



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

Lower Power DC Electronic Load AN235(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.

- 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	2U	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

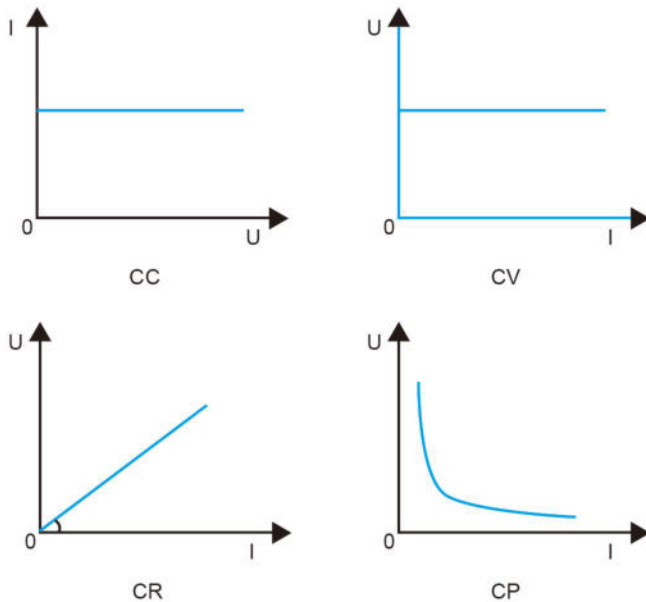
Applications

- 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



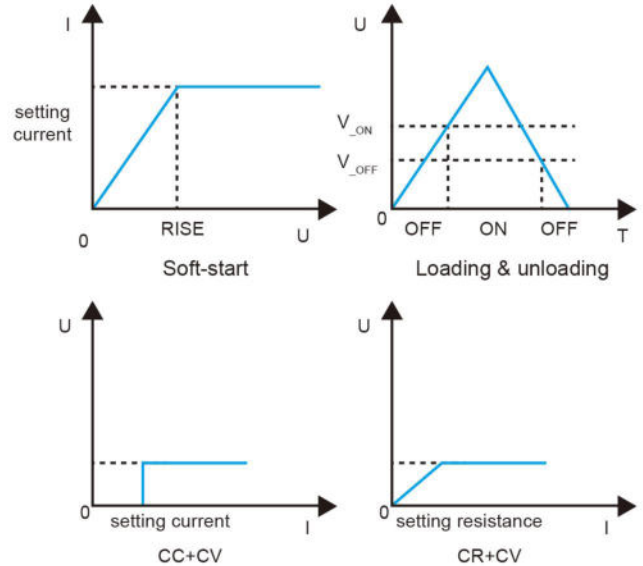
Basic Mode

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

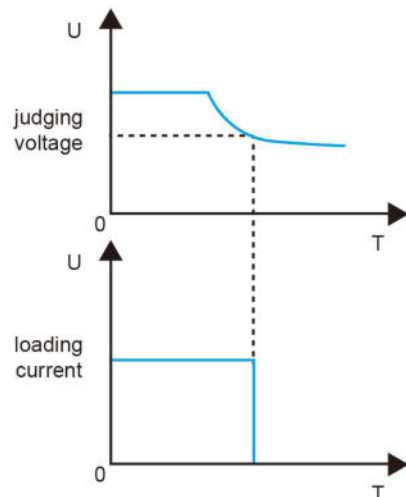
The AN235(F) load integrates four major compound modes: soft start mode, load-unload mode, CC+CV mode, and CR+CV mode, meeting a wide range of testing needs.



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.

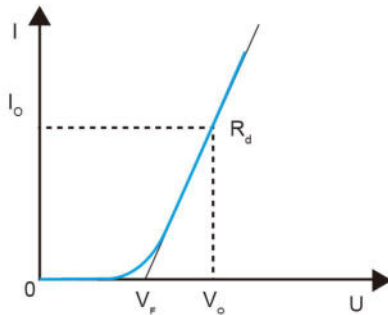


Adjustable Load Rise/Fall Slope

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.

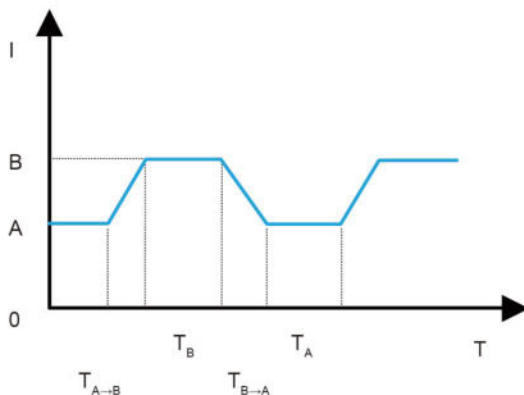
LED Mode - Simulate LED Load Mode

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.



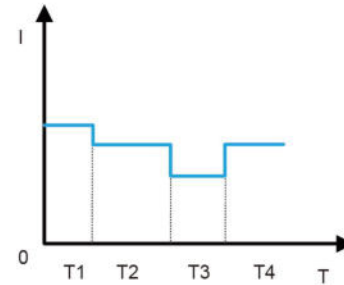
CCD Mode - Fast Dynamic Testing

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.



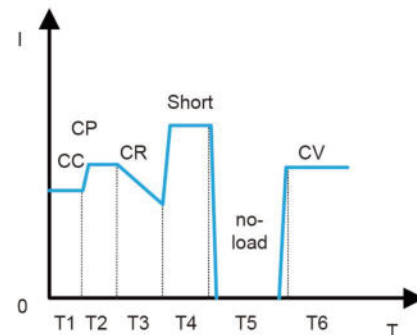
LIST Mode - Serialized Loading Function

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.

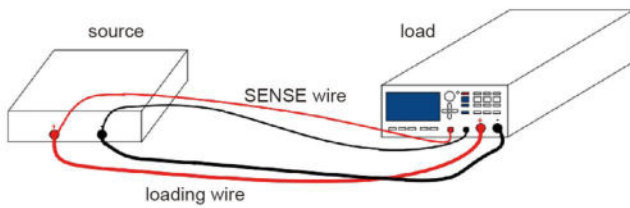


High Precision Measurement

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/240A providing 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.

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.

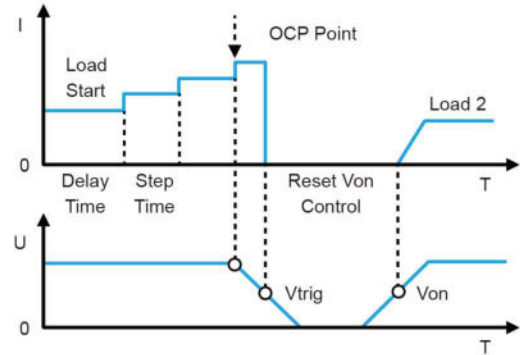
All-Round Protection

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.



