

HY-CTL Series Capacitor Test Linear Power Source

Hangyu Power System (Shanghai) Co., Ltd

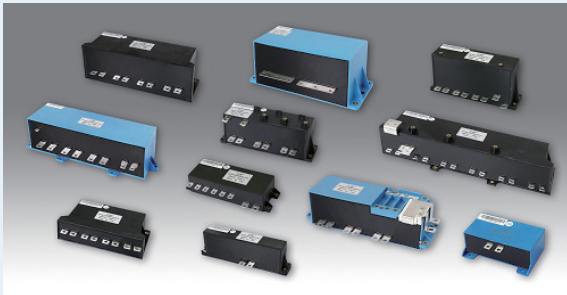


HY-CTL Series Capacitor Test Linear Power Source (Ripple durability test)



Application Field

- ◆ Testing of ripple durability characteristics of thin film capacitors
- ◆ Temperature rise test
- ◆ Aging test



Product Features

- Output frequency range 100Hz-200kHz Optional
- Output capacity range 50VA-30kVA Optional
- Output voltage Maximum 10kVrms
- Output current Maximum 1kArms
- Supports front panel programming without the need for upper computer software control
- Adjustable slope for voltage rise and fall
- 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 size
- 7-Inch large LCD display screen
- Touch screen operation & number key input
- Multistage shuttle adjustment knob
- The power input is controlled by a circuit breaker, making it safer
- Output ON/OFF key
- Intelligent speed control design for fans to reduce noise
- Front/side air inlet, rear air outlet, saving heat dissipation space
- Support modbus agreement
- Standard interface: RS-485&RS-232
- Purchasing interface: LAN
CAN
GPIB
USB

Analog programming and monitoring (isolated type)

HY-CTL Series Product Selection Table

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

HY-CTL Series Capacitor Testing Power Supply		
AC Output	Capacity (VA)	50VA-30kVA
	Voltage (Vrms)	0~30 Vrms/0~50 Vrms/0~100 Vrms/0~150 Vrms/0~200 Vrms/0~300 Vrms/Max10 kV
	Current (Arms)	1Arms~1000Arms
	Frequency range (Hz)	45Hz~70Hz/100Hz~1kHz/100Hz~2kHz/10kHz~100kHz/50kHz~200kHz
DC Output	Capacity (W)	500W~30kW
	Voltage (V)	0~10kV

Product Model Naming Rules

Product Series	Output Voltage	Output Current	Maximum Frequency	DC Voltage
HY-CTL	100	10	FE20K	D2000
Series Name	The output voltage is 0-100V	The output current is 10A	FE sets the maximum frequency 20kHz	The DC voltage is 2000V

Selection examples:

Model: HY-CTL 100-10-FE20k-D2000V

Output voltage 0-100V, output current 10A, maximum frequency 20kHz, DC voltage 2000V

HY-CTL Series Technical Parameter

AC Input		
Connection	Single phase two wire+ground wire	Three phase three wire&three phase four wire+ground wire
Input Voltage	220Vrms±15%	380Vrms±15%
Input Frequency	47Hz-63Hz	47Hz-63Hz
AC Output		
Connection	Single phase two wire+ground wire	Three phase four wire+ground wire
Frequency	Optional range 100Hz-200kHz,resolution ratio 0.01Hz	
Output capacity	Optional range 50VA-30kVA	
Output voltage	Optional range 1~10kV	
Output current	Optional range 1~1000A	
Frequency stabilization accuracy	±0.1%F.S.	
DC Part		
Stable voltage and current accuracy	Source effect: ≤ 0.5% of rated value (output voltage change rate caused only by ± 10% change in input source voltage)	
	Time drift: ≤ 0.3% of rated value (only due to the output voltage change rate caused by the continuous working time of the power supply exceeding 8 hours)	
	Temperature drift: ≤ 0.04% of rated value/°C (only due to the output voltage change rate caused by environmental temperature changes within the temperature range of the power supply)	
	Load effect: ≤ 0.2% of rated value (only due to the output voltage change rate caused by the change of output current from zero to rated value)	
Ripple wave (rms)	≤0.01%+10mV (80%~100% Measurement at rated output)	
Output voltage regulating range	0~ Rated voltage	
Output current regulation range	Continuous adjustable rated current value	
Output voltage display resolution	0.1V (≤10000V) 、 1V (> 10000V)	
Output current display resolution	0.001A (≤100A) 、 0.01A (100A < 1A≤1000A)	
(二) AC Portion		
Output voltage regulating range	0~Continuous adjustable rated voltage value	
Output frequency adjustment range	Customization is acceptable	
Output voltage display resolution	0.1V/0.01V	
Output current display resolution	0.1A/0.01A	
Protection Function		
Protection function	Overvoltage, overcurrent, internal overheating, short circuit	

HY-CTL Series Technical Parameter

Ambient Condition	
Ambient Temperature	0°C~45°C; choose -20°C~45°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	≤ 65dB(A), Weighted measurement using 1m
Control Panel	
Display screen	7-inch, LCD display, touch screen
Display item	Voltage (set value&measured value), current measurement 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	10U, Standard 19 inch rack mounted or floor mounted (with movable universal casters and brakes); 18U And above, floor mounted cabinet 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)

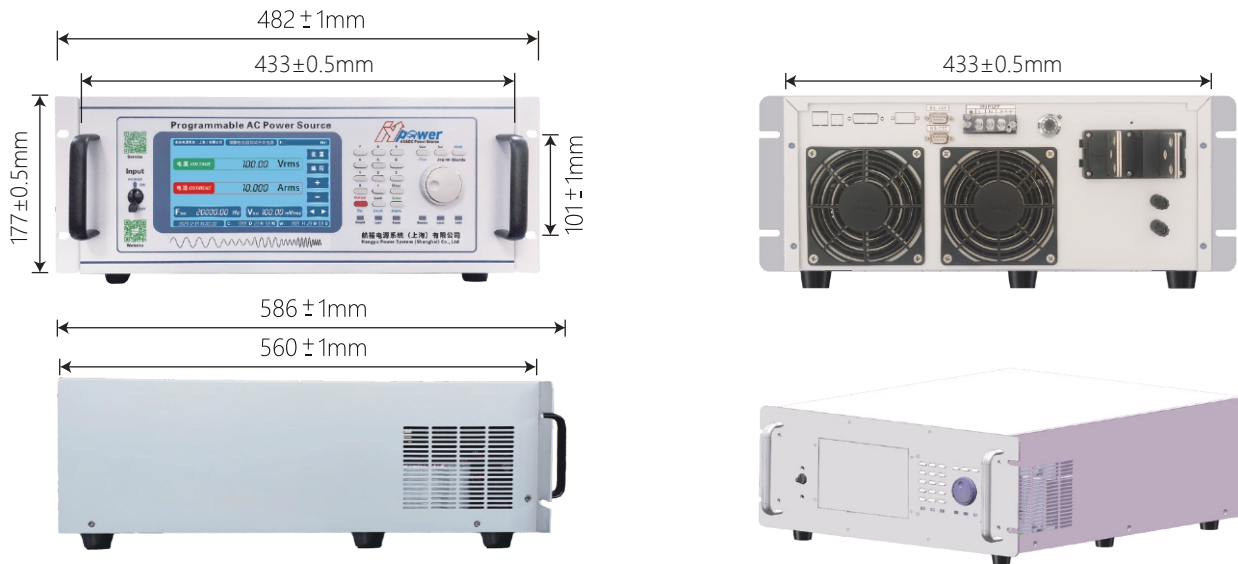
Purchasing Function

- T2 Working 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)

