

WPS-6000 SERIES

1/2 (2U) Wide range economical DC power supply



Features

- Equipped with active PFC, the power factor can reach up to 0.99.
- Wide range output capability, expanding the output range to 1.5 times that of the same power level "matrix" power supply.
- Adopting high-frequency LLC multi resonant inverter, the overall efficiency of the machine is as high as 92%.
- Supports OVP, OCP, OPP, OTP protection, and SENSE terminal reverse connection protection.
- Equipped with lead voltage drop compensation terminals, it can achieve output lead voltage drop compensation during high current operation.
- Equipped with a discharge circuit ($U_{out} < 10V$ within 1 second).
- Built in multiple interfaces, including communication interfaces such as RS232/RS485.
- Supports SCPI instruction language.
- The display adopts high brightness LED digital tubes and indicator lights, with exquisite appearance, simple operation, and intuitive.
- Built in voltage reverse protection module, suitable for various inductive loads such as transformers and motors (optional).

Introduction

The WPS-6000 series is a programmable laboratory constant power DC power supply controlled by a microprocessor, with exquisite appearance, small size, high performance, economic applicability, and simple operation. Suitable for customers who only need the front panel knob for easy operation, without the requirement for complex functions. This series of power supplies also has excellent performance, with output indicators far higher than those of regulated power supplies of the same specifications on the market.

DC Output

This series of power supplies includes three basic models: 750W, 1.5kW, and 3kW. The output voltage ranges from 0~40V to 0~1000V, and the output current ranges from 0~2.5A to 0~200A, corresponding to various different models. Whether manually or remotely controlled (analog or digital), voltage, current, and power can be continuously adjusted between 0% and 100%.

Sense

In order to avoid voltage drop caused by excessively long wires connecting the load, remote testing allows direct measurement of the output voltage at the terminal of the test object to improve measurement accuracy. S+ and S - are remote compensation terminals. When using remote compensation testing, connect S+ and S - to the positive and negative terminals of the test object.

Discharge circuit

All power supply devices in this series are equipped with discharge circuits inside. When unloaded or with a small load, it can ensure that the dangerous voltage drops below 10VDC within 1 second after the DC output is turned off, ensuring human safety.

Protection function

To protect customers' connected devices, an overvoltage protection limit (OVP), as well as overcurrent (OCP) and over-power (OPP) protection limits can be set for the product. Once one of these three values is exceeded for any reason, the DC output will be immediately cut off and a status signal will be sent out at the display and interface terminals. This product

also has over temperature protection. If the product overheats, it will turn off the DC output to ensure the safety of the tested object and power supply.

Wide range output

Constant power supply has a wider output voltage and current range compared to ordinary power supply, and a single model power supply can meet the testing needs of customers for various specifications of products. The voltage and current output of the power supply are limited by the maximum power, and reducing the output current can obtain higher voltage or larger output current, making it more flexible than traditional "matrix" power supplies.

Technical parameter table

MODEL		WPS-6360-15	WPS-6500-5	WPS-6500-10	WPS-6750-3.5	WPS-6750-7
AC Input	Phase	1ph+N+PE				
	Voltage	220VAC±10%				
	Frequency	45~66Hz				
	PFC	≥0.99				
DC Output	Voltage	0~360V	0~500V	0~500V	0~750V	0~750V
	Current	0~15A	0~5A	0~10A	0~3.5A	0~7A
	Power	0~1.5kW	0~750W	0~1.5kW	0~750W	0~1.5kW
	Efficiency	≤93%	≤93%	≤93%	≤93%	≤93%
Program Precision	Voltage	≤±(0.05%+0.04%FS)				
	Current	≤±(0.15%+0.1%FS)				
	Power	≤±0.8%FS				
Readback precision	Voltage	≤±(0.05%+0.04%FS)				
	Current	≤±(0.15%+0.1%FS)				
	Power	≤±0.8%FS				
Ripple & Noise	RMS (20Hz-300kHz)	40mVrms	50mVrms	50mVrms	50mVrms	50mVrms
	P-P (20Hz-20MHz)	250mVpp	325mVpp	325mVpp	325mVpp	325mVpp
Line regulation	Voltage	≤0.02%FS (±10%ΔU _{ac} input)				
	Current	≤0.05%FS (±10%ΔU _{ac} input)				
Load regulation	Voltage	≤0.05%FS (0-100% of load regulation)				
	Current	≤0.15%FS (0-100%ΔU _{dc} of load regulation)				
Analog interface	Type	Built in 15 pin D-Sub female plug, electrically isolated				
	Signal Range	0~5V or 0~10V(switchable)				
	U / I / P accuracy	0~10V: ≤0.2%FS 0~5V: ≤0.4%FS				
Dynamic Response Time	Load adjustments take time	≤2ms (Adjust the load from 10-100%)				
	Output Voltage Rise Time	Maximum 30ms (10~90% full scale)				
Protection function		OTP ,OVP ,OCP ,OPP ,PF				
Interface		RS232/ RS485/ LAN				
Work environment		Operation temperature: 0~50°C, humidity: <80%, No condensation, Storage Temp: -20~70°C, altitude				
Isolation and voltage resistance		1000VDC (Output grounding)				
Size W×D×H(mm)		215×460×88				
Weight		6kg	5.2kg	6kg	5.2kg	6kg