

SPS-A Series

Single Channel Switching Mode DC Power Supply



European Type Jack Terminal



Rear Panel



FEATURES

- * Equipped with an Encoder Switch Digital Control Knob
- * Remote Sensing Function with 2-wire/4-wire Switching
- * Provides OVP, OCP, and OTP Protection Mechanisms
- * Three Preset Memory/Recall Settings
- * Setting Resolution: 10 mV / 10 mA ; Readback Resolution: 1 mV / 1 mA
- * Output On/Off Control
- * Panel Lock Function
- * Control I/O Functionality
- * Compatible with GRA-441 J/E Rack Mount Kits
- * 2.4 inch TFT LCD Display

APPLICATIONS

- * Scientific Research and Experimental Testing
- * Battery Charging and Discharging Test
- * Electronic Component Measurement
- * 3C Electronic Product Test

The SPS-A Series is a new generation of switching DC power supplies, offering five models: SPS-1230A, 1820A, 2415A, 3610A, and 606A. It features an Encoder Switch digital knob with a 2.4-inch TFT LCD color display, enabling fast and precise voltage/current settings with clear visual feedback. Remote Sensing and 2W/4W measurement switching ensure accurate output by compensating for line voltage drops. Built-in OVP, OCP, and OTP protections provide reliable safety against abnormal conditions.

For convenience, the series allows storage of three parameter sets and one power-on preset, with resolution up to 10 mV / 10 mA and readback down to 1 mV / 1 mA. A panel lock prevents accidental changes, making it suitable for production lines and long-term operation. It also supports GRA-449-J/E rack-mount accessories for easy integration into automated systems, while the output On/Off control key ensures safer operation.

Overall, the SPS-A Series combines precision, intuitive design, and robust protection, making it an ideal choice for research, education, and production testing environments.

Model	V / I	Total Power
SPS-1230A	12 V / 30 A	360 W
SPS-1820A	18 V / 20 A	
SPS-2415A	24 V / 15 A	
SPS-3610A	36 V / 10 A	
SPS-606A	60 V / 6 A	



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SPECIFICATIONS						
		SPS-1230A	SPS-1820A	SPS-2415A	SPS-3610A	SPS-606A
OUTPUT RATING						
Total Channel		1				
Voltage / Current Range		0 V to 12 V / 0 A to 30 A	0 V to 18 V / 0 A to 20 A	0 V to 24 V / 0 A to 15 A	0 V to 36 V / 0 A to 10 A	0 V to 60 V / 0 A to 6 A
Total Power		360 W				
CONSTANT VOLTAGE OPERATION						
Line Regulation *1		≤ 5 mV				
Load Regulation *2		≤ 5 mV				
Ripple & Noise (5 Hz to 1 MHz) *3		≤ 5 mVrms				
Maximum Remote Sensing Compensation Voltage		0.5 V				
Rising Time *4		< 150 ms				
Falling Time *5		< 150 ms (> 10 % rating load)				
Recovery Time *6		≤ 500 μs (50 % to 100% load change)				
Setting Range		0 V to 12.50 V	0 V to 18.50 V	0 V to 24.50 V	0 V to 36.50 V	0 V to 60.50 V
Temperature Coefficient		≤ 100 ppm/°C				
CONSTANT CURRENT OPERATION						
Line Regulation *1		≤ 3 mA				
Load Regulation *7		≤ 10 mA				
Ripple & Noise		≤ 30 mArms	≤ 10 mArms	≤ 10 mArms	≤ 5 mArms	≤ 3 mArms
Setting Range		0 A to 30.10 A	0 A to 20.10 A	0 A to 15.10 A	0 A to 10.10 A	0 A to 6.10 A
RESOLUTION						
Voltage	Setting	10 mV(≤ 36 V) ; 20 mV(> 36 V)				
	Readback	10 mV				
Current	Setting	10 mA				
	Readback	2 mA	2 mA	1 mA	1 mA	1 mA
METER						
Full Scale	Setting	12.50 V / 30.10 A	18.50 V / 20.10 A	24.50 V / 15.10 A	36.50 V / 10.10 A	60.50 V / 6.10 A
	Readback	12.50 V / 30.100 A	18.50 V / 20.100 A	24.50 V / 15.100 A	36.50 V / 10.100 A	60.50 V / 6.100 A
Programming Resolution	Voltage/Current	4 digits / 4 digits				
Readback Resolution	Voltage/Current	4 digits / 5 digits				
Setting Accuracy	Voltage	± (0.1 % of reading + 30 mV) (≤ 36V) / ± (0.1 % of reading + 60 mV) (> 36V)				
	Current	± (0.5 % of reading + 30 mA)				
Readback Accuracy	Voltage	± (0.1 % of reading + 30 mV) (≤ 36V) / ± (0.1 % of reading + 60 mV) (> 36V)				
	Current	± (0.5 % of reading + 30 mA)				
PROTECTION						
OVP	Range	5 % to 105 % of rate output voltage				
	Setting Accuracy	± (1 % of setting + 0.5 V)				
OCP	Resolution	0.1 V				
	Range	5 % to 105 % of rate output voltage				
	Setting Accuracy	± (1 % of setting + 0.3 A)				
	Resolution	0.1 A				
Insulation Resistance		Between chassis and terminal : 20 MΩ or above (DC 500V) Between chassis and DC power cord : 30 MΩ or above (DC 500V)				
ADVANCED FUNCTION						
Status Signal Output	Output ON/OFF Status	Turns on when the output is on				
	CV Status	Turns on during CV operation				
	CC Status	Turns on during CC operation				
	ALM Status	Turns on when an alarm has been activated				
	PWR ON Status	Turns on when the power is turned on				
GENERAL SPECIFICATIONS						
Display		2.4-inch TFT LCD				
Interface		Remote I/O				
Operation Environment		Indoor use, Altitude: ≤ 2000 m; Ambient temperature: 0 °C to 40 °C / Relative humidity: ≤ 80 %; Installation category: II / Pollution degree: 2				
Storage Environment		Temperature: -10 °C to 70 °C, Humidity: ≤ 70 %				
Power Input		AC 115 V/230 V ± 15 %, 50 Hz or 60 Hz				
Power Consumption		900 VA				
Dimensions & Weight		107 mm x 124 mm x 363 mm (W x H x D), Approx. 3.6 kg				

