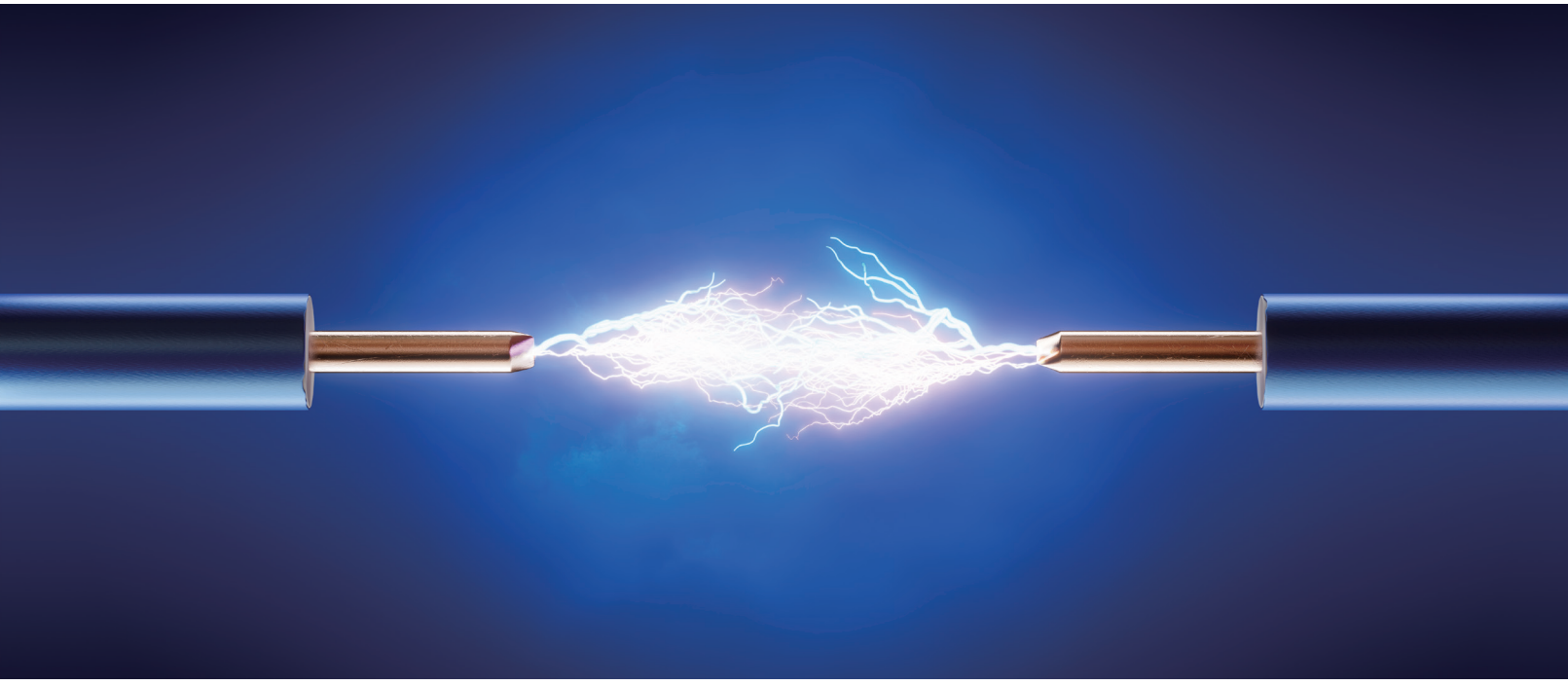
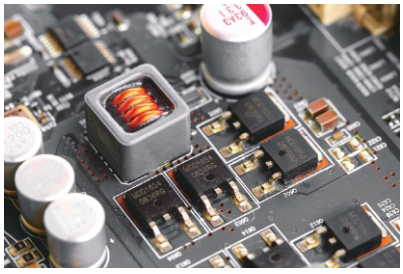
AC&DC Power Source

HY-HVL Series

Linear High Voltage DC Power Supply

Military Quality Power Supply Expert





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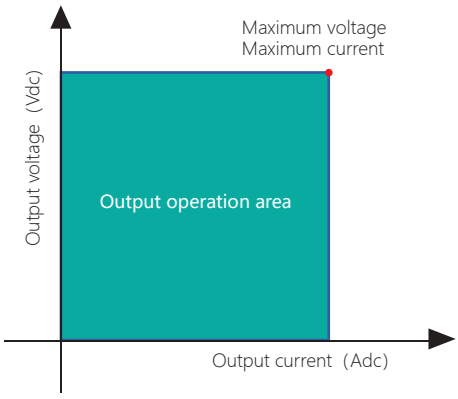
HY-HVL Series

Linear High Voltage DC Power Supply

Low interference, low ripple, high accuracy



Product Features

This power supply adopts Linear amplification technology, have Ultra-low interference The advantage of waves and high accuracy, High voltage, low current, mostly used for power semiconductors High voltage performance testing of devices。

- Output voltage range: 1.25kV-50kV
- Current range: 500μA-50mA
- Ultra low interference, ultra-low ripple, suitable for high-precision testing and measurement
- 16 bits D/A High precision converter with precise output
- 20 bits A/D High precision converter for more accurate read back

Application Area

A high-voltage high-precision current power supply commonly used for power semiconductor devices, with a voltage of up to 50kV. It conducts voltage withstand and breakdown tests on power semiconductor devices such as IGBT, MOS transistor, diode, silicon carbide device, lithography machine light source, etc.

- High voltage device breakdown test
- Diode reverse bias test
- ElectroStatic Precipitation
- High voltage component testing
- Shore based power supply
- scientific research
- High Energy Physics Research
- Ion beam power supply
- laser
- High voltage resistivity test
- High-energy particle injection
- Semiconductor Process
- Insulation and voltage withstand test
- High voltage amplifier bias
- particle accelerator
- EMC Lab
- Aging of electronic components
- Capacitor charging
- Power semiconductor testing
- Power supply for deep-sea observation network
- chemical purification
- X-ray system
- High voltage direct current transmission
- pulse power

High Voltage Breakdown Test

High voltage breakdown test is a commonly used destructive test in the laboratory, which does not set a voltage upper limit and usually does not Duration. In the breakdown test, the voltage gradually increases until the insulation of the tested object is no longer able to withstand such a high level of electricityPressure and breakdown. This voltage value is a critical voltage at which an insulator becomes a conductor.

Therefore, high-voltage breakdown testing has high requirements for the accuracy and anti-interference ability of the power supply. Hangyu Power Supply HY-HVL Series programmable high-voltage linear DC power supply, with 1.25kV, 2.5kV, 5kV, 10kV, 20kV, 30kV 40kV, 50kV and other voltage ranges are optional, with ultra-low interference and ultra-low ripple, suitable for laboratory high-voltage high-precision testing and Measurement.

Product Selection Instructions

Product Model Naming Rules

Product series	Output voltage		Output current		Optional function
HY-HVL	10kV	-	1	-	CF

Selection examples:
Model: HY-HVL 10kV-1-CF
Output voltage 0-10kV, output current 0-1mA
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

- SG : Suspended ground
- T1 : Operation temperature -10℃ to 50℃
- T2 : Operation temperature -20℃ to 50℃
- T4 : Operation temperature -40℃ to 50℃
- 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-HVL Series Product Selection And Parameters

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

Select According To Voltage Size

Models	Output voltage	Output current	Output power
HY-HVL 1.25kV-20	1.25kV	20mA	25W
HY-HVL 2.5kV-10	2.5kV	10mA	25W
HY-HVL 5kV-5	5kV	5mA	25W
HY-HVL 10kV-1	10kV	1mA	10W
HY-HVL 15kV-1	15kV	1mA	15W

Select According To Voltage Size

Models	Output voltage	Output current	Output power
HY-HVL 20kV-0.5	20kV	0.5mA	10W
HY-HVL 20kV-1	20kV	1mA	20W
HY-HVL 30kV-1	30kV	1mA	30W
HY-HVL 40kV-1	40kV	1mA	40W
HY-HVL 50kV-1	50kV	1mA	50W

HY-HVL Series Technical Parameter

Constant Voltage Mode (CV Mode)

Voltage adjustable output range	< 5kV: 0.5%-100% Output Value; ≥10kV: 1%-100% Output Value
Input adjustment rate (CV Model)	≤0.01% F.S. (AC input 220 V ± 10%, constant load)
Load regulation (CV Model)	≤0.01% F.S. (No load to full load, constant input voltage)
Ripple wave rms (3Hz - 300kHz)	0.002%F.S.

Constant Current Mode (CC Mode)

Settable output range	0 - Rated output value
Input adjustment rate (CCModel)	Rated output current 0.01% +2mA (AC input 220 V ± 15%, constant load)
Load regulation (CC Model)	Rated output current 0.02% +5mA (No load to full load, constant input voltage)
Ripple wave rms (3Hz - 300kHz)	0.002%F.S.

Programming And Readback Accuracy Resolution

Voltage output programming accuracy	0.01%+0.05% F.S.
Current output programming accuracy	0.02%+0.05% F.S.
Voltage setting resolution	0.1V (≤6KV) , 1V (> 6KV)
Current setting resolution	0.1μA (≤6mA) , 1uA (≤60mA)
Voltage output readback accuracy	Output voltage 0.01%+0.05%
Current output readback accuracy	Output voltage 0.02%+0.05%
Voltage read back resolution	0.01V (≤10kV) , 0.1V (> 10kV)
Current read back resolution	0.01μA (≤1mA) , 0.1uA (≤10mA) , 1uA (≤100mA)

Stability Temperature Coefficient

Stability (rated output voltage/current)	U:0.05% I: 0.05% (After 30 minutes of power on at a certain input voltage and load ambient temperature, 8 hours)
Temperature coefficient (rated output voltage/current)	U:200ppm/℃ I: 300ppm/℃ (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℃ to 50℃，optional -10℃ to 50℃， -20℃ to 50℃， -40℃ to 50℃
Storage environment temperature	-20℃ to 65℃，
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 ℃ 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

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	Step step、 ladder、Gradient

Input Power Supply

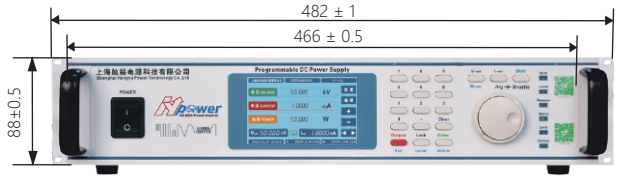
Frequency	47 Hz - 63 Hz
Connection	Single phase two wire+ground wire，220 V ± 15% （ -ST Standard configuration model）

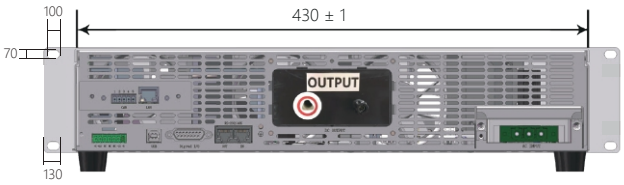
Size

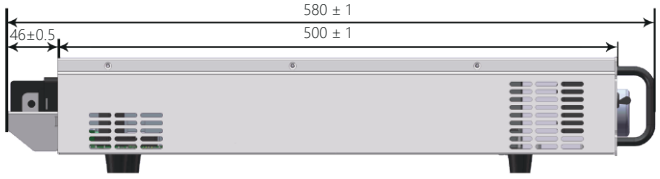
Size	430(W) * 500(D) * 88(H) mm, 2U 482.6(W) * 660(D) * 133(H) mm, 3U 430(W) * 560(D) * 178(H) mm, 4U Different voltage and power use different chassis

