High Power DC Power Supply

High Power Programmable DC Power Supply PWS Series

Introduction

Programmable switching DC power supply PWS series cover large range of outputs, rated power from 1.8kW to 100kW, rated voltage up to 5000V, rated current up to 10000A.

IGBT module adjustment and PWM modulation facilitate PWS series with high efficiency, high accuracy and high stability. High gain amplifier circuit design makes PWS series with fast response. Improvement on circuits brings stronger anti-interference performance. Active air duct design and optimized cooling channels effectively reduce temperature rise.

Over Voltage Protection, Over Current Protection and Over Temperature Protection keep the PWS series and their load safe from unexpected conditions. For more complicated applications, the PWS series are available with many optional functions: remote sensing, remote ON/OFF control, timer switch, square waveform output, PV curve output, etc.

PWS series can be made to customer order. Please contact us for more details.

Features

- ✓ Max. output voltage 5000V, Max. output current 10000A
- ✓ Applying IGBT module and 19-inch standard size
- ✓ **4 digits LCD display for voltage and current**
- ✓ Constant voltage and constant current operations, auto CV/CC switch
- ✓ Front panel operation: preset voltage and current, output ON/OFF
- ✓ Multiple protections: OVP, OCP, OTP and OLP
- ✓ Transient response time 5ms
- ✓ **Communication: RS-232 and RS-485 interface**
- ✓ Optional function
  - – Remote control: 0-5V, 0-10V or 4-20mA signal to control output voltage and current
  - – Remote Sensing: compensate the voltage drop
  - – Remote ON/OFF control: using a replay to control the output
  - – Timer Switch: turn on or off the output as per preset time
  - – Square Waveform Output: output square waveform according to preset time and cycles
  - – Reverse polarity protection: to protect power supply from damage by reverse current from EUT
  - – PV curve output for solar panel tests
  - – LAN interface
  - – System Bus interface
- ✓ Customized specifications and functions acceptable

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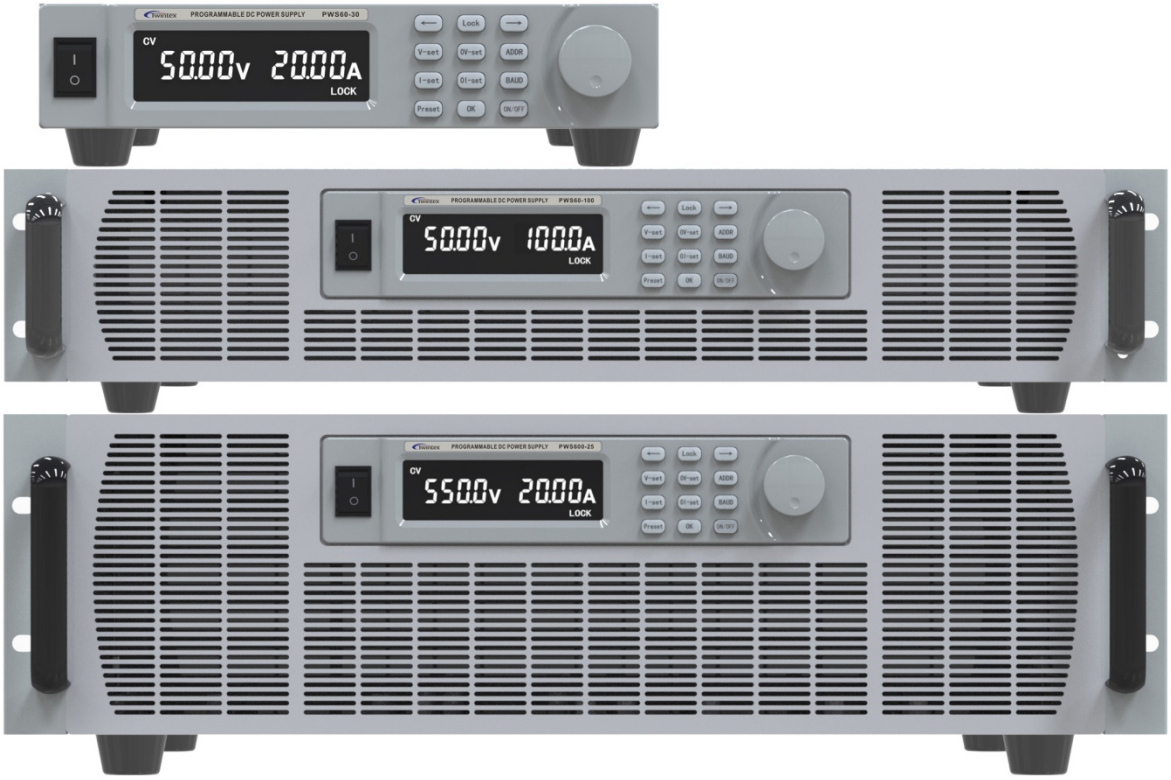
Photos



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Specifications

Working mode		**IGBT**
Line regulation	Voltage	≤0.1%FS rms
	Current	≤0.1%FS rms
Load regulation	Voltage	≤0.1%FS rms
	Current	≤0.1%FS rms
Ripple & Noise (20Hz~20MHz)	Voltage	≤0.3%FS+50mVrms
	Current	≤0.3%FS+10mArms
Time drift	Voltage	≤0.5%FS rms
	Current	≤1%FS rms
Temperature drift	Voltage	≤0.1%FS rms/˚C
	Current	≤0.3%FS rms/˚C
Setting accuracy	Voltage	≤0.1% FS +20mV (≤100V) ≤0.1% FS +100mV (300V) ≤0.1% FS +300mV (≥600V)
	Current	≤0.3% FS +10mA
Setting resolution	Voltage	0.01V / 0.1V / 1V
	Current	0.001A / 0.01A / 0.1A / 1A
Readback accuracy	Voltage	≤0.1% FS +20mV (≤100V) ≤0.1% FS +100mV (300V) ≤0.1% FS +300mV (≥600V)
	Current	≤0.3% FS +10mA
Readback resolution	Voltage	0.01V / 0.1V / 1V
	Current	0.001A / 0.01A / 0.1A / 1A
Transient response time		≤5ms (10% ~ 90% load change)
Protection		OVP, OCP, OTP and short circuit protection
OVP setting range		0.1V to 110% of rated voltage
OCP setting range		0.1A to 110% of rated voltage
Digital interface		RS232 & RS485, support ModBus-RTU commands
Analog interface (optional)		0-5V, 0-10V o 4-20mA interface for voltage/current control and feedback
Cooling method		Air cool
Operating environment		0˚C~40˚C, 10%~80%RH
Storage environment		-20˚C~70˚C, 10%~90%RH
Input voltage		≤6KW: 1φ2W, 220V±10% 50Hz/60Hz > 6KW: 3φ4W, 380V±10% 50Hz/60Hz
Input module		Power socket or terminal block
Accessories		Operation manual: 1EA

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Model (1800W)	Rated Output			Resolution		Ripple & Noise	Setting Accuracy
	V	A	Power	V	A	(20Hz~20MHz)	
PWS30-60	0~30V	0~60A	1.8kW	0.01V	0.01A	≤0.3%FS+50mVrms ≤0.3%FS+10mArms	≤0.1% FS +20mV ≤0.3% FS +10mA
PWS60-30	0~60V	0~30A	1.8kW	0.01V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS100-18	0~100V	0~18A	1.8kW	0.1V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS300-6	0~300V	0~6A	1.8kW	0.1V	0.001A		≤0.1% FS +100mV ≤0.3% FS +10mA
PWS600-3	0~600V	0~3A	1.8kW	0.1V	0.001A		≤0.1% FS +300mV ≤0.3% FS +10mA
PWS1000-1	0~1000V	0~1A	1kW	1V	0.001A		≤0.1% FS +300mV ≤0.3% FS +10mA
Input	1φ2W, 220V±10% 50Hz/60Hz						
Dimensions	218W*44H*435D mm (Half 1U frame)						
Weight	Approx 4kg						

Model (3600W)	Rated Output			Resolution		Ripple & Noise	Setting Accuracy
	V	A	Power	V	A	(20Hz~20MHz)	
PWS30-120	0~30V	0~120A	3.6kW	0.01V	0.1A	≤0.3%FS+50mVrms ≤0.3%FS+10mArms	≤0.1% FS +20mV ≤0.3% FS +10mA
PWS60-60	0~60V	0~60A	3.6kW	0.01V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS100-36	0~100V	0~36A	3.6kW	0.1V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS120-30	0~120V	0~30A	3.6kW	0.1V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS300-12	0~300V	0~12A	3.6kW	0.1V	0.01A		≤0.1% FS +100mV ≤0.3% FS +10mA
PWS600-6	0~600V	0~6A	3.6kW	0.1V	0.001A		≤0.1% FS +300mV ≤0.3% FS +10mA
PWS1000-3	0~1000V	0~3A	3kW	1V	0.001A		≤0.1% FS +300mV ≤0.3% FS +10mA
Input	1φ2W, 220V±10% 50Hz/60Hz						
Dimensions	430W*88H*520D mm (2U frame)						
Weight	Approx 18kg						

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Model (6kW)	Rated Output			Resolution		Ripple & Noise	Setting Accuracy
	V	A	Power	V	A	(20Hz~20MHz)	
PWS20-300	0~20V	0~300A	6kW	0.01V	0.1A	≤0.3%FS+50mVrms ≤0.3%FS+10mArms	≤0.1% FS +20mV ≤0.3% FS +10mA
PWS30-200	0~30V	0~200A	6kW	0.01V	0.1A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS60-100	0~60V	0~100A	6kW	0.01V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS100-60	0~100V	0~60A	6kW	0.1V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS300-20	0~300V	0~20A	6kW	0.1V	0.01A		≤0.1% FS +100mV ≤0.3% FS +10mA
PWS600-10	0~600V	0~10A	6kW	0.1V	0.01A		≤0.1% FS +300mV ≤0.3% FS +10mA
PWS1000-6	0~1000V	0~6A	6kW	1V	0.001A		≤0.1% FS +300mV ≤0.3% FS +10mA
Input	1φ2W, 220V±10% 50Hz/60Hz						
Dimensions	430W*88H*520D mm (2U frame)						
Weight	Approx 18kg						

Model (12kW)	Rated Output			Resolution		Ripple & Noise	Setting Accuracy
	V	A	Power	V	A	(20Hz~20MHz)	
PWS30-400	0~30V	0~400A	12kW	0.01V	0.1A	≤0.3%FS+50mVrms ≤0.3%FS+10mArms	≤0.1% FS +20mV ≤0.3% FS +10mA
PWS60-200	0~60V	0~200A	12kW	0.01V	0.01A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS100-120	0~100V	0~120A	12kW	0.1V	0.1A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS300-40	0~300V	0~40A	12kW	0.1V	0.01A		≤0.1% FS +100mV ≤0.3% FS +10mA
PWS600-20	0~600V	0~20A	12kW	0.1V	0.01A		≤0.1% FS +300mV ≤0.3% FS +10mA
Input	3φ4W, 380V±10% 50Hz/60Hz						
Dimensions	430W*132H*570D mm (3U frame)						
Weight	Approx 28kg						

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Model (15kW)	Rated Output			Resolution		Ripple & Noise	Setting Accuracy
	V	A	Power	V	A	(20Hz~20MHz)	
PWS60-250	0~60V	0~250A	15kW	0.01V	0.1A	≤0.3%FS+50mVrms ≤0.3%FS+10mArms	≤0.1% FS +20mV ≤0.3% FS +10mA
PWS50-300	0~50V	0~300A	15kW	0.01V	0.1A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS100-150	0~100V	0~150A	15kW	0.1V	0.1A		≤0.1% FS +20mV ≤0.3% FS +10mA
PWS300-50	0~300V	0~50A	15kW	0.1V	0.01A		≤0.1% FS +100mV ≤0.3% FS +10mA
PWS600-25	0~600V	0~25A	15kW	0.1V	0.01A		≤0.1% FS +300mV ≤0.3% FS +10mA
PWS1000-15	0~1000V	0~15A	15kW	1V	0.01A		≤0.1% FS +300mV ≤0.3% FS +10mA
PWS1500-10	0~1500V	0~10A	15kW	1V	0.01A		≤0.1% FS +300mV ≤0.3% FS +10mA
Input	3φ4W, 380V±10% 50Hz/60Hz						
Dimensions	430W*132H*570D mm (3U frame)						
Weight	Approx 28kg						

The above models are listed for reference only. Customer specifications are welcome.
Specifications are subject to change without prior notice.

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