Note: *1. At 97 Vac to 133Vac or 195 Vac or 265Vac, constant load.

*2. From No-load to Full-load, constant input voltage. Measured at the front output terminal.

*3. Measurement frequency bandwidth is 5 Hz to 1 MHz.

*4. From 10 % to 90 % of rated output voltage, with rated resistive load.

*5. From 90 % to 10 % of rated output voltage, with rated resistive load.

*6. Time for output voltage to recover within 0.1 % + 10 mV of its rated output for a load change from 50 % to 100 % of its rated output current.

*7. For load voltage change, equal to the unit voltage rating, constant input voltage.

Specifications subject to change without notice. SPS-A Series_GD1DS

ORDERING INFORMATION	
SPS-1230A	360 W Single Channel Switching Mode DC Power Supply (12 V / 30 A)
SPS-1820A	360 W Single Channel Switching Mode DC Power Supply (18 V / 20 A)
SPS-2415A	360 W Single Channel Switching Mode DC Power Supply (24 V / 15 A)
SPS-3610A	360 W Single Channel Switching Mode DC Power Supply (36 V / 10 A)
SPS-606A	360 W Single Channel Switching Mode DC Power Supply (60 V / 6 A)
ACCESSORIES	
Standard Type Jack Terminal: Power Cord x 1, Packing List x 1, Test Lead GTL-105A x 1	
European Type Jack Terminal: Power Cord x 1, Packing List x 1, Test Lead GTL-203A x 1, Test Lead GTL-201A x 1	

OPTIONAL ACCESSORIES	
GTL-105A	Test Lead, U-type to Alligator Test Lead, Max. Current 3 A, 1000 mm
GTL-201A	Ground Lead, Banana to Banana, European Terminal, 200 mm
GTL-203A	Test Lead, Banana to Alligator, European Terminal, Max. Current 3 A, 1000 mm
GTL-204A	Test Lead, Banana to Alligator, European Terminal, Max. Current 10 A, 1000 mm
GRA-441-J	Rack Mount kit (JIS)
GRA-441-E	Rack Mount kit (EIA)

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