Panel Description



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	Direction key
⑤	Knob	Used for moving cursor up and down and adjusting parameters
⑥	Tricolor light	Indicator light for load working status
⑦	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
⑩	DC load terminal	Load terminal



No.	Name	Description
①	I_Monitor	Load current waveform detection
②	COM	RS232 or RS485 optional
③	PLC	Realize multiple PLC functions (reserved)
④	Power socket	Power input + fuse
⑤	Ground terminal	Connect to the group

Specifications

Model		AN23511V2(F)	
Constant Current Mode(CC)	Range	0-3A	0-30A
	Set Resolution	0.1mA	1mA
	Accuracy	0.03%+0.05%F.S.	
Constant Voltage Mode(CV)	Range	0.1-20V	0.1-150V
	Set Resolution	1mV	10mV
	Accuracy	0.03%+0.02%F.S.	
Constant Resistance Mode(CR) (When input voltage and current values \geq 10% of full range)	Range	0.03 Ω -99.999 Ω / 100 Ω -999.99 Ω / 1000 Ω -9999.9 Ω	
	Set Resolution	0.001 Ω / 0.01 Ω / 0.1 Ω	
	Accuracy	Vin/Rset*(0.2%)+0.2%I.F.S.	
Constant Power Mode(CP) (When input voltage and current values \geq 10% of full range)	Range	100W/150W	
	Set Resolution	1mW/10mW	
	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.	
Current Measurement	Range	0-3A	0-30A
	Measurement Resolution	0.01mA	0.1mA
	Accuracy	0.03%+0.05%F.S.	0.03%+0.08%F.S.
Power Measurement (When input voltage and current values \geq 10% of full range)	Range	100W/150W	
	Measurement Resolution	1mW/10mW	
	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/ μ s, Time range: 20 μ s - 999.999ms, with a resolution of 20 μ s		
Current Soft Start Time	0-999999ms, time accuracy is 20 μ s.		
Short Circuit Function	\geq 1.1 times the range of this stage.		
Temperature	Working Temperature	0~40 C	
	Storage Temperature	-25~70 C	
Dimension	W×H×D (mm)	213×88×401	
Weight	Kg	6.7	6.6

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

Model		AN23512V2(F)		AN23512BV2(F)	
Constant Current Mode(CC)	Range	0-6A	0-60A	0-3A	0-15A
	Set Resolution	0.1mA	1mA	0.1mA	1mA
	Accuracy	0.03%+0.05%F.S.			
Constant Voltage Mode(CV)	Range	0.1-20V	0.1-150V	0.1-60V	0.1-600V
	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) (When input voltage and current values \geq 10% of full range)	Range	0.03 Ω -99.999 Ω / 100 Ω -999.99 Ω / 1000 Ω -9999.9 Ω			
	Set Resolution	0.001 Ω / 0.01 Ω / 0.1 Ω			
	Accuracy	Vin/Rset*(0.2%)+0.2%I.F.S.			
Constant Power Mode(CP) (When input voltage and current values \geq 10% of full range)	Range	100W/300W			
	Set Resolution	1mW/10mW			
	Accuracy	0.1%+0.1%F.S.			
Voltage Measurement	Range	0-20V	0-150V	0-60V	0-600V
	Measurement Resolution	1mV	10mV	1mV	10mV
	Accuracy	0.015%+0.03%F.S.	0.015%+0.03%F.S.	0.015%+0.05%F.S.	
Current Measurement	Range	0-6A	0-60A	0-3A	0-15A
	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 (When input voltage and current values \geq 10% of full range)	Range	100W/300W			
	Measurement Resolution	1mW/10mW			
	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/ μ s, Time range: 20 μ s - 999.999ms, with a resolution of 20 μ s				
Current Soft Start Time	0-999999ms, time accuracy is 20 μ s.				
Short Circuit Function	\geq 1.1 times the range of this stage.				
Temperature	Working Temperature	0~40 C			
	Storage Temperature	-25~70 C			
Dimension	W×H×D (mm)	213×88×401			
Weight	Kg	6.7		6.6	

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Model		AN23513(F)		AN23513B(F)	
Constant Current Mode(CC)	Range	0-12A	0-120A	0-3A	0-30A
	Set Resolution	1mA	10mA	0.1mA	1mA
	Accuracy	0.05%+0.05%F.S.		0.1%+0.05%F.S.	
Constant Voltage Mode(CV)	Range	0.1-20V	0.1-150V	0.1-60V	0.1-600V
	Set Resolution	1mV	10mV	1mV	10mV
	Accuracy	0.03%+0.02%F.S.		0.03%+0.02%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%I.F.S.			
Constant Power Mode(CP) (When input voltage and current values ≥ 10% of full range)	Range	100W/600W			
	Set Resolution	1mW/10mW			
	Accuracy	0.1%+0.1%F.S.			
Voltage Measurement	Range	0-20V	0-150V	0-60V	0-600V
	Measurement Resolution	1mV	10mV	1mV	10mV
	Accuracy	0.015%+0.03%F.S.		0.015%+0.03%F.S.	0.015%+0.05%F.S.
Current Measurement	Range	0-12A	0-120A	0-3A	0-30A
	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 (When input voltage and current values ≥ 10% of full range)	Range	100W/600W			
	Measurement Resolution	1mW/10mW			
	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.				
Temperature	Working Temperature	0~40℃			
	Storage Temperature	-25~70℃			
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.

Model		AN23514(F)		AN23514B(F)	
Constant Current Mode(CC)	Range	0-24A	0-240A	0-6A	0-60A
	Set Resolution	1mA	10mA	0.1mA	1mA
	Accuracy	0.05%+0.05%F.S.		0.1%+0.05%F.S.	
Constant Voltage Mode(CV)	Range	0.1-20V	0.1-150V	0.1-60V	0.1-600V
	Set Resolution	1mV	10mV	1mV	10mV
	Accuracy	0.03%+0.02%F.S.		0.03%+0.02%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%I.F.S.			
Constant Power Mode(CP) (When input voltage and current values ≥ 10% of full range)	Range	100W/1200W			
	Set Resolution	1mW/0.1W			
	Accuracy	0.1%+0.1%F.S.			
Voltage Measurement	Range	0-20V	0-150V	0-60V	0-600V
	Measurement Resolution	1mV	10mV	1mV	10mV
	Accuracy	0.015%+0.03%F.S.		0.015%+0.03%F.S.	0.015%+0.05%F.S.
Current Measurement	Range	0-24A	0-240A	0-6A	0-60A
	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 (When input voltage and current values ≥ 10% of full range)	Range	100W/1200W			
	Measurement Resolution	1mW/0.1W			
	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.				
Temperature	Working Temperature	0~40℃			
	Storage Temperature	-25~70℃			
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.

High Power DC Electronic Load AN236(F) Series

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.
- It has rich interfaces such as standard LAN, GPIB, USB, CAN, RS232, RS485 and other interfaces.



