)	10mA/us-48A/us (1200A)	10mA/us-48A/us (1200A)	10mA/us-48A/us (1200A)	10mA/us-48A/us (1200A)	10mA/us-48A/us (1200A)
0.000		20mA/us-96A/us (2400A)	20mA/us-96A/us (2400A)	20mA/us-96A/us (2400A)	20mA/us-96A/us (2400A)	20mA/us-96A/us (2400A)	20mA/us-96A/us (2400A)
	Resolution	2/10/20 mA/us	2/10/20 mA/us	2/10/20 mA/us	2/10/20 mA/us	2/10/20 mA/us	2/10/20 mA/us
Specification	Dimensions	610 mm×1410 mm ×800 mm (W×H×D)	610 mm×1410mm ×800 mm (W×H×D)	610 mm×1762 mm ×800 mm (W×H×D)	610 mm×1762 mm ×800 mm (W×H×D)	610 mm×1940 mm ×800 mm (W×H×D)	610 mm×1720 mm ×800 mm (W×H×D)
	Weight	205kg	231kg	272kg	298kg	435kg	469kg

Moc	fel	AN23602E -600-140(F)	AN23603E -600-210(F)	AN23604E -600-280(F)	AN23605E -600-350(F)	AN23606E -600-420(F)	AN23608E -600-560(F)
	Voltage			0-6	00V		
Working range	Current	0-140A	0-210A	0-280A	0-350A	0-420A	0-560A
	Power	2kW	3kW	4kW	5kW	6kW	8kW
Minimum wor	king voltage	14V@140A	14V@210A	14V@280A	14V@350A	14V@420A	14V@560A
Constant current	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
loading	Accuracy			0.05%+0	.05%F.S.		
Constantuslings	Range			80/150	)/600V		
Constant voltage	Resolution			0.5/1	/5mV		
loading	Accuracy			0.025%+0	.025%F.S.		
		0.15Ω-1500Ω(80V)	0.1Ω-1000Ω(80V)	75mΩ-750Ω(80V)	50mΩ-500Ω(80V)	50mΩ-500Ω(80V)	38mΩ-375Ω(80V)
Constant	Range	0.6Ω-6000Ω(150V)	0.4Ω-4000Ω(150V)	300mΩ-3000Ω(150V)	200mΩ-2000Ω(150V)	200mΩ-2000Ω(150V)	150mΩ-1.5kΩ(150\
resistance		6Ω-12000Ω(600V)	4Ω-8000Ω(600V)	3Ω-6000Ω(600V)	2Ω-4000Ω(600V)	2Ω-4000Ω(600V	1.5Ω-3kΩ(600V)
load	Resolution	2mA/Vsense	2mA/Vsense	4mA/Vsense	4mA/Vsense	4mA/Vsense	5mA/Vsense
	Accuracy			Vin/Rset*(0.2	%)+0.2%IF.S.	1. CM/doi.10/00-000-00-00-00-00-00-00-00-00-00-00-0	
0	Range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W
Constant power	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW
loading	Accuracy			0.2%+0	.2%F.S.		
		0.2mA/us-0.6A/us (14A)	0.2mA/us-0.9A/us (21A)	0.4mA/us-1.2A/us (28A)	0.4mA/us-1.5A/us (35A)	0.4mA/us-1.8A/us (42A)	0.5mA/us-1.8A/us (56A)
Current change rate	Setting range	1mA/us-3A/us (70A) 2mA/us-6A/us (140A)	1mA/us-4.5A/us (105A) 2mA/us-9A/us (210A)	2mA/us-6A/us (140A) 4mA/us-12A/us (280A)	2mA/us-7.5A/us (175A) 4mA/us-15A/us (350A)	2mA/us-9A/us (210A) 4mA/us-18A/us (420A)	2mA/us-9A/us (280A) 5mA/us-18A/us (560A)
	Resolution	0.2/1/2mA/us	0.2/1/2mA/us	0.4/2/4mA/us	0.4/2/4mA/us	0.4/2/4mA/us	0.5/2/5mA/us
Specification	Dimensions			n×177mm×600mm(W increased by 201mm	(C)		426 mm×400 mm ×650 mm (W×H×D)
	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg

Mod	iel	AN23602E -150-200(F)	AN23603E -150-300(F)	AN23604E -150-400(F)	AN23605E -150-500(F)	AN23606E -150-600(F)	AN23608E -150-800(F)
	Voltage			0-15	50V		
Working range	Current	0-200A	0-300A	0-400A	0-500A	0-600A	0-800A
Carbonal Constant of the	Power	2kW	3kW	4kW	5kW	6kW	8kW
Minimum wo	king voltage	1.8V@200A	1.8V@300A	1.8V@400A	1.8V@500A	1.8V@600A	1.8V@800A
<u></u>	Range	20/100/200A	30/150/300A	40/200/400A	50/250/500A	60/300/600A	80/400/800A
Constant current	Resolution	0.2/1/2mA	0.2/1/2mA	0.4/2/4mA	0.5/2/5mA	0.5/2/5mA	1/5/10mA
loading	Accuracy			0.05%+0	.05%F.S.		
o	Range			16/80/	150V		
Constant voltage	Resolution			0.1/0.5	5/1mV		
loading	Accuracy			0.025%+0	.025%F.S.	n	
	0.000000000000	15mΩ-150Ω(16V)	10mΩ-100Ω(16V)	7.5mΩ-75Ω(16V)	5mΩ-50Ω(16V)	5mΩ-50Ω(16V)	3.8mΩ-37.5Ω(16\
Constant	Range	60mΩ-600Ω(80V)	40mΩ-400Ω(80V)	30mΩ-300Ω(80V)	20mΩ-200Ω(80V)	20mΩ-200Ω(80V)	15mΩ-150Ω(80V
resistance		1.5Ω-3000Ω(150V)	1Ω-2000Ω(150V)	0.75Ω-1500Ω(150V)	0.5Ω-1000Ω(150V)	0.5Ω-1000Ω(150V)	0.375Ω-750Ω(150
load	Resolution	2mA/Vsense	2mA/Vsense	4mA/Vsense	5mA/Vsense	5mA/Vsense	10mA/Vsense
20072	Accuracy			Vin/Rset*(0.2	%)+0.2%IF.S.		
0	Range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W
Constant power	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW
loading	Accuracy			0.2%+0	.2%F.S.		
Current change	Setting range	0.2mA/us-2A/us (20A) 1mA/us-7A/us	0.2mA/us-3A/us (30A) 1mA/us-10.5A/us	0.4mA/us-4A/us (40A) 2mA/us-14A/us	0.5mA/us-5A/us (50A) 2mA/us-17.5A/us	0.5mA/us-6A/us (60A) 2mA/us-21A/us	1mA/us-8A/us (80A) 5mA/us-24A/us
rate	Coung range	(100A) 2mA/us-14A/us (200A)	(150A) 2mA/us-21A/us (300A)	(200A) 4mA/us-28A/us (400A)	(250A) 5mA/us-35A/us (500A)	(300A) 5mA/us-42A/us (600A)	(400A) 10mA/us-48A/us (800A)
	Resolution	0.2/1/2mA/us	0.2/1/2mA/us	0.4/2/4mA/us	1/5/10mA/us	0.5/2/5mA/us	1/5/10 mA/us
Specification	Dimension			n×177mm×600mm(W) increased by 201mm v			426 mm×400 mm ×650 mm (W×H×D)
1	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg

ny change oopa

Mod	el	AN23610E -150-1000(F)	AN23612E -150-1200(F)	AN23615E -150-1500(F)	AN23618E -150-1800(F)	AN23620E -150-2000(F)	AN23624E -150-2400(F)
	Voltage			0-1	50V		
Working range	Current	0-1000A	0-1200A	0-1500A	0-1800A	0-2000A	0-2400A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum work	king voltage	1.8V@1000A	1.8V@1200A	1.8V@1500A	1.8V@1800A	1.8V@2000A	1.8V@2400A
Constant comment	Range	100/500/1000A	120/600/1200A	150/750/1500A	180/900/1800A	200/1000/2000A	240/1200/2400A
Constant current	Resolution	1/5/10mA	1/5/10mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
loading	Accuracy			0.05%+0	.05%F.S.		
Q	Range			16/80	/150V		
Constant voltage	Resolution			0.1/0.	5/1mV		
loading	Accuracy			0.025%+0	.025%F.S.		
Constant	Range	2.5mΩ-25Ω(16V) 10mΩ-100Ω(80V)	2.5mΩ-25Ω(16V) 10mΩ-100Ω(80V)	1.7mΩ-16.67Ω(16V) 6.7mΩ-66.67Ω(80V)	1.7mΩ-16.67Ω(16V) 6.7mΩ-66.67Ω(80V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V)	1.3mΩ-12.5Ω(16V 5mΩ-50Ω(80V)
resistance		0.25Ω-500Ω(150V)	0.25Ω-500Ω(150V)	0.167Q-333.34Q(150V)	0.167Ω-333.34Ω(150V)	0.125Q-250Q(150V)	0.125Ω-250Ω(150V
load	Resolution	10mA/Vsense	10mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy			Vin/Rset*(0.2	%)+0.2%IF.S.		
Constant power	Range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000
loading	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	40/200/400mW	100/500/1000mW
loading	Accuracy			0.2%+0	).2%F.S.	С. М. И.	ů. V
Current change rate	Setting range	1mA/us-10A/us (100A) 5mA/us-27.5A/us (500A) 10mA/us-55A/us	1mA/us-12A/us (120A) 5mA/us-30A/us (600A) 10mA/us-60A/us	2mA/us-15A/us (150A) 10mA/us-32A/us (750A) 20mA/us-64A/us	2mA/us-18A/us (180A) 10mA/us-36A/us (900A) 20mA/us-72A/us	2mA/us-20A/us (200A) 10mA/us-40A/us (1000A) 20mA/us-80A/us	2mA/us-24A/us (240A) 10mA/us-48A/us (1200A) 20mA/us-96A/us
	Resolution	(1000A) 1/5/10 mA/us	(1200A) 1/5/10 mA/us	(1500A) 2/10/20 mA/us	(1800A) 2/10/20 mA/us	(2000A) 2/10/20 mA/us	(2400A) 2/10/20 mA/us
Specification	Dimensions	426 mm×400	0 mm×650 mm (H×D)	426 mm×532	mm×650 mm H×D)	426 mm×665	mm×650 mm H×D)
	Weight	66.5kg	72kg	92.5kg	98kg	113kg	124kg

Any changes to the above parameter specifications will not be notified separately.

