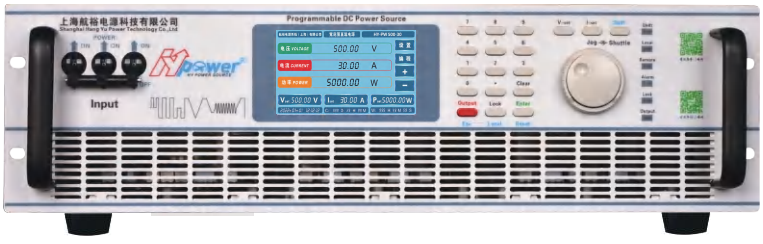
AC&DC Power Source

HY-PWSU Series

Programmable Wide-range DC Power Supply

Military Quality Power Supply Expert

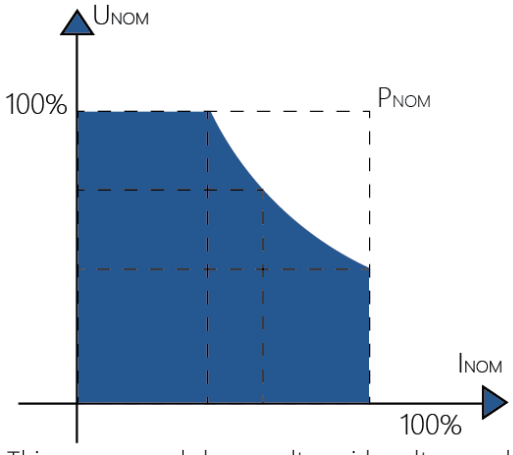


www.hypower.cn

HY-PWSU Series Programmable Wide-Range DC Power Supply

AC&DC Power Source

Wide range, High power, High precision



This power supply has an ultra-wide voltage and current input range, covering a variety of existing limits, to meet a variety of high current and low voltage, or high voltage and low current test requirements.

Product Features

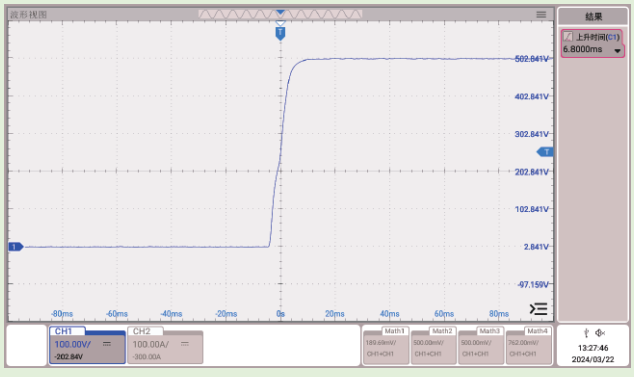
- Maximum output voltage 2250V
- Maximum output current 510A
- High power density, single machine maximum 15kW
- Master-slave parallel can be extended to 1.5MW
- Input standard PFC, power factor up to 0.99
- 16 bits D/A high precision converter, accurate output
- 20 bits A/D high precision converter, more accurate read back
- Working mode: CC, CV, CP

Application Field

This power supply is widely used.It plays an important role in industry (motor), server power supply, high-voltage UPS, aerospace, national defense and other fields.

- Design and test of server power supply, UPS and inverter
- Fuel cell, power battery, lead battery, super capacitor test
- Power supply environment simulation of vehicle, airborne and shipboard electronic equipment
- DC charger, charging pile design and test system integra tion
- Drones, lasers, sensors
- Power Electronics
- New energy

Actual Test Waveform



HY-PWSU series power output voltage rise time ⩽15ms

Product Model Naming Rules

Product series	Output voltage		Output current		Optional function
HY-PWSU	1000	-	30	-	CF

Example of model selection:
Product Model: HY-PWSU 1000-30-CF
Output voltage 0-1000V, output current 30A,
Choose user-defined features

Optional function

- HR : High resolution/precision
- ABD : Anti-inversion diode
- BD : Anti-bond anti-diode
- TVS : transient suppression diode
- CF : User-defined functions (please specify when ordering)
- MR : Measurement report (issued by CNAS certified third party)
- SP : Sequential, functional programming capabilities
- T1 : Operating temperature -10°C to 50°C
- T2 : Operating temperature -20°C to 50°C
- T4 : Operating temperature -40°C to 50°C

Communication protocol	Standard communication interface	Optional communication interface
Modbus SCPI	RS-485 RS-232 Digital I/O LAN	- CAN :CAN communication interface - GPIB :GPIB communication interface - IA :Analog quantity programming and monitoring interface (isolated type)

* All technical indicators can only be guaranteed when the equipment runs continuously for more than 30 minutes at the specified operating temperature.

HY-PWSU Series Product Model Selection And Parameters

Special specifications outside the voltage/current/power range in the selection table can be customized

5kW Series Power Supply Selection

Models	Output voltage	Output current	Output power
HY-PWSU 80-170	80V	170A	5kW
HY-PWSU 200-70	200V	70A	5kW
HY-PWSU 360-40	360V	40A	5kW
HY-PWSU 500-30	500V	30A	5kW
HY-PWSU 750-20	750V	20A	5kW

10kW Series Power Supply Selection

Models	Output voltage	Output current	Output power
HY-PWSU 80-340	80V	340A	10kW
HY-PWSU 200-140	200V	140A	10kW
HY-PWSU 360-80	360V	80A	10kW
HY-PWSU 500-60	500V	60A	10kW
HY-PWSU 750-40	750V	40A	10kW
HY-PWSU 1000-30	1000V	30A	10kW
HY-PWSU 1500-20	1500V	20A	10kW

15kW Series Power Supply Selection

Models	Output voltage	Output current	Output power
HY-PWSU 80-510	80V	510A	15kW
HY-PWSU 200-210	200V	210A	15kW
HY-PWSU 360-120	360V	120A	15kW
HY-PWSU 500-90	500V	90A	15kW
HY-PWSU 750-60	750V	60A	15kW
HY-PWSU 1000-40	1000V	40A	15kW
HY-PWSU 1500-30	1500V	30A	15kW
HY-PWSU 2250-20	2250V	20A	15kW

HY-PWSU Series Technical Parameters

HY-PWSU Series Technical Parameters | 5kW

Models		HY-PWSU 80-170	HY-PWSU 200-70	HY-PWSU 360-40	HY-PWSU 500-30	HY-PWSU 750-20
Rated Output Voltage	V	80	200	360	500	750
Rated Output Current	A	170	70	40	30	20
Rated Output Power	W	5kW				
Efficiency	%	93	95	93	95	94
Constant Pressure Mode (CV Mode)						
Output Range Can Be Set	V	0- Rated Output Value				
Input Adjustment Rate	mV	0.02%+0.02% (Range of measuring)				
Load Adjustment Rate	mV	0.05%+0.05% (Range of measuring)				
Maximum Compensation Voltage For Telemetry	V	<30V 2V;⩾30V 8V; (Can be customized according to demand)				
Ripple Effective Value rms (3Hz-300kHz)	mVrms	10	40	55	70	90
Noise Peak-To-Peak Value p-p (20Hz-20MHz)	mVpp	100	300	320	350	800
Output Voltage Rise Time10-90%	ms	15 ms				
Transient Response Time	ms	2 ms				
Constant Current Mode (CC Mode)						
Output Range Can Be Set	A	0- Rated Output Value				
Input Adjustment Rate	mA	0.05%+0.05% (Range of measuring)				
Load Adjustment Rate	mA	0.15%+0.15% (Range of measuring)				
Ripple Effective Value rms (3Hz-300kHz)	mArms	80	22	18	16	16

HY-PWSU Series Technical Parameters | 10kW

Models		HY-PWSU 80-340	HY-PWSU 200-140	HY-PWSU 360-80	HY-PWSU 500-60	HY-PWSU 750-40	HY-PWSU 1000-30	HY-PWSU 1500-20
Rated Output Voltage	V	80	200	360	500	750	1000	1500
Rated Output Current	A	340	140	80	60	40	30	20
Rated Output Power	W	10kW						
Efficiency	%	93	95	93	95	94	95	95
Constant Pressure Mode (CV Mode)								
Output Range Can Be Set	V	0- Rated Output Value						
Input Adjustment Rate	mV	0.02%+0.02% (Range of measuring)						
Load Adjustment Rate	mV	0.05%+0.05% (Range of measuring)						
Maximum Compensation Voltage For Telemetry	V	<30V 2V;⩾30V 8V; (Can be customized according to demand)						
Ripple Effective Value rms (3Hz-300kHz)	mVrms	10	40	55	70	90	350	500
Noise Peak-To-Peak Value p-p (20Hz-20MHz)	mVpp	100	300	320	350	800	1000	2000
Output Voltage Rise Time10-90%	ms	15 ms						
Transient Response Time	ms	2 ms						
Constant Current Mode (CC Mode)								
Output Range Can Be Set	A	0- Rated Output Value						
Input Adjustment Rate	mA	0.05%+0.05% (Range of measuring)						
Load Adjustment Rate	mA	0.15%+0.15% (Range of measuring)						
Ripple Effective Value rms (3Hz-300kHz)	mArms	160	44	35	32	32	22	163

HY-PWSU Series Technical Parameters | 15kW

Models		HY-PWSU 80-510	HY-PWSU 200-210	HY-PWSU 360-120	HY-PWSU 500-90	HY-PWSU 750-60	HY-PWSU 1000-40	HY-PWSU 1500-30
Rated Output Voltage	V	80	200	360	500	750	1000	1500
Rated Output Current	A	510	210	120	90	60	40	30
Rated Output Power	W	15kW						
Efficiency	%	93	95	93	95	94	95	95
Constant Pressure Mode (CV Mode)								
Output Range Can Be Set	V	0- Rated Output Value						
Input Adjustment Rate	mV	0.02%+0.02% (Range of measuring)						
Load Adjustment Rate	mV	0.05%+0.05% (Range of measuring)						
Maximum Compensation Voltage For Telemetry	V	<30V 2V; ⩾30V 8V; (Can be customized according to demand)						
Ripple Effective Value rms (3Hz-300kHz)	mVrms	10	40	55	70	90	350	500
Noise Peak-To-Peak Value p-p (20Hz-20MHz)	mVpp	100	300	320	350	800	1600	2400
Output Voltage Rise Time	ms	15 ms						
Transient Response Time	ms	2 ms						
Constant Current Mode (CC Mode)								
Output Range Can Be Set	A	0- Rated Output Value						
Input Adjustment Rate	mA	0.05%+0.05% (Range of measuring)						
Load Adjustment Rate	mA	0.15%+0.15% (Range of measuring)						
Ripple Effective Value rms (3Hz-300kHz)	mArms	240	66	50	48	48	32	26

Stability And Temperature Coefficient

Stability (Rated Output Voltage/Current)	U:0.01% I:0.01% (After 30 minutes of power on at a certain input voltage and load ambient temperature, 8 hours)
Temperature Coefficient (Rated Output Voltage/Current)	U:50ppm/°C I: 70ppm/°C (30 minutes after power on)

Programming And Readback Accuracy & Resolution

Voltage Output Programming Accuracy	0.05% of the rated output voltage
Current Output Programming Accuracy	±0.1% of rated output current + ±0.1% of actual current
Voltage Setting Resolution	0.01V (⩽600 V) , 0.1V (>600 V)
Current setting resolution	0.01A (⩽600 A) , 0.1A (>600 A)
Voltage Output Read-Back Accuracy	±0.05% of rated output voltage + ±0.05% of actual voltage
Current Output Read-Back Accuracy	±0.1% of rated output current + ±0.1% of actual current
Voltage Read Back Resolution	0.0001 V (⩽ 100 V), 0.001 V (100 V< U ⩽ 1000 V), 0.01 V (>1000 V)
Current Read Back Resolution	0.0001 A (⩽ 100 A), 0.001 A (100 A< I ⩽ 1000 A)

HY-PWSU Series Technical Parameters

Protection Function

OVP Overvoltage Protection Setting Range	10-110%, beyond the limit output immediately off
OCP Overcurrent Protection Setting Range	0-115%, beyond the limit output immediately off
OTP Overtemperature Protection	Output beyond the limit is turned off immediately
OPP Overpower Protection	10-110%, beyond the limit output immediately off

Environmental Condition

Environment	Indoor use; Installation overvoltage class: II; Pollution level: P2; Class II equipment
Operating Ambient Temperature	0°C to 50°C, optional -10°C to 50°C, -20°C to 50°C, -40°C to 50°C
Storage Ambient Temperature	-20°C to 65°C,
Working Ambient Humidity	20%-90% RH, no dew formation, continuous operation
Storage Environment Humidity	10% - 95% RH, no dew formation
Altitude	Above 2000 meters above sea level, every 100 meters up, the power will be reduced by 2%, or reduce the maximum working ambient temperature by 1°C per 100 meters; When not in operation, the altitude can reach 12,000 meters
Cooling	Forced air cooling, intelligent speed regulating fan, front/side air inlet, rear air outlet
Noise	⩽ 65dB(A), use 1 m to weighted measurement

Control Panel

Display	4 inch LCD display, touch screen
Control Function	Digital key input, multi-stage shuttle knob adjustment (outer ring coarse adjustment/inner ring fine adjustment), output ON/OFF switch, Lock keyboard and touch lock, Reset Restart status indicator (Shift/Local/Remote/Alarm/Lock/Output)
Programming Function	Step, Ladder, Gradient

Input Power Supply

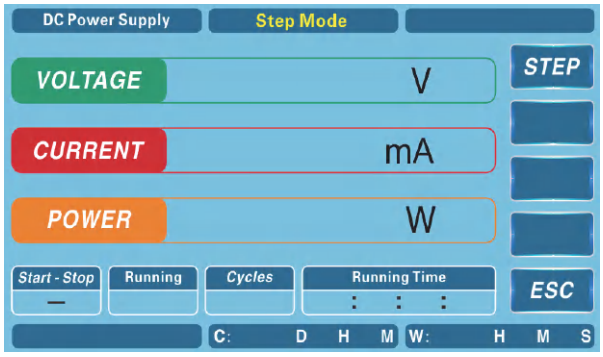
Frequency	47 Hz - 63 Hz
Connection Mode	Three-phase three-wire + ground wire, 380 V ± 15%
Power Factor (Typical Value)	0.94(Three-phase input)

Size And Weight

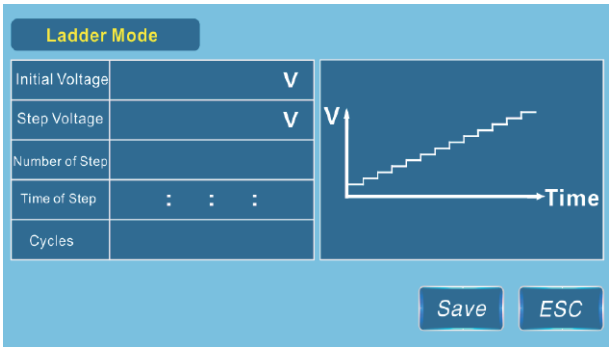
Note: See page P112 for more information on appearance and display

Size	3U：482.6(W) * 660(D) * 133(H) mm
Weight	35kg/3U
Colour	RAL 7035

Programmable Function

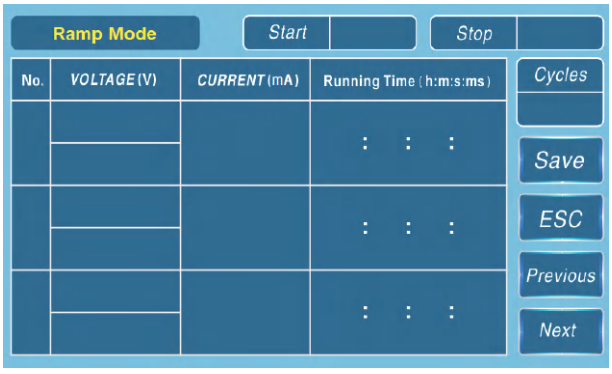


Homepage



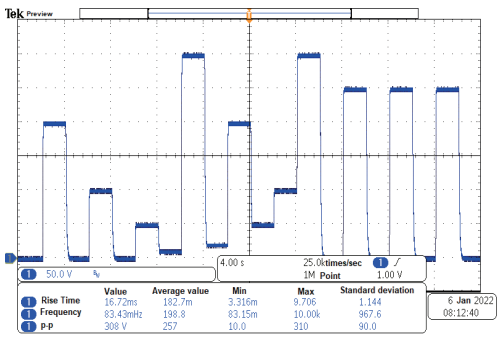
The ladder setting page can set the required initial frequency, step frequency, initial voltage, step voltage, step times and step time.

The step setting page can set the required frequency, voltage, running time, initial step, end step and cycle times.

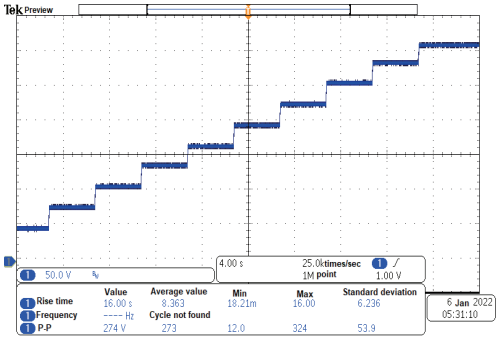


The gradient setting page can set the required voltage, frequency, running time, initial step and end step.

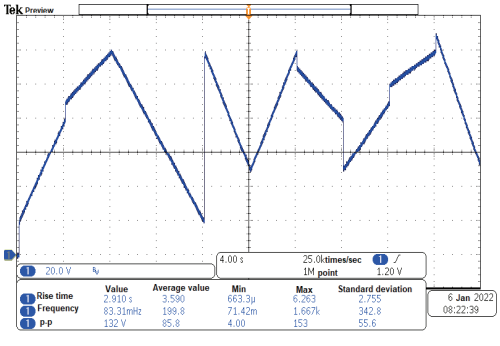
Output Waveform



Step order



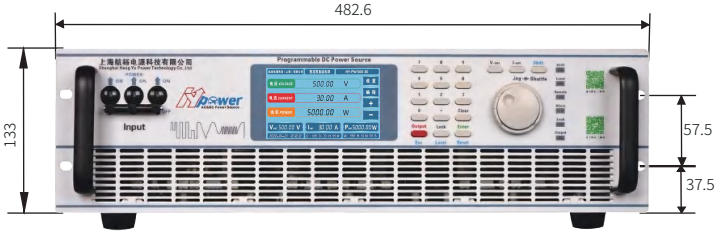
Ladder

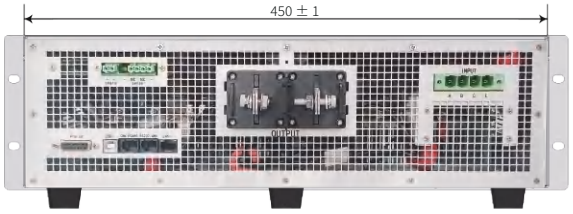


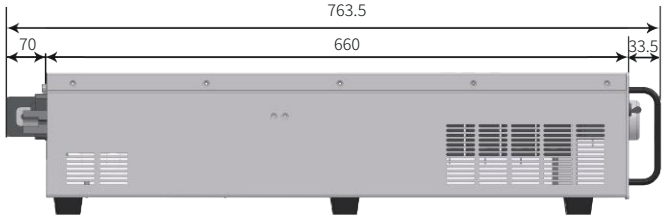
Gradual change

Appearance & Size Outline Dimension

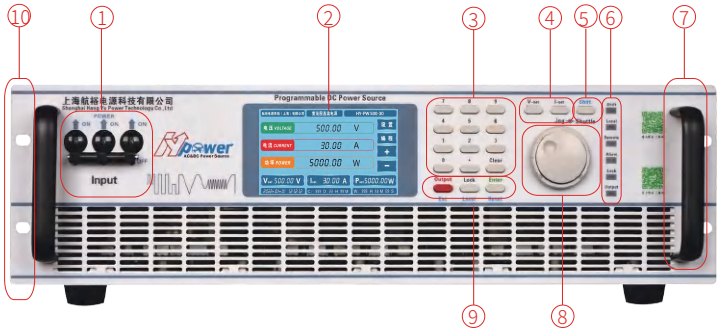
3U 482.6(W) * 660(D) * 133(H) mm





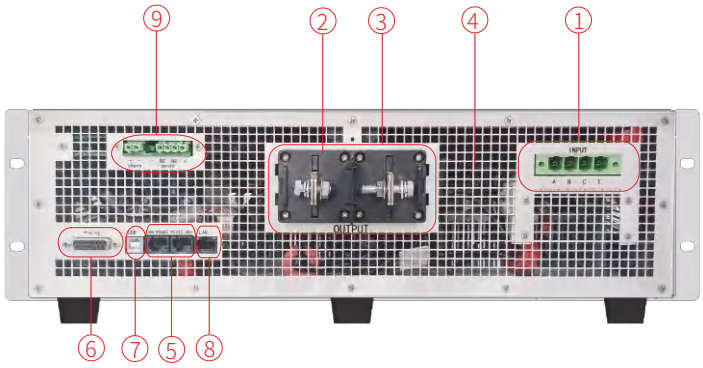


Control Panel



① Power input circuit breaker
② LCD Display (4-inch, touch screen)
③ Number input keyboard
④ Voltage/current/power 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

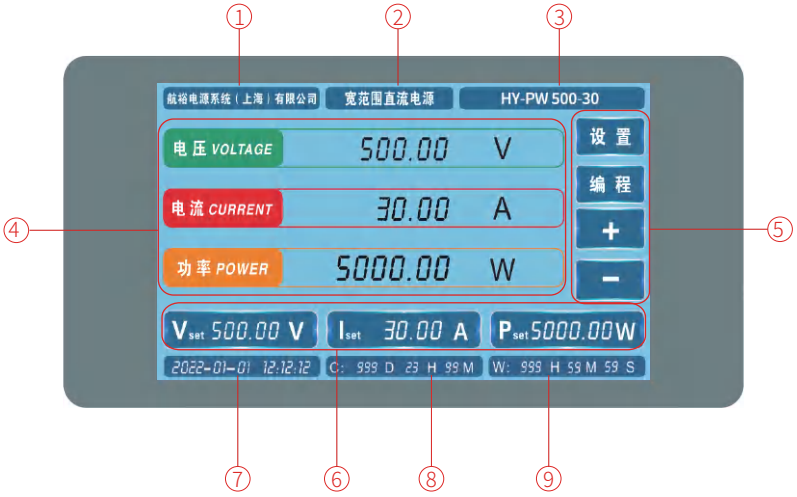
Rear Panel



① AC input terminal
② Output copper bar
③ DC output terminal protective cover
④ Heat dissipation air outlet
⑤ RS-485 & RS-232 communication interface
⑥ Digital I/O communication interface
⑦ USB communication interface (Optional)
⑧ LAN communication interface
⑨ Remote compensation measurement terminal

Appearance&Size Outline Dimension

Display Interface



① Display interface
② Product name
③ Product Series
④ Voltage/current/power read back display area
⑤ Function setting area
⑥ Voltage/Current/Power setpoints&CV/CC/CP Status
⑦ TIME
⑧ Accumulated running time
⑨ This run time

Power Semiconductor Customer

Changchun National Science
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

Enterprise In The Field Of Automotive Electronics

CATARC
CAERI
BMW
China FAW Group Corporation
Hong Qi Automobile
SAIC Motor
Saic Volkswagen
Tesla Inc.
Weilai
Xiaomi Automobile
BYD
Valeo
polary
Lantu Automobile
GEELY Automobile
Huichuan
HAOMO.AI
Shanghai Tongmin
Ningde Age
Human Horizons
Hezhong New Energy

High-Tech R&D Enterprise

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

Cooperative Customers (Part)

Aerospace & Defense Military Industry Research Institute

CASC　CASIC　AVIC　AECC　CETC　CSSC　CSIC

CASC 800 (Shanghai Aerospace Precision Machinery Research Institute)
CASC 801 (Shanghai Institute of Space Propulsion)
CASC 803 (Shanghai Aerospace Control Technology Institute)
CASC 804 (Shanghai Aerospace Electronic Communication Equipment Research Institute)
CASC 805 (Shanghai Aerospace System Engineering Institute)
CASC 808 (Shanghai Precision Measurement and Testing Institute)
CASC 811 (Shanghai Space Power Research Institute)
CASC 812 (Shanghai Satellite Equipment Research Institute)
CASC 502 (Beijing Control Engineering Research Institute)
CASC 510 (Lanzhou Institute of Space Technology Physics)
CASC 203 (China Ordnance Industry 203 Research Institute)
CASIC 206 (Beijing Machinery and Equipment Research Institute)
CASIC 242 Factory (Lanzhou Flight Control Co., LTD.)
CASIC 307 Factory (Aerospace Chenguang Co., LTD.)
CASIC 33 (33 Aerospace Science and Industry Institutes)
CASIC 3651 Factory (Shanghai Aerospace Control Technology Institute)

AVIC 603 (AVIC Xi 'an Aircraft Design and Research Institute)
AVIC 613 (Luoyang Electro-Optical Equipment Research Institute of Aviation Industry Corporation of China)
AVIC 615 (Aeronautical Radio Electronics Research Institute of China)
AVIC 618 (Xi 'an Flight Automatic Control Research Institute)
AVIC 631 (Aviation Computing Technology Research Institute of AVIC)
AVIC 105 Factory (Tianjin Aviation Electromechanical Co., LTD.)
AVIC 115 Factory (Shaanxi Aero Electric Co., LTD.)
AVIC 118 Factory (Shanghai Aviation Electric Appliance Co., LTD.)
AVIC 135 Factory (State-owned Wanli Electromechanical Factory)
AVIC 181 Factory (Wuhan Aviation Instrument Co., LTD.)
AVIC 304 (Beijing Great Wall Institute of Measurement and Testing Technology)
AECC 606 (Shenyang Engine Research Institute)
AVIC 607 (China Leihua Electronic Technology Institute)
Jiangnan Shipbuilding (Group) Co., LTD
Nanjing Panda Electronics Co., LTD
State-owned 741 Factory (Nanjing Huadong Electronics Group Co., LTD.)
Institute of Modern Physics, Chinese Academy of Sciences

CETC 14 (Nanjing Institute of Electronic Technology)
CETC 21 (Shanghai Micromotor Research Institute)
CETC 23 (Shanghai Transmission Line Research Institute)
CETC 36 (Gangnam Electronics and Communication Research Institute)
CETC 38 (East China Institute of Electronic Engineering)
CETC 50 (Shanghai Microwave Technology Research Institute)
CETC 51 (Shanghai Microwave Equipment Research Institute)
CETC 54 (Shijiazhuang Communication Measurement and Control Technology Research Institute)
CETC 55 (Nanjing Institute of Electronic Devices)
CSIC 707 (Tianjin Institute of Marine Instruments)
CSIC 7107 (Shaanxi Aerospace Navigation Equipment Co., LTD.)
CSIC 719 (Wuhan Second Ship Design Institute)
CSIC 704 (Shanghai Marine Equipment Research Institute)
CSIC 726 (Shanghai Marine Electronic Equipment Research Institute)

Scientific Research & Third Party Quality Inspection Agency

Technical Institute of Physics and Chemistry (Beijing)
Institute of Urban Environment (Xiamen)
Electrotechnical Research Institute (Beijing)
Institute of Applied Physics (Shanghai)

The Chinese People's Liberation Army

South Sea Fleet

East China Sea Fleet

North Sea Fleet

Navy Factory 701 / Factory 702

4724 Factory (Shanghai Haiying Machinery Factory)

Unit 95861 (Air First Base)

5720 Factory of the People's Liberation Army of China

Commercial Aviation

COMAC
Commercial Aircraft Corporation of China

Collins Aerospace
Rockwell Collins

GAMECO
Guangzhou Aircraft Maintenance Engineering Co., LTD

Ameco
Beijing Aircraft Maintenance Engineering Co., LTD

Military Academies & 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：hypower-cn

Contact us

Hangyu Power System (Shanghai) Co., Ltd.

Mobile/Whatsapp:+8613801800699
Fax:+86-21-67285228-8009
Email:sales@hangyupower.com
neo@hangyupower.com
Address: Block B, Building 11, No. 1698 Minyi Road, Songjiang District, Shanghai
Web:www.hangyupower.com

Programmable DC Power Supply Product Catalog, version 08.00, April 2024
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：