PROGRAMMABLE SWITCHING D.C. POWER SUPPLY

PSU-Series

CE | USB | GPIB | Analog Control | LAN | LabVIEW Driver | RS-232 | RS-485

GW Instek PSU-HV series has five models, including PSU 100-15, PSU 150-10, PSU 300-5, PSU 400-3.8, and PSU 600-2.6 . The launch of PSU-HV is to complete the existing PSU-series so as to satisfy high voltage application demands, allowing the augmented PSU-series to cover a voltage range from 6V to 600V. PSU-HV inherits the functional design and maintains the high power density characteristic and 1U height appearance of the PSU-LV series (PSU 6-200, PSU 12.5-120, PSU 20-76, PSU 40-38 and PSU 60-25). Furthermore, the original maximum output voltage of 60V is expanded to the maximum voltage of 600V and the maximum power of 1560 watts. The launch of the PSU-HV series augments the existing PSU-series to fully satisfy the extensive voltage demands of 1U power supply market and provides system integrators with more flexibilities and selections to conduct system integration. The introduction of the PSU-HV series has perfected the PSU product line, which satisfies the application requirements ranging from low voltage and large current to high voltage.

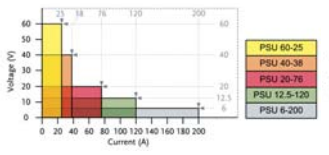
Utilizing same model units of the PSU-series to conduct series and parallel connections can increase total output power, total current or total voltage. The wide voltage and current output ranges of the PSU-series can fully satisfy various voltageand current measurement requirements. The PSU-series is 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.

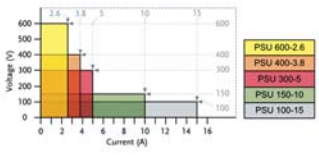
The PSU-series allows settings for CC priority or CV priority. Under CC or CV mode, users can adjust slew rate for output voltage or current based upon test requirements. There are two kinds of slew rate settings: high speed priority and slew rate priority. High speed priority sets slew rate at the maximum 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 new 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.

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.





Model name	Voltage Rating	Current Rating	Power
PSU 6-200	6V	200A	1200W
PSU 12.5-120	12.5V	120A	1500W
PSU 20-76	20V	76A	1520W
PSU 40-38	40V	38A	1520W
PSU 60-25	60V	25A	1500W
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

FEATURES

- Voltage Output : 6V/12.5V/20V/40V/60V/ 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

GW INSTEK
Simply Reliable

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

SPECIFICATIONS

MODEL	PSU 6-200	PSU 12.5-120	PSU 20-76	PSU 40-38	PSU 60-25	PSU 100-15	PSU 150-10	PSU 300-5	PSU 400-3.8	PSU 600-2.6
OUTPUT RATINGS										
Rated Output Voltage (*1)	6V	12.5V	20V	40V	60V	100V	150V	300V	400V	600V
Rated Output Current (*2)	200A	120A	76A	38A	25A	15A	10A	5A	3.8A	2.6A
Rated Output Power	1200W	1500W	1520W	1520W	1500W	1500W	1500W	1500W	1520W	1560W
RIPPLE AND NOISE(*5)										
CVp-p(10 ~ 20MHz) p-p (*6)	60mV	60mV	60mV	60mV	60mV	80mV	100mV	150mV	200mV	300mV
CVrms(5Hz ~ 1MHz) r.m.s. (*7)	8mV	8mV	8mV	8mV	8mV	8mV	10mV	25mV	40mV	60mV
CCrms(5Hz ~ 1MHz) r.m.s.(*12)	400mA	240mA	152mA	95mA	75mA	45mA	35mA	25mA	17mA	12mA
LOAD REGULATION										
Voltage(*4)	2.6mV	3.25mV	4mV	6mV	8mV	12mV	17mV	32mV	42mV	62mV
Current(*11)	45mA	29mA	20.2mA	12.6mA	10mA	8mA	7mA	6mA	5.76mA	5.52mA
LINE REGULATION										
Voltage(*3)	2.6mV	3.25mV	4mV	6mV	8mV	12mV	17mV	32mV	42mV	62mV
Current(*3)	22mA	14mA	9.6mA	5.8mA	4.5mA	3.5mA	3mA	2.5mA	2.38mA	2.26mA
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%+	12mV	25mV	40mV	80mV	120mV	200mV	300mV	600mV	800mV	1200mV
Current Accuracy 0.2%+	600mA	360mA	228mA	114mA	75mA	45mA	30mA	15mA	11.4mA	7.8mA
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									

SPECIFICATIONS

MODEL		PSU 6-200	PSU 12.5-120	PSU 20-76	PSU 40-38	PSU 60-25	PSU 100-15	PSU 150-10	PSU 300-5	PSU 400-3.8	PSU 600-2.6
TRANSIENT RESPONSE TIME (*10)											
Transient Response Time		1.5ms	1ms	1ms	1ms	1ms	1ms	2ms	2ms	2ms	2ms
OUTPUT RESPONSE TIME											
Rise Time(*8)	Rated load	80ms	80ms	80ms	80ms	80ms	150ms	150ms	150ms	200ms	250ms
	No load	80ms	80ms	80ms	80ms	80ms	150ms	150ms	150ms	200ms	250ms
Fall Time(*9)	Rated load	10ms	50ms	50ms	80ms	80ms	150ms	150ms	150ms	200ms	250ms
	No load	500ms	700ms	800ms	1000ms	1100ms	1500ms	2000ms	2500ms	3000ms	4000ms
PROGRAMMING AND MEASUREMENTS (RS-232/485, USB, LAN, GPIB)											
Output Voltage Programming Accuracy 0.05%+		3mV	6.25mV	10mV	20mV	30mV	50mV	75mV	150mV	200mV	300mV
Output Current Programming Accuracy 0.2%+		200mA	120mA	76mA	38mA	25mA	15mA	10mA	5mA	3.8mA	2.6mA
Output Voltage Programming Resolution		0.2mV	0.4mV	0.7mV	1.3mV	2mV	3.4mV	5.2mV	10.2mV	13.6mV	20.4mV
Output Current Programming Resolution		6mA	4mA	2.5mA	1.2mA	0.8mA	0.5mA	0.34mA	0.19mA	0.13mA	0.09mA
Output Voltage Measurement Accuracy 0.1%+		6mV	12.5mV	20mV	40mV	60mV	100mV	150mV	300mV	400mV	600mV
Output Current Measurement Accuracy 0.2%+		400mA	240mA	152mA	76mA	50mA	30mA	20mA	10mA	7.6mA	5.2mA
Output Voltage Measurement Resolution		0.2mV	0.4mV	0.7mV	1.3mV	2mV	3.4mV	5.2mV	10.2mV	13.6mV	20.4mV
Output Current Measurement Resolution		6mA	4mA	2.5mA	1.2mA	0.8mA	0.5mA	0.34mA	0.19mA	0.13mA	0.09mA
TEMPERATURE COEFFICIENCE											
Voltage & Current		100ppm/℃ after a 30 minute warm-up									
REMOTE SENSE COMPENSATION VOLTAGE(SINGLE WIRE)											
Voltage		1V	1V	1V	2V	3V	5V	5V	5V	5V	5V
PROTECTION FUNCTION											
Over Voltage Protection(OVP)	Setting Range	0.6~6.6V	1.25~13.75V	2~22V	4~44V	5~66V	5~110V	5~165V	5~330V	5~440V	5~660V
	Setting Accuracy	60mV	125mV	200mV	400mV	600mV	1000mV	1500mV	3000mV	4000mV	6000mV
Over Current Protection(OCP)	Setting Range	5~220A	5~132A	5~83.6A	3.8~41.8A	2.5~27.5A	1.5~16.5A	1~11A	0.5~5.5A	0.38~4.18A	0.26~2.86A
	Setting Accuracy	4000mA	2400mA	1520mA	760mA	500mA	300mA	200mA	100mA	76mA	52mA
Under Voltage Limit(UVL)	Setting Range	0~6.3V	0~13.12V	0~21V	0~42V	0~63V	0~105V	0~157.5V	0~315V	0~420V	0~630V
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									
RS-232 / RS-485		Complies with the EIA232D / EIA485 Specifications									
GPIB (Factory Option)		SCPI - 1993, IEEE 488.2 compliant interface									
ISOLATED ANALOG CONTROL INTERFACE (FACTORY OPTION)											
Voltage Control		Using 0-5V or 0-10V signals for programming and measurement									
Current Control		Using 4-20mA current signals for programming and measurement									
ENVIRONMENTAL CONDITIONS											
Operating Temperature		0℃ ~ 50℃									
Storage Temperature		-25℃ ~ 70℃									
Operating Humidity		20% ~ 85% RH; No condensation									
Storage Humidity		90% RH or less; No condensation									
Altitude		Maximum 2000m									
INPUT CHARACTERISTICS											
Nominal Input Rating		100Vac to 240Vac, 50Hz to 60Hz, single phase									
Input Voltage Range		85Vac ~ 265Vac									
Input Frequency Range		47Hz ~ 63Hz									
Maximum Input Current	100Vac/200Vac(A)	21/11									
Inrush Current		Less than 50A									
Maximum Input Power		2000VA									
Power Factor	100Vac/200Vac	0.99/0.98									
Hold-up Time		20ms or greater									
Efficiency (*13)	100Vac/200Vac(%)	76.5/78.5	82.0/85.0	83.0/86.0	84.0/87.0	84.0/87.0	84.0/87.0	84.0/87.0	84.0/87.0	84.0/87.0	84.0/87.0
DIMENSIONS & WEIGHT											
		423(W) × 43.6(H) × 447.2(D)mm, Approx. 8.7kg									

Note : *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~20MHz.
*7. Measurement frequency bandwidth is 5Hz~1MHz.
*8. From 10%~90% of rated output voltage, with rated resistive load.
*9. From 90%~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 10~90% of its rated output current. Voltage set point from 10%~100% of rated output.
*11. For load voltage change, equal to the unit voltage rating, constant input voltage.
*12. For 6V model the ripple is measured at 2~6V 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.

Specifications subject to change without notice. SU-SeriesGD1DS

ORDERING INFORMATION

PSU 6-200	**1200W Programmable Switching DC Power Supply**
PSU 12.5-120	**1500W Programmable Switching DC Power Supply**
PSU 20-76	**1520W Programmable Switching DC Power Supply**
PSU 40-38	**1520W Programmable Switching DC Power Supply**
PSU 60-25	**1500W 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
PSU-01C	Cable for 2 units in parallel connection
PSU-02B	Bus bar for 3 units in parallel connection
PSU-02C	Cable for 3 units in parallel connection
PSU-03B	Bus bar for 4 units in parallel connection
PSU-03C	Cable for 4 units in parallel connection
PSU-232	RS232 Cable with DB9 connector kit
PSU-485	RS485 Cable with DB9 connector kit
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)
GTL-246	USB Cable, USB 2.0A-B Type Cable, 4P
GRM-001	Slide bracket 2pcs/set ,PSU option
PSU-GPIB	GPIB Interface card (factory option)
GPW-001	UL/CSA power cord 3m ,PSU option
GPW-002	VDE power cord 3m ,PSU option
GPW-003	PSE power cord 3m ,PSU option

FREE DOWNLOAD

Driver LabView Driver

Global Headquarters
GOOD WILL INSTRUMENT CO., LTD.
No.7-1, Jhongsing Road, Tucheng Dist., New Taipei City 236, Taiwan
T +886-2-2268-0389 **F** +886-2-2268-0639
E-mail: marketing@goodwill.com.tw

www.gwinstek.com www.facebook.com/GWInstek

GW INSTEK
Simply Reliable