Electronic Load

Specifications

### 

Any changes to the above parameter specifications will not be notified separately.

Voltage

Current

Weight

Exceeding & Trustworthy

-600-1400(F)

0-1400A

AN23624E

-600-1680(F)

0-1680A

124kg

Specifications

Mod		AN23602E	AN23603E	AN23604E	AN23605E	AN23606E	AN23608E
MOC	101	-1200-80(F)	-1200-120(F)	-1200-160(F)	-1200-200(F)	-1200-240(F)	-1200-320(F)
	Voltage			0-12	00V		
Working range	Current	0-80A	0-120A	0-160A	0-200A	0-240A	0-320A
	Power	2kW	3kW	4kW	5kW	6kW	8kW
Minimum wor	king voltage	20V@80A	20V@120A	20V@160A	20V@200A	20V@240A	20V@320A
Constant current	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
loading	Accuracy		1	0.04%+0	.06%F.S.	<ol> <li>Constanting of the second s Second second sec</li></ol>	The second second second
Constant voltage	Range			150/600	)/1200V		
	Resolution			1/5/1	0mV		
loading	Accuracy			0.025%+0	.025%F.S.		
		0.3Ω-3kΩ(150V)	0.2Ω-2kΩ(150V)	0.15Ω-1.5kΩ(150V)	0.1Ω-1kΩ(150V)	0.1Ω-1kΩ(150V)	75mΩ-0.75kΩ(150\
Constant	Range	1.2Ω-12kΩ(600V)	0.8Ω-8kΩ(600V)	0.6Ω-6kΩ(600V)	0.4Ω-4kΩ(600V)	0.4Ω-4kΩ(600V)	0.3Ω-3kΩ(600V)
resistance		30Ω-60kΩ(1200V)	20Ω-40kΩ(1200V)	15Ω-30kΩ(1200V)	10Ω-20kΩ(1200V)	10Ω-20kΩ(1200V)	7.5Ω-15kΩ(1200V)
load	Resolution	1mA/Vsense	1mA/Vsense	2mA/Vsense	2mA/Vsense	2mA/Vsense	4mA/Vsense
N3-0438-40	Accuracy			Vin/Rset*(0.2	%)+0.2%IF.S.		
Constant power	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
loading	Accuracy		A	0.2%+0	.2%F.S.	h	
	0.00000000000000	0.1mA/us-0.4A/us (8A)	0.1mA/us-0.6A/us (12A)	0.2mA/us-0.8A/us (16A)	0.2mA/us-1A/us (20A)	0.2mA/us-1.2A/us (24A)	0.4mA/us-1.2A/us (32A)
Current change rate	Setting range	0.5mA/us-2A/us (40A) 1mA/us-4A/us (80A)	0.5mA/us-3A/us (60A) 1mA/us-6A/us (120A)	1mA/us-4A/us (80A) 2mA/us-8A/us (160A)	1mA/us-5A/us (100A) 2mA/us-10A/us (200A)	1mA/us-6A/us (120A) 2mA/us-12A/us (240A)	2mA/us-6A/us (160A) 4mA/us-12A/us (320A)
	Resolution	0.1/0.5/1mA/us	0.1/0.5/1mA/us	0.2/1/2mA/us	0.2/1/2mA/us	0.2/1/2mA/us	0.4/2/4mA/us
Specification	Dimensions			×177mm×600mm(W× ncreased by 201mm w	STATES CONTRACTOR AND		426 mm×400 mm ×650 mm (W×H×D)
	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg

Mod	lel	AN23610E -1200-400(F)	AN23612E -1200-480(F)	AN23615E -1200-600(F)	AN23618E -1200-720(F)	AN23620E -1200-800(F)	AN23624E -1200-960(F)
	Voltage			0-12	200V		
Working range	Current	0-400A	0-480A	0-600A	0-720A	0-800A	0-960A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum wor	king voltage	20V@400A	20V@480A	20V@600A	20V@720A	20V@800A	20V@960A
Constant current	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
loading	Accuracy			0.04%+0	.06%F.S.	/	
Constant unlines	Range			150/600	0/1200V		
Constant voltage	Resolution			1/5/1	10mV		
loading	Accuracy			0.025%+0	.025%F.S.		
		50mΩ-0.5kΩ(150V)	50mΩ-0.5kΩ(150V)	34mΩ-0.34kΩ(150V)	34mΩ-0.34kΩ(150V)	25mΩ-0.25kΩ(150V)	25mΩ-0.25kΩ(150V
Constant	Range	0.2Ω-2kΩ(600V)	0.2Ω-2kΩ(600V)	0.14Ω-1.34kΩ(600V)	0.14Ω-1.34kΩ(600V)	0.1Ω-1kΩ(600V)	0.1Ω-1kΩ(600V)
resistance		5Ω-10kΩ(1200V)	5Ω-10kΩ(1200V)	3.34Ω-6.67kΩ(1200V)	3.34Q-6.67kQ(1200V)	2.5Ω-5kΩ(1200V)	2.5Ω-5kΩ(1200V)
load	Resolution	4mA/Vsense	5mA/Vsense	5mA/Vsense	5mA/Vsense	10mA/Vsense	10mA/Vsense
	Accuracy		I	Vin/Rset*(0.2	%)+0.2%IF.S.	A contraction of a contraction	I
Constant and a	Range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000
Constant power	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	100/500/1000mW	100/500/1000mW
loading	Accuracy		N	0.2%+0	.2%F.S.		
		0.4mA/us-1.4A/us (40A)	0.4mA/us-1.6A/us (48A)	0.5mA/us-1.8A/us (60A)	0.5mA/us-2A/us (72A)	1mA/us-2.2A/us (80A)	1mA/us-2.4A/us (96A)
Current change rate	Setting range	2mA/us-7A/us (200A)	2mA/us-8A/us (240A)	2mA/us-9A/us (300A)	2mA/us-10A/us (360A)	5mA/us-11A/us (400A)	5mA/us-12A/us (480A)
0.000		4mA/us-14A/us (400A)	4mA/us-16A/us (480A)	5mA/us-18A/us (600A)	5mA/us-20A/us (720A)	10mA/us-22A/us (800A)	10mA/us-24A/us (960A)
	Resolution	0.4/2/4mA/us	0.4/2/4mA/us	0.5/2/5mA/us	0.5/2/5mA/us	1/5/10mA/us	1/5/10mA/us
Specification	Dimensions		×400 mm (W×H×D)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	×532 mm (W×H×D)		×665 mm n(W×H×D)
	Weight	66.5kg	72kg	92.5kg	98kg	113kg	124kg

	Power	10kW	12kW	15kW	18kW	20kW	24kW			
Minimum worl	king voltage	14V@700A	14V@840A	14V@1050A	14V@1260A	14V@1400A	14V@1680A			
nstant current	Range	70/350/700A	84/420/840A	105/525/1050A	128/630/1260A	140/700/1400A	168/840/1680A			
loading	Resolution	0.5/2.5/5mA	1/5/10mA	1/5/10mA	1/5/10mA	2/10/20mA	2/10/20mA			
loading	Accuracy			0.05%+0	.05%F.S.					
nstant voltage	Range			80/150	)/600V					
loading	Resolution			0.5/1	/5mV					
loading	Accuracy			0.025%+0	.025%F.S.					
		25mΩ-250Ω(80V)	25mΩ-250Ω(80V)	17mΩ-166.67Ω(80V)	17mΩ-166.67Ω(80V)	13mΩ-125Ω(80V)	13mΩ-125Ω(80V)			
Constant	Range	0.1Ω-1000Ω(150V)	0.1Ω-1000Ω(150V)	67Ω-666.67Ω(150V)	67Ω-666.67Ω(150V)	50mΩ-500Ω(150V)	50mΩ-500Ω(150V)			
resistance		1Ω-2000Ω(600V)	1Ω-2000Ω(600V)	0.67Ω-1333.34Ω(600V)	0.67Ω-1333.34Ω(600V)	0.5Ω-1000Ω(600V)	0.5Ω-1000Ω(600V)			
load	Resolution	5mA/Vsense	10mA/Vsense	10mA/Vsense	10mA/Vsense	20mA/Vsense	20mA/Vsense			
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.								
nstant power	Range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W			
loading	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	100/500/1000mW	100/500/1000mW			
loading	Accuracy	0.2%+0.2%F.S.								
		0.5mA/us-2.1A/us (70A)	1mA/us-2.4A/us (84A)	1mA/us-2.7A/us (105A)	1mA/us-3A/us (128A)	2mA/us-3.3A/us (140A)	2mA/us-3.6A/us (168A)			
rrent change rate	Setting range	2.5mA/us-10.5A/us (350A) 5mA/us-21A/us (700A)	5mA/us-12A/us (420A) 10mA/us-24A/us (840A)	5mA/us-13.5A/us (525A) 10mA/us-27A/us (1050A)	5mA/us-15A/us (630A) 10mA/us-30A/us (1260A)	10mA/us-16.5A/us (700A) 20mA/us-33A/us (1400A)	10mA/us-18A/us (840A) 20mA/us-36A/us (1680A)			
	Resolution	0.5/2.5/5mA/us	1/5/10mA/us	1/5/10mA/us	1/5/10mA/us	2/10/20mA/us	2/10/20mA/us			
pecification	Dimensions		mm×650 mm H×D)		mm×650 mm H×D)	426 mm×665 (W×I	mm×650 mm H×D)			

-600-1260(F)

0-1260A

-600-1050(F)

0-1050A

92.5kg

0-600V

Any changes to the above parameter specifications will not be notified separately.

