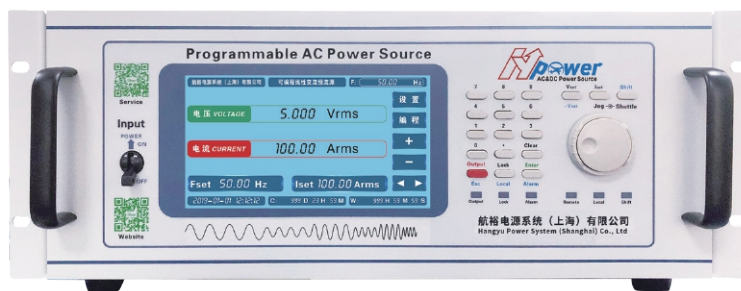


HY-LCS Series Programmable Linear AC Current Source

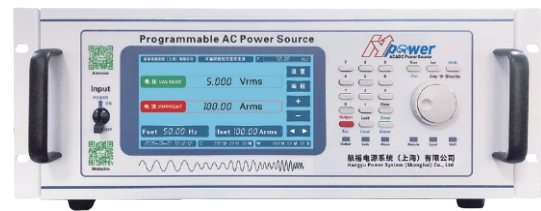
Hangyu Power System (Shanghai) Co., Ltd



HY-LCS Series Programmable Linear AC Current Source

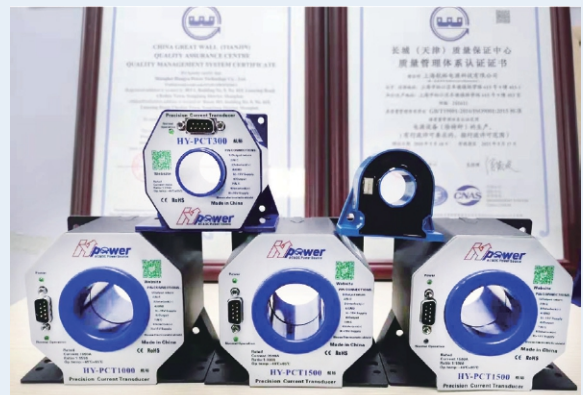
Product Features

- Output frequency range 45Hz-70Hz,
Optional range 45Hz-1kHz
 - Output capacity range 300VA-30kVA
 - Output current range 0.1A-10000A
 - Open circuit voltage 2.5V/5V/10V/20V/36V/48V
 - Linear power technology, ultra-low distortion rate,
ultra-low external interference
 - Support front panel programming, no need for PC
software control
 - Voltage rising and falling slopes are adjustable
 - Power output soft-start function
 - 16 bits D/A high precision converter, accurate output
 - 16 bits A/D high precision converter, more accurate
readback
 - Multiple protection functions Over temperature, open
circuit protection
 - 19-inch standard rack size
 - 7-inch large LCD screen
 - Touch screen operation & numeric key input
 - Multi-level shuttle adjustment knob
 - The power input is controlled by a circuit breaker, which
is more secure
 - Output ON/OFF button
 - Fan intelligent speed regulation design to reduce noise
 - Front/side air intake, rear air outlet, saving cooling space
 - Support Modbus protocol
 - Standard interface: RS-485&RS-232
 - Optional interface: LAN&CAN
- USB
GPIB
Analog programming and monitoring (isolated)



Application Field

- ◆ Current sensor
- ◆ Current Transformer
- ◆ Cable
- ◆ Wiring Harness
- ◆ Connector
- ◆ Circuit breaker
- ◆ Contactor
- ◆ Low voltage
electrical appliances



HY-LCS Series Product Selection Table

In the selection table, special specifications outside the range of voltage/frequency/output capacity can be customized

LCS Series Programmable Linear AC Current Source				
Product model	Max output current(Arms)	Max open circuit voltage (L-N,Vrms)	Output capacity (1Φ/3Φ)	Output frequency(Hz)
HY-LCS	100A	2.5V 5V 10V 20V 36V 48V Multiple options available	300VA 500VA 1kVA 2kVA 3kVA 5kVA 10kVA 15kVA 30kVA Multiple options available	45-70Hz 45-400Hz (≤10 kVA) 320-480Hz 45-1000Hz Multiple options available
HY-LCS	150A			
HY-LCS	200A			
HY-LCS	250A			
HY-LCS	300A			
HY-LCS	400A			
HY-LCS	600A			
HY-LCS	1000A			
HY-LCS	1200A			
HY-LCS	1500A			
HY-LCS	2000A			
HY-LCS	5000A			
HY-LCS	10000A			

Product Model Naming Rules (1Φ)

Product series	Open circuit voltage	Output current	Customized function
HY-LCS	10	100	CF
Series name	Open circuit voltage is 10V	Output current is 0.1A-100A	Abbreviation for customized function See optional features

Selection example:
 Product model: HY-LCS 10-100-CF
 Open circuit voltage 10V, output current 0.1A-100A, optional user-defined function

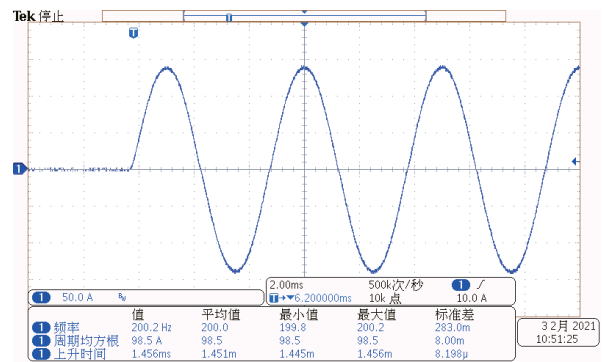
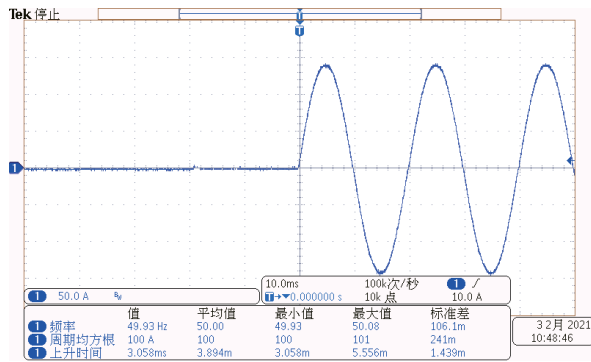
Product Model Naming Rules (3Φ)

Product series	Three-Phase output	Open circuit voltage	Output current	Customized function
HY-LCS	3P	10	100	CF
Series name	Three-phase output	Open circuit voltage is 10V	Output current is 1A-100A	Abbreviation for customized function See optional features

Selection example:
 Product model: HY-LCS 3P-10-100-CF
 Three-phase output, open circuit voltage 10V, output current 1A-100A, optional user-defined function

HY-LCS Series Technical Parameter

The actual measurement of the current rise time of some constant current sources is shown below. The current rise response time is $\leq 10\text{ms}$, which can meet the testing requirements of low-voltage electrical transient testing within 10ms.



AC Output

Working mode	CC Mode
Output capacity	Optional range 300VA-30kVA
Output current	0.1A-100A/150A/200A/250A/300A/400A/600A/1000A/1200A/1500A/2000A/5000A/10000A
Settable output current range	0.5%-100%
Open circuit voltage	L-N 2.5V/5V/10V/20V/36V/48V (customized)
Output frequency	45Hz-70Hz/45-400Hz/320-480Hz/45-1000Hz (Four options) (Customization is acceptable)
Frequency stabilization accuracy	100ppm
Input regulation	$\leq 0.5\%F.S.$ (Note: F.S. means full scale)
Waveform distortion(THD))	Sine wave, I-THD $\leq 1\%$, resistive test Different current models have different distortion rates

Programming And Readback Accuracy & Resolution

Current Output Programming Accuracy	0.5%F.S.
Current Setting Resolution	0.01A ($\leq 600A$) , 0.1A ($> 600A$)
Frequency Setting Resolution	0.01Hz
Current Output Readback Accuracy	0.5%F.S.
Current Readback Resolution	0.01A ($\leq 600A$) , 0.1A ($> 600A$)

Protective Function

Open circuit protection	The output shuts down immediately when the open-circuit voltage limit is exceeded
Over temperature protection(OTP)	When the limit is exceeded, the output shuts down immediately

