

Bidirectional Programmable 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.
- 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
- 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.



	Model ANEVH100-170(F) ANEVH100-340(F) ANEVH100-510(F) ANEVH300-75(F) ANEVH300-150(F) ANE Phase number Three-phase three-wire+PE									
Input	Voltage Voltage	Three-phase three-wire+PE								
		342V-528VAC								
	Frequency Power factor	45-66Hz								
		≥0.99								
Output	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 color LCD								
	resolution	0.01V (>1000V, 0.1V)								
	resolution			0.01A (>100						
(All Man	resolution			0.001kW (>100						
Setting error	Voltage			≤0.059	Maria Salara					
(programming	Current			≤0.1%	20.12550					
accuracy)	Power			≤1%	-3000A000					
leasurement error	Voltage			≤0.05°	%F.S.					
(readback	Current			≤0.1%						
accuracy)	Power			≤1%	FS	0000				
Ripple and noise	Vrms		40mVrms			100mVrms				
20Hz-20MHz	Vpp		250mVpp			650mVpp				
Load effect	Voltage	≤0.01%Umax								
Load Chool	Current	≤0.05%lmax								
Power effect	Voltage	≤0.01%Umax								
Fower ellect	Current		≤0.01%lmax							
Voltage rise time		≤30ms (10%-90%)								
Transient r	esponse time			≤2r	ns					
Forward and reverse switching time		2ms (+90%-90%)								
Voltage		0.05% set value								
emperature drift	Current	0.05% set value								
N	oise	≤65dB(A) (Measuring distance≥2m)								
OVE	P range			110%						
	drop compensation	≤5% Umax (6.5V)								
VA. 100 CO. 10	ation function		Sta	ndard: CAN/232/485/L		PIB				
2777773777		Input undervoltage protection, short-circuit protection, output overvoltage,								
Protection	on functions	current-limiting protection and internal overheating protection.								
Analog inte	face (optional)	Startup, stop, alarm, 0-5V or 0-10V analog control output								
	rnal interfaces		Otarta							
	ciency	Standard equipped parallel port ~90%								
CIII	Frequency	45-66Hz								
	Power factor	45-66HZ ≥0.99								
Feedback	Switching time			1000						
parameters	Feedback function	≤2ms								
	Feedback efficiency	Full power range feedback ~90%								
Montrie	-			0-50	District.					
	temperature									
	emperature			-20-7						
Humidity		<80%, no condensation								
Dimension	Housing dimension	444×133×753mm								
(10/00)	Overall dimension	482×133×787mm								
W	eight	5kw: ≤21kg 10kw: ≤29kg 15kw ≤37kg								
	10			on of programming acc						
Re	marks			d for the output voltage						
			when t	the load changes from	100% to 50% or vice	versa.				