113kg

98kg

Mod	lel	AN23630E -600-2100(F)	AN23636E -600-2400(F)	AN23642E -600-2400(F)	AN23648E -600-2400(F)	AN23654E -600-2400(F)	AN23660E -600-2400(F)		
-	Voltage	0-600V							
Working range	Current	0-2100A	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A		
2010/01/2012-052	Power	30kW	36kW	42kW	48kW	54kW	60kW		
Minimum wo	king voltage	14V@2100A	14V@2400A	14V@2400A	14V@2400A	14V@2400A	14V@2400A		
Constant comment	Range	210/1050/2100A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A		
Constant current	Resolution	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA		
loading	Accuracy			0.05%+0	.05%F.S.				
o	Range	80/150/600V							
Constant voltage	Resolution	0.5/1/5mV							
loading	Accuracy	0.025%+0.025%F.S.							
	Range	10mΩ-100Ω(80V)	9mΩ-87.5Ω(80V)	9mΩ-87.5Ω(80V)	9mΩ-87.5Ω(80V)	9mΩ-87.5Ω(80V)	9mΩ-87.5Ω(80V)		
Constant		40mΩ-400Ω(150V)	4mΩ-350Ω(150V)	4mΩ-350Ω(150V)	4mΩ-350Ω(150V)	4mΩ-350Ω(150V)	4mΩ-350Ω(150V)		
resistance		0.4Ω-800Ω(600V)	0.35Ω-700Ω(600V)	0.35Ω-700Ω(600V)	0.35Ω-700Ω(600V)	0.35Ω-700Ω(600V)	0.35Ω-700Ω(600V		
load	Resolution	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense		
2000048	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.							
<b>A 1 1</b>	Range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000V		
Constant power	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW		
loading	Accuracy	0.2%+0.2%F.S.							
Current change rate		2mA/us-3.6A/us (210A) 10mA/us-18A/us	2mA/us-3.6A/us (240A) 10mA/us-18A/us	2mA/us-3.6A/us (240A) 10mA/us-18A/us	2mA/us-3.6A/us (240A) 10mA/us-18A/us	2mA/us-3.6A/us (240A) 10mA/us-18A/us	2mA/us-3.6A/us (240A) 10mA/us-18A/us		
	Setting range	(1050A) 20mA/us-36A/us (2100A)	(1200A) 20mA/us-36A/us (2400A)	(1200A) 20mA/us-36A/us (2400A)	(1200A) 20mA/us-36A/us (2400A)	(1200A) 20mA/us-36A/us (2400A)	(1200A) 20mA/us-36A/us (2400A)		
	Resolution	2/10/20mA/us	2/10/20mA/us	2/10/20mA/us	2/10/20mA/us	2/10/20mA/us	2/10/20mA/us		
Specification	Dimensions	610 mm×1410 mm ×800 mm (W×H×D)	610 mm×1410 mm ×800 mm (W×H×D)	610 mm×1762 mm ×800 mm (W×H×D)	610 mm×1762 mm ×800 mm (W×H×D)	610 mm×1940 mm ×800 mm (W×H×D)	610 mm×1720 mm ×800 mm (W×H×D)		
	Weight	205kg	231kg	272kg	298kg	435kg	469kg		

-600-840(F)

0-840A

72kg

-600-700(F)

0-700A

66.5kg

Any changes to the above parameter specifications will not be notified separately.

Specifications

Working range

Constant current loading Constant voltage loading

> Constant resistance load

Constant power loading

Current change rate

Specification

Model

#### Ainuo Electronic Load

Any changes to the above parameter specifications will not be notified separately.

AN23660

1200.2400/F

0-2400A

60kW

20V@2400A

240/1200/2400A

2/10/20mA

20mA/Vsense

2mA/us-2.4A/us

(240A)

10mA/us-12A/us

(1200A)

20mA/us-24A/us

(2400A)

2/10/20mA/us

×800 mm

(W×H×D)

469kg

AN23654E

1200-2160/F

0-2160A

54kW

20V@2160A

216/1080/2160A

2/10/20mA

20mA/Vsense

2mA/us-2.4A/us

(216A)

10mA/us-12A/us

(1080A)

20mA/us-24A/us

(2160A)

2/10/20mA/us

×800 mm

(W×H×D)

435kg

High Power Bidirectional DC Electronic Load **ANEL(F)** Series



Any changes to the above parameter specifications will not be notified separately.

610 mm×1762 mm 610 mm×1762 mm 610 mm×1940 mm 610 mm×1720 mm

AN23648

1200-1920(F

0-1920A

48kW

20V@1920A

192/960/1920A

2/10/20mA

20mA/Vsense

2mA/us-2.4A/us

(192A)

10mA/us-12A/us

(960A)

20mA/us-24A/us

(1920A)

2/10/20mA/us

×800 mm

(W×H×D)

298ka

1200-1680/F

0-1680A

42kW

20V@1680A

168/840/1680A

2/10/20mA

20mA/Vsense

2mA/us-2.4A/us

(168A)

10mA/us-12A/us

(840A)

20mA/us-24A/us

(1680A)

2/10/20mA/us

×800 mm

(W×H×D)

272kg

0-1200V

0.04%+0.06%FS

150/600/1200V

1/5/10mV

0.025%+0.025%FS 20mQ-0.2kQ(150V) 17mQ-0.17kQ(150V) 14mQ-0.14kQ(150V) 13mQ-0.13kQ(150V) 11mQ-0.11kQ(150V) 10mQ-0.1kQ(150V)

80mΩ-0.8kΩ(600V) 67mΩ-0.67kΩ(600V) 57mΩ-0.57kΩ(600V) 50mΩ-0.5kΩ(600V) 44mΩ-0.44kΩ(600V) 40mΩ-0.4kΩ(600V)

2Q-4kQ(1200V) 1.67Q-3.33kQ(1200V) 1.43Q-2.86kQ(1200V) 1.25Q-2.5kQ(1200V) 1.11Q-2.22kQ(1200V) 1Q-2kQ(1200V)

Vin/Rset*(0.2%)+0.2%IF.S.

