

PSU-Series



GW Instek PSU-Series, a DC power supply with high power density design, is 1U in height and compatible with 19" Rack Mount Size. The series is suitable for test system installation or system integration by flexibly selecting models for the integration into the existing test system. The PSU-Series, featuring superior voltage and current control functions, comprises fifteen models with output voltage/current ranging from 6V/200A to 600V/2.6A. The Series is suitable for different test conditions and DUTs, including electronic components testing, micro resistors, relays, shunt resistors, 12V/24V/48V battery simulation, and automotive electronic device testing.

The PSU-HV series is ideal for the primary input of DC/DC converter and servomotor production application. PSU is often integrated into component test systems such as aging test equipment for capacitors; 600V DC bias applications; aging test equipment for diode; semiconductor production equipment; automotive electronics; and ECU for V8 engine or V12 engine, etc.

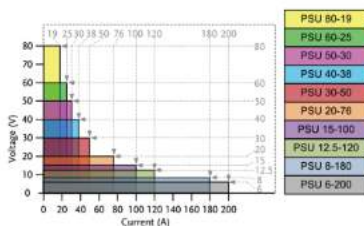
Utilizing same model units of the PSU-Series to conduct series and parallel connections can increase total output power, total current or total voltage. The wide voltage and current output ranges of the PSU-Series can fully satisfy various voltage and current measurement requirements. The PSU-Series is a single power output DC programmable power supply, which outputs 1200W to 1560W. The PSU-Series provides maximum 2 units in series connection (models under 300V) to achieve maximum 600V or 4 units in parallel connection to obtain maximum 800A and the maximum output power of 6.24 kilowatts.

The PSU-Series allows settings for CC priority or CV priority. Under CC or CV mode, users can adjust slew rate for output voltage or current based upon test requirements. There are two kinds of slew rate settings: high speed priority and slew rate priority. High speed priority sets slew rate at the maximum speed to reach CC or CV mode. Slew rate priority allows users to set slew rate for CC or CV mode in order to control rise or fall slew rate. Slew rate priority mode is ideal for motor tests by adjusting the rise time of output voltage to protect DUT from being damaged by inrush current occurred at turn-on.

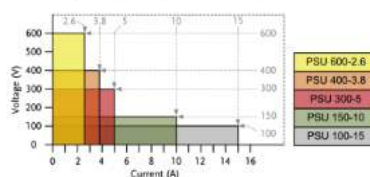
Comparing with other 1U power supplies available in the market, PSU supports a most complete array of interfaces, including USB, LAN, RS-232, RS-485, analog control interface, GPIB (option), isolated analog interface (voltage control), and isolated analog interface (current control). Via the multi-drop mode, PSU will not need any switch/hub and GPIB cable for remote control and slave unit augmentation when using LAN, USB or GPIB. This feature can help users save costs on augmentation equipment for connecting slave while using LAN or USB.

The PSU-Series provides users with flexible settings of High/Low Level or Trigger input/Trigger output signals with pulse width of 1 ~ 60ms. Trigger input controls PSU to output or upload preset voltage, current and memory parameters. While outputting or uploading preset voltage, current and memory parameters PSU can produce corresponding Trigger output signals.

PSU-Series Operating Area
(6-80V models)



PSU-Series Operating Area
(100-600V models)



FEATURES

- Voltage Output : 6V/8V/12.5V/15V/20V/30V/40V/50V/60V/80V/100V/150V/300V/400V/600V
- Power Output : 1200W ~ 1560W
- C.V/C.C Priority Mode
- Adjustable Voltage/Current Rise and Fall Time
- Series/Parallel Connection : Max. 2 units (Models Under 300V)/4 units of The Same Model
- High Efficiency and High Power Density
- 1U Height and 19" Rack Mount Size
- Three sets of Preset Function
- Bleeder Control Function
- Internal Resistance Function
- Panel Lock Function
- Protection : OVP, OCP, OHP, UVL, AC Fail, FAN Fail
- Standard : USB, LAN, RS-232, RS-485, Analog Control
- Option : GPIB, Isolated Analog Interface (Voltage Control/Current Control)

APPLICATIONS

- The Primary Input of DC/DC Converter
- Servomotor Manufacturing Equipment
- Aging Test Equipment for Capacitors
- Aging Test Equipment for Diodes
- Power Supply for Communications Equipment
- Electronic Components Testing
- Micro Resistors
- Relays
- Shunt Resistors

Model Name	Voltage	Current	Power
PSU 6-200	6V	200A	1200W
PSU 8-180	8V	180A	1440W
PSU 12.5-120	12.5V	120A	1500W
PSU 15-100	15V	100A	1500W
PSU 20-76	20V	76A	1520W
PSU 30-50	30V	50A	1500W
PSU 40-38	40V	38A	1520W
PSU 50-30	50V	30A	1500W
PSU 60-25	60V	25A	1500W
PSU 80-19	80V	19A	1520W
PSU 100-15	100V	15A	1500W
PSU 150-10	150V	10A	1500W
PSU 300-5	300V	5A	1500W
PSU 400-3.8	400V	3.8A	1520W
PSU 600-2.6	600V	2.6A	1560W

SPECIFICATIONS								
MODEL	PSU 6-200	PSU 8-180	PSU 12.5-120	PSU 15-100	PSU 20-76	PSU 30-50	PSU 40-38	PSU 50-30
OUTPUT RATINGS								
Rated Output Voltage (*1)	6V	8V	12.5V	15V	20V	30V	40V	50V
Rated Output Current (*2)	200A	180A	120A	100A	76A	50A	38A	30A
Rated Output Power	1200W	1440W	1500W	1500W	1520W	1500W	1520W	1500W
RIPPLE AND NOISE(*5)								
CVp-p(10 ~ 20MHz) p-p (*6)	60mV	60mV	60mV	60mV	60mV	60mV	60mV	60mV
CVrms(5Hz ~ 1MHz) r.m.s. (*7)	8mV	8mV	8mV	8mV	8mV	8mV	8mV	8mV
CCrms(5Hz ~ 1MHz) r.m.s.(*12)	400mA	360mA	240mA	200mA	152mA	125mA	95mA	85mA
LOAD REGULATION								
Voltage(*4)	2.6mV	2.8mV	3.25mV	3.5mV	4mV	5mV	6mV	7mV
Current(*11)	45mA	41mA	29mA	25mA	20.2mA	15mA	12.6mA	11mA
LINE REGULATION								
Voltage(*3)	2.6mV	2.8mV	3.25mV	3.5mV	4mV	5mV	6mV	7mV
Current(*3)	22mA	20mA	14mA	12mA	9.6mA	7mA	5.8mA	5mA
ANALOG PROGRAMMING AND MONITORING								
External Voltage Control Output Voltage	Accuracy and linearity: ±0.5% of rated output voltage							
External Voltage Control Output Current	Accuracy and linearity: ±1% of rated output current							
External Resistor Control Output Voltage	Accuracy and linearity: ±1% of rated output voltage							
External Resistor Control Output Current	Accuracy and linearity: ±1.5% of rated output current							
Output Voltage Monitor	Accuracy: ±1%							
Output Current Monitor	Accuracy: ±1%							
Shutdown Control	Turns the output off with a LOW (0V to 0.5V) or short-circuit							
Output On/Off Control	Possible logic selections: Turn the output on using a LOW (0V to 0.5V) or short-circuit, turn the output off using a HIGH (4.5V to 5V) or open-circuit; Turn the output on using a HIGH (4.5V to 5V) or open-circuit, turn the output off using a LOW(0V to 0.5V) or short-circuit							
Alarm Clear Control	Clear alarms with a LOW (0V to 0.5V) or short-circuit							
CV/CC/ALM/PWR ON/OUT ON Indicator	Photocoupler open collector output; Maximum voltage 30V, maximum sink current 8mA							
Trigger Out	Maximum low level output = 0.8V; minimum high level output = 2V; Maximum source current = 8mA							
Trigger In	Maximum low level input voltage = 0.8V; minimum high level input votage = 2V, Maximum sink current = 8mA							
FRONT PANEL								
Display, 4 digits, Voltage Accuracy 0.1%+ Current Accuracy 0.2%+	12mV 600mA	16mV 540mA	25mV 360mA	30mV 300mA	40mV 228mA	60mV 150mA	80mV 114mA	100mV 90mA
Indications	GREEN LED's: CV, CC, V, A, VSR, ISR, DLY, RMT, LAN, M1, M2, M3, RUN, Output ON; RED LED's: ALM, ERR							
Buttons	Lock/Local(Unlock), PROT(ALM_CLR), Function(M1), Test(M2), Set(M3), Shift, Output							
Knobs	Voltage, Current							
USB Port	Type A USB connector							
TRANSIENT RESPONSE TIME (*10)								
Transient Response Time	1.5ms	1.5ms	1ms	1ms	1ms	1ms	1ms	1ms
OUTPUT RESPONSE TIME								
Rise Time(*8)	80ms	80ms	80ms	80ms	80ms	80ms	80ms	80ms
Fall Time(*9)	Rated load	80ms	80ms	80ms	80ms	80ms	80ms	80ms
	No load	80ms	80ms	80ms	80ms	80ms	80ms	80ms
	Rated load	10ms	50ms	50ms	50ms	80ms	80ms	80ms
	No load	500ms	600ms	700ms	700ms	800ms	1000ms	1100ms
PROGRAMMING AND MEASUREMENTS (RS-232/485, USB, LAN, GPIB)								
Output Voltage Programming Accuracy 0.05%+	3mV	4mV	6.25mV	7.5mV	10mV	15mV	20mV	25mV
Output Current Programming Accuracy 0.2%+	200mA	180mA	120mA	100mA	76mA	50mA	38mA	30mA
Output Voltage Programming Resolution	0.2mV	0.27mV	0.4mV	0.5mV	0.7mV	1mV	1.3mV	1.7mV
Output Current Programming Resolution	6mA	6mA	4mA	3.3mA	2.5mA	1.7mA	1.2mA	1mA
Output Voltage Measurement Accuracy 0.1%+	6mV	8mV	12.5mV	15mV	20mV	30mV	40mV	50mV
Output Current Measurement Accuracy 0.2%+	400mA	360mA	240mA	200mA	152mA	100mA	76mA	60mA
Output Voltage Measurement Resolution	0.2mV	0.27mV	0.4mV	0.5mV	0.7mV	1mV	1.3mV	1.7mV
Output Current Measurement Resolution	6mA	6mA	4mA	3.3mA	2.5mA	1.7mA	1.2mA	1mA
TEMPERATURE COEFFICIENCE								
Voltage & Current	100ppm/°C after a 30 minute warm-up							
REMOTE SENSE COMPENSATION VOLTAGE(TWO WIRE)								
Voltage	1V	1V	1V	1V	1V	1.5V	2V	2V
PROTECTION FUNCTION								
Over Voltage Protection(OVP) Setting Range	0.6~6.6V	0.8~8.8V	1.25~13.75V	1.5~16.5V	2~22V	3~33V	4~44V	5~55V
Setting Accuracy	60mV	80mV	125mV	150mV	200mV	300mV	400mV	500mV
Over Current Protection(OCP) Setting Range	5~220A	5~198A	5~132A	5~110A	5~83. 6A	5~55A	3. 8~41.8A	3~33A
Setting Accuracy	4000mA	3600mA	2400mA	2000mA	1520mA	1000mA	760mA	600mA
Under Voltage Limit(UVL) Setting Range	0~6.3V	0~8.4V	0~13.12V	0~15.75V	0~21V	0~31.5V	0~42V	0~52.5V
Over Temperature Protection(OHP) Operation	Turn the output off.							
Incorrect Sensing Connection Protection(SENSE) Operation	Turn the output off.							
Low AC Input Protection (AC-FAIL) Operation	Turn the output off.							
Shutdown (SD) Operation	Turn the output off.							
Power Limit (POWER LIMIT) Operation	Over power limit							
Value (Fixed)	Approx. 105% of rated output power							
INTERFACE CAPABILITIES								
USB	TypeA: Host, TypeB: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class)							
LAN	MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask							

Notes: *1. Minimum voltage is guaranteed to maximum 0.2% of the rated output voltage.
 *2. Minimum current is guaranteed to maximum 0.4% of the rated output current.
 *3. At 85~132Vac or 170~265Vac, constant load.
 *4. From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.
 *5. Measure with JEITA RC-9131B (1:1) probe
 *6. Measurement frequency bandwidth is 10Hz to 20MHz.
 *7. Measurement frequency bandwidth is 5Hz to 1MHz.
 *8. From 10% to 90% of rated output voltage, with rated resistive load.
 *9. From 90% to 10% of rated output voltage, with rated resistive load.

*10. Time for output voltage to recover within 0.5% of its rated output for a load change from 10 to 90% of its rated output current. Voltage set point from 10% to 100% of rated output.
 *11. For load voltage change, equal to the unit voltage rating, constant input voltage.
 *12. For 6V~20V model the ripple is measured at 2V ~ rated output voltage and full output current. For other models, the ripple is measured at 10~100% output voltage and full output current.
 *13. At rated output power.
 *14. If install the front panel filter kit, the temperature is guaranteed to 40 °C.

ORDERING INFORMATION

PSU 6-200	1200W Programmable Switching DC Power Supply
PSU 8-180	1440W Programmable Switching DC Power Supply
PSU 12.5-120	1500W Programmable Switching DC Power Supply
PSU 15-100	1500W Programmable Switching DC Power Supply
PSU 20-76	1520W Programmable Switching DC Power Supply
PSU 30-50	1500W Programmable Switching DC Power Supply
PSU 40-38	1520W Programmable Switching DC Power Supply
PSU 50-30	1500W Programmable Switching DC Power Supply
PSU 60-25	1500W Programmable Switching DC Power Supply
PSU 80-19	1520W Programmable Switching DC Power Supply
PSU 100-15	1500W Programmable Switching DC Power Supply
PSU 150-10	1500W Programmable Switching DC Power Supply
PSU 300-5	1500W Programmable Switching DC Power Supply
PSU 400-3.8	1520W Programmable Switching DC Power Supply
PSU 600-2.6	1560W Programmable Switching DC Power Supply

ACCESSORIES

CD-ROM x 1 (User Manual, Programming Manual), Output terminal cover x 1, Analog connector plug kit x 1, Output terminal M8 bolt set (6V~60V model), Input terminal cover x 1, 1U Handle (RoHS), 1U Bracket (LEFT, RoHS), 1U Bracket (RIGHT, RoHS), Power Cord (10A) provided for certain regions only

OPTIONAL ACCESSORIES

PSU-01B	Bus bar for 2 units in parallel connection	GPW-001	UL/CSA power cord 3m, PSU option
PSU-01C	Cable for 2 units in parallel connection	GPW-002	VDE power cord 3m, PSU option
PSU-02B	Bus bar for 3 units in parallel connection	GPW-003	PSE power cord 3m, PSU option
PSU-02C	Cable for 3 units in parallel connection	GTL-246	USB Cable, USB 2.0A-B Type Cable, 4P
PSU-03B	Bus bar for 4 units in parallel connection	GTL-258	GPIO Cable, 2000mm
PSU-03C	Cable for 4 units in parallel connection	GTL-259	RS-232 Cable with DB9 connector to RJ45
PSU-232	RS232 Cable with DB9 connector kit	GTL-260	RS-485 Cable with DB9 connector to RJ45
PSU-485	RS485 Cable with DB9 connector kit	GTL-262	RS-485 Slave cable
PSU-001	Front panel filter kit (factory Installed)		
PSU-01A	Joins a vertical stack of 2 PSU units together. 2U-sized handles x2, joining plates x2		
PSU-02A	Joins a vertical stack of 3 PSU units together. 3U-sized handles x2, joining plates x2		
PSU-03A	Joins a vertical stack of 4 PSU units together. 4U-sized handles x2, joining plates x2		
PSU-ISO-I	Isolate current remote control card (factory option)		
PSU-ISO-V	Isolate voltage remote control card (factory option)		
PSU-GPIB	GPIB Interface card (factory option)		
GRM-001	Slide bracket 2pcs/set, PSU option		

FREE DOWNLOAD

Driver LabView Driver

Specifications subject to change without notice. PSU-SeriesGD1DS

PANEL INTRODUCTION



1. AC Power Switch (AC Power On/Off)
2. USB A Port
3. Voltage Knob
4. Display Area
5. Current Knob
6. AC Input (HV:Wire Clamp Connector)

7. DC Output Terminal
8. USB
9. LAN
10. RS 485/RS 232
11. Analog Control Interface

12. Option Slot for (Selection One of Three)
GPIB Interface Card/Isolate Voltage Remote
Control Card/Isolate Current Remote
Control Card
13. Remote Sense

GW INSTEK
Simply Reliable

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