AC&DC Power Source

Hangyu Power System (Shanghai) Co., Ltd.

HY-GSU Series

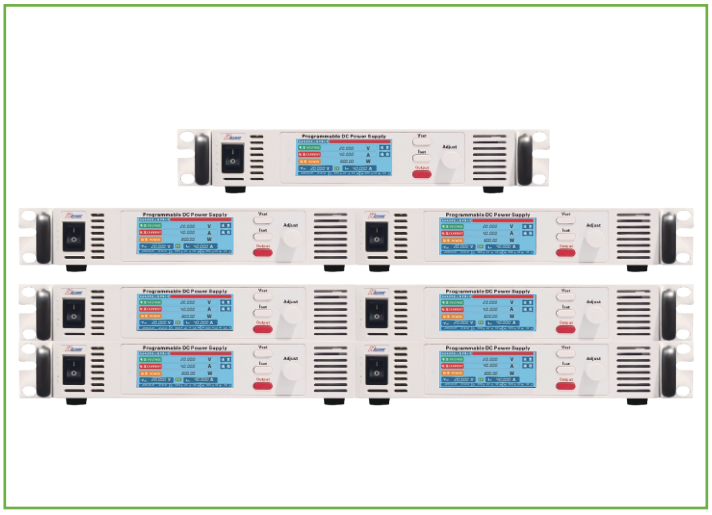
1U Half-Width Ultra-Thin Programmable DC Power Supply

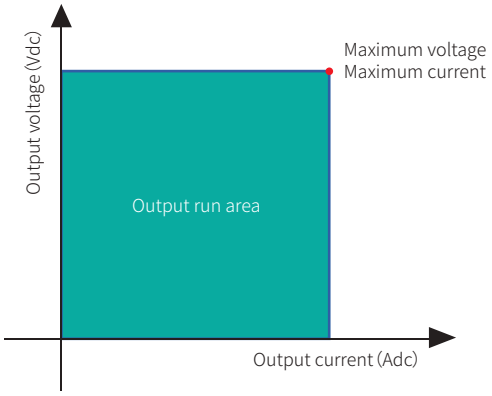
Portable High Reliability

Military quality power supply expert
To provide customers with accurate, intelligent and convenient test power supply solutions

www.hangyupower.com

HY-GSU Series 1U Half-Width Ultra-Thin Programmable DC Power Supply





Ultra-small size: 214(W)*457.5(D)*43.7(H)mm, can be installed in parallel in a 19-inch frame.

Product Features

- Two in series operation, 4 master-slave parallel operation
- Power density: 200W/400W/600W/800W
- Wide input voltage range: 85~265VAC
- Input standard PFC, power factor up to 0.99
- 16-bit D/A high precision converter, accurate output
- 20-bit A/D high precision converter, more accurate read back

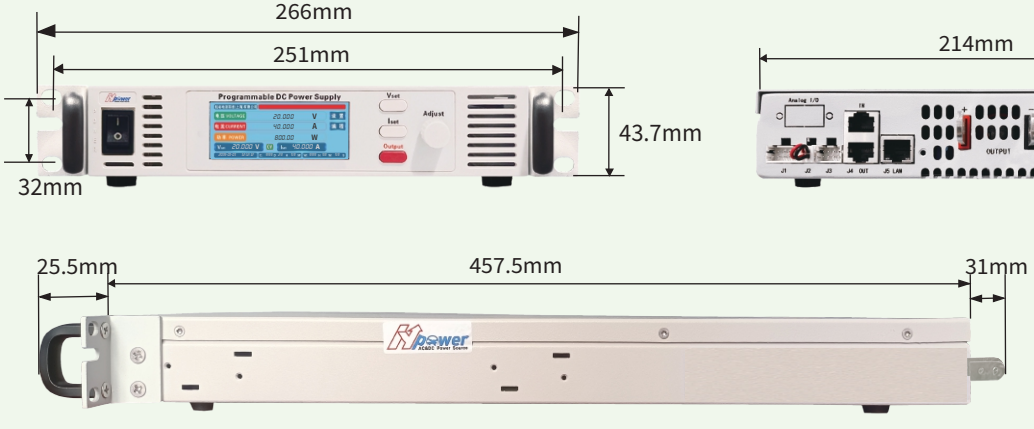
Application Field

HY-GSU series power supply, through the series parallel form, more free parameter choice can be obtained, a wide range of applications, very suitable for integrated systems, in the military and intelligent manufacturing field is widely popular.

- Stable power supply
- Integration testing
- Military industry
- Medical treatment

Product Display

1U Half Wide 214(W)*457.5(D)*43.7(H)mm



HY-GSU Series Product Selection Table

Product Model Naming Rules

Product Series	Output Voltage		Output Current
HY-GSU	10	-	20

Selection examples:
Product model: HY-GSU 10-20
Output voltage 0-10V, output current 0-20A

Communication Protocol	Standard Communication Interface	Optional Communication Interface
Modbus	RS-485	- LAN : Ethernet communicationinterface
SCPI	RS-232	- CAN : CAN communication interface
	Digital I/O	- 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-GSU Series Product Model Selection And Parameters

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

200W Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-GSU 10-20	10V	20A	200W
HY-GSU 20-10	20V	10A	200W
HY-GSU 36-6	36V	6A	216W
HY-GSU 60-3.5	60V	3.5A	210W
HY-GSU 100-2	100V	2A	200W
HY-GSU 160-1.3	160V	1.3A	208W
HY-GSU 320-0.65	320V	0.65A	208W
HY-GSU 650-0.32	650V	0.32A	208W

400W Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-GSU 10-40	10V	40A	400W
HY-GSU 20-20	20V	20A	400W
HY-GSU 36-12	36V	12A	432W
HY-GSU 60-7	60V	7A	420W
HY-GSU 100-4	100V	4A	400W
HY-GSU 160-2.6	160V	2.6A	416W
HY-GSU 320-1.3	320V	1.3A	416W
HY-GSU 650-0.64	650V	0.64A	416W

600W Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-GSU 10-60	10V	60A	600W
HY-GSU 20-30	20V	30A	600W
HY-GSU 36-18	36V	18A	648W
HY-GSU 60-10	60V	10A	600W
HY-GSU 100-6	100V	6A	600W
HY-GSU 160-4	160V	4A	640W
HY-GSU 320-2	320V	2A	640W
HY-GSU 650-1	650V	1A	650W

800W Series Power Supply Model Selection

Models	Output Voltage	Output Current	Output Power
HY-GSU 10-72	10V	72A	720W
HY-GSU 20-40	20V	40A	800W
HY-GSU 36-24	36V	24A	864W
HY-GSU 60-14	60V	14A	840W
HY-GSU 100-8	100V	8A	800W
HY-GSU 160-5	160V	5A	800W
HY-GSU 320-2.5	320V	2.5A	800W
HY-GSU 375-2.2	375V	2.2A	825W
HY-GSU 650-1.25	650V	1.25A	812.5W

HY-GSU Series Technical Parameters

DC 200W Low Voltage Output Series Technical Parameters

Models		HY-GSU 10-20	HY-GSU 20-10	HY-GSU 36-6	HY-GSU 60-3.5	HY-GSU 100-2
Rated Output Voltage	V	10	20	36	60	100
Rated Output Current	A	20	10	6	3.5	2
Rated Output Power	W	200	200	216	210	200
Efficiency	%	77.5	79	80.5	80.5	81
Constant Voltage Mode (CV Mode)						
Output Range Can Be Set	V	0- Rated output value				
Line Regulation Rate	mV	0.01% +2mV of rated output voltage				
Load Regulation Rate	mV	0.01% +2mV of rated output voltage				
Maximum Compensation Voltage For Telemetry	V	1	1	2	3	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	5	6	6	7	8
Noise Peak-To-Peak Value p-p (20MHz)	mVpp	50	50	50	50	80
Output Voltage Rise Time 10-90%	ms	15	30	30	50	50
Output Voltage Drop Time (Full Load)90-10%	ms	12	25	30	40	50
Output Voltage Drop Time (No Load)	ms	210	250	320	380	1200
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. Output models below 100V: ＜1ms				
Constant Current Mode (CC Mode)						
Output Range Can Be Set	A	0- Rated output value				
Line Regulation Rate	mA	0.01% +2mA of the rated output current				
Load Regulation Rate	mA	0.02% +5mA of the rated output current				
Ripple Effective Value rms (5Hz -1MHz)	mArms	25	15	8	4	3