3000/15000/30000W 3600/18000/36000W 4200/21000/42000W 4800/24000/48000W 5400/27000/54000W 6000/30000/60000W

200/1000/2000mW 200/1000/2000mW 200/1000/2000mW 200/1000/2000mW 400/2000/4000mW 400/2000/4000mW

0.2%+0.2%F.S.

Model		Common Parameters					
Volt	tage	150V 600V		1200V			
Composite	Range	LS: 0.1uH~20uH RS: 30mQ~20Q	CL: 30uF~50000uF	RL: Consistent with CR mode high grade			
Impedance	Resolution	LS: 0.1uH RS: 1 mΩ	CL: 1uF RL:	Consistent with CR mode high grade			
LED Test	Range		coeff: 0.01~1				
R.H. T.I	Discharge Time	1s~100000s					
Battery Test	Resolution	1s					
	T1&T2	0.0	20~99.999ms/100ms~	99999ms			
Current Dynamics	Resolution	1us/1ms					
Jurrent Dynamics	Accuracy	2us+100ppm					
	Minimum Rise Time	10us(Typical)	20us(Typical)	20us(Typical)			
Current	Range, Resolution	Same as current loading					
Measurement	Accuracy	0.04%+0.04%F.S. 0.04%+0.06					
Weasurement	Range, Resolution	Same as voltage loading					
Voltage	Accuracy	0.015%+0.015%F.S.					
Measurement	Input Resistance	800kΩ(Typical)	1MΩ(Typical)	2MΩ(Typical)			
Power	Range, Resolution	Same as power loading					
Measurement	Accuracy	0.1%+0.1%IF.S.*UF.S.					
Operating Temp	erature, Humidity	0 ~ 40 C, 20-90%RH					
Temperatur	e Coefficient	100ppm/C(Typical)					

Any changes to the above parameter specifications will not be notified separately.

### Product Introduction

The ANEL(F) Series Regenerative DC Electronic Load is a high-tech product integrated with high-frequency PWM rectification technology, bidirectional DC conversion technology, and FPGA digital control technology. It has adaptive grid feedback capability and can support the continuous energy feedback in the full power range. It simultaneously possesses the capability of bidirectional operation in both positive and negative directions, enabling seamless energy transfer. With dual-loop control technology, it achieves ultra-high control precision, rapid response to customer load changes, ensuring equipment test stability and data precision. With its wide range of voltage and current adaptability capabilities and rich programming test functions, it better meets the diverse testing needs of customers' products. The device also includes multiple protection programming functions to better protect the safety of customer equipment during testing.

Working range

Constant current

Constant voltage

loading

Constant

resistance

load

Constant power

loading

Current change

rate

Specification

loading

Ainuo // Electronic Load

Voltage

Current

Range

Resolution

Accuracy

Range

Resolution

Accuracy

Range

Resolution

Accuracy Range

Resolution

Accuracy

Setting range

Resolution

Dimensions

Weight

Powe

Minimum working voltage

1200-1200/F

0-1200A

30kW

20V@1200A

120/600/1200A

1/5/10mA

10mA/Vsense

1mA/us-2.4A/us

(120A)

5mA/us-12A/us

(600A)

10mA/us-24A/us

(1200A)

1/5/10mA/us

610 mm×1410mm

×800 mm

(W×H×D)

205kg

1200-1440(F

0-1440A

36kW

20V@1440A

144/720/1440A

2/10/20mA

20mA/Vsense

2mA/us-2.4A/us

(144A)

10mA/us-12A/us

(720A)

20mA/us-24A/us

(1440A)

2/10/20mA/us

610 mm×1410mm

×800 mm

(W×H×D)

231kg

#### Electronic Load Ainuo

#### Features

- Source load integrated machine, with a pure load mode.
- Supports CV, CC, CP, and CR working modes
- Voltage 0.05%FS, current 0.1%FS, and power 0.2%FS.
- Minimum current 0A and minimum power 0KW.
- Response time≤3ms; switching time≤4ms.
- Power factor≥0.99, current harmonic distortion≤3%.
- Provides 900-step programming function with a minimum programming time of 1mS.
- Supports simulation of 7 types of batteries including ternary lithium, lithium iron phosphate, lithium titanium oxide, lithium cobalt oxide, lithium manganese oxide, nickel-metal hydride, and lead-acid batteries.
- Supports 1st, 2nd, and 3rd grade battery models and internal resistance models, and allows for import and export of data in CSV and mat formats.
- Provides multi-unit parallel mode, supports parallel output of multiple loads of the same model.
- Equipped with CAN, RS232/RS485, LAN and other communication interfaces.