HY-LCS Series Technical Parameter

Environmental Conditions	
Surroundings	Indoor use; installation overvoltage class: II; pollution class: P2; class II equipment
Working temperature	0°C to 45°C; optional -20°C to 45°C
Storage ambient 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 2000 meters above sea level, the power decreases by 2% for every 100 meters, or the maximum working environment temperature decreases by 1 °C every 100 meters;When not in operation, up to 12,000 meters above sea level
Cool down	Forced air cooling, intelligent speed-adjustable fan, air intake from both sides/front, air out from the rear
Noise	≤ 65dB(A), weighted measurements with 1m
Control Panel	
Display	7 inches, LCD liquid crystal display, touch screen
Show items	Current (set value & measurement value), voltage measurement value, operating time, cumulative operating time, current time and date
Control function	Digital key input, multi-level shuttle knob adjustment (coarse adjustment of outer ring / fine adjustment of inner ring) Output ON/OFF switch, Lock keyboard and touch lock, Reset restart Status Indicators (Shift / Local / Remote / Alarm / Lock / Output)
Programming function	Step/Staircase/Gradation
Communication Interface	
Standard	RS-485 & RS-232
Options	LAN、CAN、USB、GPIB, analog programming and monitoring interface (isolated)
Appearance Color & Size	
Color	RAL 7035
Size	4U, standard 19-inch rack, or desktop (with fixed feet); 10U, standard 19-inch rack type, or floor table (with movable universal casters and brakes); 18U and above, floor-standing cabinet, with movable swivel casters and brakes.

Customized Interface

- LAN LAN Communication Interface
- CAN CAN Communication Interface
- USB USB Communication Interface
- GPIB GPIB Communication Interface
- APM Analog programming and monitoring interface (isolated)

Customized Function

- HR High resolution/high precision
- T2 Operating temperature -20°C to 45°C
- CF User-defined functions (please specify when ordering)
- MR Measurement report (issued by a third party certified by CNAS)