Serialized Models



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

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

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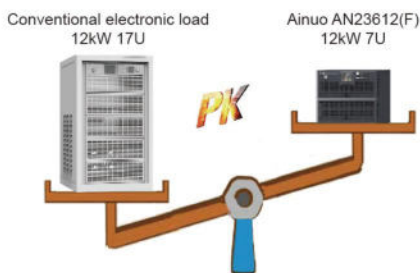
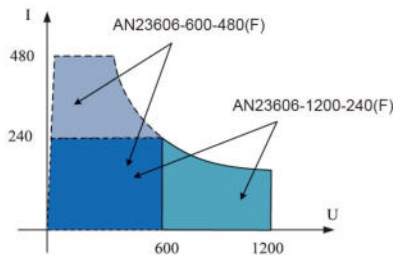
Applications

- 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.



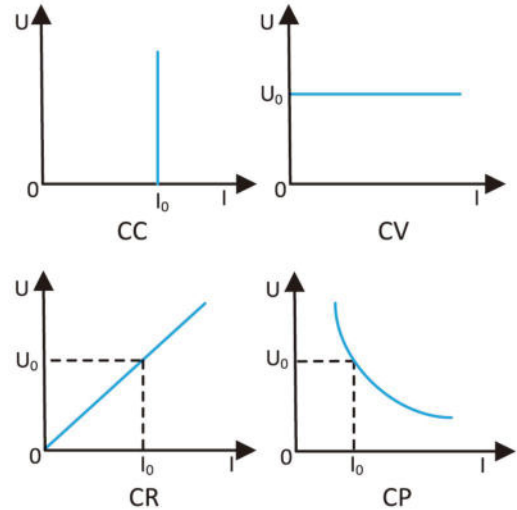
High Power Density, Compact and Wide Voltage

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

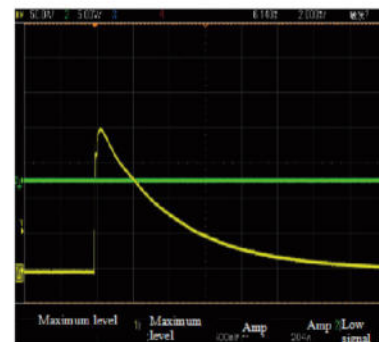
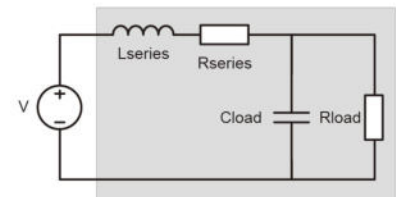
Built-in basic constant voltage(CV), constant current(CC), constant resistance(CR), and constant power(CP) modes, which can meet a wide range of testing needs.



FLEX Mode - Built-In Composite Impedance Network startup mode

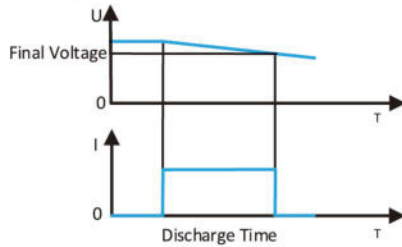
The input filter capacitor in real load will cause a huge inrush current at the moment of power-on. The parasitic resistance and inductance of long internal lead will cause further distortion of the loading wave. So its impedance will be equivalent to a complex impedance network. The built-in complex impedance (FLEX) mode the AN236(F) series is designed to simulate such loads to test the suitability of the power supply under test. The four test parameters shown in the figure below are decomposed according to the characteristics of the real load in this mode. After power-on, the load will load current according to the impedance network.

FLEX Mode
 Lseries: 0.1uH-20uH
 Rseries:30mΩ-20Ω
 Cload: 30uF-50,000uF
 Rload: Aligned with the high-gear CR mode



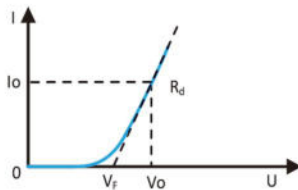
BATY Mode - Battery Test Dedicated Mode

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.



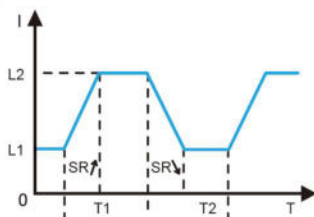
LED Mode - Simulated LED Characteristics Load Mode

The AN236(F) Series load features a built-in simulated LED characteristics load mode, which simulates the model shown in the figure on the right for loading. It simulates the characteristics of a LED with zero current before conduction and then rising along the V-I curve after conduction. By using electronic load for simulated loading effectively, it solves the light pollution and parameter instability issues associated with using LED strips and resistor loads.



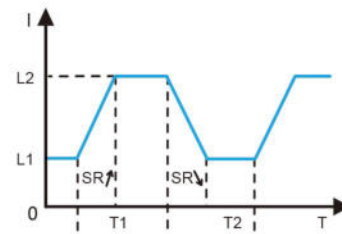
CCD Mode - Rapid Dynamic and Vpp Testing

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.



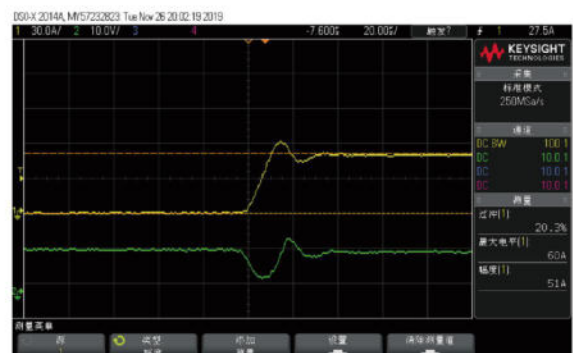
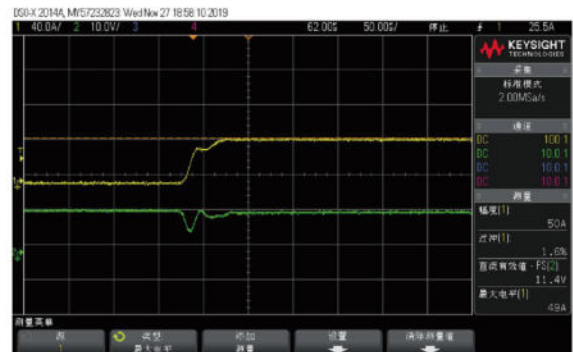
CRD Mode - Rapid Dynamic and Vpp Testing

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.



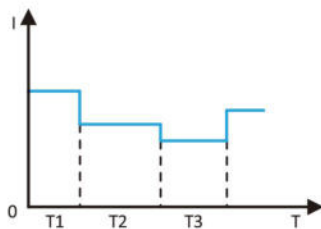
CV Mode - High-performance Controller with Adjustable Loop Speed

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.