Specification and model

Product series	Product model	Rated current	Rated power	Peak current	Peak power	Voltage range	Overall dimensions/mm (W×D×H)
	ANEL800-800-100(F)	800A	100kW	1000A	125KW	12V-800V	1500×1000×2100
	ANEL800-1000-160(F)	1000A	160kW	1250A	200KW	12V-800V	2000×1000×2100
800V Series	ANEL800-1000-200(F)	1000A	200kW	1250A	250KW	12V-800V	2000×1000×2100
	ANEL800-1000-250(F)	1000A	250kW	1250A	312KW	12V-800V	2000×1000×2100
	ANEL800-1000-300(F)	1000A	300kW	1250A	375KW	12V-800V	2000×1200×2100
	ANEL800-1000-400(F)	1000A	400kW	1250A	500KW	12V-800V	2000×1200×2200
	ANEL800-1000-500(F)	1000A	500kW	1250A	625KW	12V-800V	2000×1200×2200
	ANEL1000-600-100(F)	600A	100kW	750A	125KW	12V-1000V	1500×1000×2100
	ANEL1000-1000-160(F)	1000A	160kW	1250A	200KW	12V-1000V	2000×1000×2100
	ANEL1000-1000-200(F)	1000A	200kW	1250A	250KW	12V-1000V	2000×1000×2100
1000V Series	ANEL1000-1000-250(F)	1000A	250kW	1250A	312KW	12V-1000V	2000×1000×2100
	ANEL1000-1000-300(F)	1000A	300kW	1250A	375KW	12V-1000V	2000×1200×2100
	ANEL1000-1000-400(F)	1000A	400kW	1250A	500KW	12V-1000V	2000×1200×2200
	ANEL1000-1000-500(F)	1000A	500kW	1250A	625KW	12V-1000V	2000×1200×2200

Any changes to the above parameter specifications will not be notified separately.

Product	name	High Power Bidirectional DC Electronic Load				
Work mode Energy feedback Isolation function		CV CC CP CR Grid-following feedback				
			Setting range	12V-Vmax		
CV mode	Resolution	0.1V				
	Accuracy	0.05%FS				
	Setting range	0A-Imax				
CC mode	Resolution	0.1A				
	Accuracy	0.1%FS				
	Setting range	0kW-Pmax				
CP mode	Resolution	0.01kW				
	Accuracy	0.2%FS				
	Setting range	0Ω-1,000Ω				
CR mode	Resolution	0.1Ω				
	Accuracy	0.5%FS				
Dunamia	Recovery time	≤3ms (10%-90% load switching)				
Dynamic haracteristics	Rise time	≤3ms				
	Switching time	≤4ms				

Any changes to the above parameter specifications will not be notified separately.

	Mode	3-phase 4-wire+PE			
AC	Voltage	323V-347V			
	Frequency	45Hz-65Hz (Follows grid frequency)			
	Phase	Follows grid phase			
characteristic	Power factor	≥0.99			
	Total harmonic content	≤3% (tested under conditions of standard AC power input with distortion within 1.5%)			
	Overall efficiency	≥0.94			
	Feedback performance	Full power continuous feedback			
		It allows programmable output voltage waveforms, including voltage and current slopes,			
	Output programming	steps, cyclic control, and jump control.			
		It has an emergency stop button and built-in output contactor for quickly and			
	Emergency stop	completely disconnecting from the load equipment.			
Product		It can simulate five types of batteries: lithium ternary, lithium manganese, lithium cobalt,			
features		lithium iron phosphate, lead-acid, and nickel-metal hydride.			
	Battery simulation	It supports customizing battery cell capacity, series/parallel quantity,			
		State of Charge (SOC), and temperature parameters.			
	Ramp-up function	It provides voltage, current, and power programming ramp-up			
	Multi-mode function	It supports various load modes, including CV, CC, CR, CP, CV-CC, CC-CP, CP-CR, CV-CC-CR, etc.			
	AC protection	AC undervoltage, overvoltage, and phase loss protection			
	Built-in protection	Bus overvoltage protection, power module overheating protection,			
Protection		power module overcurrent protection, and power module short circuit protection			
functions	Protection setting	Allow setting protection parameters and enable for OVP, LVP, OCP, LCP and OPP protection			
	Limit setting	It supports setting upper and lower limits for voltage, current, and power parameters			
Display and	Display mode	LCD			
operation	Operation mode	Number key, knob and touch screen three-in-one			
Disalau	Voltage	0.001V			
Display	Current	0.001A			
resolution	Power	0.001kW			
	Serial interface	Standard RS232/RS485 (select one)			
Communication	CAN interface	Supports CAN2.0 protocol, with a communication data update frequency ≥ 50Hz			
interface	Ethernet	Supports the Ethernet communications			
Ana	alog interface	Supports external emergency stop switch quantity signal control			
	Insulation resistance	≥2MΩ (tested at 1,000V insulation voltage)			
0-64	Withstand voltage	2,000VDC 5mAmin			
Safety -	Grounding resistance	≤100mΩ			
performance -	Working temperature	0°C-40°C			
environment	Working humidity	20-90%RH (no condensation)			
	Altitude	≤2,000m			
	Storage temperature	-10°C-70°C			
	Noise	≤70dB			
Cod	oling method	Temperature-controlled air cooling. It has a built-in temperature-controlled variable speed fan.			
Pro	tection level	IP21			

Exceeding & Trustworthy

#### 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



#### 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.



#### 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

DC loading waveform Connect in parallel and series

3 units in parallel to realize 3 phase load.

