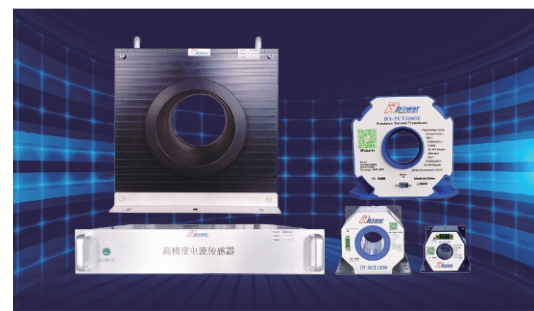




# HY-HPD Series

High Precision DC Power Supply

Military Quality Power Supply Expert



## High precision, high power density



HY-HPD series high-precision DC power supply, specifically designed for high-precision electrical Calibration accuracy of flow sensors and automotive DC current diverters. Power supply accuracy Levels up to 0.01, 0.02, and 0.05 are optional.

### Product Features

- Power supply accuracy level 0.01, 0.02, 0.05 optional
- Output current range: 0-50kA optional
- Can achieve automatic switching of multiple ranges without the need for conversion devices, with longer lifespan and higher stability
- Optional high-precision DC ammeter to establish a DC current divider testing system
- Optional 10ppm high-precision current sensor for comparative testing of current sensors
- Optional positive and negative polarity conversion device for current sensor positive and negative current testing
- Input standard PFC, with a power factor of up to 0.99

### Application Area

- Dedicated to calibrating accuracy for automotive sensors and diverters

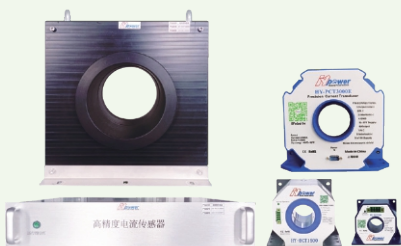


High precision current sensor for automobiles



Automotive DC current splitter

### Optional High-Precision Current Sensor For Comparative Testing Of Current Sensors



HY-PCT series high-precision sensors with the highest rated DC current on the primary side Up to 30kA, with an accuracy of 10ppm and excellent linearity And accuracy, strong electromagnetic interference resistance, and ultra-low response time.

- High precision: 5ppm, 10ppm, 50ppm optional (2ppm customizable)
- Drift to zero: 2ppm
- Temperature effect: 1ppm/10 degrees
- Can measure AC, DC, and pulse currents
- Load start, overload protection, self recovery function



# HY-HPD Series Schematic Diagram For Selection And Testing

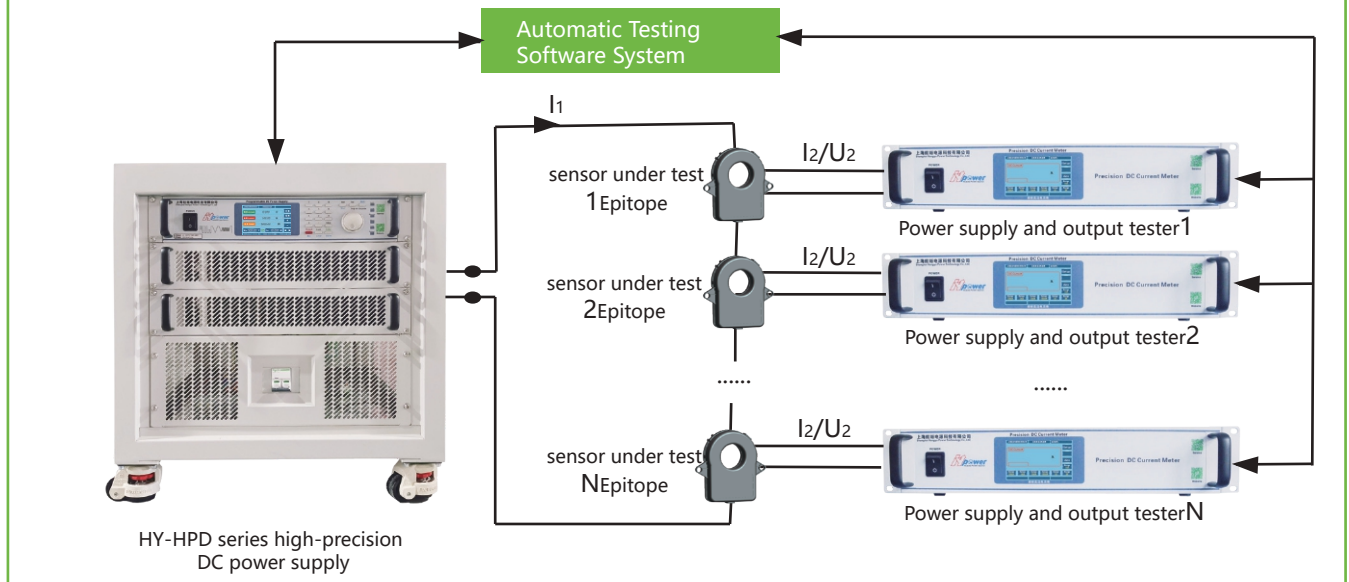
## Select High-Precision DC Ammeter To Establish A DC Current Divider Testing System



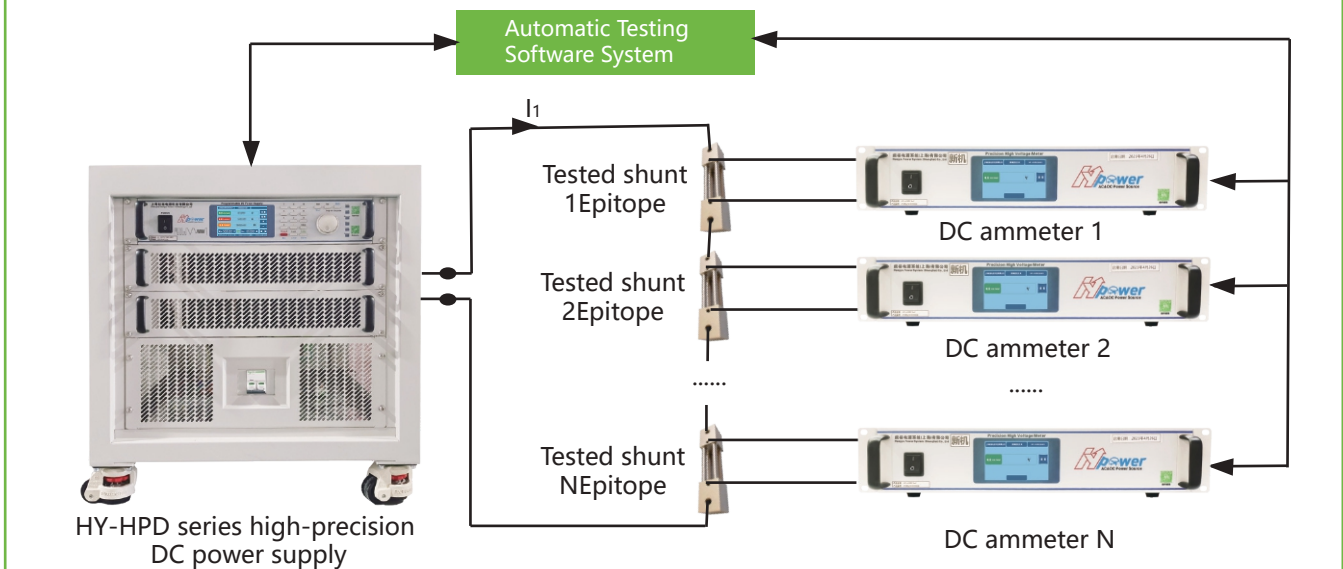
HY-CM Series high-precision ammeter, capable of observing small or large currents, capable of Electronic and electrical measurement, industrial automation, instrument testing and measurement.

