Programmable Switching D.C. Power Supply (Multi-range D.C. Power Supply)

PSB-2400L2

PSB-2400L/PSB-2400H/ PSB-2800L/PSB-2800H

PSB-2800LS

USB | RS-232 | GPIB | Analog Control

The PSB-2000 Series, which is a high power density, programmable and multi-range output DC power supply. There are six models in the series including one power booster unit. The PSB-2000 Series has the output voltage of 0~80V and 0~800V, and the output power ranges of 0~400W and 0~800W. The multi-range output functionality facilitates flexible collocations of higher voltage and larger current under the rated power range. Both series and parallel connections can be applied to the PSB-2000 Series to fulfill the requirements of higher power output range.

The PSB-2000 Series provides three sets of preset function keys to memorize regularly used settings of voltage, current and power that users can recall rapidly. The sequence function, via RS232C, USB interface or optional GPIB interface, can connect with the computer to produce output power defined by sequence of a series of set voltage and current steps that are defined by the computer. This function is often used to establish a standard test procedure for the verification of the influence on DUTs done by the swiftly changing operating conditions.

The PSB-2000 Series protects over voltage and over current. The power supply output function will be shut down to protect DUTs while the protection mechanism is triggered to function. When conducting battery charging operation, the Hi- mode of the PSB-2000 Series will prevent reverse current from damaging power supply. The PSB-2000 Series provides analog control and analog monitor interfaces on the rear panel to control PSB-2000 Series output via the external voltage or to externally monitor voltage and current output status of power supply. PSB-2000 Series panel can be rotated 90 degree angle suitable for vertical or horizontal position to accommodate the ideal space utilization.

Compared with the maximum power output of the conventional power supply that is calculated by the maximum output voltage multiplies by the maximum output current, the PSB-2000 Series, defying the formula, has a unique characteristic of multi-range output (voltage and current). This distinguishing feature, under the same maximum power output range, can output a higher voltage with a smaller current and vice versa. For instance, for a conventional power supply with a maximum power output of 360W, the maximum voltage and current outputs are likely to be 10V and 36A respectively. Comparatively, PSB-2400L, with the maximum power output of 400W, provides voltage and current output ranges of 0~80V and 0~40A. The maximum current of 5A will be provided when the voltage reaches 80V and the maximum voltage of 10V for the maximum current of 40A. PSB-2400L, breaking the limitation of Pmax=Vmax x Imax,, broadens voltage and current application ranges.

FEATURES

* Voltage Rating : 80V/800V Output Power Rating : 400W ~ 800W
* 90 Degree Rotating Panel Operation (Vertically or Horizontally)
* Constant Power Output for Multi-Range (V & I) Operation
* Series and Parallel Operation (2 Units in Series or 4 Units in Parallel Maximum)
* Sequence Function Edited by PC will be Controlled Through Power Supply Optional Interfaces
* Standard Interface : Analog Control Interface
* Optional Interface : USB, RS-232C, GPIB
* LabView Driver

SPECIFICATIONS

	PSB-2400L	PSB-2800L	PSB-2400L2	PSB-2400H	PSB-2800H	PSB-2800LS
OUTPUT RATING						
Voltage	0 ~ 80V	0 ~ 80V	0 ~ 80V x 2CH	0 ~ 800V	0 ~ 800V	80V
Current	0 ~ 40A	0 ~ 80A	0 ~ 40A x 2CH	0 ~ 3A	0 ~ 6A	80A
Power	400W	800W	400W x 2CH	400W	800W	800W
REGULATION (CV)						
Load	0.01% ± 3mV of rated voltage			0.01% ± 30mV of rated voltage		N/A
Line	0.01% ± 2mV of rated voltage			0.01% ± 20mV of rated voltage		
REGULATION (CC)						
Load	0.02% ± 3mA of rated current			0.05% ± 15mA of rated current		N/A
Line	0.01% ± 2mA of rated current			0.05% ± 10mA of rated current		
RIPPLE & NOISE (Noise Bandwidth 20MHz ; Ripple Bandwidth=1MHz)						
CV p-p	90mV	150mV	90mV	250mV(only output voltage measures more than 1% of the rated voltage)	300mV(only output voltage measures more than 1% of the rated voltage)	N/A
CV rms	4mV	6mV	4mV	20mV(when current measures<2A) 35mV(when current measures>2A)	25mV(when current measures<2A) 40mV(when current measures>2A)	
CC rms	30mA	60mA	30mA	15mA	20mA	
PROGRAMMING ACCURACY						
Voltage	0.1% setting±2digits			0.1% setting±2digits		N/A
Current	0.2%setting±2digits			0.2% setting±2digits		
Power	± 10W			±10W (only output voltage measures more than 1% of rated voltage)		
READ BACK ACCURACY						
Voltage	0.2% reading±2digits			0.2% reading±2digits		N/A
Current	0.3% reading±2digits			0.3% reading±2digits		
Power	0.5% reading±5digits			0.5% reading±Vout x 40mA		
RESPONSE TIME						
Raise Time(Full load/No load)	50ms			200ms		N/A
Fall Time(Full load)	100ms			500ms		
Fall Time(No load)	500ms			1000ms		
Load Transient Recover Time (Load change from 50~100%)	1ms			7ms		
PROGRAMMING RESOLUTION						
Voltage	10mV			100mV		N/A
Current	10mA			10mA		
Power	10W			10W		
MEASUREMENT RESOLUTION						
Voltage	10mV			100mV		N/A
Current	10mA			10mA		
Power	10W			10W		
SERIES AND PARALLEL CAPABILITY						
Parallel Operation	Up to 2 units		N/A	N/A		N/A
Series Operation	Up to 4 units		N/A	N/A		
PPROTECTION FUNCTION						
OVP (Fixed)	Output off when 110% of rated voltage			Output off when output voltage exceeds 110% of rated voltage		N/A
OVP (Variable)	Output off when operating ; Setting range : 1V ~ 84V with front panel			Presettable in range from 10V ~ 840V om front panel		
OCP (Fixed)	Output off when 110% of rated current			Output off when output voltage exceed 110% of rated voltage		
OCP (Variable)	Output off when operating ; Setting range : 1A ~ 42A (84A for model number)			Presettable in range from 0.1A ~ 6.30A om front panel		
OHP	Output off above heat sink setting temperature			Output off at the intemal heat sink temperature over setting value		
ENVIRONMENT CONDITION						
Operation Temp	0°C ~ 40°C					N/A
Storage Temp	-20°C ~ 70°C					
Operating Humidity	30% ~ 80% RH (no dew condensation)					
Storage Humidity	30% ~ 80% RH (no dew condensation)					
OTHER						
Inrush Current	35A max	70A max	70A max	35A max	70A max	70A max
Power Consumption/Factor	560VA	1120VA	1120VA	560VA	1120VA	1120VA
Cooling Method	Forced air-cooling with fan motor					N/A
Power Source	100VAC ~ 240VAC, 50/60Hz, Single phase					
Interface (Standard)	RS-232C/USB					
Interface (Optional)	GPIB					
Analog Control	Yes					
DIMENSIONS & WEIGHT						
	210(W) x 124(H) x 290(D)mm					
	Approx.5kg	Approx.7kg	Approx.7kg	Approx. 5kg	Approx. 6kg	Approx. 7kg

PSB-2400L2

PSB-2400L/PSB-2400H/
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PSB-2800LS

Rear Panel

PSB-003 Parallel Connection Kit for Horizontal Installation

PSB-004 Parallel Connection Kit for Vertical Installation

ORDERING INFORMATION

PSB-2400L	0~80V/0~40A/400W Multi-Range DC Power Supply
PSB-2800L	0~80V/0~80A/800W Multi-Range DC Power Supply
PSB-2400L2	0~80V x 2/0~40A x 2/800W Multi-Range DC Power Supply
PSB-2400H	0~800V/0~40A/400W Multi-Range DC Power Supply
PSB-2800H	0~800V/0~80A/800W Multi-Range DC Power Supply
PSB-2800LS	800W Slave (Booster) Unit For Current Extension Only

ACCESSORIES :

User Manual (CD) x 1, AC Power Cord x 1, External Control Connector (26pin), Screws for output terminals on rear panel, Protection covers for output terminals on rear panel, Protection caps for output terminals on the front panel, GND Cable, USB Cable (For Model Number : PSB-2400L; PSB-2800L; PSB-2400L2; PSB-2400H; PSB-2800H) Loacal Bus (For Model Number : PSB-2400L; PSB-2800L; PSB-2400L2; PSB-2400H; PSB-2800H)

OPTIONAL ACCESSORIES

PSB-001	GPIB Card
PSB-003	Parallel Connection Kit for Horizontal Installation. Kit Includes : (PSB-007 Joint Kit, Horizontal bus bar x 2 , PSB-005 x1)
PSB-004	Parallel Connection Kit for Vertical Installation. Kit Includes : (PSB-007 Joint Kit, Verical bus bar x 2, PSB-005 x 1)
PSB-005	Parallel Connection Signal Cable
PSB-006	Serial Connection Signal Cable
PSB-007	Joint Kit : Includes 4 Joining Plates, (M3x6)screws x 4 ; (M3x8)screw x 2
GRJ-1101	Modular Cables

PSB-001 GPIB Control Board

GRJ-1101 Modular Cables

PSB-005 Paralle Connection Signal Cable

PSB-006 Serial Connection Signal Cable

PSB-007 Joint Kit