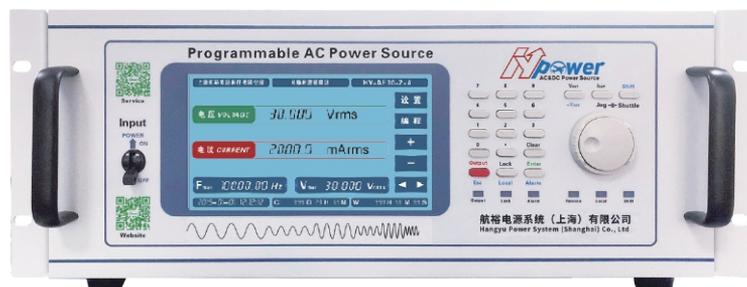


# HY-AE Series AC Excitation Power Source

Hangyu Power System (Shanghai) Co., Ltd.

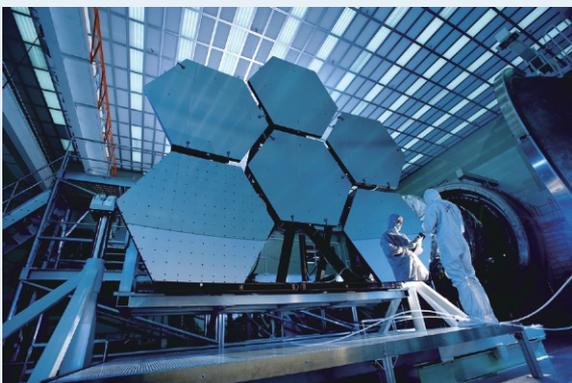


High Purity  
High Precision  
High Reliability



## Application Field

- ◆ Aviation Military
- ◆ Testing laboratory
- ◆ AC Sensor testing
- ◆ Piezoelectric ceramics
- ◆ Magnetic Material
- ◆ Medical Treatment
- ◆ Scientific Research



## Product Features

- Output frequency range 100Hz-30kHz, optional range 100Hz-50kHz, set resolution 0.01Hz
- Output capacity range 10VA - 600VA
- Output voltage AC 0-30Vrms, set resolution 0.01V
- Output voltage accuracy: level A (1%) level B (0.5%) level C (0.1%) level D (0.05%)
- Linear power technology, low ripple noise, high stability, and no high-frequency interference
- Supports front panel programming without the need for upper computer software control
- Power output soft start function
- 16 bits D/A High precision converter with precise output
- 16 bits A/D High precision converter for more accurate read back
- Multiple protection functions OVP / OCP / OTP
- 19 Inch standard rack or floor mounted
- 4 Inch & 7 inch large LCD display screen
- Touch screen operation & number key input
- Multistage shuttle adjustment knob
- Output ON / OFF key
- Intelligent speed control design for fans to reduce noise
- Front/side air inlet, rear air outlet, saving heat dissipation space
- Supports modbus protocol
- Standard interface: RS-485&RS-232
- Purchasing interface: LAN&CAN
  - USB
  - GPIB
  - Analog programming and monitoring (isolated type)

# HY-AE Series Product Selection Table

**In the selection table, special specifications beyond the voltage/frequency/output capacity range are accepted for customization.**

HY-AE Series Excitation Power Supply (100Hz-30kHz)

Voltage	Output Capacity (VA) / Output Current (Arms)					
	600VA	300VA	200VA	100VA	50VA	10VA
0-10Vrms	60A	30A	20A	10A	5A	1A
0-15Vrms	40A	20A	13.4A	6.7A	3.4A	0.6A
0-30Vrms	20A	10A	6.7A	3.4A	1.7A	0.3A

## Product Model Naming Rules

Product Series	Output Voltage	Output Current	Frequency	Accuracy	Choose
HY-AE	10	60	30K	A	CF
Series name	Output voltage 0-10V	Output current 60A	Maximum frequency 30kHz	Voltage/ frequency accuracy A/B/C/D-level accuracy	Short name for purchasing function please refer to the purchasing function

Selection examples:

Model: HY-AE 10-60-30K-A-CF

Output voltage 0-10V, output current 60A, maximum output frequency 100 Hz-30kHz, A-level accuracy, optional user-defined function.

# HY-AE Series Technical Parameter

AC Output	
Connection	Single phase L, N+ground wire
Frequency setting range	100Hz - 30kHz, optional 100Hz - 50kHz
Frequency stabilization accuracy	100ppm, 10ppm , 1ppm ,three gear options
Source effect	$\leq \pm 0.1\% \pm 5$ words F.S., input 220V $\pm 10\%$
Load regulation	$\leq \pm 0.2\% \pm 5$ words F.S.
Waveform distortion (THD)	Sine wave, THD $\leq 0.5\%$
Programming And Read Back Accuracy & Resolution	
Voltage output programming accuracy	A-level: 1%FS; B-level: 0.5%FS; C-level: 0.1%FS; D-level: 0.05%FS.
Frequency output programming accuracy	$\pm 0.01\%$ F.S.
Voltage setting resolution	0.01V
Frequency setting resolution	0.01Hz
Voltage output readback accuracy	A-level: 1%FS; B-level: 0.5%FS; C-level: 0.1%FS; D-level: 0.05%FS.
Current output readback accuracy	$\pm 0.5\%$ F.S.
Voltage read back resolution	0.01V
Current read back resolution	0.0001A ( $\leq 6A$ ) ; 0.001A ( $\leq 60A$ ) ; 0.01A ( $< 650A$ ) ; 0.1A ( $> 650A$ )
Protection Function	
Overload capacity	125% current 15s, 150% current 5s, 200% current 2s, 300% current Stop output immediately
Protection Function	Overvoltage, overcurrent, internal overheating, short circuit
Ambient Condition	
Environment	Indoor use; installation overvoltage level: II; pollution level: P2; class II equipment
Ambient Temperature	0°C to 45°C; -20°C to 55°C; choose -40°C to 55°C
Storage environment temperature	-20°C to 65°C
Working environment humidity	20%-90%RH, No condensation, continuous operation
Storage environment humidity	10%-95%RH, No condensation
Altitude	Above an altitude of 2000 meters, the power decreases by 2% for every 100 meters increase, or the maximum working environment temperature decreases by 1 °C for every 100 meters;When not in operation, it can reach an altitude of 12000 meters
Burial	Forced air cooling, intelligent variable speed fan, both sides/front air inlet, rear air outlet
Noise	$\leq 65$ dB(A), Weighted measurement using 1m

# HY-AE Series Technical Parameter

Control Panel	
Monitor	4-Inch/7-inch, LCD liquid crystal display, touch screen
Display Item	Voltage (set value&measured value), current measurement value, frequency setting value, working time, cumulative working time, current time and date
Control Function	Number button input, multi-level shuttle knob adjustment (outer circle coarse adjustment/inner circle fine adjustment)Output ON/OFF switch, Lock keyboard and touch lock, reset restart status indicator light (Shift / Local / Remote / Alarm / Lock / Output)
Programming Function	Step/ladder/gradient
Communication Interface	
Standard Configuration	RS-485 & RS-232
Choose	LAN、CAN、USB、GPIB, Analog programming and monitoring interface (isolated type)
Appearance Color & Size	
Colour	RAL 7035
Size	2U, Standard 19 inch rack mounted or desktop (with fixed foot pads); 4U, Standard 19 inch rack mounted or desktop (with fixed foot pads); 10U, Standard 19 inch rack mounted or floor mounted (with movable universal casters and brakes);

## Purchasing Interface

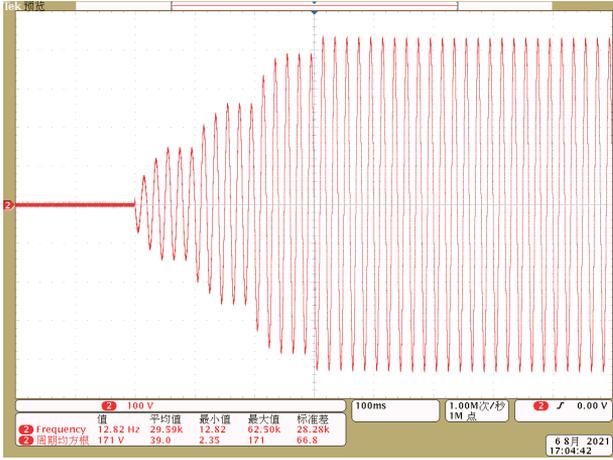
- LAN LAN communication interface
- CAN CAN communication interface
- USB USB communication interface
- GPIB GPIB communication interface
- APM Analog programming and monitoring interface  
(isolated type)

## Purchasing Function

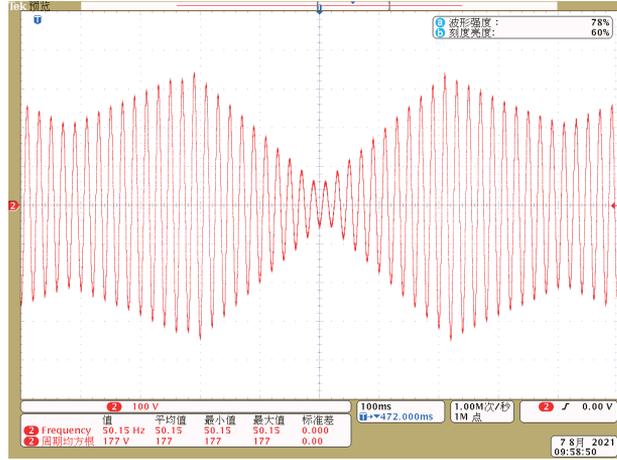
- HR High resolution/precision
- T2 Operation temperature -20°C to 55°C
- T4 Operation temperature -40°C to 55°C
- CF User defined functions (please specify when ordering)
- MR Measurement report (issued by a third party certified by CNAS)

\*The equipment operates continuously for more than 30 minutes at the specified operating temperature Only then can all technical indicators be guaranteed.

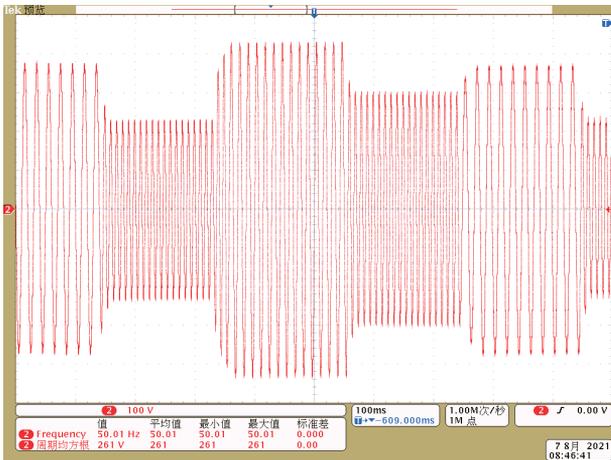
## Single Phase



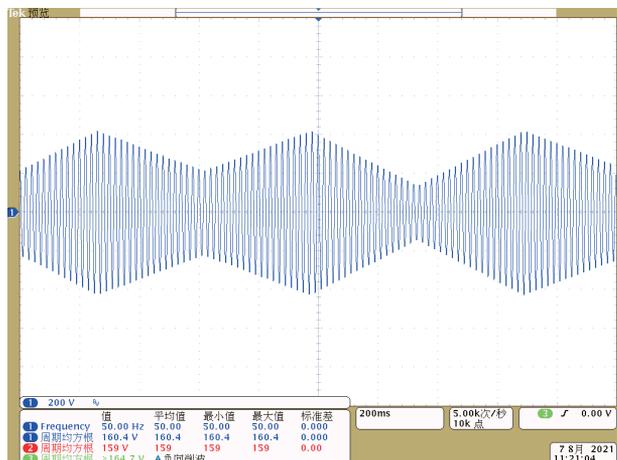
Step



Step



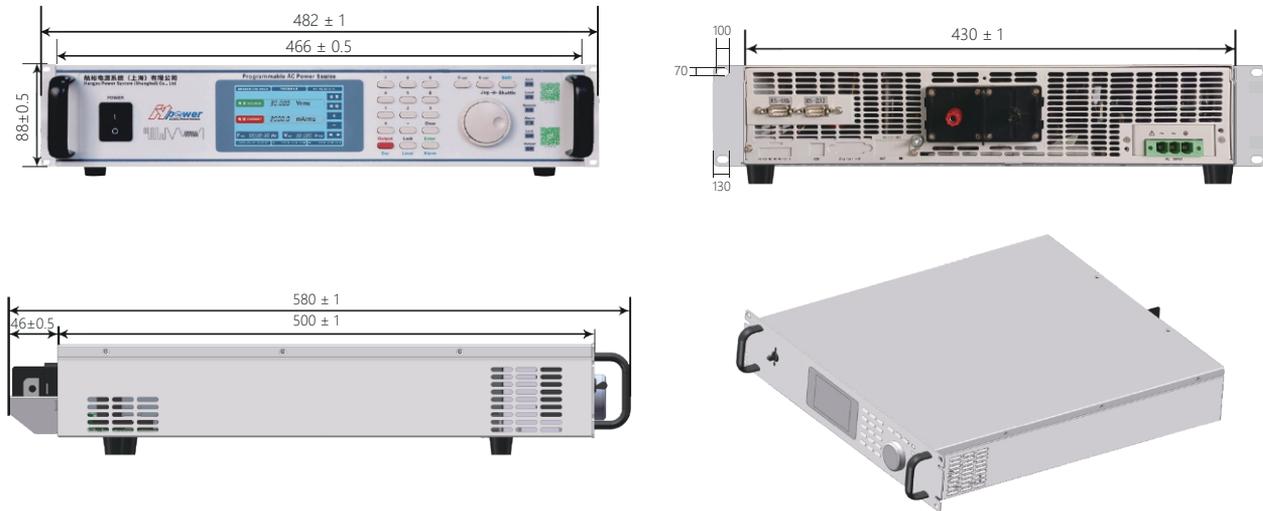
Ladder



Gradient

# Appearance & Size Outline Dimension

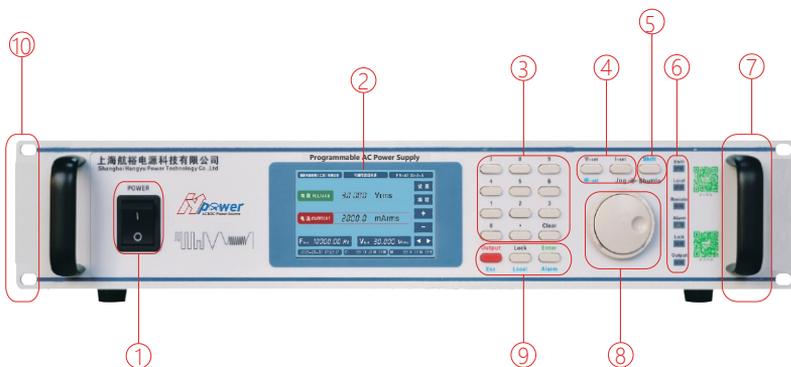
2U 430(W) \* 500(D) \* 88(H) mm



4U 430(W)\*560(D)\*178(H)mm



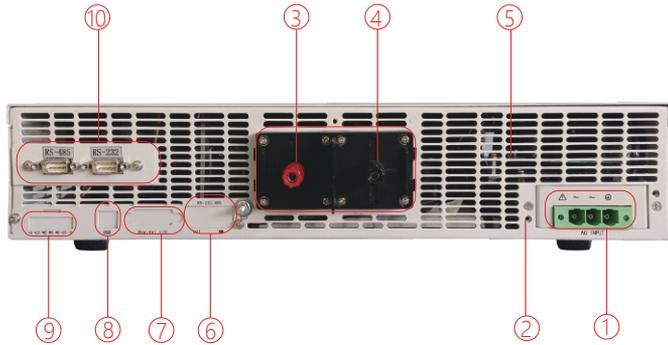
## 控制面板



- ① Power input circuit breaker
- ② LCD Display (4-inch, touch screen)
- ③ Number input keyboard
- ④ Voltage/current setting key
- ⑤ Shift function reuse key
- ⑥ Status
- ⑦ Chassis handle
- ⑧ Multistage shuttle adjustment knob (inner circle fine adjustment/outer circle coarse adjustment)
- ⑨ Lock, enter to confirm, esc to exit local, reset restart output ON/OFF switch
- ⑩ 19 Inch standard rack mounting holes