Specifications	
and the first of the first of the first of the first of the	

	Model	AN29201(F)	AN29202(F)	AN29203(F)	AN29204(F)	AN29205(F)	AN29206(F)		
	Power	1400W	2800W	4200W	5600W	7000W	8400W		
	Current	0-10Arms(45Apeak)	0-20Arms(90Apeak)	0-30Arms(135Apeak)	0-40Arms(180Apeak	0-50Arms(225Apeak)	0-60Ams(270Apea		
	Voltage		2V- 260Vm	s (360 Vpeak), custon	nizable 2V-350Vrms (	500Vpeak)			
	Frequescy			44 - 1000	Hz, DC				
-		0.2~10Arms,	0.2~20Arms,	0.2~30Arms,	0.4~40Arms,	0.4~50Arms,	0.4~60Arms,		
AC part:	Setting Range	programmable	programmable	programmable	programmable	programmable	programmable		
Constant	Accuracy			DC/50/60/400Hz: 0	.1% + 0.2% range	1			
Current Mode	Resolution	2mA	5mA	5mA	7mA	9mA	10mA		
		1Ω~1200Ω,	1Ω~600Ω,	1Ω~400Ω,	1Ω~300Ω,	10~2400,	1Ω~200Ω,		
Constant	Setting Range	programmable	programmable	programmable	programmable	programmable	programmable		
Resistance		A CONTRACTOR OF A CONTRACTOR	50/60/400Hz: Min. re	sistance ~ 1/2 Max. re					
Mode	Accuracy	greater than 1/2 Max. resistance - Max. resistance: + (3.5% setting value+0.5% range)							
	Resolution	0.2Ω	0.1Ω	0.067Ω	0.05Ω	0.04Ω	0.04Ω		
		10W~1400W,	10W~2800W,	10W~4200WQ.	10W~5600W,	10W~7000W,	10W~8400W,		
Constant Power	Setting Range	programmable	programmable	programmable	programmable	programmable	programmable		
Mode	Accuracy	1 0		DC/50/60/400Hz: 0	1 0				
	Resolution	0.25W	0.5W	0.75W	1W	1.25W	1.5W		
	Peak Factor			1		0			
Peak Factor	Setting Range			1.4~5.0, pro	grammable				
Mode	Phase Shift Angle								
	Setting Range			-90°~+90°, pr	ogrammable				
Gate Trigge	Turn On Angle			0-3	59°				
Mode	Turn off Angle			0-3	60°				
	Frequency			1-1	15				
Harmonic Mode	Setting Range			0-					
	Resolution			0,1					
	Measurement Range	0~1 lead or lag	0~1 lead or lag	0~1 lead or lag	0~1 lead or lag	0~1 lead or lag	0~1 lead or lag		
Power Factor	Measurement Accuracy	1% range	1% range	1% range	1% range	1% range	1% range		
- choi - dotti	Resolution	i të tungë	17610180	0.0		i in thige			
	Voltage Working Range								
	Current Setting Range	0.2A~10A	0.2A~20A	0.2A~30A	0.4A~40A	0.4A~50A	0.4A~60A		
	Minimum Operating	0.271 1071	0.2/1 20/1			0.471 0071	0.4/1 00/1		
	Voltage	2V							
DC part	Rise Time	1ms							
	Operating Mode	Tms Constant current, constant resistance, constant power, dynamic							
	Short Circuit	Constant current, constant resistance, constant power, dynamic							
	Current Simulation	Use constant resistance mode							
	Voltage Measurement								
	Range	2V~260V, customizable 2V~350V							
	Voltage Measurement								
	Accuracy	DC/50/60/400Hz: 0.1% + 0.1% range							
	Voltage Resolution	100mV							
Measurement	Current Measurement			100			State State State		
part	Range	0~10.00A	0~20.00A	0~30.00A	0~40.00A	0~50.00A	0~60.00A		
	Current Measurement					k. a			
	Accuracy	DC/50/60/400Hz: 0.1%+0.2% range							
	Current Resolution	2.0mA	4.0mA	6.0mA	8.0mA	10.0mA	12.0mA		
	Other Parameters	and the second se		parent power (VA), rea		1			
	Other Falameters	"Overcurrent:	"Overcurrent:				11222		
			21Arms;	"Overcurrent:	"Overcurrent:	"Overcurrent:	"Overcurrent: 63Arms;		
		10.5Arms;		31.5Arms;	42Arms;	52.5Arms;			
Others	Protection	Overvoltage:	Overvoltage:	Overvoltage:	Overvoltage:	Overvoltage:	Overvoltage:		
	Frotection	273Vrms;	273Vrms;	367Vrms;	273Vrms;	273Vrms;	273Vrms;		
		Over power:	Over power:	Over power:	Over power:	Over power:	Over power:		
		1470W;	2940W;	4410W;	2880W;	7350W;	8820W;		
	Orabella	Over temperature"	Over temperature"	Over temperature"	Over temperature"	Over temperature"	Over temperature		
	Control Interface	Standard: RS-232, USB; Optional: Ethernet port							
	Operating Voltage			115/230 V	ac ± 10%				
	Dimension		440×222×465			440×354×465			
	WxHxD (mm)								
	Foot Height (mm)	15							

#### Electronic Load Ainuo