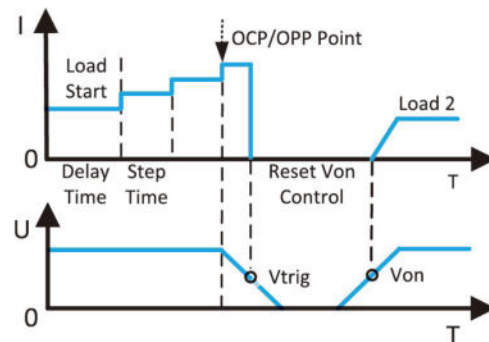
Instantaneous Overpower Function

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).

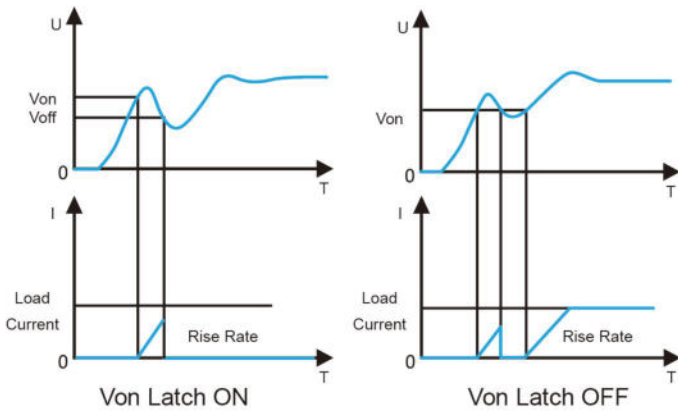
When the load detects that the voltage is less than or equal to the threshold after setting the loading current and the threshold, the loading stops, and the current power at the moment of protection is displayed on the screen, and the result is judged according to the protection point.



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.

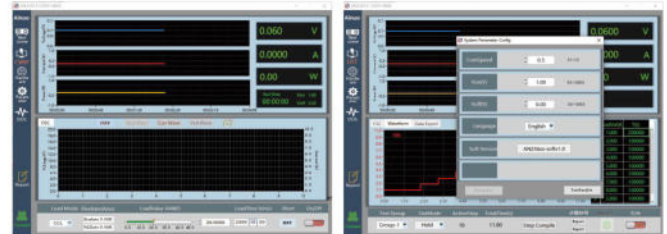


Data Acquisition Function

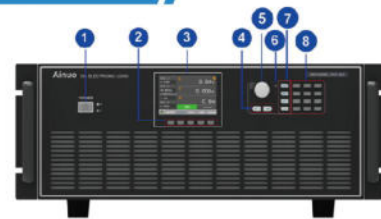
Users can utilize the load's data acquisition function in conjunction with a trigger source to capture instantaneous voltage and current data.

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);

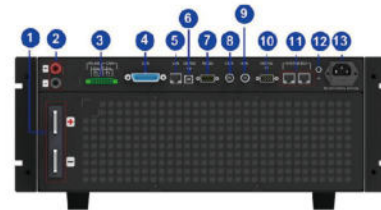
Trigger source: Load on/Load off/TTL/BUS/Manual.



Panel Instructions



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
⑦	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
⑦	RS232	Standard RS232 Communication Interface
⑧	I_Monitor	Load current waveform detection
⑨	V_Monitor	Load voltage waveform detection
⑩	Digital IO	Multiple input/output signals
⑪	Parallel terminal	Parallel connection port
⑫	Ground terminal	Connected to the ground
⑬	Power socket	Power supply input

Specifications

Model		AN23602E -150-200(F)	AN23603E -150-300(F)	AN23604E -150-400(F)	AN23605E -150-500(F)	AN23606E -150-600(F)	AN23608E -150-800(F)	
Working range	Voltage	0-150V						
	Current	0-200A	0-300A	0-400A	0-500A	0-600A	0-800A	
	Power	2kW	3kW	4kW	5kW	6kW	8kW	
Minimum working voltage		1.8V@200A	1.8V@300A	1.8V@400A	1.8V@500A	1.8V@600A	1.8V@800A	
Constant current loading	Range	20/100/200A	30/150/300A	40/200/400A	50/250/500A	60/300/600A	80/400/800A	
	Resolution	0.2/1/2mA	0.2/1/2mA	0.4/2/4mA	0.5/2/5mA	0.5/2/5mA	1/5/10mA	
	Accuracy	0.05%+0.05%F.S.						
Constant voltage loading	Range	16/80/150V						
	Resolution	0.1/0.5/1mV						
	Accuracy	0.025%+0.025%F.S.						
Constant resistance load	Range	15mΩ-150Ω(16V) 60mΩ-600Ω(80V) 1.5Ω-3000Ω(150V)	10mΩ-100Ω(16V) 40mΩ-400Ω(80V) 1Ω-2000Ω(150V)	7.5mΩ-75Ω(16V) 30mΩ-300Ω(80V) 0.75Ω-1500Ω(150V)	5mΩ-50Ω(16V) 20mΩ-200Ω(80V) 0.5Ω-1000Ω(150V)	5mΩ-50Ω(16V) 20mΩ-200Ω(80V) 0.5Ω-1000Ω(150V)	3.8mΩ-37.5Ω(16V) 15mΩ-150Ω(80V) 0.375Ω-750Ω(150V)	
	Resolution	2mA/Vsense	2mA/Vsense	4mA/Vsense	5mA/Vsense	5mA/Vsense	10mA/Vsense	
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.						
Constant power loading	Range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W	
	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW	
	Accuracy	0.2%+0.2%F.S.						
Current change rate	Setting range	0.2mA/us-2A/us (20A)	0.2mA/us-3A/us (30A)	0.4mA/us-4A/us (40A)	0.5mA/us-5A/us (50A)	0.5mA/us-6A/us (60A)	1mA/us-8A/us (80A)	
		1mA/us-7A/us (100A)	1mA/us-10.5A/us (150A)	2mA/us-14A/us (200A)	2mA/us-17.5A/us (250A)	2mA/us-21A/us (300A)	5mA/us-24A/us (400A)	
		2mA/us-14A/us (200A)	2mA/us-21A/us (300A)	4mA/us-28A/us (400A)	5mA/us-35A/us (500A)	5mA/us-42A/us (600A)	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	426mm×177mm×600mm(W×H×D), The height can be increased by 201mm with detachable feet					426 mm×400 mm ×650 mm (W×H×D)	
	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg	

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

Model		AN23610E -150-1000(F)	AN23612E -150-1200(F)	AN23615E -150-1500(F)	AN23618E -150-1800(F)	AN23620E -150-2000(F)	AN23624E -150-2400(F)
Working range	Voltage	0-150V					
	Current	0-1000A	0-1200A	0-1500A	0-1800A	0-2000A	0-2400A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum working voltage		1.8V@1000A	1.8V@1200A	1.8V@1500A	1.8V@1800A	1.8V@2000A	1.8V@2400A
Constant current loading	Range	100/500/1000A	120/600/1200A	150/750/1500A	180/900/1800A	200/1000/2000A	240/1200/2400A
	Resolution	1/5/10mA	1/5/10mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
Constant voltage loading	Range	16/80/150V					
	Resolution	0.1/0.5/1mV					
	Accuracy	0.025%+0.025%F.S.					
Constant resistance load	Range	2.5mΩ-25Ω(16V) 10mΩ-100Ω(80V) 0.25Ω-500Ω(150V)	2.5mΩ-25Ω(16V) 10mΩ-100Ω(80V) 0.25Ω-500Ω(150V)	1.7mΩ-16.67Ω(16V) 6.7mΩ-66.67Ω(80V) 0.167Ω-333.34Ω(150V)	1.7mΩ-16.67Ω(16V) 6.7mΩ-66.67Ω(80V) 0.167Ω-333.34Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)
	Resolution	10mA/Vsense	10mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.					
Constant power loading	Range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W
	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	40/200/400mW	100/500/1000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	1mA/us-10A/us (100A)	1mA/us-12A/us (120A)	2mA/us-15A/us (150A)	2mA/us-18A/us (180A)	2mA/us-20A/us (200A)	2mA/us-24A/us (240A)
		5mA/us-27.5A/us (500A)	5mA/us-30A/us (600A)	10mA/us-32A/us (750A)	10mA/us-36A/us (900A)	10mA/us-40A/us (1000A)	10mA/us-48A/us (1200A)
		10mA/us-55A/us (1000A)	10mA/us-60A/us (1200A)	20mA/us-64A/us (1500A)	20mA/us-72A/us (1800A)	20mA/us-80A/us (2000A)	20mA/us-96A/us (2400A)
Resolution	1/5/10 mA/us	1/5/10 mA/us	2/10/20 mA/us	2/10/20 mA/us	2/10/20 mA/us	2/10/20 mA/us	
Specification	Dimensions	426 mm×400 mm×650 mm (W×H×D)		426 mm×532 mm×650 mm (W×H×D)		426 mm×665 mm×650 mm (W×H×D)	
	Weight	66.5kg	72kg	92.5kg	98kg	113kg	124kg

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

Specifications

Model		AN23630E -150-2400(F)	AN23636E -150-2400(F)	AN23642E -150-2400(F)	AN23648E -150-2400(F)	AN23654E -150-2400(F)	AN23660E -150-2400(F)
Working range	Voltage	0-150V					
	Current	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A
	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum working voltage		1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A	1.8V@2400A
Constant current loading	Range	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A
	Resolution	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
Constant voltage loading	Range	16/80/150V					
	Resolution	0.1/0.5/1mV					
	Accuracy	0.025%+0.025%F.S.					
Constant resistance load	Range	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)	1.3mΩ-12.5Ω(16V) 5mΩ-50Ω(80V) 0.125Ω-250Ω(150V)
	Resolution	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%I.F.S.					
Constant power loading	Range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000W
	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	2mA/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)
		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)
		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

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

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

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

Safety Analyzer

AC Power Supply

DC Power Supply

Motor Test Scheme

Power Analyzer

Electronic Load

Specifications

Model		AN23610E -600-700(F)	AN23612E -600-840(F)	AN23615E -600-1050(F)	AN23618E -600-1260(F)	AN23620E -600-1400(F)	AN23624E -600-1680(F)
Working range	Voltage	0-600V					
	Current	0-700A	0-840A	0-1050A	0-1260A	0-1400A	0-1680A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum working voltage		14V@700A	14V@840A	14V@1050A	14V@1260A	14V@1400A	14V@1680A
Constant current loading	Range	70/350/700A	84/420/840A	105/525/1050A	128/630/1260A	140/700/1400A	168/840/1680A
	Resolution	0.5/2.5/5mA	1/5/10mA	1/5/10mA	1/5/10mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
Constant voltage loading	Range	80/150/600V					
	Resolution	0.5/1/5mV					
	Accuracy	0.025%+0.025%F.S.					
Constant resistance load	Range	25mΩ-250Ω(80V) 0.1Ω-1000Ω(150V) 1Ω-2000Ω(600V)	25mΩ-250Ω(80V) 0.1Ω-1000Ω(150V) 1Ω-2000Ω(600V)	17mΩ-166.67Ω(80V) 67Ω-666.67Ω(150V) 0.67Ω-1333.34Ω(600V)	17mΩ-166.67Ω(80V) 67Ω-666.67Ω(150V) 0.67Ω-1333.34Ω(600V)	13mΩ-125Ω(80V) 50mΩ-500Ω(150V) 0.5Ω-1000Ω(600V)	13mΩ-125Ω(80V) 50mΩ-500Ω(150V) 0.5Ω-1000Ω(600V)
	Resolution	5mA/Vsense	10mA/Vsense	10mA/Vsense	10mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.					
Constant power loading	Range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W
	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	100/500/1000mW	100/500/1000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.5mA/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)
		2.5mA/us-10.5A/us (350A)	5mA/us-12A/us (420A)	5mA/us-13.5A/us (525A)	5mA/us-15A/us (630A)	10mA/us-16.5A/us (700A)	10mA/us-18A/us (840A)
		5mA/us-21A/us (700A)	10mA/us-24A/us (840A)	10mA/us-27A/us (1050A)	10mA/us-30A/us (1260A)	20mA/us-33A/us (1400A)	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	
Specification	Dimensions	426 mm×400 mm×650 mm (W×H×D)		426 mm×532 mm×650 mm (W×H×D)		426 mm×665 mm×650 mm (W×H×D)	
	Weight	66.5kg	72kg	92.5kg	98kg	113kg	124kg

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

Model		AN23630E -600-2100(F)	AN23636E -600-2400(F)	AN23642E -600-2400(F)	AN23648E -600-2400(F)	AN23654E -600-2400(F)	AN23660E -600-2400(F)
Working range	Voltage	0-600V					
	Current	0-2100A	0-2400A	0-2400A	0-2400A	0-2400A	0-2400A
	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum working voltage		14V@2100A	14V@2400A	14V@2400A	14V@2400A	14V@2400A	14V@2400A
Constant current loading	Range	210/1050/2100A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A	240/1200/2400A
	Resolution	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.05%+0.05%F.S.					
Constant voltage loading	Range	80/150/600V					
	Resolution	0.5/1/5mV					
	Accuracy	0.025%+0.025%F.S.					
Constant resistance load	Range	10mΩ-100Ω(80V) 40mΩ-400Ω(150V) 0.4Ω-800Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)	9mΩ-87.5Ω(80V) 4mΩ-350Ω(150V) 0.35Ω-700Ω(600V)
	Resolution	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.					
Constant power loading	Range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000W
	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	2mA/us-3.6A/us (210A)	2mA/us-3.6A/us (240A)	2mA/us-3.6A/us (240A)	2mA/us-3.6A/us (240A)	2mA/us-3.6A/us (240A)	2mA/us-3.6A/us (240A)
		10mA/us-18A/us (1050A)	10mA/us-18A/us (1200A)	10mA/us-18A/us (1200A)	10mA/us-18A/us (1200A)	10mA/us-18A/us (1200A)	10mA/us-18A/us (1200A)
		20mA/us-36A/us (2100A)	20mA/us-36A/us (2400A)	20mA/us-36A/us (2400A)	20mA/us-36A/us (2400A)	20mA/us-36A/us (2400A)	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

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

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

Specifications

Model		AN23602E -1200-80(F)	AN23603E -1200-120(F)	AN23604E -1200-160(F)	AN23605E -1200-200(F)	AN23606E -1200-240(F)	AN23608E -1200-320(F)	
Working range	Voltage	0-1200V						
	Current	0-80A	0-120A	0-160A	0-200A	0-240A	0-320A	
	Power	2kW	3kW	4kW	5kW	6kW	8kW	
Minimum working voltage		20V@80A	20V@120A	20V@160A	20V@200A	20V@240A	20V@320A	
Constant current loading	Range	8/40/80A	12/60/120A	16/80/160A	20/100/200A	24/120/240A	32/160/320A	
	Resolution	0.1/0.5/1mA	0.1/0.5/1mA	0.2/1/2mA	0.2/1/2mA	0.2/1/2mA	0.4/2/4mA	
	Accuracy	0.04%+0.06%F.S.						
Constant voltage loading	Range	150/600/1200V						
	Resolution	1/5/10mV						
	Accuracy	0.025%+0.025%F.S.						
Constant resistance load	Range	0.3Ω-3kΩ(150V) 1.2Ω-12kΩ(600V) 30Ω-60kΩ(1200V)	0.2Ω-2kΩ(150V) 0.8Ω-8kΩ(600V) 20Ω-40kΩ(1200V)	0.15Ω-1.5kΩ(150V) 0.6Ω-6kΩ(600V) 15Ω-30kΩ(1200V)	0.1Ω-1kΩ(150V) 0.4Ω-4kΩ(600V) 10Ω-20kΩ(1200V)	0.1Ω-1kΩ(150V) 0.4Ω-4kΩ(600V) 10Ω-20kΩ(1200V)	75mΩ-0.75kΩ(150V) 0.3Ω-3kΩ(600V) 7.5Ω-15kΩ(1200V)	
	Resolution	1mA/Vsense	1mA/Vsense	2mA/Vsense	2mA/Vsense	2mA/Vsense	4mA/Vsense	
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.						
Constant power loading	Range	200/1000/2000W	300/1500/3000W	400/2000/4000W	500/2500/5000W	600/3000/6000W	800/4000/8000W	
	Resolution	5/20/50mW	5/20/50mW	10/50/100mW	10/50/100mW	10/50/100mW	20/100/200mW	
	Accuracy	0.2%+0.2%F.S.						
Current change rate	Setting range	0.1mA/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)	
		0.5mA/us-2A/us (40A)	0.5mA/us-3A/us (60A)	1mA/us-4A/us (80A)	1mA/us-5A/us (100A)	1mA/us-6A/us (120A)	2mA/us-6A/us (160A)	
		1mA/us-4A/us (80A)	1mA/us-6A/us (120A)	2mA/us-8A/us (160A)	2mA/us-10A/us (200A)	2mA/us-12A/us (240A)	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	426mm×177mm×600mm(W×H×D), The height can be increased by 201mm with detachable feet					426 mm×400 mm ×650 mm (W×H×D)	
	Weight	24.5kg	29.5kg	29.5kg	35kg	35kg	61kg	

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

Model		AN23610E -1200-400(F)	AN23612E -1200-480(F)	AN23615E -1200-600(F)	AN23618E -1200-720(F)	AN23620E -1200-800(F)	AN23624E -1200-960(F)
Working range	Voltage	0-1200V					
	Current	0-400A	0-480A	0-600A	0-720A	0-800A	0-960A
	Power	10kW	12kW	15kW	18kW	20kW	24kW
Minimum working voltage		20V@400A	20V@480A	20V@600A	20V@720A	20V@800A	20V@960A
Constant current loading	Range	40/200/400A	48/240/480A	60/300/600A	72/360/720A	80/400/800A	96/480/960A
	Resolution	0.4/2/4mA	0.5/2/5mA	0.5/2/5mA	0.5/2/5mA	1/5/10mA	1/5/10mA
	Accuracy	0.04%+0.06%F.S.					
Constant voltage loading	Range	150/600/1200V					
	Resolution	1/5/10mV					
	Accuracy	0.025%+0.025%F.S.					
Constant resistance load	Range	50mΩ-0.5kΩ(150V) 0.2Ω-2kΩ(600V) 5Ω-10kΩ(1200V)	50mΩ-0.5kΩ(150V) 0.2Ω-2kΩ(600V) 5Ω-10kΩ(1200V)	34mΩ-0.34kΩ(150V) 0.14Ω-1.34kΩ(600V) 3.34Ω-6.67kΩ(1200V)	34mΩ-0.34kΩ(150V) 0.14Ω-1.34kΩ(600V) 3.34Ω-6.67kΩ(1200V)	25mΩ-0.25kΩ(150V) 0.1Ω-1kΩ(600V) 2.5Ω-5kΩ(1200V)	25mΩ-0.25kΩ(150V) 0.1Ω-1kΩ(600V) 2.5Ω-5kΩ(1200V)
	Resolution	4mA/Vsense	5mA/Vsense	5mA/Vsense	5mA/Vsense	10mA/Vsense	10mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%IF.S.					
Constant power loading	Range	1000/5000/10000W	1200/6000/12000W	1500/7500/15000W	1800/9000/18000W	2000/10000/20000W	2400/12000/24000W
	Resolution	20/100/200mW	20/100/200mW	40/200/400mW	40/200/400mW	100/500/1000mW	100/500/1000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	0.4mA/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)
		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)
		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	426 mm×400 mm ×650 mm(W×H×D)		426 mm×532 mm ×650 mm(W×H×D)		426 mm×665 mm ×650 mm(W×H×D)	
	Weight	66.5kg	72kg	92.5kg	98kg	113kg	124kg

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

Specifications

Model		AN23630E -1200-1200(F)	AN23636E -1200-1440(F)	AN23642E -1200-1680(F)	AN23648E -1200-1920(F)	AN23654E -1200-2160(F)	AN23660E -1200-2400(F)
Working range	Voltage	0-1200V					
	Current	0-1200A	0-1440A	0-1680A	0-1920A	0-2160A	0-2400A
	Power	30kW	36kW	42kW	48kW	54kW	60kW
Minimum working voltage		20V@1200A	20V@1440A	20V@1680A	20V@1920A	20V@2160A	20V@2400A
Constant current loading	Range	120/600/1200A	144/720/1440A	168/840/1680A	192/960/1920A	216/1080/2160A	240/1200/2400A
	Resolution	1/5/10mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA	2/10/20mA
	Accuracy	0.04%+0.06%F.S.					
Constant voltage loading	Range	150/600/1200V					
	Resolution	1/5/10mV					
	Accuracy	0.025%+0.025%F.S.					
Constant resistance load	Range	20mΩ-0.2kΩ(150V) 80mΩ-0.8kΩ(600V) 2Ω-4kΩ(1200V)	17mΩ-0.17kΩ(150V) 67mΩ-0.67kΩ(600V) 1.67Ω-3.33kΩ(1200V)	14mΩ-0.14kΩ(150V) 57mΩ-0.57kΩ(600V) 1.43Ω-2.86kΩ(1200V)	13mΩ-0.13kΩ(150V) 50mΩ-0.5kΩ(600V) 1.25Ω-2.5kΩ(1200V)	11mΩ-0.11kΩ(150V) 44mΩ-0.44kΩ(600V) 1.11Ω-2.22kΩ(1200V)	10mΩ-0.1kΩ(150V) 40mΩ-0.4kΩ(600V) 1Ω-2kΩ(1200V)
	Resolution	10mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense	20mA/Vsense
	Accuracy	Vin/Rset*(0.2%)+0.2%I.F.S.					
Constant power loading	Range	3000/15000/30000W	3600/18000/36000W	4200/21000/42000W	4800/24000/48000W	5400/27000/54000W	6000/30000/60000W
	Resolution	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	200/1000/2000mW	400/2000/4000mW	400/2000/4000mW
	Accuracy	0.2%+0.2%F.S.					
Current change rate	Setting range	1mA/us-2.4A/us (120A)	2mA/us-2.4A/us (144A)	2mA/us-2.4A/us (168A)	2mA/us-2.4A/us (192A)	2mA/us-2.4A/us (216A)	2mA/us-2.4A/us (240A)
		5mA/us-12A/us (600A)	10mA/us-12A/us (720A)	10mA/us-12A/us (840A)	10mA/us-12A/us (960A)	10mA/us-12A/us (1080A)	10mA/us-12A/us (1200A)
		10mA/us-24A/us (1200A)	20mA/us-24A/us (1440A)	20mA/us-24A/us (1680A)	20mA/us-24A/us (1920A)	20mA/us-24A/us (2160A)	20mA/us-24A/us (2400A)
Resolution	1/5/10mA/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×1410mm ×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

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

Model	Common Parameters		
Voltage	150V	600V	1200V
Composite Impedance	Range	LS: 0.1uH~20uH RS: 30mΩ~20Ω CL: 30uF~50000uF RL: Consistent with CR mode high grade	
	Resolution	LS: 0.1uH RS: 1 mΩ CL: 1uF RL: Consistent with CR mode high grade	
LED Test	Range	coeff: 0.01~1	
Battery Test	Discharge Time	1s~100000s	
	Resolution	1s	
Current Dynamics	T1&T2	0.020~99.999ms/100ms~99999ms	
	Resolution	1us/1ms	
	Accuracy	2us+100ppm	
	Minimum Rise Time	10us(Typical)	20us(Typical)
Current Measurement	Range, Resolution	Same as current loading	
	Accuracy	0.04%+0.04%F.S.	
Voltage Measurement	Range, Resolution	Same as voltage loading	
	Accuracy	0.015%+0.015%F.S.	
Input Resistance	800kΩ(Typical)	1MΩ(Typical)	2MΩ(Typical)
Power Measurement	Range, Resolution	Same as power loading	
	Accuracy	0.1%+0.1%I.F.S.*U.F.S.	
Operating Temperature, Humidity		0 ~ 40 C, 20-90%RH	
Temperature Coefficient		100ppm/ C (Typical)	

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

High Power Bidirectional DC Electronic Load ANEL(F) Series



Product Introduction

The ANEL(F) Series Feedback 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.

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 \leq 3ms; switching time \leq 4ms.
- Power factor \geq 0.99, current harmonic distortion \leq 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)
800V Series	ANEVL800-800-100(F)	800A	100kW	1000A	125KW	12V-800V	1500×1000×2100
	ANEVL800-1000-160(F)	1000A	160kW	1250A	200KW	12V-800V	2000×1000×2100
	ANEVL800-1000-200(F)	1000A	200kW	1250A	250KW	12V-800V	2000×1000×2100
	ANEVL800-1000-250(F)	1000A	250kW	1250A	312KW	12V-800V	2000×1000×2100
	ANEVL800-1000-300(F)	1000A	300kW	1250A	375KW	12V-800V	2000×1200×2100
	ANEVL800-1000-400(F)	1000A	400kW	1250A	500KW	12V-800V	2000×1200×2200
	ANEVL800-1000-500(F)	1000A	500kW	1250A	625KW	12V-800V	2000×1200×2200
1000V Series	ANEVL1000-600-100(F)	600A	100kW	750A	125KW	12V-1000V	1500×1000×2100
	ANEVL1000-1000-160(F)	1000A	160kW	1250A	200KW	12V-1000V	2000×1000×2100
	ANEVL1000-1000-200(F)	1000A	200kW	1250A	250KW	12V-1000V	2000×1000×2100
	ANEVL1000-1000-250(F)	1000A	250kW	1250A	312KW	12V-1000V	2000×1000×2100
	ANEVL1000-1000-300(F)	1000A	300kW	1250A	375KW	12V-1000V	2000×1200×2100
	ANEVL1000-1000-400(F)	1000A	400kW	1250A	500KW	12V-1000V	2000×1200×2200
	ANEVL1000-1000-500(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	CV CC CP CR	
Energy feedback	Grid-following feedback	
Isolation function	Electrical isolation between input and output	
CV mode	Setting range	12V-Vmax
	Resolution	0.1V
	Accuracy	0.05%FS
CC mode	Setting range	0A-Imax
	Resolution	0.1A
	Accuracy	0.1%FS
CP mode	Setting range	0kW-Pmax
	Resolution	0.01kW
	Accuracy	0.2%FS
CR mode	Setting range	0Ω-1,000Ω
	Resolution	0.1Ω
	Accuracy	0.5%FS
Dynamic characteristics	Recovery time	≤3ms (10%-90% load switching)
	Rise time	≤3ms
	Switching time	≤4ms

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

AC characteristic	Mode	3-phase 4-wire+PE
	Voltage	323V-347V
	Frequency	45Hz-65Hz (Follows grid frequency)
	Phase	Follows grid phase
	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
Product features	Output programming	It allows programmable output voltage waveforms, including voltage and current slopes, steps, cyclic control, and jump control.
	Emergency stop	It has an emergency stop button and built-in output contactor for quickly and completely disconnecting from the load equipment.
	Battery simulation	It can simulate five types of batteries: lithium ternary, lithium manganese, lithium cobalt, lithium iron phosphate, lead-acid, and nickel-metal hydride. 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.
Protection functions	AC protection	AC undervoltage, overvoltage, and phase loss protection
	Built-in protection	Bus overvoltage protection, power module overheating protection, power module overcurrent protection, and power module short circuit protection
	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 operation	Display mode	LCD
	Operation mode	Number key, knob and touch screen three-in-one
Display resolution	Voltage	0.001V
	Current	0.001A
	Power	0.001kW
Communication interface	Serial interface	Standard RS232/RS485 (select one)
	CAN interface	Supports CAN2.0 protocol, with a communication data update frequency ≥ 50Hz
	Ethernet	Supports the Ethernet communications
Analog interface		Supports external emergency stop switch quantity signal control
Safety performance working environment	Insulation resistance	≥2MΩ (tested at 1,000V insulation voltage)
	Withstand voltage	2,000VDC 5mAmin
	Grounding resistance	≤100mΩ
	Working temperature	0 C -40 C
	Working humidity	20-90%RH (no condensation)
	Altitude	≤2,000m
	Storage temperature	-10 C -70 C
Noise		≤70dB
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.