- Current measurement range: 0.001A-300A optional
- Measurement accuracy: 0.01 level, 0.02 level, 0.05 level
- Voltage measurement function: 0-1000.00V
- Voltage meter measurement accuracy: DC 0.01%

## Current Sensor Comparison Test



## DC Current Divider Testing System



# HY-HPD Series Product Selection Table

## Product Selection Instructions

### Product Model Naming Rules

Product series	Output voltage	Output current	Optional function
HY-HPD	5	- 10000	- CF

Model: HY-HPD 5-10000-CF  
 The model information is: Output voltage 0-5V,  
 Output current 0-10000A  
 Choose User Defined Features

#### Communication protocol

Modbus  
 SCPI

#### Standard communication interface

RS-485  
 RS-232  
 Digital I/O

#### Optional communication interface (Users can install it themselves)

- LAN : Ethernet communication interface
- CAN : CAN communication interface
- GPIB : GPIB communication interface
- IA : Analog programming and monitoring interface (isolated type)

### Purchasing function

- PN : Positive and negative switching
- CP : Constant power function
- T1 : operation temperature -10°C to 50°C
- T2 : operation temperature -20°C to 50°C
- T4 : operation temperature -40°C to 50°C
- CF : User defined functions (please specify when ordering)
- MR : Measurement report (issued by a third party certified by CNAS)

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

## HY-HPD Series Model Table

Output voltage: 5V, 10V optional

In the selection table, special specifications beyond the voltage/current/power range are accepted for customization.

### 5V Series Power Selection

Models	Output voltage	Output current	Output power	Short-term stability (%/h)			Optimal measurement uncertainty (k=2) , ppm*RD +ppm*RG		
				0.01 grade	0.02 grade	0.05 grade	0.01 grade	0.02 grade	0.05 grade
HY-HPD 5-500	5V	500A	2.5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPD 5-1000	5V	1000A	5kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPD 5-2000	5V	2000A	10kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPD 5-3000	5V	3000A	15kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPD 5-5000	5V	5000A	25kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPD 5-6000	5V	6000A	30kW	0.003	0.005	0.01	70+30	150+50	400+100
HY-HPD 5-10000	5V	10000A	50kW		0.005	0.01		150+50	400+100
HY-HPD 5-20000	5V	20000A	100kW		0.005	0.01		150+50	400+100
HY-HPD 5-30000	5V	30000A	150kW		0.005	0.01		150+50	400+100
HY-HPD 5-50000	5V	50000A	250kW		0.005	0.01		150+50	400+100

Current output range (single current source): 0-1000A

Adjusting fineness: 0.0005% \* RG, 7-bit display

Establishment time: The time to output to 0.01% accuracy is less than 3 seconds

# HY-HPD Series Technical Parameter

## DC Voltage Measurement DCV

Range	Minimum resolution	Optimal measurement uncertainty (k=2) ppm*RD+μV			Temperature coefficient, ±ppm*RD/°C		
		0.01 grade	0.02 grade	0.05 grade	0.01 grade	0.02 grade	0.05 grade
1mV	1nV	70+0.5μ	80+0.5μ	150+1μ	15	15	30
10mV	10nV	70+1μ	80+1.5μ	150+3μ	5	5	10
100mV	100nV	70+3μ	80+5μ	150+10μ	5	5	10
1V	1μV	70+30μ	80+10μ	150+20μ	2	2	5
10V	10μV	70+300μ	80+50μ	150+100μ	2	2	5

Voltage measurement range: ± (100 μ V~11V), manual/automatic range shifting

Input Resistance: > 1GΩ

Input protection: 50Vpk, continuous

## Stability&Temperature Coefficient

Temperature drift	U: 0.01%	I: 0.01% (After 30 minutes of power on at a certain input voltage and load ambient temperature, the temperature coefficient remains unchanged for 8 hours)
Temperature coefficient	U: 50ppm/°C	I: 70ppm/°C (After 30 minutes of power on)

## Protection Function

OVP Overvoltage protection setting range	10 - 110%, Immediate shutdown of output beyond limit
OCP Overcurrent protection setting range	0 - 105%, Immediate shutdown of output beyond limit
OTP Over temperature protection	Immediate shutdown of output beyond limit
OPP Over power protection	10 - 110%, Immediate shutdown of output beyond limit

## Ambient Condition

Environment	Indoor use; Installation overvoltage level: II; Pollution level: P2; Class II equipment
Ambient temperature	0°C to 50°C, Optional-10°C to 50°C, -20°C to 50°C, -40°C to 50°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, front/side air inlet, rear air outlet
Noise	≤ 65dB(A), Weighted measurement with 1 m

# HY-HPD Series Technical Parameter

## Control Panel

Monitor	4/7-inch LCD display, touch screen
Control function	Numeric key 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	Steps, ladder, gradients

## Input Power Supply

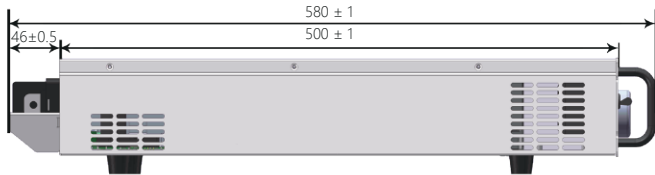
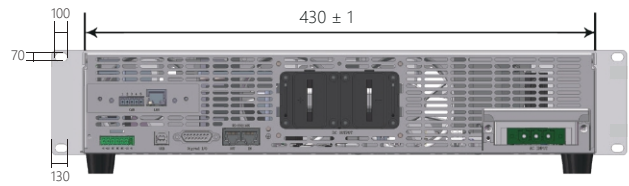
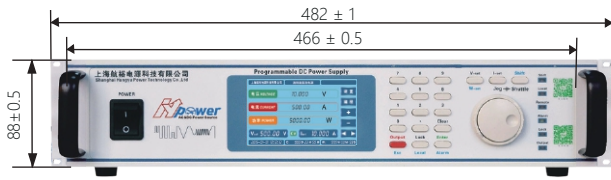
Frequency	47 Hz - 63 Hz
Connection	Single phase two wire+ground wire, 220 V $\pm$ 15% Three phase three wire+ground wire, 380 V $\pm$ 15% (-3P Standard configuration model)
Power factor (typical value)	0.99  0.94 (-3P)

## Size

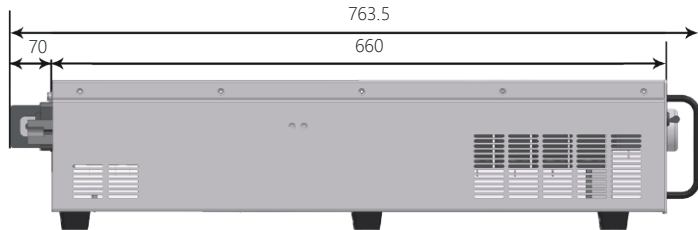
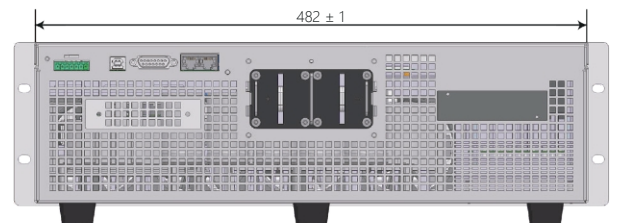
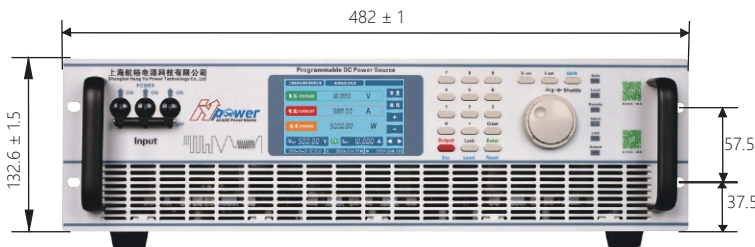
Size	430 (W) * 500 (D) * 88 (H) mm, 2U 450 (W) * 610 (D) * 133 (H) mm, 3U 440 (W) * 600 (D) * 445 (H) mm, 10U The size can be changed according to user needs
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# Appearance&Size Outline Dimension

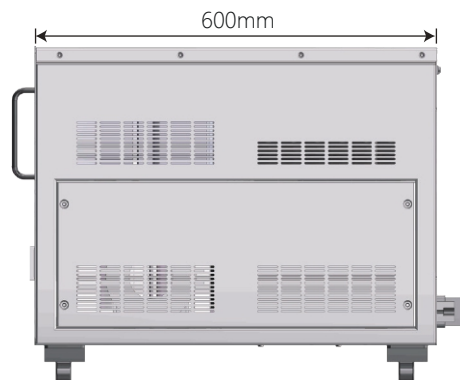
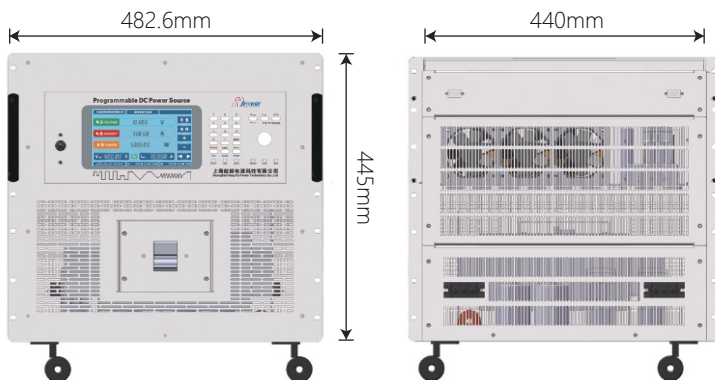
2U 430(W) \* 500(D) \* 88(H) mm



3U 482.6(W) \* 660(D) \* 133(H) mm

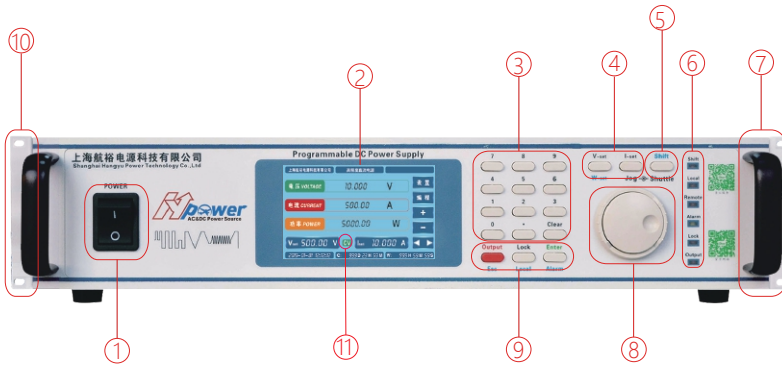


10U 440(W) \* 600(D) \* 445(H) mm



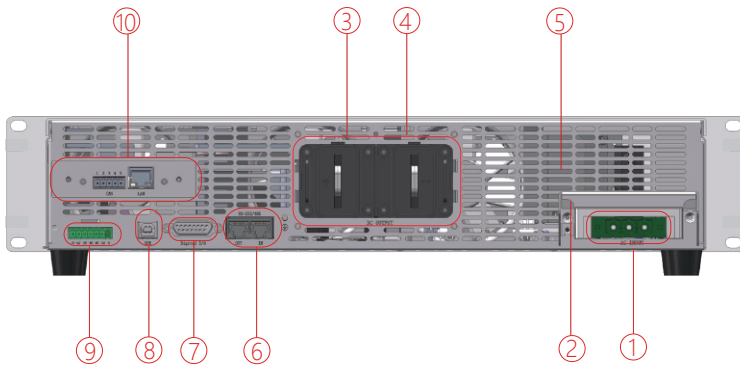
# Display and Control Panel Display & Control Panel

## Control Panel



- ① Power input circuit breaker
- ② LCD Display (4-inch, touch screen)
- ③ Number input keyboard
- ④ Voltage/current setting key
- ⑤ Shift Function reset 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
- ⑪ CC/CV Priority can be set

## Rear Panel



- ① AC input terminal
- ② AC input terminal protective cover
- ③ Output copper bar
- ④ Output end 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 Choose communication interface  
(One out of three)  
LAN & CAN communication interface  
GPIB communication interface  
Analog programming and monitoring interface (isolated type)

## Display Interface



- ① Manufacturer's name
- ② product name
- ③ Model
- ④ Voltage/current/power read back display area
- ⑤ Function setting area
- ⑥ Voltage/Current Setpoints&CV/CC Status
- ⑦ TIME
- ⑧ Accumulated running time
- ⑨ This run time



## Cooperative Clients (Partial)

### Power Semiconductor Customers



Changchun Guoke



Electrical industry



China Resources  
Microelectronics



Shanghai Huinengtai  
Semiconductor



Yuexin Technology



Wishing to create  
technology



Group core  
microelectronics



Hangzhou Zhongsi



Feishide



Suzhou Lianxun  
Instrument



Weiyujia  
Semiconductor



Shanghai Zhanxin  
Semiconductor



Chengxin  
Technology



Zhuoxinda  
Technology

### Enterprises In The Field Of Automotive Electronics



China Automotive  
Research and  
Development



Heavy Industry Automotive  
Research and Development



BMW  
Brilliance



Red Banner



SAIC Group



SAIC Volkswagen



吉利汽车  
GEELY



tesla



Weilai



Xiaomi Automobile



BYD



value



polary



Lantu Automobile



Inovance



HAOMO.AI



MKLtech



Shanghai Tongmin  
Vehicle



Ningde Era



Human Horizons



Hezhong New Energy

### High Tech R&D Enterprises



Huawei



FARATRONIC



Panasonic



EPCOS



TYCO



Weidmuller



Honeywell



Nader



SIEMENS



ABB



Schneider



NOSRK



HONGFA



EOPLE



FLUKE



Philips



Gree



Guilin Rubber  
Machinery Factory



CASCO



CRRC



US PI



HILTI



BOSCH



linde



NARI-TECHNOLOGY



Shanghai Electric



New Thunder Energy



Silan

## Aerospace and National Defense Military Industry Research Institute



china  
aerospace

- CASC 800 institute (Shanghai Aerospace Precision Machinery Research Institute)
- CASC 801 institute (Shanghai Institute of Space Propulsion)
- CASC 803 institute (Shanghai Institute of Space Propulsion)
- CASC 804 institute (Shanghai Aerospace Electronic Communication Equipment Research Institute)
- CASC 805 institute (Shanghai Aerospace Systems Engineering Research Institute)
- CASC 808 institute (Shanghai Institute of Precision Metrology and Testing)
- CASC 811 institute (Shanghai Space Power Research Institute)
- CASC 812 institute (Shanghai Satellite Equipment Research Institute)
- CASC 502 institute (Beijing Institute of Control Engineering)
- CASC 510 institute (Lanzhou Institute of Space Technology Physics)
- CASIC 206 institute (Beijing Institute of Mechanical Equipment)
- CASIC 307 factory (Aerosun Corporation)
- CASIC 33 institute (Institute 33 of Aerospace Science and Industry Third Institute)
- CASIC 3651 factory (Guizhou Aerospace Linquan Motor Co., Ltd)



CASIC



aviation  
industry

- AVIC 603 institute (AVIC Xi'an Aircraft Design and Research Institute)
- AVIC 613 institute (China Aviation Industry Group Luoyang Electro Optic Equipment Research Institute)
- AVIC 615 institute (China Aviation Industry Group Luoyang Electro Optic Equipment Research Institute)
- AVIC 618 institute (Xi'an Automatic Flight Research Institute of China Radio Aviation Research Institute)
- AVIC 631 institute (AVIC Aerospace Computing Technology Research Institute)
- AVIC 105 factory (Tianjin Aviation Electromechanical Co., Ltd)
- AVIC 115 factory (Shaanxi Aviation Electric Co., Ltd)
- AVIC 118 factory (Shanghai Aviation Electrical Appliances Co., Ltd)
- AVIC 181 factory (Wuhan Aviation Instrument Co., Ltd)
- AVIC 607 institute (China Leihua Electronic Technology Research Institute)
- AVIC 304 institute (Beijing Great Wall Metrology and Testing Technology Research Institute)
- AECC 606 institute (Shenyang Engine Research Institute)



China  
Aerospace



CETC

- CETC 14 institute (Nanjing Institute of Electronic Technology)
- CETC 21 institute (Shanghai Micromotor Research Institute)
- CETC 23 institute (Shanghai Transmission Line Research Institute)
- CETC 36 institute (Jiangnan Electronic Communication Research Institute)
- CETC 38 institute (East China Electronic Engineering Research Institute)
- CETC 50 institute (Shanghai Microwave Technology Research Institute)
- CETC 51 institute (Shanghai Microwave Equipment Research Institute)
- CETC 54 institute (Shijiazhuang Communication Measurement and Control Technology Research Institute)
- CETC 55 institute (Nanjing Institute of Electronic Devices)
- CSIC 707 institute (Tianjin Institute of Navigation Instruments)
- CSIC 7107 institute (Shaanxi Aerospace Navigation Equipment Co., Ltd)
- CSIC 719 institute (Wuhan Second Ship Design and Research Institute)
- CSIC 704 institute (Shanghai Shipbuilding Equipment Research Institute)
- 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.)



CSSC



CSIC

## 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

## 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



## 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



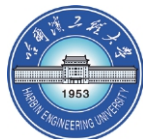
Beihang University



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



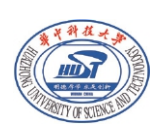
Shanghai Jiaotong University



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



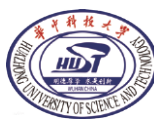
Dalian University of Technology



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



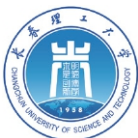
Fudan University



Xiamen University



North China Electric Power University



Changchun Institute of Technology



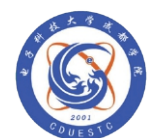
Xiangtan University



Zhejiang University of Technology



Xi'an University of Technology



University of Electronic Science and Technology of China

Official WeChat:  
HY Power-cn



# About us

Hangyu Power was founded in 2011 and is a national high-tech enterprise. Located in Songjiang, the birthplace of the G60 Science and Technology Innovation Corridor in the Yangtze River Delta, for over a decade Strive to provide customers with accurate, intelligent, and convenient testing power solutions.

Our company adheres to the product positioning of "specialty, precision, specialty, and novelty", and On the basis of targeting the market demand for "import substitution", propose "poor The development strategy of "differentiated import substitution" and "high-quality manufacturing" is committed to Innovative development of testing power supply technology in China, promoting the rejuvenation of science and technology in China The national cause is thriving.

Hangyu Power Series products cover power semiconductors, automotive electronics Aerospace, Defense and Military Industry, Low Voltage Electrical Appliances, Medical, Sensors Capacitors, inductors, smart grids, airborne, shipborne, weapons, ships.

Radar, communication, rail transit, power electronics, and other testing and other disciplines In the field of research, we strive to achieve perfect import substitution, with excellent military quality and service,

Win unanimous praise from users.

# Contact us

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neo@hangyupower.com

Address: Building 9, No. 615 Lianhe Road, Songjiang District, Shanghai, China

website:www.hangyupower.com

- 2009 ● Establishing Shanghai Ouzu Electronics Brand
- 2010 ● Successfully delivered 400kVA high-power AC power supply
- 2011 ● Hangyu Power Supply was established and officially put into operation as a three-phase precision AC power supply and military Using a gyroscope to test the power supply, replacing Russian made products
- 2012 ● Formal production of programmable variable frequency power supply and AC constant current source
- 2013 ● Formal production of programmable AC/DC power supply and HY-AE excitation power supply
- 2014 ● Formal production of high-power bipolar testing power supply
- 2015 ● Formal production of HY-PM series and HY-GT series new models Dual phase/three-phase gyroscope power supply
- 2016 ● HY-HP series programmable high-power DC power supply officially put into operation
- 2017 ● HY-HV series programmable high-voltage DC power supply officially put into operation
- 2018 ● HY-CTL/CTS capacitor testing high-frequency high current testing power supply And successfully delivered 100kHz, 100Arms
- 2019 ● Official production of high-speed power supply for automotive electronic testing within 500kHz
- 2020 ● Officially put into operation LV123 new energy vehicle testing high-voltage ripple testing power supply
- 2021 ● HY-UHS series ultra-high stability magnet power supply officially put into operation
- 2022 ● HY-HVL series linear high-voltage programmable DC power supply officially put into operation