	odel	ANEVH500-40(F)	ANEVH500-80(F)	ANEVH500-120(F)	ANEVH750-25(F)	ANEVH750-50(F)	ANEVH750-75(
	Phase number	Three-phase three-wire+PE								
Input	Voltage	342V-528VAC								
	Frequency	45-66Hz								
	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			
Displa	y mode			4.3-inch colo	rLCD					
Voltage	resolution	0.01V (>1000V, 0.1V)								
Current	resolution	0.01A (>1000A, 0.1A)								
Power r	resolution		0.001kW (>100kW, 0.01kW)							
Setting error	Voltage			≤0.05%F	S.					
(programming	Current			≤0.1%F.	S.					
accuracy)	Power			≤1%F\$	3					
easurement error	Voltage			≤0.05%F	.s.					
(readback	Current			≤0.1%F.	S.					
accuracy)	Power			≤1%F\$						
tipple and noise	Vrms		70mVrms	Acceptable		90mVrms				
20Hz-20MHz	Vpp		500mVpp			800mVpp				
	Voltage		осолтурр	≤0.01%Uı	nax	осситурр				
Load effect	Current			≤0.05%ln	100000					
	Voltage	≤0.01%Umax								
Power effect	Current	≤0.01%Imax								
Voltage				≤30ms (10%	A 1990					
2000 C - 11-10-00-00	rise time			≤2ms	1-90 70)					
	esponse time			≥ZIIIS						
Forward and reverse switching time		2ms (+90%-90%)								
emperature drift	Voltage	0.05% set value								
imperature unit	Current			0.05% set v	/alue					
No	oise			≤65dB(A) (Measuring	distance≥2m)					
OVP	range			110%F.	S					
Maximum lead d	rop compensation			≤5% Umax	(6.5V)					
Communica	ation function	Standard: CAN/232/485/LAN/USB, optional: GPIB								
		Input undervoltage protection, short-circuit protection, output overvoltage,								
Protectio	n functions	current-limiting protection and internal overheating protection.								
Analog interl	face (optional)	Startup, stop, alarm, 0-5V or 0-10V analog control output								
	nal interfaces		•	Standard equipped	parallel port					
Effic	ciency	~90%								
10740300	Frequency	45-66Hz								
<u> </u>	Power factor	≥0.99								
Feedback	Switching time	≤2ms								
parameters	Feedback function	Full power range feedback								
	Feedback efficiency	900 CO								
Working to	emperature			0-50 0						
	emperature			-20-70	A					
Humidity Housing dimension		<80%, no condensation 444×133×753mm								
Dimension	Overall dimension	444×133×753mm								
141		482×133×787mm								
Weight		5kw: ≤21kg 10kw: ≤29kg 15kw ≤37kg								
VVE		 The test condition of programming accuracy/readback accuracy is (25 ℃±5 ℃). The time required for the output voltage to recover to within "rated value±0.75%" 								
200	narks			- H (T) - H (T)	- 31					



M	odel	ANEVH1000-40(F)	ANEVH1000-75(F)	ANEVH1500-40(F)	ANEVH2250-25(F)					
	Phase number	Three-phase three-wire+PE								
Input	Voltage	342V-528VAC								
	Frequency	45-66Hz								
	Power factor	≥0.99								
	Voltage	0-1,000VDC	0-1,000VDC	0-1,500VDC	0-2,250VDC					
Output	Current	-40A-40A	-75A-75A	-40A-40A	-25A-25A					
	Power	-10KW-10KW	-15KW-15KW	-15KW-15KW	-15KW-15KW					
Displa	iy mode	4.3-inch color LCD								
Voltage	resolution	0.01V (>1000V, 0.1V)								
Current	resolution	0.01A (>1000A, 0.1A)								
Power r	resolution	0.001kW (>100kW, 0.01kW)								
Setting error	Voltage		≤0.05%	%F.S.						
(programming	Current		≤0.1%	6F.S.						
accuracy)	Power		≤1%	FS						
Measurement error	Voltage		≤0.05%	%F.S.						
(readback	Current		≤0.1%							
accuracy)	Power		≤1%	FS						
Ripple and noise	Vrms	300mVrms	100mVrms	200mV	rms					
20Hz-20MHz	Vpp	1600mVpp	1000mVpp	2000m\	/ pp					
Load effect	Voltage	≤0.01%Umax								
	Current	≤0.05%lmax								
Power effect	Voltage	≤0.01%Umax								
	Current	≤0.01%lmax								
Voltage rise time		≤30ms (10%-90%)								
Transient response time		≤2ms								
Forward and reverse switching time		2ms (+90%-90%)								
emperature drift	Voltage	0.05% set value								
emperature unit	Current	0.05% set value								
No	oise	≤65dB(A) (Measuring distance≥2m)								
OVP	range	110%F.S								
Maximum lead d	Irop compensation	≤5% Umax (6.5V)								
Communica	ation function	Standard: CAN/232/485/LAN/USB, optional: GPIB								
Protection	n functions	Input undervoltage protection, short-circuit protection, output overvoltage,								
FTOLEGUIO	TI FAITOUOTIO	current-limiting protection and internal 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								
Effic	ciency	~90%								
	Frequency	45-66Hz								
Feedback	Power factor		≥0.1	99						
parameters	Switching time		≤2r	ms						
paramotoro	Feedback function		Full power ran	ge feedback						
	Feedback efficiency	~90%								
Working temperature		0-50℃								
Storage temperature		-20-70 °C								
Humidity		<80%, no condensation								
Dimension	Housing dimension	444×133×753mm								
Jillonalon	Overall dimension	482×133×787mm								
We	eight	5kw: ≤21kg 10kw: ≤29kg 15kw ≤37kg								
Remarks		1. The test condition of programming accuracy/readback accuracy is (25 C±5 C).								
		2. The time required for the output voltage to recover to within "rated value±0.75%"								
		when the load changes from 100% to 50% or vice versa.								

DC Power Supply \\ Ainuo

M	odel	ANEVH300-225(F)	ANEVH500-160(F)	ANEVH750-120(F)	ANEVH1000-80(F)	ANEVH1500-70(F)	ANEVH2250-50(F		
	Phase number	Three-phase three-wire+PE							
the second	Voltage			342V-528	VAC				
Input	Frequency	45-66Hz							
	Power factor	≥0.99							
Ť	Voltage	0-300VDC							
Output	Current	-225A-225A	-160A-160A	-120A-120A	-80A-80A	-70A-70A	-50A-50A		
Output	Power	-21KW-21KW	-21KW-21KW	-21KW-21KW	-21KW-21KW	-21KW-21KW	-21KW-21KW		
Dienla	ay mode	-21101-21101	-21100-21100			-21100	-21100-21100		
320-W 1991	resolution	4.3-inch color LCD							
	resolution	0.01V (>1000V, 0.1V)							
1 1110 2000		0.01A (>1000A, 0.1A)							
Power resolution 0.001kW (>100kW, 0.01kW)									
Setting error	Voltage	≤0.05%F.S.							
(programming	Current	≤0.1%F.S.							
accuracy)	Power			≤1%F5	2011				
leasurement error	Voltage			≤0.05%F	auto				
(readback	Current	≤0.1%F.S.							
accuracy)	Power			≤1%F\$		1000			
Ripple and noise	Vrms	100mVrms	80mVrms	80mVrms	220mVrms	220mVrms	400mVrms		
20Hz-20MHz	Vpp	650mVpp	750mVpp	800mVpp	1800mVpp	1800mVpp	2400mVpp		
Load effect	Voltage	≤0.01%Umax							
Load ellect	Current	≤0.05%lmax							
Power effect	Voltage	≤0.01%Umax							
Power ellect	Current	≤0.01%lmax							
Voltage	rise time	≤30ms (10%-90%)							
Transient re	esponse time	≤2ms							
15000	and reverse			2ms (+90%	-90%)				
SWILCH		0.05% set value							
emperature drift	Voltage	0.05% set value 0.05% set value							
NI.	oise	u.us% set value ≤65dB(A) (Measuring distance≥2m)							
25170	T. T. T.				**************************************				
	range	110%F.S							
	Irop compensation	≤5% Umax (6.5V)							
Communica	ation function	Standard: CAN/232/485/LAN/USB, optional: GPIB							
Protectio	n functions	Input undervoltage protection, short-circuit protection, output overvoltage,							
29- 10 0013 50		current-limiting protection and internal overheating protection.							
Analog inter	face (optional)	Startup, stop, alarm, 0-5V or 0-10V analog control output							
Other extern	nal interfaces	Standard equipped parallel port							
Effic	ciency	~90%							
	Frequency	45-66Hz							
Feedback	Power factor	≥0.99							
parameters	Switching time	≤2ms							
parameters	Feedback function			Full power range	feedback				
	Feedback efficiency								
Working to	emperature	0-50℃							
Storage to	emperature	-20-70℃							
Humidity		< 80%, no condensation							
ridit	Housing dimension	444×133×753mm							
Dimension	Overall dimension	444×133×763mm 482×133×787mm							
10/2	eight	482×133×/8/mm 21kw≤39kg							
VVE	aigiit		1 The test condition	of programming accura		vie (25°C±5°C)			
_									
Remarks			Ž.	or the output voltage to					
			when the	load changes from 10	0% to 50% or vice ver	'sa.			



N	Model	ANEVH500-240(F)	ANEVH750-180(F)	ANEVH1500-80(F)	ANEVH2250-60(F)	ANEVH80-1020(F)			
	Phase number		8.	Three-phase three-wire+PE					
Innut	Voltage	342V-528VAC							
Input	Frequency	45-66Hz							
	Power factor			≥0.99					
Output	Voltage	0-500VDC	0-750VDC	0-1,500VDC	0-2,250VDC	0-80VDC			
	Current	-240A-240A	-180A-180A	-80A-80A	-60A-60A	-1,020A-1,020A			
	Power	-30KW-30KW	-30KW-30KW	-30KW-30KW	-30KW-30KW	-30KW-30KW			
Displa	ay mode	in the second se	51	4.3-inch color LCD					
Voltage	resolution	0.01V (>1000V, 0.1V)							
Current	resolution	0.01A (>1000A, 0.1A)							
Power	resolution	0.001kW (>100kW, 0.01kW)							
Setting error	Voltage			≤0.05%F.S.	<u> </u>				
(programming	Current			≤0.1%F.S.					
accuracy)	Power			≤1%FS					
easurement error				≤0.05%F.S.					
(readback	Current			≤0.1%F.S.					
accuracy)	Power			≤1%FS					
Ripple and noise		80mVrms	80mVrms	220mVrms	400mVrms	25mVrms			
20Hz-20MHz	Viiis	750mVpp	800mVpp	750mVpp	2400mVpp	400mVpp			
20112 20111112	Voltage	73011Vpp	ооотгурр		2400111Vpp				
Load effect	Current	≤0.01%Umax ≤0.02%Umax							
	Voltage	≤0.05%lmax ≤0.05%lmax ≤0.02%Umax							
Power effect	Current								
\		≤0.01%lmax ≤0.05%lmax							
Voltage rise time		≤30ms (10%-90%)							
Transient response time		≤2ms							
	and reverse hing time	2ms (+90%-90%)							
emperature drift	Voltage	0.05% set value							
omporataro ant	Current	0.05% set value							
N	loise	≤65dB(A) (Measuring distance≥2m)							
OVE	range			110%F.S					
Maximum lead	drop compensation	≤5% Umax (6.5V)							
Communic	cation function	Standard: CAN/232/485/LAN/USB, optional: GPIB							
D		Input undervoltage protection, short-circuit protection, output overvoltage,							
Protection	on functions	current-limiting protection and internal overheating protection.							
Analog inter	rface (optional)	Startup, stop, alarm, 0-5V or 0-10V analog control output							
Other exter	rnal interfaces	Standard equipped parallel port							
Effi	ciency	~90% ~94%							
	Frequency	45-66Hz							
F	Power factor	≥0.99							
Feedback	Switching time			≤2ms					
parameters	Feedback function	Full power range feedback							
	Feedback efficiency	575.00							
Working	temperature			0-40°C					
Storage temperature		-20-70°C							
	midity			<80%, no condensation					
	Housing dimension	444×133×753mm 444×177×69							
Dimension	Overall dimension								
W	/eight								
VV	9.11	30kw:≤40kg 30kw:≤50kg 1.The test condition of programming accuracy/readback accuracy is (25 ℃ ±5 ℃).							
Remarks		2. The time required for the output voltage to recover to within "rated value±0.75%"							
Remarks		2.		changes from 100% to 50%		70			