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

Outline Dimension

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



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

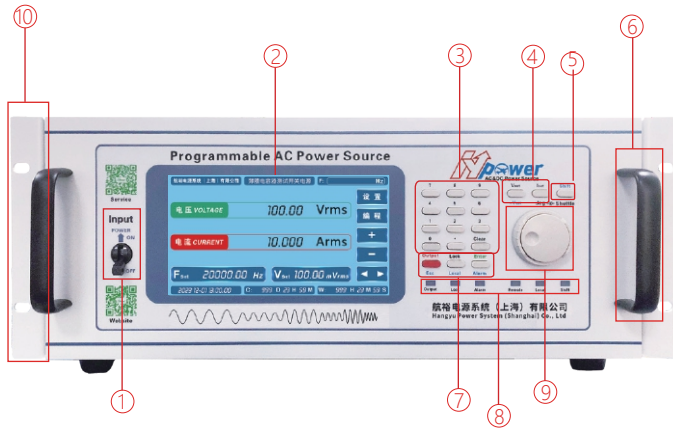


18U 600(W)*800(D)*920(H)mm



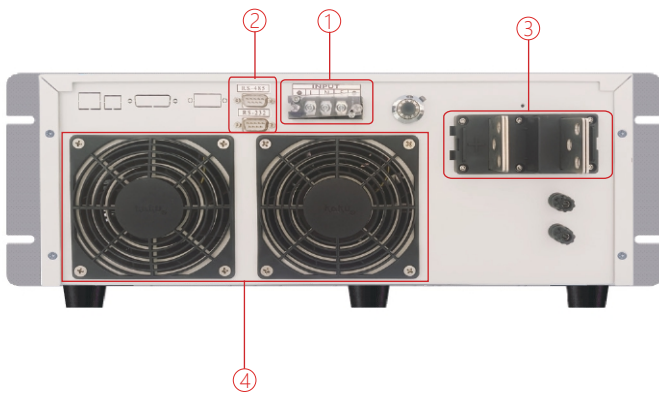
Display And Control Panel

Control Panel



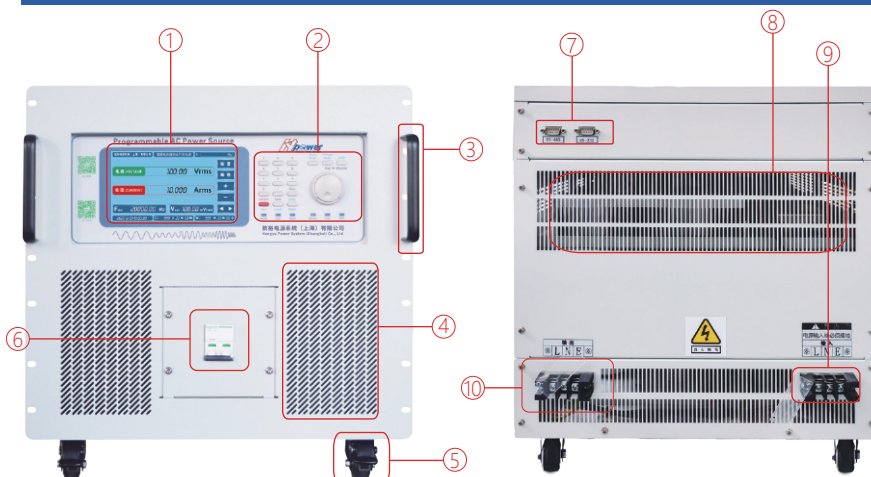
- ① Power input circuit breaker
- ② LCD display (7 inches, touch screen)
- ③ Numeric input keyboard
- ④ Frequency/voltage or current setting key
- ⑤ Shift function reuse key
- ⑥ Chassis handle
- ⑦ Lock Lock, Enter confirm, Esc exit
Local Local or Reset Restarts
Output ON/OFF Switch
- ⑧ Status indicator
- 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



Aerospace science and engineering



Aviation industry



China Air Development



China Electrical Engineering Group



China Shipbuilding Corporation



China Shipbuilding Industry Corporation

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 Chenguang 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.)

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

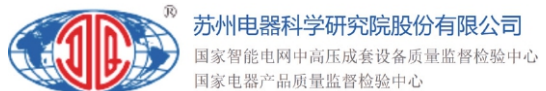


Technical Institute of Physics and Chemistry (Beijing)

Institute of Urban Environment (Xiamen)

Electrotechnical Research Institute (Beijing)

Institute of Applied Physics (Shanghai)



Cooperative Customers (Part)

Military Academies & Local Universities



High-tech R&D Enterprise





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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:

