

PSW-Series

Multi-Range D.C. Power Supply



FEATURES

- Voltage Rating : 30V/80V/160V/250V/800V, Output Power Rating : 360W~1080W
- Constant Power Output for Multi-Range (V & I) Operation
- C.V / C.C Priority ; Particularly Suitable for the Battery and LED Industry
- Adjustable Slew Rate
- Series Operation (2 units in Series) for (30V/80V/160V), Parallel Operation (3 units in Parallel) for (30V/80V/160V/250V/800V)
- High Efficiency and High Power Density
- 1/2, 1/3, 1/6 Rack Mount Size Design (EIA/JIS Standard) for 360W, 720W, 1080W
- Standard Interface : LAN, USB, Analog Control Interface
- Optional Interface : GPIB-USB Adaptor, RS232-USB Cable
- LabVIEW Driver



Powerful Stretch with Multi-range Technology

The PSW-Series is a single-output multi-range programmable switching DC Power Supply covering a power range up to 1080W. This series of products include fifteen models with the combination of 30V, 80V, 160V, 250V and 800V rated voltages and 360W, 720W and 1080W maximum output powers. The multi-range feature allows the flexible and efficient configuration of voltage and current within the rated power range. As the PSW-Series can be connected in series for maximum 2 units or in parallel for maximum 3 units, the capability of connecting multiple PSW-Series units for higher voltage or higher current output provides a broad coverage of applications. With the flexibility of multi-range power utilization and series/parallel connection, the PSW-Series significantly reduces the users' cost for various power supply products to accommodate the projects with different power requirements.

The C.V/C.C priority selection of the PSW-Series is a very useful feature for DUT protection. The conventional power supply normally operates under C.V mode when the power output is turned on. This could bring a high inrush current to the capacitive load or current-intensive load at the power output-on stage. Taking the I-V curve verification of LED as an example, it becomes a very challenging task to perform this measurement using a conventional power supply. With LED connected to a power supply under C.V mode as the initial setting, when the power output is turned on and the voltage rises to the LED forward voltage, the current will suddenly peak up and exceed the preset value of current limit. Upon detecting this high current, the power supply starts the transition from C.V mode to C.C mode. Though the current becomes stable after the C.C mode being activated, the current spike occurred at the C.V and C.C crossover point may possibly damage the DUT. At the power output-on stage, the PSW-Series is able to operate under C.C priority to limit the current spike occurred at the threshold voltage and therefore protects DUT from the inrush current damage.

The adjustable slew rate of the PSW-Series allows users to set for either output voltage or output current, a specific rise time from low to high level transition, and a specific fall time from high to low level transition. This facilitates the characteristic verification of a DUT during voltage or current level changes with controllable slew rates. Most manufacturing tests of lighting device or large capacitor during power output-on are associated with the occurrence of high surge current, which can greatly reduce the life time of the DUT. To prevent inrush current from damaging current-intensive devices, a smooth and slow voltage transition during power On-Off can significantly reduce the spike current and protect the device from high current damage.

The OVP and OCP are provided with the PSW-Series. Both OVP and OCP levels can be selected, with default level set at 110%, of the rated voltage/current of the power supply. When any of the protection levels is tripped, the power output will be switched off to protect the DUT. The PSW-Series provides USB Host/Device and LAN interfaces as standard, GPIB-USB adapter and RS232-USB cable as optional. The LabView driver and the Data Logging PC software are supported on all the available interfaces. An analog control/monitoring connector is also available on the rear panel for external control of power On/Off and external monitoring of power output Voltage and Current.

PANEL INTRODUCTION



PSW-Series (HV) Rear Panel



PARALLEL OPERATION (3 UNITS)

MODEL	SINGLE UNIT	2 UNITS	3 UNITS	
PSW 30-36	30V/36A	30V/72A	30V/108A	
PSW 30-72	30V/72A	30V/144A	30V/216A	
PSW 30-108	30V/108A	30V/216A	30V/324A	
PSW 80-13.5	80V/13.5A	80V/27A	80V/40.5A	
PSW 80-27	80V/27A	80V/54A	80V/81A	
PSW 80-40.5	80V/40.5A	80V/81A	80V/121.5A	
PSW 160-7.2	160V/7.2A	160V/14.4A	160V/21.6A	
PSW 160-14.4	160V/14.4A	160V/28.8A	160V/43.2A	
PSW 160-21.6	160V/21.6A	160V/43.2A	160V/64.8A	
PSW 250-4.5	250V/4.5A	250V/9A	250V/13.5A	
PSW 250-9	250V/9A	250V/18A	250V/27A	
PSW 250-13.5	250V/13.5A	250V/27A	250V/40.5A	
PSW 800-1.44	800V/1.44A	800V/2.88A	800V/4.32A	
PSW 800-2.88	800V/2.88A	800V/5.76A	800V/8.64A	
PSW 800-4.32	800V/4.32A	800V/8.64A	800V/12.96A	

PSW-Series (LV) Rear Panel



SERIES OPERATION (2 UNITS)

MODEL	SINGLE UNIT	2 UNITS
PSW 30-36	30V/36A	60V/36A
PSW 30-72	30V/72A	60V/72A
PSW 30-108	30V/108A	60V/108A
PSW 80-13.5	80V/13.5A	160V/13.5A
PSW 80-27	80V/27A	160V/27A
PSW 80-40.5	80V/40.5A	160V/40.5A
PSW 160-7.2	160V/7.2A	320V/7.2A
PSW 160-14.4	160V/14.4A	320V/14.4A
PSW 160-21.6	160V/21.6A	320V/21.6A
PSW 250-4.5	N/A	N/A
PSW 250-9	N/A	N/A
PSW 250-13.5	N/A	N/A
PSW 800-1.44	N/A	N/A
PSW 800-2.88	N/A	N/A
PSW 800-4.32	N/A	N/A



PSW 80-40.5 (0~80V, 0~40.5A, 1080W)

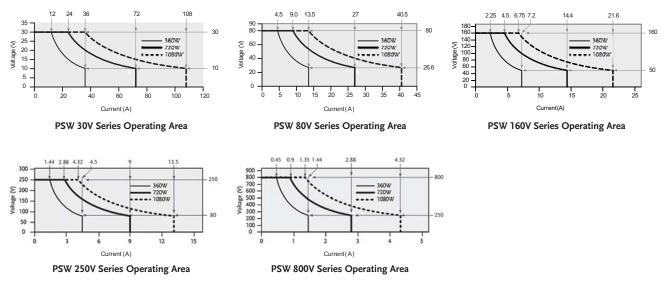


PSW 80-27 (0~80V, 0~27A, 720W)



PSW 80-13.5 (0~80V, 0~13.5A, 360W)

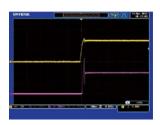
A. MULTI-RANGE OPERATION



When the power supply is configured that the total output (Current x Voltage output) is less than the rated power output, it functions as a typical Constant Current (C.C) and Constant Voltage (C.V) power supply.

However, when the power supply is configured such that the total output power (Current x Voltage Output) exceeds the rated power output, the effective output is actually limited to the operation area of the unit.

B. C.V / C.C PRIORITY SELECTION





The Inrush Current and Surge Voltage occur at LED Forward Voltage(Vf)Under C.V Priority

The CC Priority Feature Effectively Limits the Occurrence of Inrush Current and Surge Voltage when the Supplied Voltage Rises to the LED Forward Voltage

The PSW-Series provides C.C Mode and C.V Mode to fit various applications in the general purpose market. To get into critical application niches, however, the power supply needs to provide

. ADJUSTABLE SLEW RATE

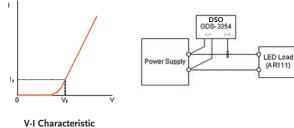


The Adjustable Rise Time of the PSW 30V



The Adjustable Rise Time of the PSW 800V

The PSW-Series has adjustable slew rates for the level transition of both Current and Voltage. This gives the PSW-Series power supply the ability to set specific rise time and fall time of the Voltage and Current drawn from the power supply to verify DUT performance during the Voltage / Current level transition. The feature also provides the benefit to slow down the voltage transition at the power output-on to protect DUT from inrush current damage. This is especially useful for the test of heavycurrent-drawn devices like capacitors.

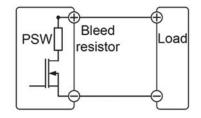


v-I Characteristic of Diode

Operation Under C.V Priority and C.C Priority Respectively

advanced features to meet the specific requirements. The C.C and C.V Priority Selection enable the power supply to run under C.C priority, rather than normal CV priority, at the output-on stage.

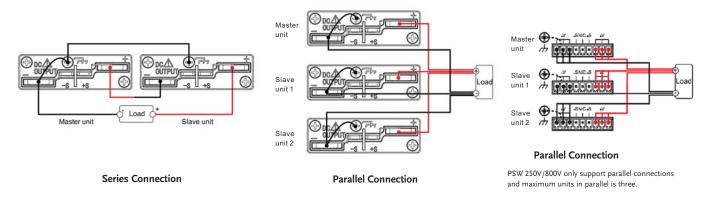
D. BLEEDER CONTROL



PSW-Series Built-in Bleed Resistor

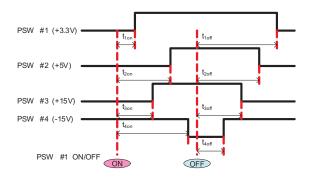
The PSW-Series employs a bleed resistor in parallel with the output terminal. Bleed resistor is designed to dissipatch the power from the power supply filter capacitors when power is turned off and the load is disconnected. Without a bleed resistor, power terminal may remain charged on the filter capacitors for some time and be potentially hazardous. In addition, bleed resistor also allows for smoother voltage regulation of the power supply as the bleed resistor acts as a minimum voltage load. The bleed resistance can be turned on or off using the configuration setting.

E. SERIES AND PARALLEL CONNECTIONS



To increase power output capacity, the PSW-Series could be connected in Series mode to perform double voltage rating or in parallel mode to perform triple current rating for each model. With Multi-Range feature

OUTPUT ON /OFF DELAY



The Example of Output On/Off Delay Control Among Multiple Outputs of the PSW Units

The output On/Off delay feature enables the setting of a specific time delay for output on after the power supply output is turned on, and a specific time delay for output off after the power supply output is turned off. When multiple PSW units are used, the On/Off delay time

of each unit can be set respectively referring to fix time points. This multiple-output control can be done through the Analog Control terminal at the rear panel or through the PC programming with standard commands.

and Series/Parallel connection capability, the PSW-Series is a high power

density and cost-effective equipment for the tests of DC power modules,

batteries and components in a broad power range.

VARIOUS INTERFACES SUPPORT & EXTENDED TERMINAL BOX



LAN Port for System Communication

Rear Panel for PSW-Series

The PSW-Series provides USB Host port in the front panel for easy access of stored data, such as test script program. In the rear panel, a USB Device port is available for remote control or I & V data logging of power output through a PC controller. The LAN interface, which meets DHCP standard, is provided as a standard feature of the PSW-Series for system communications and ATE applications.



GUG-001 GPIB to USB Adapter



Extended Terminal

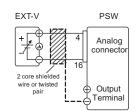
(for PSW 30V/80V/160V)



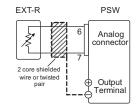
GET-002 Extended Terminal (for PSW 250V/800V)

An Extender Terminal box (P/N: GET-001/GET-002) is provided as optional accessory to extend the power output form the rear panel to the front side. This extender terminal gives R&D or QC engineers convenience to do the jobs without frequently reaching the output terminal at the rear side of the PSW-Series.

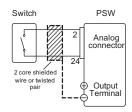
GET-001



External Voltage Control of the Voltage Output

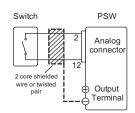


External Resistance control of the Voltage Output

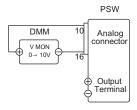


External Switch Control of the Output On/Off

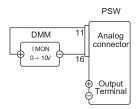
On the rear panel of the PSW-Series power supply, a 26-pin Analog Control connector is available to perform lots of remote control and monitoring functions. The output voltage and current can be set using external voltage or resistance.



External Switch Control of the Main Power Shut-down



External DMM Monitoring of the Output Voltage



External DMM Monitoring of the Output Current

The power supply output on/off and main power shut-down can also be controlled using external switches. This Analog Control Connector is complied with the Mil 26 pin connector (OMRON XG4 IDC plug) standard.

I. USING THE RACK MOUNT KIT



Rack Mount Kit GRA-410-J (JIS)

The Rack Mount Kit of the PSW-Series supports both EIA and JIS standards. A standard rack can accommodate 6 units of type I (360W Output Power) models, or 3 units of type II (720W Output Power) models, or 2 units of type III (1080W Output Power) models.



Rack Mount Kit GRA-410-E (EIA)

The Rack Mount Kits for EIA standard (P/N: GRA-410-E) and for JIS standard (P/N: GRA-410-J) are provided as optional accessaries for the PSW-Series.

OUTPUT RATING Voltage									
	PSW 30-36	PSW 30-72	PSW 30-108	PSW 80-13.5	PSW 80-27	PSW 80-40.5	PSW 160-7.2	PSW 160-14.4	PSW 160-21.6
voltage	0 ~ 30V	0 ~ 30V	0 ~ 30V	0 ~ 80V	0 ~ 80V	0 ~ 80V	0~160V	0~160V	0~160V
Current	0~36A	0 ~ 72A	0~ 108A	0~13.5A	0~27A	0~40.5A	0 ~ 7.2A	0~14.4A	0~21.6A
Power	360W	720W	1080W	360W	720W	1080W	360W	720W	1080W
REGULATION(CV)									
Load Line	20mV 18mV	20mV 18mV	20mV 18mV	45mV 43mV	45mV 43mV	45mV 43mV	85mV 83mV	85mV 83mV	85mV 83mV
REGULATION(CC)	10111	10111	10111	451117	-51114	-5111	051114	05111	051114
Load	41mA	77mA	113mA	18.5mA	32mA	45.5mA	12.2mA	19.4mA	26.6mA
Line	41mA	77mA	113mA	18.5mA	32mA	45.5mA	12.2mA	19.4mA	26.6mA
RIPPLE & NOISE (No CV p-p				60mV	80mV	100mV	60mV	80mV	100mV
CV p-p CV rms	60mV 7mV	80mV 11mV	100mV 14mV	7mV	11mV	14mV	12mV	15mV	20mV
CC rms	72mA	144mA	216mA	27mA	54mA	81mA	15mA	30mA	45mA
PROGRAMMING ACC									
Voltage Current	0.1% +10mV 0.1% + 30mA	0.1% +10mV 0.1% + 60mA	0.1% +10mV 0.1% + 100mA	0.1% +10mV 0.1% + 10mA	0.1% +10mV 0.1% + 30mA	0.1% +10mV 0.1% + 40mA	0.1% +100mV 0.1% + 5mA	0.1% +100mV 0.1% +15mA	0.1% +100mV 0.1% +20mA
MEASUREMENT ACC		0.178 + 00MA	0.1/6 + 100MA	0.170 + 1011A	0.170 + 50114	0.170 + 401174	0.170 + 51114	0.170 +151114	0.170 +2011/4
Voltage	0.1% +10mV	0.1% +10mV	0.1% +10mV	0.1% +10mV	0.1% +10mV	0.1% +10mV	0.1% +100mV	0.1% +100mV	0.1% +100mV
Current	0.1% +30mA	0.1% +60mA	0.1% +100mA	0.1% +10mA	0.1% +30mA	0.1% +40mA	0.1% +5mA	0.1% +15mA	0.1% +20mA
RESPONSE TIME									
Raise Time	50ms	50ms	50ms	50ms	50ms	50ms	100ms	100ms	100ms
Fall Time(Full Load) Fall Time(No Load)	50ms 500ms	50ms 500ms	50ms 500ms	50ms 500ms	50ms 500ms	50ms 500ms	100ms 1000ms	100ms 1000ms	100ms 1000ms
Load Transient	lms	lms	lms	lms	lms	lms	2ms	2ms	2ms
Recover Time (Load change from									
50~100%)									
PROGRAMMING RES	OLUTION (By	PC Remote Cont	rol Mode)						
Voltage	1mV	1mV	lmV	2mV	2mV	2mV	3mV	3mV	3mV
Current	1mA	2mA	3mA	1mA	2mA	3mA	1mA	2mA	3mA
MEASUREMENT RESO			/				2. 1/	2.14	<i>i</i>
Voltage Current	1mV 1mA	1mV 2mA	1mV 3mA	2mV 1mA	2mV 2mA	2mV 3mA	3mV 1mA	3mV 2mA	3mV 3mA
SERIES AND PARALLE	L CAPABILITY					I I		<u> </u>	
Parallel Operation	Up to 3 units	including the ma	aster unit						
Series Operation	Up to 2 units i	ncluding the ma	ster unit						
PROTECTION FUNCT	ION						T	L	
OVP	$3 \sim 33V$	3 ~ 33V	$3 \sim 33V$	8 ~ 88V	8 ~ 88V	8 ~ 88V	16~ 176V	16 ~ 176V	16 ~ 176V
OCP	3.6 ~ 39.6A	5 ~ 79.2A	5 ~ 118.8A	1.35 ~ 14.85A	2.7 ~ 29.7A	4.05 ~ 44.55A	0.72 ~ 7.92A	1.44 ~ 15.84A	2.16 ~ 23.76A
ОНР	· · ·	lecated internal t	emperatures						
FRONT PANEL DISPL									
Voltage Current	0.1%±20mV 0.1%±40mA	0.1%±20mV 0.1%±70mA	0.1%±20mV 0.1%±100mA	0.1%±20mV 0.1%±20mA	0.1%±20mV 0.1%±40mA	0.1%±20mV 0.1%±50mA	0.1%±100mV 0.1%±5mA	0.1%±100mV 0.1%±30mA	0.1%±100mV 0.1%±30mA
ENVIRONMENT CON		0.1701701174	0.170±100117	0.170±20111A	0.170±40117	0.170±301114	0.170151114	0.170±30111A	0.170±301114
Operation Temp	00~500								
	-250 ~ 70 0								
Storage Temp		L N	ion						
Storage Temp Operating Humidity		H; No condensat							
Operating Humidity Storage Humidity	90% RH or Les	H; No condensat ss; No condensa							
Operating Humidity Storage Humidity READ BACK TEMP CO	90% RH or Les	ss; No condensa	tion						
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage	90% RH or Les EFFICIENT 100ppm/°C of	ss; No condensa Frated output vo	tion tage : after a 30	minute warm-up					
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current	90% RH or Les EFFICIENT 100ppm/°C of	ss; No condensa Frated output vo	tion tage : after a 30	minute warm-up minute warm-up					
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage	90% RH or Les EFFICIENT 100ppm/°C of	ss; No condensa Frated output vo	tion tage : after a 30						
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER	90% RH or Les EFFICIENT 100ppm/℃ of 200ppm/℃ of	ss; No condensa Frated output vol Frated output cu	tion tage : after a 30						
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s	ss; No condensa frated output vol frated output cu lB(Option) sensing control	tion ltage : after a 30 rrent : after a 30						
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s	ss; No condensa Frated output vol Frated output cu IB(Option)	tion Itage : after a 30 rrent : after a 30 gle phase						
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H)	ss; No condensa Frated output vol Frated output cu B (Option) sensing control C, 47~63Hz, sin; 142(W)x124(H)	tion ltage : after a 30 rrent : after a 30 gle phase 214(W)x124(H)	71 (W)x124(H)	142(W)x124(H)	214(W)x124(H)	71 (W)x124(H)	142(W)×124(H)	214(W)x124(H)
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71 (W)x124(H) x350(D) mm ;	ss; No condensa frated output vol frated output cuu BB (Option) sensing control C, 47~63Hz, sing 142(W)x124(H) x350(D)mm ;	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124(H) x350(D) mm ;	minute warm-up 71 (W)x124(H) x350(D) mm ;	142(W)x124(H) x350(D) mm;	x350(D) mm ;	x350(D) mm ;	x350(Ď) mm ; ´	x350(D) mm;
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H)	ss; No condensa Frated output vol Frated output cu B (Option) sensing control C, 47~63Hz, sin; 142(W)x124(H)	tion ltage : after a 30 rrent : after a 30 gle phase 214(W)x124(H)	minute warm-up 71 (W)x124(H) x350(D) mm ;	142(W)x124(H)				
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm ; Approx. 3kg	ss; No condensa Frated output vol Frated output cu BB (Option) sensing control C, 47~63Hz, sin; 142 (W)x124 (H) x350 (D)mm ; Approx. 5.3kg	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124(H) x350(D) mm ;	minute warm-up 71 (W)x124(H) x350(D) mm ;	142(W)x124(H) x350(D) mm ; Approx. 5.3kg	x350(D) mm ;	x350(D) mm ;	x350(Ď) mm ; ´	x350(D) mm;
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING INFO	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm ; Approx. 3kg	ss; No condensa Frated output vol Frated output cul IB (Option) sensing control C, 47~63Hz, sini 142(W)x124(H) x350(D)mm ; Approx. 5.3kg	tion Itage : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg	71 (W)x124(H) x350(D) mm ; Approx. 3kg	142(W)x124(H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua	x350(D) mm; Approx. 7.5kg	x350(D) mm ; Approx. 3kg	x350(D) mm; Approx. 5.3kg	x350(Ď) mm ; Approx. 7.5kg
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING INFO PSW 30-36 (0-30)	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC-265VA 71(W)x124(H) x350(D) mm; Approx. 3kg ORMATION V/0~36A/360W)	ss; No condensa Frated output vol Frated output cur rated output cur IB (Option) sensing control C, 47~63Hz, sini 142 (W)x124 (H) x350 (D)mm ; Approx. 5.3kg	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124(H) x350(D) mm ; Approx. 7.5kg Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x 1(x 1 (Region de 160V), Includ	142(W)x124(H) x350(D) mm ; Approx. 5.3kg ORIES Programming Manua ependent), GTL-240 U s : M4 Terminal scre	x350(D) mm; Approx. 7.5kg II, User Manual), GTL JSB Cable "L" Type x 1 ws and washers x 2, A	x350(D) mm ; Approx. 3kg -123 Test Lead x 1 (fc , PSW-004 Basic Acce ir Filter x 1, Analog co	x350(D) mm ; Approx. 5.3kg	x350(D) mm; Approx. 7.5kg , Power Cord W 30V/80V/
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING ING PSW 30-36 (0-30) PSW 30-108 (0-30)	90% RH or Les DEFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm ; Approx. 3kg DRMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080	ss; No condensa Frated output vol Frated output cur IB (Option) sensing control C, 47~63Hz, sin; 142 (W)x124 (H) x350 (D)mm ; Approx. 5.3kg) Multi-Range DC) Multi-Range DC W) Multi-Range IC	tion tage : after a 30 rrent : after a 30 gle phase 214(W)x124(H) x350(D) mm ; Approx. 7.5kg Power Supply Power Supply DC Power Supply	minute warm-up 71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x 1(x 1(Region de 160V), Includu control lock le	142 (W)x124 (H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua ependent), GTL-240 L es : M4 Terminal scre ver x 1, M8 Terminal	x350(D) mm; Approx. 7.5kg I, User Manual), GTL ISB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washe	x350(D) mm ; Approx. 3kg -123 Test Lead x 1 (fo , PSW-004 Basic Acce iir Filter x 1, Analog co rs x 2,	x350(D) mm; Approx. 5.3kg r PSW 30V/80V/160V) sssories Kit x 1(for PS) pontrol protection dum	x350(D) mm; Approx. 7.5kg , Power Cord % 30V/80V/ my x 1, Analog
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT PSW 30-36 (0-300 PSW 30-108 (0-300 PSW 80-13.5 (0-800	90% RH or Les DEFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm; Approx. 3kg DRMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080°	ss; No condensa Frated output vol Frated output cur rated output cur IB (Option) sensing control (C, 47~63Hz, sin; 142 (W)x124 (H) x350 (D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC W) Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg Power Supply Power Supply DC Power Supply DC Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x 1(x 1 (Region de 160V), Includ. control lock le PSW-008 Bas PSW-009 Out	142(W)x124(H) x350(D) mm ; Approx. 5.3kg ORIES Programming Manua ependent), GTL-240 U s: M4 Terminal ic Accessories kit for toput terminal cover fo	x350(D) mm; Approx. 7.5kg II, User Manual), GTI JSB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V,800V mod r 30V/80V/160V mod	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fc ,PSW-004 Basic Acce ir Filter x 1, Analog co rrs x 2, els PSW-011 Outpu	x350(D) mm ; Approx. 5.3kg r PSW 30V/80V/160V/ ssories Kit x 1(for PS)	x350(D) mm; Approx. 7.5kg , Power Cord X 30V/80V/ my x 1, Analog 0V/800V models
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING INFO PSW 30-36 (0-30) PSW 30-72 (0-30) PSW 30-710 (0-30) PSW 30-710 (0-30) PSW 30-72 (0-30) PSW 30-72 (0-30) PSW 30-73 (0-80) PSW 80-73 (0-80)	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm ; Approx. 3kg ORMATION V/0~36A/360W) V/0~72A/720W) V/0~27A/720W)	ss; No condensa rated output vol rated output cul rated output cul rated output cul rated output cul rated output cul sensing control C, 47~63Hz, sin; 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC Multi-Range DC W) Multi-Range DC W) Multi-Range DC Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg Power Supply Power Supply Power Supply Power Supply Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x1(x1(Region de 160V), Includ. control lock le PSW-008 Bas PSW-009 Out OPTION/	142(W)x124(H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua ependent), GTL-240 U s: M4 Terminal scre ever x 1, M8 terminal ic Accessories kit for tput terminal cover fo AL ACCESSOR	x350(D) mm; Approx. 7.5kg II, User Manual), GTI JSB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V,800V mod r 30V/80V/160V mod	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fc ,PSW-004 Basic Acce ir Filter x 1, Analog co rrs x 2, els PSW-011 Outpu	x350(D) mm;; Approx. 5.3kg r PSW 30V/80V/160V) sssories Kit x 1(for PS) ontrol protection dum t terminal cover for 25	x350(D) mm; Approx. 7.5kg , Power Cord X 30V/80V/ my x 1, Analog 0V/800V models
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING INFO PSW 30-36 (0-300 PSW 30-172 (0-300 PSW 30-108 (0-300 PSW 80-13.5 (0-800	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC-265VA 71 (W)x124 (H) x350(D) mm ; Approx. 3kg ORMATION V/0~36A/360W) V/0~72A/720W) V/0~13.5A/360W V/0~27A/720W) V/0~40.5A/1080	ss; No condensa Frated output vol Frated output cul rated output cul sensing control C, 47~63Hz, sini 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214(W)x124(H) x350(D) mm ; Approx. 7.5kg Power Supply Power Supply Power Supply DC Power Supply DC Power Supply DC Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x 1(x 1 (Region de 160V), Includ control lock le PSW-008 Bas PSW-009 Out OPTION / PSW-001 Ac PSW-001 Ac	142(W)x124(H) x350(D) mm ; Approx. 5.3kg ORIES Programming Manua ependent), GTL-240 U s: M4 Terminal scre ever x1, M8 terminal ic Accessories kit for tput terminal cover for AL ACCESSOR Cessory Kit mple IDC Tool	x350(D) mm; Approx. 7.5kg II, User Manual), GTI JSB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V,800V mod r 30V/80V/160V mod	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fc ,PSW-004 Basic Acce ir Filter x 1, Analog co rrs x 2, els PSW-011 Outpu	x350(D) mm;; Approx. 5.3kg r PSW 30V/80V/160V) sssories Kit x 1(for PS) ontrol protection dum t terminal cover for 25	x350(D) mm; Approx. 7.5kg , Power Cord X 30V/80V/ my x 1, Analog 0V/800V models
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING ING PSW 30-36 (0-30) PSW 30-72 (0-30) PSW 30-108 (0-30) PSW 30-13.5 (0-80) PSW 80-40.5 (0-80) PSW 80-40.5 (0-80) PSW 160-7.2 (0-160) PSW 160-7.2 (0-160)	90% RH or Les DEFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm ; Approx. 3kg DRMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080 V/0~27A/720W) V/0~2A/720W) V/0~2A/720W) V/0~2A/720W) V/0~2A/720W) V/0~2A/720W) V/0~2A/720W) V/0~2A/720W) V/0~40.5A/1080 W/0~14.4A/720W	ss; No condensa rated output vol rated output cur rated output cur sensing control C, 47~63Hz, sin; 142(W)x124(H) x350(D)mm; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214(W)x124(H) x350(D) mm ; Approx. 7.5kg Power Supply Power Supply Power Supply DC Power Supply DC Power Supply DC Power Supply Power Supply C Power Supply C Power Supply C Power Supply C Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x1(x1(Region du 160V), Includ control lock le PSW-008 Bas PSW-009 Out OPTION, PSW-001 Ac PSW-003 Co	142 (W)x124 (H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua ependent), GTL-240 D s: M4 Terminal scre ever x1, M8 terminal ic Accessories kit for put terminal cover fo AL ACCESSOR cessory Kit mple IDC Tool ntact Removal Tool	x350(D) mm; Approx. 7.5kg II, User Manual), GTI JSB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V,800V mod r 30V/80V/160V mod	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fc PSW-004 Basic Acce irs X2, els PSW-011 Outpu els PSW-012 High vi	x350(D) mm ; Approx. 5.3kg rr PSW 30V/80V/160V) sesories Kit x 1 (for PS) ontrol protection dum t terminal cover for 25 oltage output terminal f	x350(D) mm; Approx. 7.5kg , Power Cord X 30V/80V/ my x 1, Analog 0V/800V models