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

Outline Dimension

4U 433(W)*560(D)*177(H)mm



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

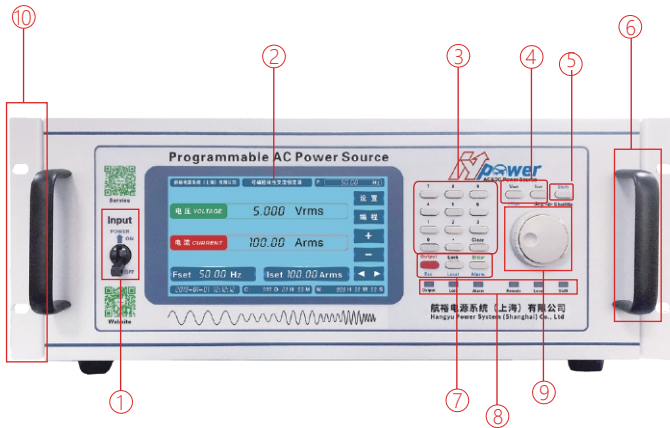


18U 600(W)*800(D)*920(H)mm



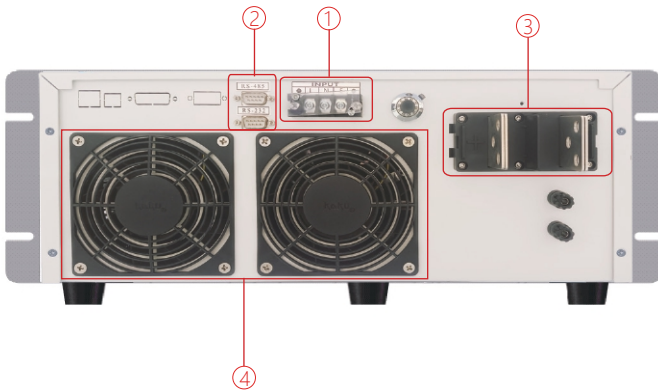
Display And Control Panel

Control Panel



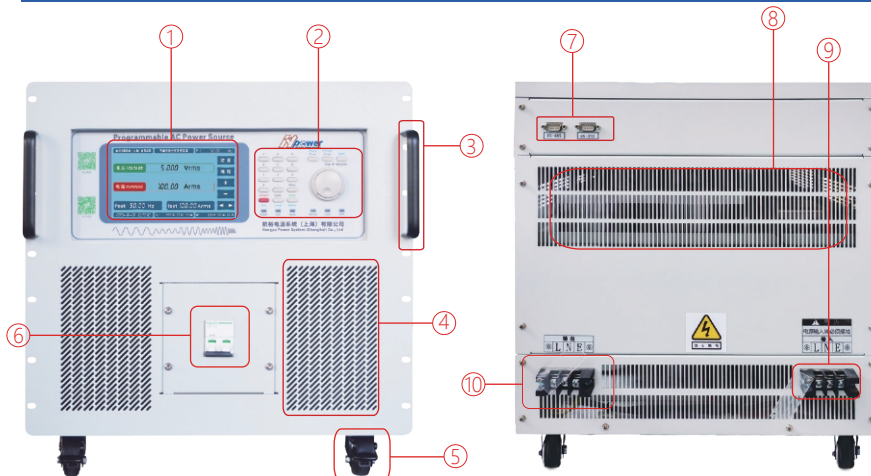
- ① Power input circuit breaker
- ② LCD display (7 inches, touch screen)
- ③ Numeric input keyboard
- ④ Frequency/voltage or current setting key
- ⑤ Shift function reuse key
- ⑥ Chassis handle
- ⑦ Lock Lock, Enter confirm, Esc exit
- Local Local or Reset Restarts
- Output ON/OFF Switch
- ⑧ Status indicator
- ⑨ Multi-stage shuttle adjustment knob (inner ring fine adjustment/outer ring coarse adjustment)
- ⑩ 19-inch standard rack mounting holes

Rear Panel



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

Front Panel & Rear Panel



- ① LCD display (7 inches, touch screen)
- ② Control area
- ③ 19-inch standard rack handle
- ④ Heat dissipation inlet
- ⑤ Casters
- ⑥ Power input circuit breaker
- ⑦ Communication interface
- ⑧ Heat dissipation outlet
- ⑨ AC input terminals
- ⑩ AC output terminal

Cooperative Customers (Part)

Aerospace & Defense Military Research Institute



China Aerospace

CASC 803 (Shanghai Aerospace Control Technology Institute)
 CASC 800 (Shanghai Aerospace Precision Machinery Research 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 801 (Shanghai Space Propulsion Research Institute)
 CASC 502 (Beijing Control Engineering Research Institute)
 CASC 510 (Lanzhou Institute of Space Technology Physics)
 CASIC 206 (Beijing Machinery and Equipment Research Institute)
 CASIC 304 Institute (Beijing Great Wall Institute of Measurement and Testing Technology)
 CASIC 307 Factory (Aerospace Chengguang Co., LTD.)
 33 CASIC (33 Aerospace Science and Industry Institutes)
 CASIC 3651 Factory (Guizhou Aerospace Linquan Motor Co., LTD.)
 AVIC 615 (Aeronautical Radio Electronics Research Institute of China)
 AVIC 618 (Xi'an Flight Automatic Control Research Institute)
 AVIC 105 Factory (Tianjin Aviation Electromechanical Co., LTD.)
 AVIC 115 Factory (Shaanxi Aero Electric Co., LTD.)



Aerospace science and engineering



Aviation industry



China Air Development



China Electrical Engineering Group



China Shipbuilding Corporation



China Shipbuilding Industry Corporation

AVIC 118 Factory (Shanghai Aviation Electric Appliance Co., LTD.)
 AVIC 181 Factory (Wuhan Aviation Instrument Co., LTD.)
 AVIC 607 Institute (China Leihua Electronic Technology Institute)
 AECC 606 Institute (Shenyang Engine Research Institute)
 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 Institute of Electronic Communication)
 CETC 38 Institute (East China Institute of Electronic Engineering)
 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 Marine Instruments)
 CSIC 719 Institute (Wuhan Second Ship Design Institute)
 CSIC 704 Institute (Shanghai Marine Equipment Research Institute)
 CSIC 726 Institute (Shanghai Marine Electronic Equipment Research Institute)
 Jiangnan Shipbuilding (Group) Co., LTD
 Nanjing Panda Electronics Co., LTD
 State-owned 741 Factory (Nanjing Huadong Electronics Group Co., LTD.)

Chinese People's Liberation Army

South Sea Fleet
 East China Sea Fleet
 North Sea Fleet
 Navy Plant 701 / Plant 702
 4724 Factory (Shanghai Haiying Machinery Factory)
 Unit 95861 (Empty Base 1)

Commercial Aviation



Commercial Aircraft Corporation of China



Collins Aerospace

Rockwell Collins



Guangzhou Aircraft Maintenance Engineering Co., LTD



Beijing Aircraft Maintenance Engineering Co., LTD

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)



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



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



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Military Academies & Local Universities



High-tech R&D Enterprise



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Hangyu Power AC Power Supply Product Manual, version 06.00, february 2024

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:

