

## PSU-Series



### 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



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.

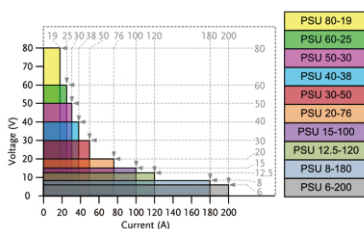
The PSU-Series allows settings for CC priority or CV priority. Under CC or CV mode, users can adjust slew rate for output voltage or current based upon test requirements. There are two kinds of slew rate settings: high speed priority and slew rate priority. High speed priority sets slew rate at the maximum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

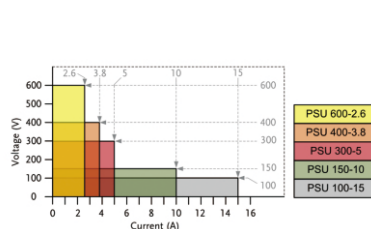
The PSU-Series provides users with flexible settings of High/Low Level or Trigger input/Trigger output signals with pulse width of 1 ~ 60ms. Trigger input controls PSU to output or upload preset voltage, current and memory parameters. While outputting or uploading preset voltage, current and memory parameters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

| 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 |

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



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



| 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     |
| <b>OUTPUT RATINGS</b>   |   |               |               |               |               |               |               |               |
| 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         |
| <b>RIPPLE AND NOISE (*5)</b>  |   |               |               |               |               |               |               |               |
| 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          |
| <b>LOAD REGULATION</b>  |   |               |               |               |               |               |               |               |
| 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          |
| <b>LINE REGULATION</b>  |   |               |               |               |               |               |               |               |
| 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           |
| <b>ANALOG PROGRAMMING AND MONITORING</b>                            |   |               |               |               |               |               |               |               |
| 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:<br>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;<br>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 voltage = 2V, Maximum sink current = 8mA   |               |               |               |               |               |               |               |
| <b>FRONT PANEL</b>  |   |               |               |               |               |               |               |               |
| Display, 4 digits, Voltage Accuracy 0.1%+<br>Current Accuracy 0.2%+ | 12mV<br>600mA   | 16mV<br>540mA | 25mV<br>360mA | 30mV<br>300mA | 40mV<br>228mA | 60mV<br>150mA | 80mV<br>114mA | 100mV<br>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  |               |               |               |               |               |               |               |
| <b>TRANSIENT RESPONSE TIME (*10)</b>                                |   |               |               |               |               |               |               |               |
| Transient Response Time   | 1.5ms   | 1.5ms         | 1ms           | 1ms           | 1ms           | 1ms           | 1ms           | 1ms           |
| <b>OUTPUT RESPONSE TIME</b>   |   |               |               |               |               |               |               |               |
| Rise Time(*8)   | 80ms  | 80ms          | 80ms          | 80ms          | 80ms          | 80ms          | 80ms          | 80ms          |
| Fall Time(*9)   | 10ms  | 50ms          | 50ms          | 50ms          | 50ms          | 80ms          | 80ms          | 80ms          |
|   | Rated load  | 80ms          | 80ms          | 80ms          | 80ms          | 80ms          | 80ms          | 80ms          |
|   | No load   | 500ms         | 600ms         | 700ms         | 700ms         | 800ms         | 900ms         | 1100ms        |
| <b>PROGRAMMING AND MEASUREMENTS (RS-232/485, USB, LAN, GPIB)</b>    |   |               |               |               |               |               |               |               |
| 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           |
| <b>TEMPERATURE COEFFICIENT</b>                                      |   |               |               |               |               |               |               |               |
| Voltage & Current   | 100ppm/°C after a 30 minute warm-up   |               |               |               |               |               |               |               |
| <b>REMOTE SENSE COMPENSATION VOLTAGE(TWO WIRE)</b>                  |   |               |               |               |               |               |               |               |
| Voltage   | 1V  | 1V            | 1V            | 1V            | 1V            | 1.5V          | 2V            | 2V            |
| <b>PROTECTION FUNCTION</b>  |   |               |               |               |               |               |               |               |
| 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         |
| Over Voltage Protection(OVP) 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         |
| Over Current Protection(OCP) 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  |               |               |               |               |               |               |               |
| Power Limit (POWER LIMIT) Value (Fixed)                             | Approx. 105% of rated output power  |               |               |               |               |               |               |               |
| <b>INTERFACE CAPABILITIES</b>                                       |   |               |               |               |               |               |               |               |
| 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   |               |               |               |               |               |               |               |
| <b>ISOLATED ANALOG CONTROL INTERFACE (FACTORY OPTION)</b>           |   |               |               |               |               |               |               |               |
| Voltage Control   | Using 0-5V or 0-10V signals for programming and measurement   |               |               |               |               |               |               |               |
| Current Control   | Using 4-20mA current signals for programming and measurement  |               |               |               |               |               |               |               |
| <b>ENVIRONMENTAL CONDITIONS</b>                                     |   |               |               |               |               |               |               |               |
| Operating Temperature   | 0°C ~ 50°C (*14)  |               |               |               |               |               |               |               |
| Storage Temperature   | -25°C ~ 70°C  |               |               |               |               |               |               |               |
| Operating Humidity  | 20% ~ 85% RH; No condensation   |               |               |               |               |               |               |               |
| Storage Humidity  | 90% RH or less; No condensation   |               |               |               |               |               |               |               |
| Altitude  | Maximum 2000m   |               |               |               |               |               |               |               |
| <b>INPUT CHARACTERISTICS</b>  |   |               |               |               |               |               |               |               |
| 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)  | 76.5/79   | 78/81         | 82/85         | 82/85         | 83/86         | 83/86         | 84/87         | 84/87         |
| <b>DIMENSIONS &amp; WEIGHT</b>                                      |   |               |               |               |               |               |               |               |
|   | 423(W) × 43.6(H) × 447.2(D)mm, Approx. 8.7kg  |               |               |               |               |               |               |               |

| SPECIFICATIONS  |   |               |               |               |               |                 |                 |  |
|---|---|---------------|---------------|---------------|---------------|-----------------|-----------------|--|
| MODEL   | PSU 60-25   | PSU 80-19     | PSU 100-15    | PSU 150-10    | PSU 300-5     | PSU 400-3.8     | PSU 600-2.6     |  |
| <b>OUTPUT RATINGS</b>   |   |               |               |               |               |                 |                 |  |
| Rated Output Voltage (*1)   | 60V   | 80V           | 100V          | 150V          | 300V          | 400V            | 600V            |  |
| Rated Output Current (*2)   | 25A   | 19A           | 15A           | 10A           | 5A            | 3.8A            | 2.6A            |  |
| Rated Output Power  | 1500W   | 1520W         | 1500W         | 1500W         | 1500W         | 1520W           | 1560W           |  |
| <b>RIPPLE AND NOISE(*5)</b>   |   |               |               |               |               |                 |                 |  |
| CVp-p(10 ~ 20MHz) p-p (*6)  | 60mV  | 80mV          | 80mV          | 100mV         | 150mV         | 200mV           | 300mV           |  |
| CVrms(5Hz ~ 1MHz) r.m.s. (*7)                                       | 8mV   | 8mV           | 8mV           | 10mV          | 25mV          | 40mV            | 60mV            |  |
| CCrms(5Hz ~ 1MHz) r.m.s. (*12)                                      | 75mA  | 57mA          | 45mA          | 35mA          | 25mA          | 17mA            | 12mA            |  |
| <b>LOAD REGULATION</b>  |   |               |               |               |               |                 |                 |  |
| Voltage(*4)   | 8mV   | 10mV          | 12mV          | 17mV          | 32mV          | 42mV            | 62mV            |  |
| Current(*11)  | 10mA  | 8.8mA         | 8mA           | 7mA           | 6mA           | 5.76mA          | 5.52mA          |  |
| <b>LINE REGULATION</b>  |   |               |               |               |               |                 |                 |  |
| Voltage(*3)   | 8mV   | 10mV          | 12mV          | 17mV          | 32mV          | 42mV            | 62mV            |  |
| Current(*3)   | 4.5mA   | 3.9mA         | 3.5mA         | 3mA           | 2.5mA         | 2.38mA          | 2.26mA          |  |
| <b>ANALOG PROGRAMMING AND MONITORING</b>                            |   |               |               |               |               |                 |                 |  |
| 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:<br>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;<br>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 voltage = 2V, Maximum sink current = 8mA   |               |               |               |               |                 |                 |  |
| <b>FRONT PANEL</b>  |   |               |               |               |               |                 |                 |  |
| Display, 4 digits, Voltage Accuracy 0.1%+<br>Current Accuracy 0.2%+ | 120mV<br>75mA   | 160mV<br>57mA | 200mV<br>45mA | 300mV<br>30mA | 600mV<br>15mA | 800mV<br>11.4mA | 1200mV<br>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  |               |               |               |               |                 |                 |  |
| <b>TRANSIENT RESPONSE TIME (*10)</b>                                |   |               |               |               |               |                 |                 |  |
| Transient Response Time   | 1ms   | 1ms           | 1ms           | 2ms           | 2ms           | 2ms             | 2ms             |  |
| <b>OUTPUT RESPONSE TIME</b>   |   |               |               |               |               |                 |                 |  |
| Rise Time(*8)   | 80ms  | 150ms         | 150ms         | 150ms         | 150ms         | 200ms           | 250ms           |  |
| Fall Time(*9)   | 80ms  | 150ms         | 150ms         | 150ms         | 150ms         | 200ms           | 250ms           |  |
|   | 1100ms  | 1200ms        | 1500ms        | 2000ms        | 2500ms        | 3000ms          | 4000ms          |  |
| <b>PROGRAMMING AND MEASUREMENTS (RS-232/485, USB, LAN, GPIB)</b>    |   |               |               |               |               |                 |                 |  |
| Output Voltage Programming Accuracy 0.05%+                          | 30mV  | 40mV          | 50mV          | 75mV          | 150mV         | 200mV           | 300mV           |  |
| Output Current Programming Accuracy 0.2%+                           | 25mA  | 19mA          | 15mA          | 10mA          | 5mA           | 3.8mA           | 2.6mA           |  |
| Output Voltage Programming Resolution                               | 2mV   | 2.7mV         | 3.4mV         | 5.2mV         | 10.2mV        | 13.6mV          | 20.4mV          |  |
| Output Current Programming Resolution                               | 0.8mA   | 0.65mA        | 0.5mA         | 0.34mA        | 0.19mA        | 0.13mA          | 0.09mA          |  |
| Output Voltage Measurement Accuracy 0.1%+                           | 60mV  | 80mV          | 100mV         | 150mV         | 300mV         | 400mV           | 600mV           |  |
| Output Current Measurement Accuracy 0.2%+                           | 50mA  | 38mA          | 30mA          | 20mA          | 10mA          | 7.6mA           | 5.2mA           |  |
| Output Voltage Measurement Resolution                               | 2mV   | 2.7mV         | 3.4mV         | 5.2mV         | 10.2mV        | 13.6mV          | 20.4mV          |  |
| Output Current Measurement Resolution                               | 0.8mA   | 0.65mA        | 0.5mA         | 0.34mA        | 0.19mA        | 0.13mA          | 0.09mA          |  |
| <b>TEMPERATURE COEFFICIENT</b>                                      |   |               |               |               |               |                 |                 |  |
| Voltage & Current   | 100ppm/°C after a 30 minute warm-up   |               |               |               |               |                 |                 |  |
| <b>REMOTE SENSE COMPENSATION VOLTAGE(TWO WIRE)</b>                  |   |               |               |               |               |                 |                 |  |
| Voltage   | 3V  | 4V            | 5V            | 5V            | 5V            | 5V              | 5V              |  |
| <b>PROTECTION FUNCTION</b>  |   |               |               |               |               |                 |                 |  |
| Over Voltage Protection(OVP) Setting Range                          | 5~66V   | 5~88V         | 5~110V        | 5~165V        | 5~330V        | 5~440V          | 5~660V          |  |
| Over Voltage Protection(OVP) Setting Accuracy                       | 600mV   | 800mV         | 1000mV        | 1500mV        | 3000mV        | 4000mV          | 6000mV          |  |
| Over Current Protection(OCP) Setting Range                          | 2.5~27.5A   | 1.9~20.9A     | 1.5~16.5A     | 1~11A         | 0.5~5.5A      | 0.38~4.18A      | 0.26~2.86A      |  |
| Over Current Protection(OCP) Setting Accuracy                       | 500mA   | 380mA         | 300mA         | 200mA         | 100mA         | 76mA            | 52mA            |  |
| Under Voltage Limit(UVL) Setting Range                              | 0~63V   | 0~84V         | 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  |               |               |               |               |                 |                 |  |
| Power Limit (POWER LIMIT) Value (Fixed)                             | Approx. 105% of rated output power  |               |               |               |               |                 |                 |  |
| <b>INTERFACE CAPABILITIES</b>                                       |   |               |               |               |               |                 |                 |  |
| 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   |               |               |               |               |                 |                 |  |
| <b>ISOLATED ANALOG CONTROL INTERFACE (FACTORY OPTION)</b>           |   |               |               |               |               |                 |                 |  |
| Voltage Control   | Using 0-5V or 0-10V signals for programming and measurement   |               |               |               |               |                 |                 |  |
| Current Control   | Using 4-20mA current signals for programming and measurement  |               |               |               |               |                 |                 |  |
| <b>ENVIRONMENTAL CONDITIONS</b>                                     |   |               |               |               |               |                 |                 |  |
| Operating Temperature   | 0°C ~ 50°C (*14)  |               |               |               |               |                 |                 |  |
| Storage Temperature   | -25°C ~ 70°C  |               |               |               |               |                 |                 |  |
| Operating Humidity  | 20% ~ 85% RH; No condensation   |               |               |               |               |                 |                 |  |
| Storage Humidity  | 90% RH or less; No condensation   |               |               |               |               |                 |                 |  |
| Altitude  | Maximum 2000m   |               |               |               |               |                 |                 |  |
| <b>INPUT CHARACTERISTICS</b>  |   |               |               |               |               |                 |                 |  |
| 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(%)                                   | 84/87   | 84/87         | 84/87         | 84/87         | 84/87         | 84/87           | 84/87           |  |
| <b>DIMENSIONS &amp; WEIGHT</b>                                      |   |               |               |               |               |                 |                 |  |
|   | 423(W) × 43.6(H) × 447.2(D)mm, Approx. 8.7kg  |               |               |               |               |                 |                 |  |

- 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 | GPIB 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

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