Appearance&Size Outline Dimension

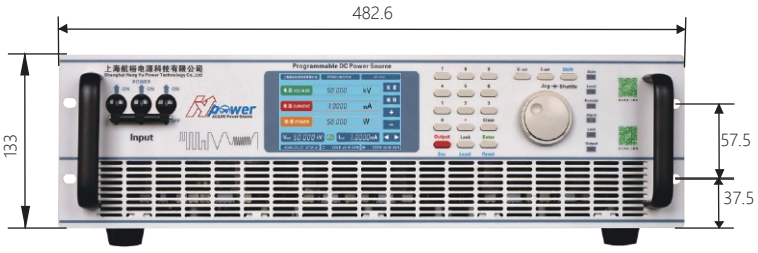
2U 430(W) * 500(D) * 88(H) mm

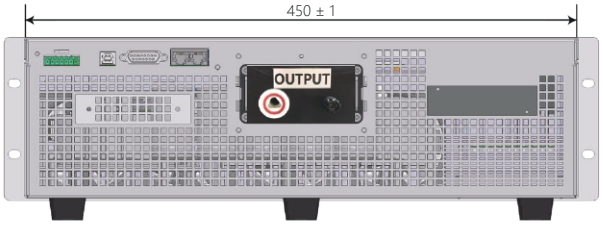


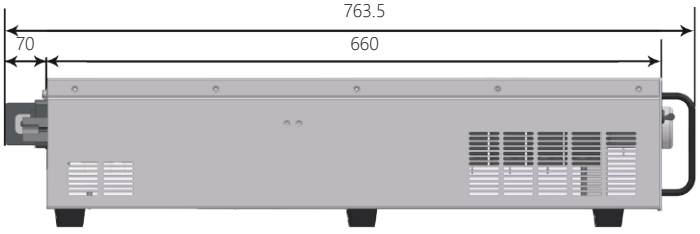




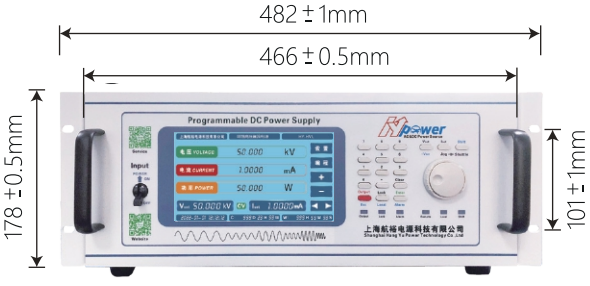
3U 482.6(W) * 660(D) * 133(H) mm



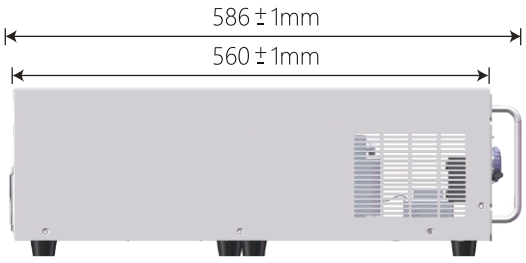




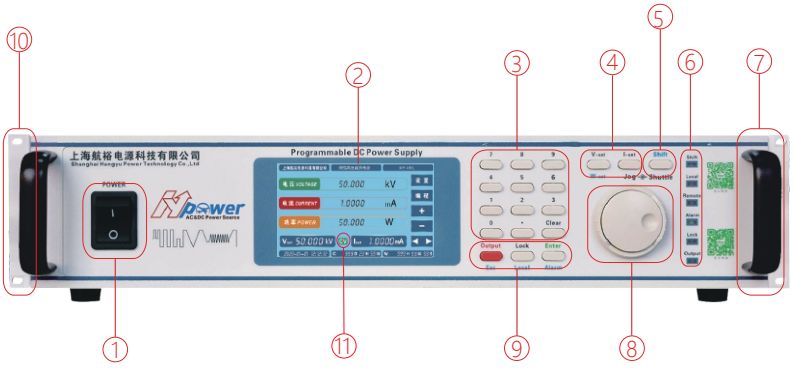
4U 430(W)*560(D)*178(H)mm



Appearance&Size Outline Dimension

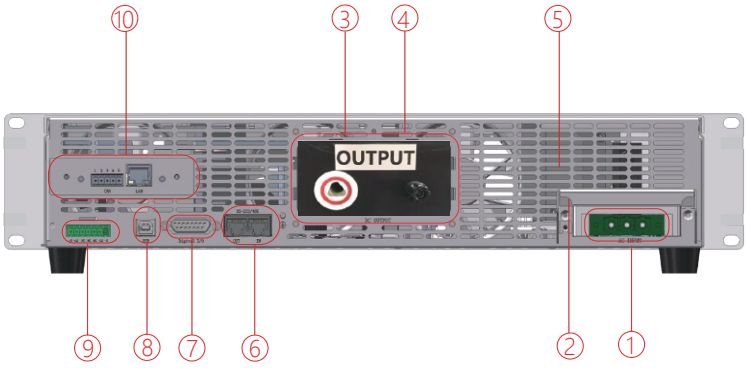


Control Panel



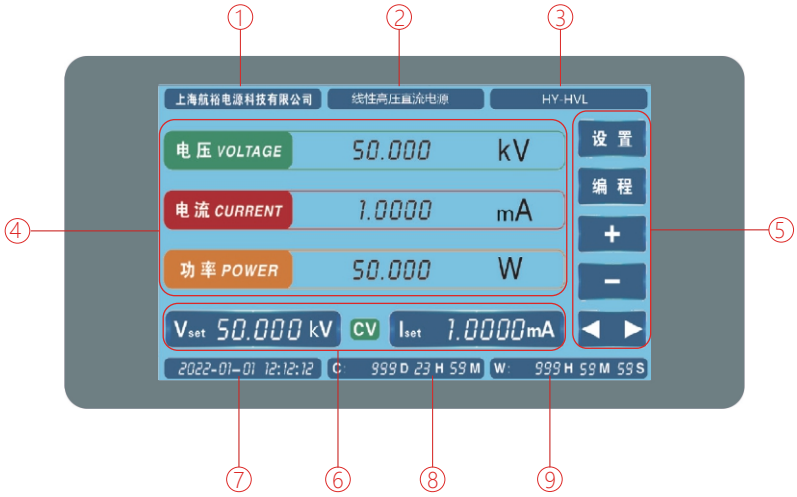
① Power input circuit breaker (2U single-phase, 3U three-phase)
② LCD display (4-inch, touch screen)
③ Number input keyboard
④ Voltage/current setting key
⑤ Shift function reset key
⑥ Status
⑦ Chassis handle
⑧ Multistage shuttle adjustment knob (inner circle fine adjustment/outer circle coarse adjustment)
⑨ Lock, Enter to confirm, Esc to exitLocal, Reset restart
⑪ Output ON/OFF switch
⑩ 19 inch standard rack mounting holes
CC/CV Priority can be set

Rear Panel



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)

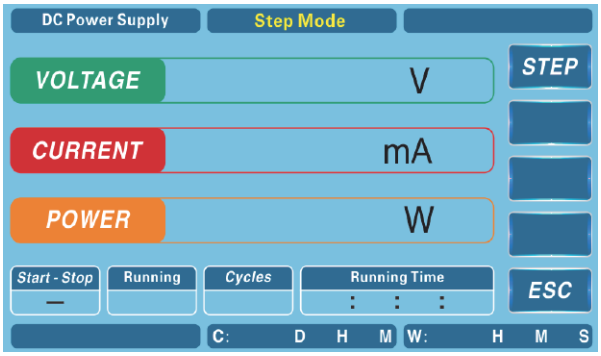
Display Interface



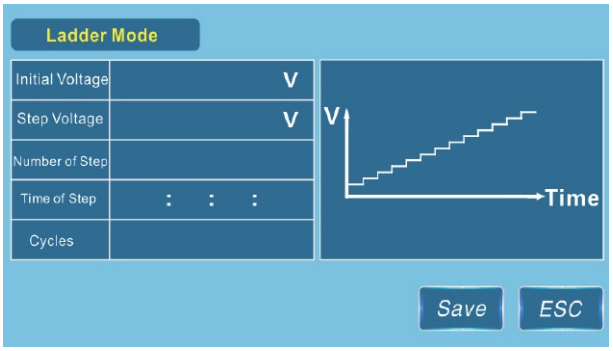
① Manufacturer's name
② Product name
③ Model
④ Voltage/current/power read back display area
⑤ Function setting area
⑥ Voltage/Current Setpoints&CV/CC Status
⑦ TIME
⑧ Accumulated running time
⑨ This run time

programmability

Programmable Function

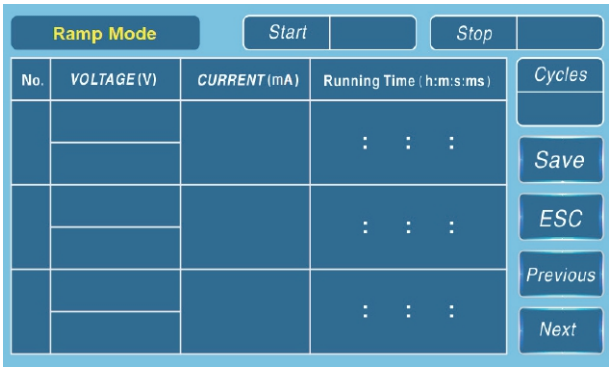


Homepage



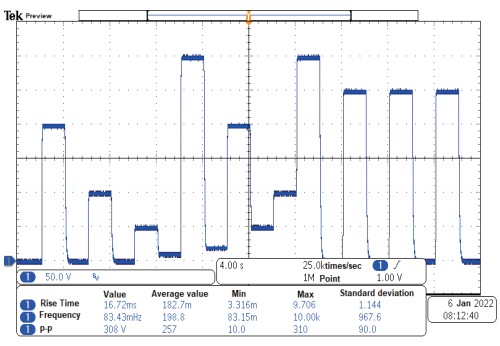
The ladder setting page can set the required initial frequency, step frequency, initial voltage, step voltage, step times and step time.

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

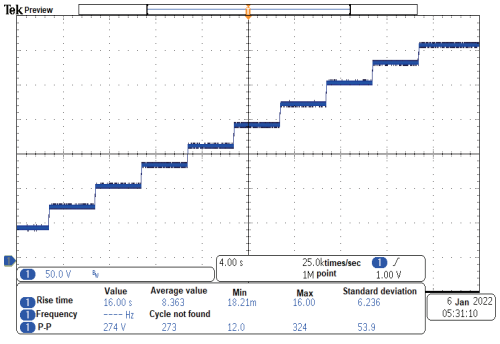


The gradient setting page can set the required voltage, frequency, running time, initial step and end step.

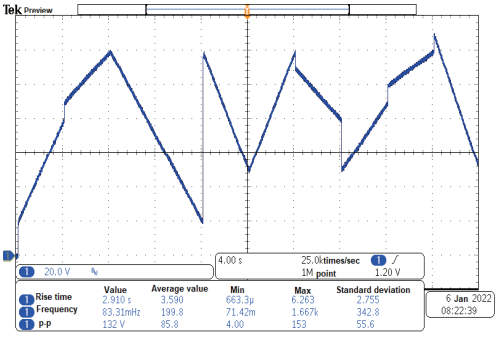
Output Waveform



Step order



Ladder



Gradual change

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

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

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)

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)

China Aerospace

AECC 606 institute (Shenyang Engine Research Institute)

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)

CSSC

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

CSIC

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)

中国科学院 CHINESE ACADEMY OF SCIENCES

中国工程物理研究院 CHINA ACADEMY OF ENGINEERING PHYSICS

中国地震局 地壳应力研究所 The Institute of Crustal Dynamics

福建省产品质量检验研究院 FUJIAN INSPECTION AND RESEARCH INSTITUTE FOR PRODUCT QUALITY

SEARI 上电科 上海電器科学研究所(集团)有限公司 Shanghai Electrical Apparatus Research Institute (Group) Co., Ltd.

苏州电器科学研究院股份有限公司
国家智能电网中高压成套设备质量监督检验中心
国家电器产品质量监督检验中心

长春市产品质量监督检验院 Changchun product quality supervision and inspection institute

西安市产品质量监督检验院 Xi'an Supervision & Inspection Institute of Product Quality

杭州市质量技术监督检测院 Hangzhou Technical Supervision and Procuratorate

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

Commercial Aircraft Corporation of China Limited

Rockwell Collins

Guangzhou Aircraft Maintenance Engineering Co., Ltd

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

Official WeChat:
hypower-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 solutionsPlan.

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 q uality and service,

Win unanimous praise from users.

Contact us

Tel: +86 1380 1800 699
Email:sales@hangyupower.com
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 militaryUsing 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