**AC/DC Electronic Load
AN29(F) Series**



Product Introduction

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

Features

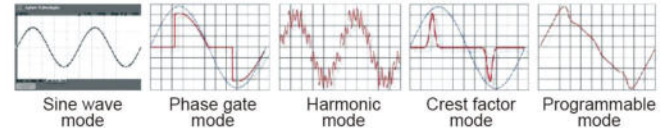
- CE
- Power Capacity: 1400W~ 8400W
- Working voltage is low to 2V, and up to 350Vrms
- Current range: 10Arms~60Arms, peak current: 45A~ 270A
- Frequency range: 44~ 1000Hz, DC
- Peak factor: 1.4 ~ 5.0000
- Adjustable power factor, setting range 0-1.0
- 3 units in parallel to realize 3 phase load
- Work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

Order information and extended functions

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

Production Function

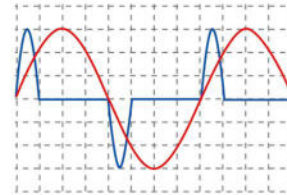
Waveform simulation



Test Function

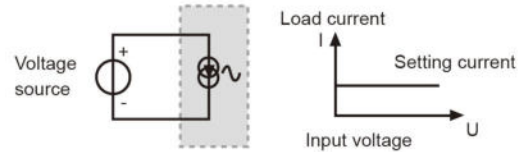
Power factor test

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



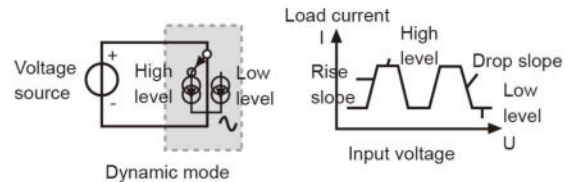
Regulation test

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



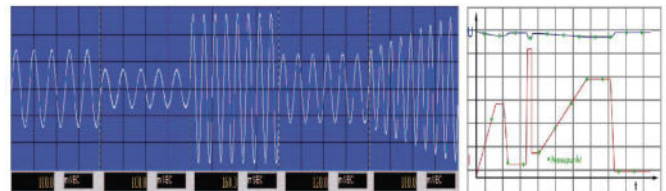
Dynamic performance test

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



Programmable steps

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



Connect in parallel and series

3 units in parallel to realize 3 phase load.

Safety Analyzer

AC Power Supply

DC Power Supply

Motor Test Scheme

Power Analyzer

Electronic Load

Specifications

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)	0-60Arms(270Apeak)
Voltage		2V- 260Vrms (360 Vpeak), customizable 2V-350Vrms (500Vpeak)					
Frequency		44 - 1000Hz, DC					
AC part: Constant Current Mode	Setting Range	0.2~10Arms, programmable	0.2~20Arms, programmable	0.2~30Arms, programmable	0.4~40Arms, programmable	0.4~50Arms, programmable	0.4~60Arms, programmable
	Accuracy	DC/50/60/400Hz: 0.1% + 0.2% range					
	Resolution	2mA	5mA	5mA	7mA	9mA	10mA
Constant Resistance Mode	Setting Range	1Ω~1200Ω, programmable	1Ω~600Ω, programmable	1Ω~400Ω, programmable	1Ω~300Ω, programmable	1Ω~240Ω, programmable	1Ω~200Ω, programmable
	Accuracy	DC/50/60/400Hz: Min. resistance ~ 1/2 Max. resistance: ± (1.5% setting value + 0.5% range); 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
Constant Power Mode	Setting Range	10W~1400W, programmable	10W~2800W, programmable	10W~4200W, programmable	10W~5600W, programmable	10W~7000W, programmable	10W~8400W, programmable
	Accuracy	DC/50/60/400Hz: 0.2% + 0.3% range					
	Resolution	0.25W	0.5W	0.75W	1W	1.25W	1.5W
Peak Factor Mode	Peak Factor Setting Range	1.4~5.0, programmable					
	Phase Shift Angle Setting Range	-90°~+90°, programmable					
Gate Trigge Mode	Turn On Angle	0-359°					
	Turn off Angle	0-360°					
Harmonic Mode	Frequency	1-15					
	Setting Range	0-1					
	Resolution	0.1%					
Power Factor	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
	Measurement Accuracy	1% range	1% range	1% range	1% range	1% range	1% range
	Resolution	0.01					
DC part	Voltage Working Range	2V- 260V , customizable 2V-350V					
	Current Setting Range	0.2A~10A	0.2A~20A	0.2A~30A	0.4A~40A	0.4A~50A	0.4A~60A
	Minimum Operating Voltage	2V					
	Rise Time	1ms					
	Operating Mode	Constant current, constant resistance, constant power, dynamic					
	Short Circuit Current Simulation	Use constant resistance mode					
Measurement part	Voltage Measurement Range	2V~260V, customizable 2V~350V					
	Voltage Measurement Accuracy	DC/50/60/400Hz: 0.1% + 0.1% range					
	Voltage Resolution	100mV					
	Current Measurement Range	0~10.00A	0~20.00A	0~30.00A	0~40.00A	0~50.00A	0~60.00A
	Current Measurement 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	Active power (W), apparent power (VA), reactive power (VAR), power factor, frequency					
Others	Protection	"Overcurrent: 10.5Arms; Overvoltage: 273Vrms; Over power: 1470W; Over temperature"	"Overcurrent: 21Arms; Overvoltage: 273Vrms; Over power: 2940W; Over temperature"	"Overcurrent: 31.5Arms; Overvoltage: 367Vrms; Over power: 4410W; Over temperature"	"Overcurrent: 42Arms; Overvoltage: 273Vrms; Over power: 2880W; Over temperature"	"Overcurrent: 52.5Arms; Overvoltage: 273Vrms; Over power: 7350W; Over temperature"	"Overcurrent: 63Arms; Overvoltage: 273Vrms; Over power: 8820W; Over temperature"
	Control Interface	Standard: RS-232, USB; Optional: Ethernet port					
	Operating Voltage	115/230 Vac ± 10%					
	Dimension WxHxD (mm)	440×222×465			440×354×465		
	Foot Height (mm)	15					

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