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING INE(PSW 30-36 (0-30) PSW 30-72 (0-30) PSW 30-135 (0-30) PSW 80-13.5 (0-30) PSW 80	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm; Approx. 3kg ORMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080 W/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~27A/720W) V/0~21.6A/1080	ss; No condensa Frated output vol Frated output cur rated output cur sensing control (, 47~63Hz, sing 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg Power Supply Power Supply DC Power Supply Power Supply Power Supply Power Supply Power Supply Power Supply C Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x1(x1(Region de 160V), Includ. control lock le 160V), Includ. control lock le 160V, Includ. control lock le 160V, 2008 Bas PSW-009 Out OPTION/ PSW-002 Sin PSW-003 Cal PSW-005 Cal	142(W)x124(H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua ependent), GTL-240 U es : M4 Terminal scre ever x1, M8 terminal ic Accessories kit for fult terminal cover for AL ACCESSOR Cessory Kit mple IDC Tool mtact Removal Tool ble for 2 Units of PSW ble for 2 Units of PSW	x350(D) mm; Approx. 7.5kg II, User Manual), GTI ISB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V/800V mod r 30V/80V/160V mod IES	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fo pSW-004 Basic Acce ir Filter x 1, Analog cu rrs x 2, els PSW-011 Outpu els PSW-012 High w e Connection(for PSW ode Connection	x350(D) mm ; Approx. 5.3kg rr PSW 30V/80V/160V) sesories Kit x 1 (for PS) ontrol protection dum t terminal cover for 25 oltage output terminal f	x350(D) mm; Approx. 7.5kg , Power Cord X 30V/80V/ my x 1, Analog 0V/800V models
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT DIMENSIONS & WEIGHT DIMENSIONS WEIGHT PSW 30-36 (0-30) PSW 30-36 (0-30) PSW 30-72 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-12 (0-30) PSW 80-13.5 (0-80) PSW 80-40.5 (0-80) PSW 160-7.2 (0-160) PSW 160-7.1 (0-160) P	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm ; Approx. 3kg DRMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080 V/0~27A/720W)	ss; No condensa Frated output vol Frated output cul rated output cul sensing control C, 47~63Hz, sing 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg Power Supply DC Power Supply DC Power Supply DC Power Supply Power Supply DC Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x 1(x 1 (Region de 160V), Includ control lock le PSW-008 Bas PSW-009 Out OPTION/ PSW-001 Acc PSW-003 Cal PSW-005 Cal PSW-005 Cal PSW-006 Cal PSW-006 Cal PSW-006 Cal	142(W)x124(H) x350(D) mm ; Approx. 5.3kg ORIES Programming Manua ependent), GTL20 es : M4 Terminal scre ever x1, M8 terminal is Accessories kit for tput terminal cover for AL ACCESSOR Cessory Kit mple IDC Tool ntact Removal Tool ble for 2 Units of PSW ble for 3 Units of PSW	x350(D) mm; Approx. 7.5kg II, User Manual), GTI VSB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V,800V mod r 30V/80V/160V mod IES -Series in Series Mod /-Series in Parallel Mc /-Series in Parallel Mc /-Series in Parallel Mc /-Series in Parallel Mc	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fo , PSW-004 Basic Accc irs X2, els PSW-011 Outpu els PSW-012 High v e Connection (for PSW ode Connection ade Connection	x350(D) mm ; Approx. 5.3kg	x350(D) mm; Approx. 7.5kg , Power Cord % 30V/80V/ my x 1, Analog 0V/800V models or 250V/800V model
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT DIMENSIONS & WEIGHT PSW 30-36 (0-30) PSW 30-72 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-108 (0-30) PSW 30-12 (0-160) PSW 160-72 (0-160) PSW 160-72.6 (0-160) PSW 160-21.6 (0-160) PSW 250-4.5 (0-250)	90% RH or Les DEFFICIENT 100ppm/°C of 200ppm/°C of Ves USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm; Approx. 3kg DRMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080 V/0~27A/720W) V/0~21.6A/1080 DV/0~4.5A/360W DV/0~4.5A/360W DV/0~4.5A/360W	ss; No condensa rated output vol rated output cur rated output cur lB(Option) sensing control C, 47~63Hz, sin; 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg Power Supply DC Power Supply C Power Supply DC Power Supply DC Power Supply DC Power Supply DC Power Supply DC Power Supply POWer Supply Power Supply Power Supply	71 (W)x124 (H) x350(D) mm ; Approx. 3kg CD-ROM x1(x1(Region de 160V), Includ. control lock le PSW-008 Bas PSW-009 Out OPTION/ PSW-001 Act PSW-003 Con PSW-002 Sin PSW-003 Col PSW-005 Cal CET-001 Ext	142 (W)x124 (H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua ependent), GTL-240 U s: M4 Terminal scre ever x 1, M8 terminal ic Accessories kit for s: M4 Terminal cover fo AL ACCESSOR Cessory Kit mple IDC Tool mtact Removal Tool ble for 2 Units of PSW ble for 3 Units of PSW ended Terminal (for F	x350(D) mm; Approx. 7.5kg II, User Manual), GTI ISB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SW 250Y,800V mod r 30V/80V/160V mod IES '-Series in Series Mod /-Series in Parallel Mc /-Series in Parallel Mc /-Series in Parallel Mc /-Series in Parallel Mc	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (ff , PSW-004 Basic Acce iir Filter x 1, Analog cu rrs x 2, els PSW-011 Outpu els PSW-012 High w e Connection (for PSW, ode Connection de Connection	x350(D) mm ; Approx. 5.3kg r PSW 30V/80V/160V) ssories Kit x 1 (for PS) ontrol protection dum t terminal cover for 25 oltage output terminal f ' 30V/80V/160V) GUG-001 GPIB to L GRA-410-J Rack Mou	x350(D) mm; Approx. 7.5kg , Power Cord % 30V/80V/ my x 1, Analog 0V/800V models or 250V/800V model JSB Adaptor nrt Kit (JIS)
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT WEIGHT PSW 30-36 0-300 PSW 30-72 PSW 80-73.5 0-800 PSW 80-13.5 PSW 80-13.5 0-800 PSW 80-14.5 PSW 160-7.2 PSW 160-7.1.6 PSW 160-7.2.6 PSW 160-7.1.5 0-250 PSW 250-1.3.5 PSW 80-1.4.4 0-800 PSW 80-1.4.4 0-800 PSW 80-1.4.4	90% RH or Les DEFFICIENT 100ppm/°C of 200ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermals 85VAC~265VA 71(W)x124(H) x350(D) mm; Approx. 3kg DRMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080 V/0~27A/720W) V/0~108A/1080 V/0~27A/720W) V/0~10.5A/1080 0V/0~1.4A/720W 0V/0~1.4A/720W 0V/0~1.3.5A/360W 0V/0~1.3.5A/1080 0V/0~1.4A/360 0V/0~1.3.5A/1080 0V/0~1.4A/360 0V/0~1.3.5A/1080 0V/0~1.3.5A/1080 0V/0~1.3.5A/1080 0V/0~1.4A/360 0V/0~1.4A/3	ss; No condensa rated output vol rated output cur rated output cur rated output cur rated output cur rated output cur sensing control (C, 47~63Hz, sin; 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 gle phase 214(W)x124(H) x350(D) mm ; Approx. 7.5kg Power Supply DC Power Supply	71 (W)x124(H) x350(D) mm; Approx.3kg CD-ROM x1(x1(Region de 160V), Includ. control lock le PSW-003 Col PSW-009 Out OPTION/ PSW-004 Cal PSW-005 Cal PSW-005 Cal PSW-005 Cal PSW-005 Cal PSW-006 Cal PSW-006 Cal PSW-006 Cal PSW-006 Cal PSW-006 Cal PSW-006 Cal PSW-007 Cal CET-001 Ext CTL-130 Ext CTL-248 CP	142(W)x124(H) x350(D) mm ; Approx. 5.3kg ORIES Programming Manua ependent), GTL-240 U es : M4 Terminal scre ever x 1, M8 terminal ic Accessories kit for tput terminal cover for AL ACCESSOR Die for 2 Units of PSW ble for 3 Units of PSW ble for 4 Units of PSW ble for 3 Units of PSW ble for 3 Units of PSW ble for 4 Units of PSW ble for 2 Units of PSW ble for 3 Units of PSW ble for 4 Units of PSW ble for 3 Units of PSW ble for 4 Units of PSW ble for 4 Units of PSW ble for 3 Units of PSW ble for 4 Units of PSW ble for 5 Units of PSW ble for 4 Units of PSW ble for 4 Units of PSW ble for 5 Units of PSW ble for 4 Units o	x350(D) mm; Approx. 7.5kg II, User Manual), GTI JSB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SSW 250V/800V mod r 30V/80V/160V mod r 30V/80V/160V mod r 30V/80V/160V Series in Parallel Mc /-Series 20V/80V) ack(for PSW 250V/80V)	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (fc ,PSW-004 Basic Acce irs X2, els PSW-014 Nalog ci rrs x2, els PSW-011 Outpue els PSW-012 High vi de Connection ode Connection	x350(D) mm ; Approx. 5.3kg rr PSW 30V/80V/160V; ssories Kit x 1 (for PS) ontrol protection dum t terminal cover for 25 oltage output terminal f / 30V/80V/160V) GUG-001 GPIB to L GRA-410-J Rack Mou GRA-410-E Rack Mou	x350(D) mm; Approx. 7.5kg , Power Cord % 30V/80V/ my x 1, Analog 0V/800V models or 250V/800V model JSB Adaptor nrt Kit (JIS)
Operating Humidity Storage Humidity READ BACK TEMP CO Voltage Current OTHER Analog Control Interface Fan POWER SOURCE DIMENSIONS & WEIGHT ORDERING INFO PSW 30-36 (0-300 PSW 30-72 (0-300 PSW 160-72 (0-160 PSW 160-71.6 (0-160 PSW 160-71.6 (0-160 PSW 160-71.5 (0-250 PSW 250-13.5 (0-250	90% RH or Les EFFICIENT 100ppm/°C of 200ppm/°C of Yes USB/LAN/GPI With thermal s 85VAC~265VA 71(W)x124(H) x350(D) mm; Approx. 3kg ORMATION V/0~36A/360W) V/0~72A/720W) V/0~108A/1080 V/0~27A/720W) V/0~108A/1080 V/0~27A/720W) V/0~27A/720W) V/0~10.5A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~21.6A/1080 0V/0~2.8A/720	ss; No condensa rated output vol rated output cur rated output cur rated output cur rated output cur rated output cur sensing control (, 47~63Hz, sing 142(W)x124(H) x350(D)mm ; Approx. 5.3kg Multi-Range DC W) Multi-Range DC	tion tage : after a 30 rrent : after a 30 rrent : after a 30 gle phase 214 (W)x124 (H) x350 (D) mm ; Approx. 7.5kg Power Supply DC Power Supply DC Power Supply Power Supply DC Power Supply DC Power Supply C Power Supply C Power Supply DC Power Supply	71 (W)x124(H) x350(D) mm ; Approx. 3kg CD-ROM x1(x1(Region de 160V), Includ. control lock le PSW-009 Out PSW-009 Out PSW-009 Out PSW-001 Ac PSW-003 Cal PSW-005 Cal PSW-005 Cal PSW-006 Cal PSW-006 Cal PSW-006 Cal PSW-007 Cal CET-001 Ext CET-002 Ext CTL-103 Test CTL-248 CP CTL-251 US	142 (W)x124 (H) x350(D) mm ; Approx. 5.3kg CORIES Programming Manua ependent), GTL-240 U s: M4 Terminal scre ever x 1, M8 terminal ic Accessories kit for but terminal cover fo AL ACCESSOR Dut terminal cover fo AL ACCESSOR ble for 2 Units of PSW ble for 2 Units of PSW ble for 3 Units of PSW ble for	x350(D) mm; Approx. 7.5kg II, User Manual), GTU SB Cable "L" Type x 1 ws and washers x 2, A bolts, nuts and washer SW 250V,800V mod r 30V/80V/160V mod r 30V/80V/160V mod r 30V/80V/160V mod r 30V/80V/160V mod r 30V/80V/160V SW 30V/80V/160V SW 30V/80V/160V SW 30V/80V/160V sW 250V/800V elded, 2000mm elded, 600mm elded, 600mm elded, USB 2.0, F	x350(D) mm; Approx. 3kg -123 Test Lead x 1 (for , PSW-004 Basic Acce irs x2, els PSW-012 High v els PSW-012 High v els PSW-012 High v ode Connection (for PSW ode Connection	x350(D) mm ; Approx. 5.3kg rr PSW 30V/80V/160Vy essories Kit x 1 (for PS) ontrol pretection dumi t terminal cover for 25 oltage output terminal f / 30V/80V/160Vy GUG-001 GPIB to L GRR-410-J Rack Mou GRA-410-E Rack Mou PSW-010 Large filte	x350(D) mm; Approx. 7.5kg , Power Cord X 30V/80V/ my x 1, Analog 0V/800V models or 250V/800V model JSB Adaptor int Kit (JIS) nt Kit (JIS) nt Kit (EIA)

SPECIFICATIONS	PSW 250-4.5	PSW 250-9	PSW 250-13.5	PSW 800-1.44	PSW 800-2.88	PSW 800-4.32
OUTPUT RATING	P3W 230-4.3	F3W 230-5	P3W 230-13.5	P3W 800-1.44	F3W 000-2.00	F3W 800-4.32
	0. 2501/	0. 250)/	0. 2501/	0 ~ 800V	0 ~ 800V	0 ~ 800V
/oltage Current	0 ~ 250V 0 ~ 4.5A	0 ~ 250V 0 ~ 9A	0 ~ 250V 0 ~ 13.5A	0~800V 0~1.44A	0~ 800V 0~ 2.88A	0~800V 0~4.32A
Power	360W	720W	0~13.5A 1080W	360W	720W	1080W
REGULATION(CV)	500W	720 W	1080 W	500 1	7201	10001
Load	130mV	130mV	130mV	405mV	405mV	405mV
Line	128mV	128mV	128mV	403mV	403mV	403mV
REGULATION(CC)	1201111	120111	120111	1051117	1051111	1051111
Load	9.5mA	14mA	18.5mA	6.44mA	7.88mA	9.32mA
Line	9.5mA	14mA	18.5mA	6.44mA	7.88mA	9.32mA
RIPPLE & NOISE (Noise Bar						
CV p-p	80mV	100mV	120mV	150mV	200mV	200mV
CV rms	15mV	15mV	15mV	30mV	30mV	30mV
CC rms	10mA	20mA	30mA	5mA	10mA	15mA
ROGRAMMING ACCURACY	(
/oltage	0.1%+200mV	0.1%+200mV	0.1%+200mV	0.1%+400mV	0.1%+400mV	0.1%+400mV
Current	0.1%+5mA	0.1%+10mA	0.1%+15mA	0.1%+2mA	0.1%+4mA	0.1%+6mA
A SUREMENT ACCURACY		I	·	1		
Voltage	0.1%+200mV	0.1%+200mV	0.1%+200mV	0.1%+400mV	0.1%+400mV	0.1%+400mV
Current	0.1%+5mA	0.1%+10mA	0.1%+15mA	0.1%+2mA	0.1%+4mA	0.1%+6mA
RESPONSE TIME	I	I		1	I	
Raise Time	100ms	100ms	100ms	150ms	150ms	150ms
Fall Time(Full Load)	150ms	150ms	150ms	300ms	300ms	300ms
Fall Time (No Load)	1200ms	1200ms	1200ms	2000ms	2000ms	2000ms
Load Transient	2ms	2ms	2ms	2ms	2ms	2ms
Recover Time						
Load change from 50~100%)						
PROGRAMMING RESOLUTIO		· · · · ·		1		1
/oltage Current	5mV	5mV	5mV	14mV 1mA	14mV 1mA	14mV 1mA
MEASUREMENT RESOLUTIO	1mA	1mA	1mA	IIIIA	ImA	IMA
		1	5.14	14>/	14mV	14mV
Voltage Current	5mV 1mA	5mV 1mA	5mV 1mA	14mV 1mA	14mv 1mA	14mv 1mA
SERIES AND PARALLEL CAPA		1110 (11103			
Parallel Operation	3	3	3	3	3	3
Series Operation	N/A	N/A	N/A	N/A	N/A	N/A
PROTECTION FUNCTION						
OVP	20 ~ 275V	20 ~ 275V	20 ~ 275V	20 ~ 880V	20 ~ 880V	20 ~ 880V
DCP	0.45 ~ 4.95A	0.9 ~ 9.9A	1.35 ~ 14.85A	0.144 ~ 1.584A	0.288 ~ 3.168A	0.432 ~ 4.752
ОНР		d internal temperature				
FRONT PANEL DISPLAY ACC						
Voltage	0.1%±200mV	0.1%±200mV	0.1%±200mV	0.1%+400mV	0.1%±400mV	0.1%±400mV
Current	0.1%±200mv 0.1%±5mA	0.1%±200mV 0.1%±10mA	0.1%±200mV 0.1%±20mA	0.1%±400mv 0.1%±2mA	0.1%±400mv 0.1%±4mA	0.1%±400mV 0.1%±6mA
ENVIRONMENT CONDITIO		011/02101111	011/01201101	011/01Ennt	011/01 1111	0.170201111
Operation Temp	00~500					
Storage Temp	-250 ~ 70 0					
Operating Humidity	20% ~ 85% RH; No	condensation				
Storage Humidity	90% RH or Less; No	condensation				
READ BACK TEMP COEFFIC						
/oltage			a 30 minute warm-up			
Current	200ppm/°C of rated	output current : after	a 30 minute warm-up			
OTHER	1					
Analog Control	Yes					
nterface	USB/LAN/GPIB(Op					
Fan	With thermal sensin					
POWER SOURCE	85VAC~265VAC, 47-	-63Hz, single phase	1		1	
DIMENSIONS	71(W)x124(H)	142(W)x124(H)	214(W)x124(H)	71(W)x124(H)	142(W)x124(H)	214(W)x124(H
	x350(D) mm ;	x350(D)mm;	x350(D) mm ;	x350(D) mm ;	x350(D) mm ;	x350(D) mm ;
& WEIGHT	Approx. 3kg	Approx. 5.3kg	Approx. 7.5kg	Approx. 3kg	Approx. 5.3kg	Approx. 7.5kg



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GUR-001 USB to RS-232 Cable

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For: PSW-Series, 300mm