DC 400W Low Voltage Output Series Technical Parameters

Models		HY-G 10-40	HY-G 20-20	HY-G 36-12	HY-G 60-7	HY-G 100-4
Rated Output Voltage	V	10	20	36	60	100
Rated Output Current	A	40	20	12	7	4
Rated Output Power	W	400	400	432	420	400
Efficiency	%	82	83	85	85	86
Constant Voltage Mode (CV Mode)						
Output Range Can Be Set	V	0- Rated output value				
Line Regulation Rate	mV	0.01% +2mV of rated output voltage				
Load Regulation Rate	mV	0.01% +2mV of rated output voltage				
Maximum Compensation Voltage For Telemetry	V	1	1	2	3	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	5	6	6	7	8
Noise Peak-To-Peak Value p-p (20MHz)	mVpp	50	50	50	50	80
Output Voltage Rise Time 10-90%	ms	15	30	30	50	50
Output Voltage Drop Time (Full Load)90-10%	ms	10	10	15	30	50
Output Voltage Drop Time (No Load)	ms	210	250	320	380	1200
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. Output models below 100V: ＜1ms				
Constant Current Mode (CC Mode)						
Output Range Can Be Set	A	0- Rated output value				
Line Regulation Rate	mA	0.01% +2mA of the rated output current				
Load Regulation Rate	mA	0.02% +5mA of the rated output current				
Ripple Effective Value rms (5Hz -1MHz)	mArms	70	40	15	8	3

DC 600W Low Voltage Output Series Technical Parameters

Models		HY-GSU 10-60	HY-GSU 20-30	HY-GSU 36-18	HY-GSU 60-10	HY-GSU 100-6
Rated Output Voltage	V	10	20	36	60	100
Rated Output Current	A	60	30	18	10	6
Rated Output Power	W	600	600	648	600	600
Efficiency	%	83	86	87	87	87
Constant Voltage Mode (CV Mode)						
Output Range Can Be Set	V	0- Rated output value				
Line Regulation Rate	mV	0.01% +2mV of rated output voltage				
Load Regulation Rate	mV	0.01% +2mV of rated output voltage				
Maximum Compensation Voltage For Telemetry	V	1	1	2	3	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	5	5	5	12	15
Noise Peak-To-Peak Value p-p (20MHz)	mVpp	50	50	50	50	80
Output Voltage Rise Time 10-90%	ms	50	50	50	50	100
Output Voltage Drop Time (Full Load)90-10%	ms	25	25	25	25	80
Output Voltage Drop Time (No Load)	ms	285	425	450	570	1370
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. Output models below 100V: ＜1ms				
Constant Current Mode (CC Mode)						
Output Range Can Be Set	A	0- Rated output value				
Line Regulation Rate	mA	0.01% +2mA of the rated output current				
Load Regulation Rate	mA	0.01% +5mA of the rated output current				
Ripple Effective Value rms (5Hz -1MHz)	mArms	150	75	25	8	5

DC 800W Low Voltage Output Series Technical Parameters

Models		HY-G 10-72	HY-G 20-40	HY-G 36-24	HY-G 60-14	HY-G 100-8
Rated Output Voltage	V	10	20	36	60	100
Rated Output Current	A	72	40	24	14	8
Rated Output Power	W	720	800	864	840	800
Efficiency	%	83	86	87	87	87
Constant Voltage Mode (CV Mode)						
Output Range Can Be Set	V	0- Rated output value				
Line Regulation Rate	mV	0.01% +2mV of rated output voltage				
Load Regulation Rate	mV	0.01% +2mV of rated output voltage				
Maximum Compensation Voltage For Telemetry	V	1	1	2	3	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	5	5	5	12	15
Noise Peak-To-Peak Value p-p (20MHz)	mVpp	50	50	50	60	80
Output Voltage Rise Time 10-90%	ms	50	50	50	50	100
Output Voltage Drop Time (Full Load)90-10%	ms	25	25	25	25	80
Output Voltage Drop Time (No Load)	ms	285	425	450	570	1370
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. Output models below 100V: ＜1ms				
Constant Current Mode (CC Mode)						
Output Range Can Be Set	A	0- Rated output value				
Line Regulation Rate	mA	0.01% +2mA of the rated output current				
Load Regulation Rate	mA	0.02% +5mA of the rated output current				
Ripple Effective Value rms (5Hz -1MHz)	mArms	180	100	31	28	12

HY-GSU Series Technical Parameters

DC 200W High Voltage Output Series Technical Parameters

Models		HY-GSU 160-1.3	HY-GSU 320-0.65	HY-GSU 650-0.32
Rated Output Voltage	V	160	320	650
Rated Output Current	A	1.3	0.66	0.32
Rated Output Power	W	208W		
Efficiency	%	81	81	81
Constant Voltage Mode (CV Mode)				
Output Range Can Be Set	V	0- Rated output value		
Line Regulation Rate	mV	0.01% of the rated output voltage		
Load Regulation Rate	mV	0.01% of the rated output voltage		
Maximum Compensation Voltage For Telemetry	V	5	5	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	10	25	60
Noise Peak-To-Peak Value p-p （20MHz)	mVpp	100	10	250
Output Voltage Rise Time 10-90%	ms	110	170	170
Output Voltage Drop Time (Full Load)90-10%	ms	180	270	270
Output Voltage Drop Time (No Load)	ms	2	2.5	3
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. ＜2ms.		
Constant Current Mode (CC Mode)				
Output Range Can Be Set	A	0- Rated output value		
Line Regulation Rate	mA	0.02% of the rated output current		
Load Regulation Rate	mA	0.09% of the rated output current		
Ripple Effective Value rms （5Hz -1MHz)	mArms	1.2	0.8	0.5

DC 400W High Voltage Output Series Technical Parameters

Models		HY-G 160-2.6	HY-G 320-1.3	HY-G 650-0.64
Rated Output Voltage	V	160	320	650
Rated Output Current	A	2.6	1.3	0.64
Rated Output Power	W	416	416	416
Efficiency	%	86	86	86
Constant Voltage Mode (CV Mode)				
Output Range Can Be Set	V	0- Rated output value		
Line Regulation Rate	mV	0.01% of the rated output voltage		
Load Regulation Rate	mV	0.01% of the rated output voltage		
Maximum Compensation Voltage For Telemetry	V	5	5	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	10	25	60
Noise Peak-To-Peak Value p-p （20MHz)	mVpp	100	150	250
Output Voltage Rise Time 10-90%	ms	80	150	150
Output Voltage Drop Time (Full Load)90-10%	ms	100	150	150
Output Voltage Drop Time (No Load)	ms	2	2.5	3
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. ＜2ms.		
Constant Current Mode (CC Mode)				
Output Range Can Be Set	A	0- Rated output value		
Line Regulation Rate	mA	0.02% of the rated output current		
Load Regulation Rate	mA	0.09% of the rated output current		
Ripple Effective Value rms （5Hz -1MHz)	mArms	1.5	1	0.6

DC 600W High Voltage Output Series Technical Parameters

Models		HY-GSU 160-4	HY-GSU 320-2	HY-GSU 650-1
Rated Output Voltage	V	160	320	650
Rated Output Current	A	4	2	1
Rated Output Power	W	640	640	650
Efficiency	%	88.5	88.5	88.5
Constant Voltage Mode (CV Mode)				
Output Range Can Be Set	V	0- Rated output value		
Line Regulation Rate	mV	0.01% of the rated output voltage		
Load Regulation Rate	mV	0.01% of the rated output voltage		
Maximum Compensation Voltage For Telemetry	V	5	5	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	10	30	60
Noise Peak-To-Peak Value p-p (20MHz)	mVpp	100	150	250
Output Voltage Rise Time 10-90%	ms	55	75	75
Output Voltage Drop Time (Full Load)90-10%	ms	65	85	85
Output Voltage Drop Time (No Load)	ms	2	2.5	3
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. ＜2ms.		
Constant Current Mode (CC Mode)				
Output Range Can Be Set	A	0- Rated output value		
Line Regulation Rate	mA	0.02% of the rated output current		
Load Regulation Rate	mA	0.09% of the rated output current		
Ripple Effective Value rms (5Hz -1MHz)	mArms	2	1.5	1

DC 800W High Voltage Output Series Technical Parameters

Models		HY-G 160-5	HY-G 320-2.5	HY-G 375-2.2	HY-G 650-1.25
Rated Output Voltage	V	160	320	375	650
Rated Output Current	A	4.7-5	2.35-2.5	2-2.2	1.15-1.25
Rated Output Power	W	752-800	752-800	750-825	747.5-812.5
Efficiency	%	88.5	89	89.5	89
Constant Voltage Mode (CV Mode)					
Output Range Can Be Set	V	0- Rated output value			
Line Regulation Rate	mV	0.01% of the rated output voltage			
Load Regulation Rate	mV	0.01% of the rated output voltage			
Maximum Compensation Voltage For Telemetry	V	5	5	5	5
Ripple Effective Value rms (5Hz -1MHz)	mVrms	10	30	30	60
Noise Peak-To-Peak Value p-p (20MHz)	mVpp	100	150	150	250
Output Voltage Rise Time 10-90%	ms	45	55	55	55
Output Voltage Drop Time (Full Load)90-10%	ms	55	65	65	65
Output Voltage Drop Time (No Load)	ms	2	2.5	2.5	3
Transient Response Time	ms	The time when the output voltage is restored to within 0.5% of the rated voltage. The variation of the output current is 10-90% of the rated value.Output voltage setting range: 10-100%, local sampling. ＜2ms.			
Constant Current Mode (CC Mode)					
Output Range Can Be Set	A	0- Rated output value			
Line Regulation Rate	mA	0.02% of the rated output current			
Load Regulation Rate	mA	0.09% of the rated output current			
Ripple Effective Value rms (5Hz -1MHz)	mArms	2	1.5	1.5	1

HY-GSU Series Technical Parameters

Stability And Temperature Coefficient

Temperature Drift (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 (10%~100%) ①	0.1% of the output current + 0.05% of the rated output current (in constant current programming mode, the readback and monitoring accuracy do not include the influence of heating drift and load temperature change rate)
Voltage Setting Resolution	0.001V (≤60V) ,0.01V (≤600V) ,0.1V (>600V)
Current Setting Resolution	0.001A (≤60A) ,0.01A (≤600A) ,0.1A (>600A)
Voltage Output Read-Back Accuracy	0.05% of the rated output voltage
Current Output Read-Back Accuracy (10%~100%) ①	0.1% of the output current + 0.05% of the rated output current (in constant current programming mode, the readback and monitoring accuracy do not include the influence of heating drift and load temperature change rate)
Voltage Read Back Resolution	0.00001V (≤10V),0.0001V (≤100V), 0.001V (100V＜U ≤1000V), 0.01V (>1000V)
Current Read Back Resolution	0.00001A (≤10A), 0.0001A (≤100A), 0.001A (100A＜ I ≤1000A)

Note:
① When the current output is within the range of 1% to 10%, the accuracy is 0.1% RD + 0.1% RG.

Protection Function

OVP Overvoltage Protection Setting Range	10-110%, beyond the limit output immediately off
OCP Overcurrent Protection Setting Range	0-105%, beyond the limit output immediately off
OTP Overtemperature Protection	Beyond the limit output immediately off
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
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 Sea Level	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 1m to weighted measurement

Control Panel

Display	LCD display
Control Function	Adjustment knob,Output ON/OFF switch Vset, Iset, Output keys
Programming Function	Step, Ladder, Gradient

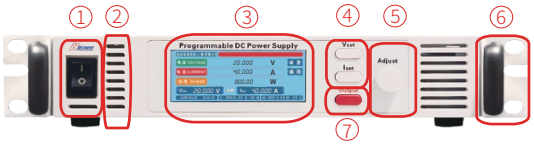
Input Power Supply

Frequency	47Hz - 63Hz
Connection Mode	Single-phase two-wire + ground wire, wide input voltage range: 85~265VAC
Power Factor (Typical Value)	0.99(Single-Phase Input)

Size And Weight

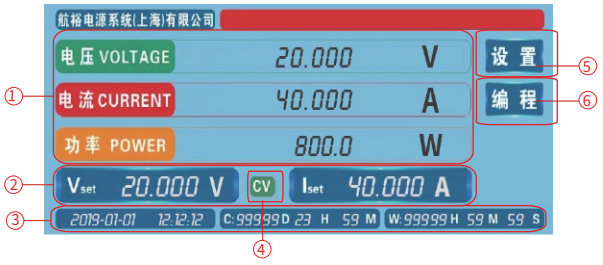
Size	1U Half Wide Model：214(W)*457.5(D)*43.7(H)mm
Weight	About 3kg
Colour	RAL 7035

Front Panel



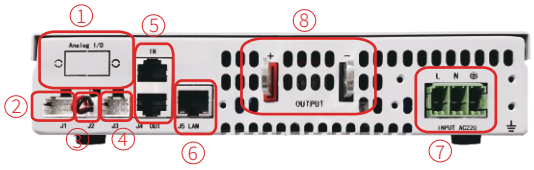
① Power switch
② Air vent
③ Liquid crystal display screen
④ Voltage/current setting key
⑤ Adjustment knob
⑥ Air vent
⑦ OUTPUT

Liquid Crystal Display Screen



① Voltage/current/power read back display area
② Voltage/current setting value
③ Current time/Accumulated running time/This run time
④ CV/CC state
⑤ Setting function
⑥ Programming function

Rear Panel



① Communication port (Digital I/O)
② Analog control and monitoring interface
③ Telemetry interface
④ Isolation control and signal interface
⑤ RS232/RS485 communication port
⑥ Select configuration communication interface
⑦ Input port
⑧ Positive and negative copper bar output ports

HY-GSU Series Product Rack Kits

Product Rack Kits And Their Numbers, As Well As Descriptions Of Optional Accessories

HY-GSU series power supplies can be installed in parallel (such as Rack Kits 1 and 2) or stacked (such as Rack Kit 3) to meet the flexibility of system integration requirements and power density needs.

Notes:

*Parallel installation meets the system integration requirements of standard cabinets, enabling the power supply to fit into a standard 19-inch rack without increasing its height;

*Stacked installation is suitable for benchtop applications, maintaining the advantages of small size and minimal floor space. With handles for easy carrying, the power supply offers more flexible and lightweight operation during experiments.

■ Single power supply installation, select Rack kit1: HY-GSU-CP 001

1.A single HY-GSU series power supply can be installed in a standard 19-inch rack with a height of 1U (43.7mm).

2.The kit includes: Chassis and Connecting plate

*Chassis: Used to fill the empty space in the 19-inch rack.

*Connecting plate: Used to connect and fix the HY-GSU series power supply to the chassis.

Rack kit 1 Overall appearance

■ Two power supplies for parallel installation, select Rack kit2: HY-GSU-CP 002

1.Two HY-GSU series power supplies can be installed side by side in a standard 19-inch rack with a height of 1U (43.7mm).

2.The kit includes: Connecting plate

*Connecting plate: Used to connect and fix two HY-GSU series power supplies.

Rack kit 2 Overall appearance

■ For stacking installation of two power supplies, select Rack kit3: HY-GSU-CP 003

1.Benchtop stacking kit for vertical stacking of two HY-GSU series power supplies.

2.The kit includes: Chassis, Handle, Front Output Interface

*Chassis: Fixes the position of the power supplies.

*Handle: Enables single-handed portability for easy movement.

*Front Output Interface: Allows direct connection of output cables when using the power supplies on a workbench, eliminating the need to flip the units repeatedly.

Rack kit 3 Front view

Rack kit 3 Axis view

Rack kit 3 Rear view

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Contact us

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®Hangyu Power System, 2024
HY-GSU Series Product Manual, Version 08.17, August 2025
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：