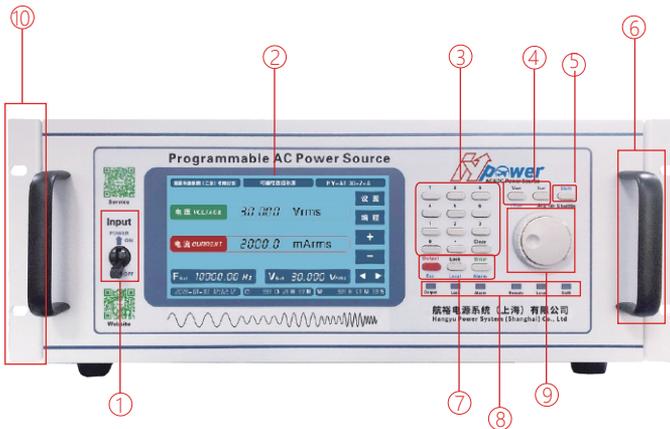
# Appearance & Size Outline Dimension

## 后面板



- ① AC Input terminal
- ② AC Input terminal protective cover
- ③ DC Output terminal ( + / - )
- ④ DC Output terminal protective cover
- ⑤ Heat dissipation air outlet
- ⑥ RS-485 & RS-232 Communication interface
- ⑦ Digital I/O Communication interface
- ⑧ USB Communication interface
- ⑨ Remote compensation measurement terminal
- ⑩ Purchase communication interface (one out of three)  
 LAN & CAN Communication interface  
 GPIB Communication interface  
 Analog programming and monitoring interface (isolated type)

## 控制面板



- ① Power input circuit breaker
- ② LCD Display (4-inch, touch screen)
- ③ Number input keyboard
- ④ Voltage/current setting key
- ⑤ Shift function reuse key
- ⑥ Chassis handle
- ⑦ Lock, enter to confirm, esc to exit local, reset restart output ON/OFF switch
- ⑧ Status
- ⑨ Multistage shuttle adjustment knob (inner circle fine adjustment/outer circle coarse adjustment)
- ⑩ 19 Inch standard rack mounting holes

## 后面板



- ① AC input terminal
- ② RS-485 & RS-232 communication interface
- ③ AC output terminal
- ④ Heat dissipation air outlet

# Cooperative Clients (Partial)

## Aerospace And National Defense Military Industry Research Institute



china  
aerospace



CASIC



aviation  
industry



China  
Aerospace



CETC



CSSC



CSIC

CASC 800 institute (Shanghai Aerospace Precision Machinery Research Institute)	AVIC 603 institute (AVIC Xi'an Aircraft Design and Research Institute)	CETC 14 institute (Nanjing Institute of Electronic Technology)
CASC 801 institute (Shanghai Institute of Space Propulsion)	AVIC 613 institute (China Aviation Industry Group Luoyang Electro Optic Equipment Research Institute)	CETC 21 institute (Shanghai Micromotor Research Institute)
CASC 803 institute (Shanghai Institute of Space Propulsion)	AVIC 615 institute (China Aviation Industry Group Luoyang Electro Optic Equipment Research Institute)	CETC 23 institute (Shanghai Transmission Line Research Institute)
CASC 804 institute (Shanghai Aerospace Electronic Communication Equipment Research Institute)	AVIC 618 institute (Xi'an Automatic Flight Research Institute of China Radio Aviation Research Institute)	CETC 36 institute (Jiangnan Electronic Communication Research Institute)
CASC 805 institute (Shanghai Aerospace Systems Engineering Research Institute)	AVIC 631 institute (AVIC Aerospace Computing Technology Research Institute)	CETC 38 institute (East China Electronic Engineering Research Institute)
CASC 808 institute (Shanghai Institute of Precision Metrology and Testing)	AVIC 105 factory (Tianjin Aviation Electromechanical Co., Ltd)	CETC 50 institute (Shanghai Microwave Technology Research Institute)
CASC 811 institute (Shanghai Space Power Research Institute)	AVIC 115 factory (Shaanxi Aviation Electric Co., Ltd)	CETC 51 institute (Shanghai Microwave Equipment Research Institute)
CASC 812 institute (Shanghai Satellite Equipment Research Institute)	AVIC 118 factory (Shanghai Aviation Electrical Appliances Co., Ltd)	CETC 54 institute (Shijiazhuang Communication Measurement and Control Technology Research Institute)
CASC 502 institute (Beijing Institute of Control Engineering)	AVIC 181 factory (Wuhan Aviation Instrument Co., Ltd)	CETC 55 institute (Nanjing Institute of Electronic Devices)
CASC 510 institute (Lanzhou Institute of Space Technology Physics)	AVIC 607 institute (China Leihua Electronic Technology Research Institute)	CSIC 707 institute (Tianjin Institute of Navigation Instruments)
CASIC 206 institute (Beijing Institute of Mechanical Equipment)	AVIC 304 institute (Beijing Great Wall Metrology and Testing Technology Research Institute)	CSIC 7107 institute (Shaanxi Aerospace Navigation Equipment Co., Ltd)
CASIC 307 factory (Aerosun Corporation)	AECC 606 institute (Shenyang Engine Research Institute)	CSIC 719 institute (Wuhan Second Ship Design and Research Institute)
CASIC 33 institute (Institute 33 of Aerospace Science and Industry Third Institute)		CSIC 704 institute (Shanghai Shipbuilding Equipment Research Institute)
CASIC 3651 factory (Guizhou Aerospace Linquan Motor Co., Ltd)		CSIC 726 institute (Shanghai Institute of Ship Electronic Equipment)
		Jiangnan Shipbuilding (Group) Co., Ltd
		Nanjing Panda Electronics Co., Ltd
		State owned 741 Factory (Nanjing East China Electronics Group Co., Ltd.)

## Scientific Research & Third Party Quality Inspection Institutions



Institute of Physical and Chemical Technology (Beijing)

Urban Environment Research Institute (Xiamen)

Institute of Electrical Engineering (Beijing)

Institute of Applied Physics (Shanghai)



# Cooperative Clients (Partial)

## The Chinese People's Liberation Army

South China Sea Fleet  
 East China Sea Fleet  
 North Sea Fleet  
 Navy Factory 701/702  
 4724 Factory (Shanghai Haiying Machinery Factory)  
 95861 Unit (Air First Base)  
 The 5720th Factory of the People's Liberation Army of China

## Commercial Aviation



**COMAC**  
Commercial Aircraft Corporation of China Limited



**Collins Aerospace**  
Rockwell Collins

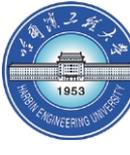
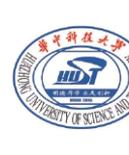


**GAMECO**  
Guangzhou Aircraft Maintenance Engineering Co., Ltd



**Ameco**  
Beijing Aircraft Maintenance Engineering Co., Ltd

## Military Academies And Local Universities

						
national university of defense technology	Aerospace Engineering University	Army Engineering University	air force engineering university	naval university of engineering	Dalian Naval Academy	Naval Aviation University
						
Beihang University	Beijing Institute of Technology	Harbin Institute of Technology	Harbin Engineering University	Nanjing University of Aeronautics and Astronautics	Nanjing University of Science and Technology	Northwestern Polytechnical University
						
University of Science and Technology of China	Tsinghua University	Peking University	Shanghai Jiaotong University	Zhejiang University	Tianjin University	Huazhong University of Science and Technology
						
University of Electronic Science and Technology	Shanghai University	Beijing University of Technology	Shanghai Maritime University	Dalian University of Technology	Dalian Maritime University	South China University of Technology
						
Huazhong University of Science and Technology	Xi'an Electronic Technology	Xi'an Jiaotong University	Sichuan University	donghua university	north china institute of aerospace engineering	Fudan University
						
Xiamen University	north china electric power university	Changchun Institute of Technology	xiangtan university	zhejiang university of technology	Xi'an University of technology	University of Electronic Science and Technology of China

## Cooperative Clients (Partial)

### Power Semiconductor Customers



### Enterprises In The Field Of Automotive Electronics



### High Tech R&D Enterprises





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## Contact us

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The warranty period of all standard products in this manual is three years, except non-standard products

All technical data and instructions are based on the actual product

If there is any change, Hangyu Power has the final interpretation right

Authorized distributor:

