PPS series (300W~900W, 1mV/1mA)

Introduction

PPS series are high accuracy programmable DC power supply with single output. MPU control, RS-232/RS-485/USB interface for PC control, the PPS series facilitates auto test and auto control. The commands of the PPS series are compliant with SCPI commands. Users can easily develop programs to facilitate different applications in auto test and auto control. Users can also store or recall data via the USB host on front panel.

The 4.3-inch TFT LCD display gives full display for parameters and output waveforms. Digital input fulfilled by rotary dial and keypad input makes input fast and accurate. Voltage and current regulations by software, avoids human error and makes the PPS series more accurate.

Features

- ✓ High accuracy, high resolution
- ✓ Over load, over voltage, over current, over temperature and reverse polarity protections
- ✓ Constant voltage and constant current operations, auto CV and CC switch
- ✓ 5 digits 4.3-inch TFT LCD display
- ✓ High speed rotary dial and keypad input
- ✓ Built-in beeper alarm
- ✓ Panel lock and output ON/OFF function
- ✓ List mode function, 300 sets save & recall for voltage, current and time setups, easy use in auto test
- ✓ Remote sense function
- ✓ Display load resistance value
- ✓ Battery charge mode
- ✓ Standard USB host interface for data storage and recall from external USB flash driver
- ✓ Standard RS-232 interface, support SCPI commands, support Labview
- ✓ Standard 0-5V analog control
- ✓ Optional RS-232 to USB cable

New Features

- ✓ Standard RS-485 interface, support Modbus-RTU commands
- ✓ CV/CC Priority Setup
- ✓ Trigger Data Record
- ✓ Current Limit Alarm
- ✓ Voltage Limit Alarm
- ✓ Ramp output, adjustable Voltage/Current slew rate
- ✓ Optional Test Data Record Function

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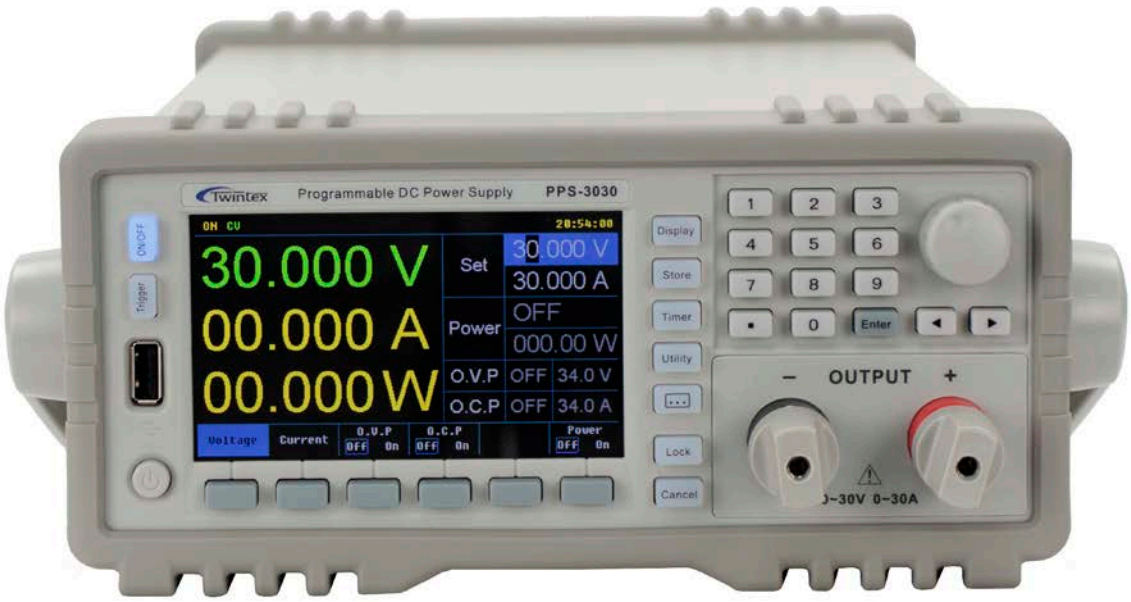
Programmable Switching DC Power Supply

Product photo



Selection Guide

We have different series of laboratory programmable power supplies. Each of them has their own remarkable features.

	PPA	PPS	PPW	PPM	TPM
Display	4.3-inch TFT LCD	4.3-inch TFT LCD	4.3-inch LCD	4.3-inch LCD	122*32 LCD
Rated Power	400W 850W 1500W	300W 600W 900W	300W 600W 900W	90W~375W	90W~180W
Voltage Ripple	50mVpp	30mVpp	30mVpp	1mVrms	1mVrms
Ramp output	√	√	×	×	×
USB Host	√	√	×	×	×
USB Device	×	×	×	×	√
RS232	√	√	√	√	×
RS485	√	√	Optional	Optional	×
Analog Control 0-5V	×	√	Optional	Optional	×
Remote Sensing	√	√	√	√	×
Battery Charge Mode	√	√	√	√	×
Low resistance measurement	√	√	√	√	×
List Mode	√	√	√	√	√
19-Inch Rack Compatible	√	√	√	√	×
Data logger	Optional	Optional	×	×	×

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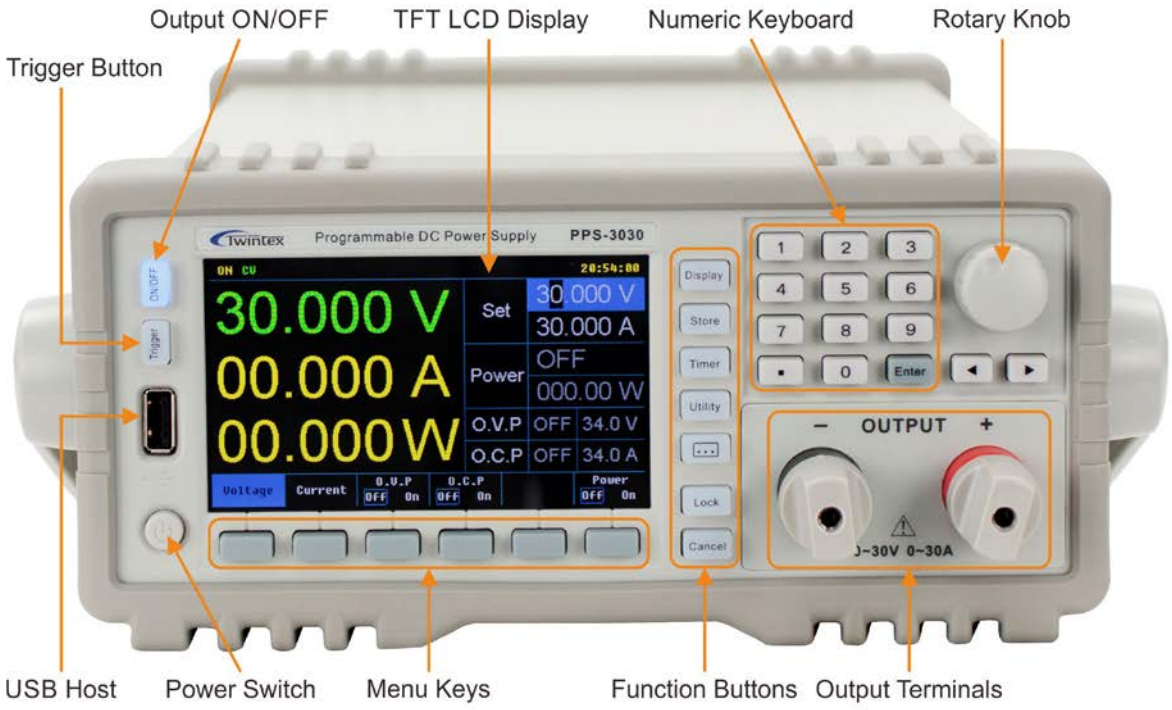
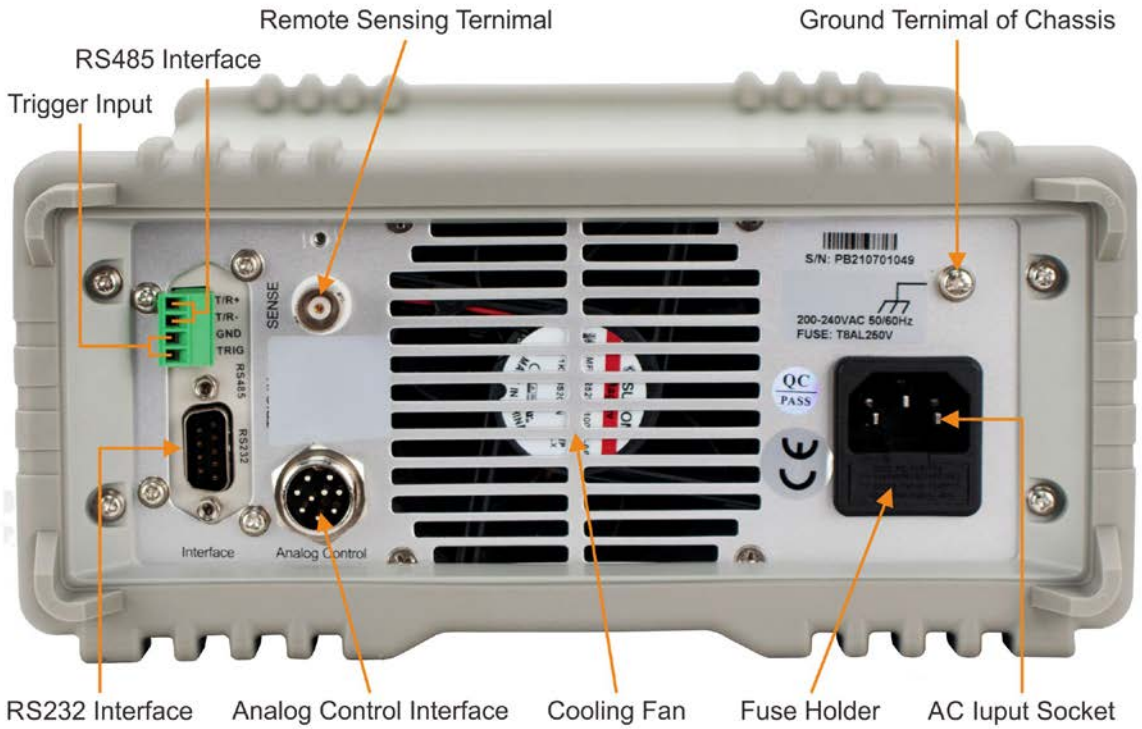
Display and Control Panel

Output voltage, output current and output time can be set through digital keypad or rotary knob. Actual values of output voltage and output current can be represented in waveform display.

To prevent unintentional operations, all operation controls can be locked.





Programmable Switching DC Power Supply

Specifications (300W/600W)

(0℃~40℃)		PPS-3010	PPS-2030	PPS-3020	PPS-6010	PPS-8008
Rated Output	Voltage	0~31V	0~20.5V	0~31V	0~60.5V	0~80.5V
	Current	0~10.5A	0~30.5A	0~21A	0~10.5A	0~8.0A
Line regulation	Voltage	≤0.01%+4mV				
	Current	≤0.1%+3mA				
Load regulation	Voltage	≤0.1%+5mV				
	Current	≤0.1%+5mA				
Setting accuracy	Voltage	±(0.03% of reading + 10mV)				
	Current	±(0.1% of reading + 0.1% of FS)				
Setting resolution	Voltage	1mV				
	Current	1mA				
Reading accuracy	Voltage	±(0.02% of reading +5mV)				
	Current	±(0.1% of reading + 0.1% of FS)				
Reading resolution	Voltage	1mV				
	Current	1mA				
Ripple&Noise (20Hz~20MHz)	Voltage	≤2mVrms, 30mVpp				
	Current	≤10mArms				
Rise time	Empty load	≤500ms				
	Full load	≤1s				
Fall time	Empty load	≤1.5s	≤1.5s	≤1.5s	≤3s	≤4s
	Full load	≤3ms	≤2ms	≤3ms	≤8ms	≤10ms
Slew rate	Time range	0.2~99999S, resolution 0.1S				
	Rise slew rate	0.06V/ms(max)	0.04V/ms(max)	0.06V/ms(max)	0.12V/ms(max)	0.16V/ms(max)
	Fall slew rate	10V/ms(max)	10V/ms(max)	10V/ms(max)	7.5V/ms(max)	8V/ms(max)
Recovery time		≤1.5ms (50% load change)				
Temperature Coefficient		≤100ppm/℃				
Efficiency		80% typical				
Power factory		0.98				
Protection		Over load, over voltage, over current, over temperature and reverse polarity protections				
O.V.P setting range		0.1~34V	0.1~24V	0.1~34V	0.1~64V	0.1~88V
O.C.P setting range		0.1~24A	0.1~34A	0.1~24A	0.1~12A	0.1~8.8A
Remote sense function		Maximum compensation voltage 5% of FS				
Battery charge		Lithium battery curve charge				
Digital interface		RS232 & RS485 interface, Support SCPI & ModBus commands				
Analog interface		0-5V analog control for output ON/OFF, voltage & current control & monitor				
Memory		300 sets internal save, support save to USB flash driver				
Insulation		Between base and terminals: ≥20MΩ/500VDC Between base and AC line: ≥30MΩ/500VDC				
Operating environment		Indoor use	Altitude: ≤2000m	Ambient temperature: 0~40℃		
		Relative humidity: ≤80%	Installation category: II	Pollution degree: 2		
Storage environment		-10℃~70℃, ≤70%RH				
Power source		AC220V±10%, 50/60Hz				
Accessories		Power cord x1, Operation manual x1, RS232 cable x1, Software CD x1				
Dimension (WxHxD)		215x89x352mm				
Weight		4.5kg				

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Programmable Switching DC Power Supply

Specifications (900W)

(0℃~40℃)		PPS-1560	PPS-2045	PPS-3030	PPS-3625	PPS-4520
Rated output	Voltage	0~15.5V	0~20.5V	0~31V	0~36.5V	0~45.5V
	Current	0~60.5A	0~45.5A	0~31A	0~25.5A	0~20.5A
Line regulation	Voltage	≤0.01%+4mV				
	Current	≤0.1%+3mA				
Load regulation	Voltage	≤0.1%+5mV				
	Current	≤0.1%+5mA				
Setting accuracy	Voltage	±(0.03% of reading + 10mV)				
	Current	±(0.1% of reading + 0.1% of FS)				
Setting resolution	Voltage	1mV				
	Current	1mA				
Reading accuracy	Voltage	±(0.02% of reading +5mV)				
	Current	±(0.1% of reading + 0.1% of FS)				
Reading resolution	Voltage	1mV				
	Current	1mA				
Ripple&Noise (20Hz~20MHz)	Voltage	≤2mVrms, 30mVpp				
	Current	≤10mArms				
Rise time	Empty load	≤200ms	≤300ms	≤500ms	≤500ms	≤500ms
	Full load	≤300ms	≤1s	≤1s	≤1s	≤1s
Fall time	Empty load	≤2s	≤2s	≤2s	≤3s	≤3s
	Full load	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Slew rate	Time range	0.2~99999S, resolution 0.1S				
	Rise slew rate	0.08V/ms(max)	0.06V/ms(max)	0.06V/ms(max)	0.07V/ms(max)	0.09V/ms(max)
	Fall slew rate	8V/ms(max)	10V/ms(max)	15V/ms(max)	12V/ms(max)	15V/ms(max)
Recovery time		≤1.5ms (50% load change)				
Temperature Coefficient		≤100ppm/℃				
Efficiency		80% typical				
Power factory		0.98				
Protection		Over load, over voltage, over current, over temperature and reverse polarity protections				
O.V.P setting range		0.1~18V	0.1~24V	0.1~34V	0.1~40V	0.1~55V
O.C.P setting range		0.1~62 A	0.1~50A	0.1~34A	0.1~27.5A	0.1~22A
Remote sense function		Maximum compensation voltage 5% of FS				
Battery charge		Lithium battery curve charge				
Digital interface		RS232 & RS485 interface, Support SCPI & ModBus commands				
Analog interface		0-5V analog control for output ON/OFF, voltage & current control & monitor				
Memory		300 sets internal save, support save to USB flash driver				
Insulation		Between base and terminals: ≥20MΩ/500VDC Between base and AC line: ≥30MΩ/500VDC				
Operating environment		Indoor use	Altitude: ≤2000m	Ambient temperature: 0~40℃		
		Relative humidity: ≤80%	Installation category: II	Pollution degree: 2		
Storage environment		-10℃~70℃, ≤70%RH				
Power source		AC220V±10%, 50/60Hz				
Accessories		Power cord x1, Operation manual x1, RS232 cable x1, Software CD x1				
Dimension (WxHxD)		215x89x412mm				
Weight		5.5kg				

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Programmable Switching DC Power Supply

Specifications (900W)

(0℃~40℃)		PPS-6015	PPS-8011	PPS-12H75	PPS-15H60
Rated output	Voltage	0~60.5V	0~80.5V	0~121V	0~151V
	Current	0~15.5A	0~11.5A	0~7.6A	0~6.1A
Line regulation	Voltage	≤0.01%+4mV			
	Current	≤0.1%+3mA			
Load regulation	Voltage	≤0.1%+5mV			
	Current	≤0.1%+5mA			
Setting accuracy	Voltage	±(0.03% of reading + 10mV)			
	Current	±(0.1% of reading + 0.1% of FS)			
Setting resolution	Voltage	1mV	1mV	10mV	10mV
	Current	1mA			
Reading accuracy	Voltage	±(0.02% of reading +5mV)			
	Current	±(0.1% of reading + 0.1% of FS)			
Reading resolution	Voltage	1mV	1mV	10mV	10mV
	Current	1mA			
Ripple&Noise (20Hz~20MHz)	Voltage	≤2mVrms, 30mVpp		≤5mVrms, ≤50mVpp	
	Current	≤10mArms			
Rise time	Empty load	≤1s	≤1s	≤1.5s	≤1.5s
	Full load	≤1.5s	≤1.5s	≤2s	≤2s
Fall time	Empty load	≤3s	≤3s	≤8s	≤8s
	Full load	≤3ms	≤4ms	≤9ms	≤12ms
Slew rate	Time range	0.2~99999S, resolution 0.1S			
	Rise slew rate	0.06V/ms(max)	0.08V/ms(max)	0.08V/ms(max)	0.1V/ms(max)
	Fall slew rate	20V/ms(max)	20V/ms(max)	13V/ms(max)	13V/ms(max)
Recovery time		≤1.5ms (50% load change)			
Temperature Coefficient		≤100ppm/℃			
Efficiency		80% typical			
Power factory		0.98			
Protection		Over load, over voltage, over current, over temperature and reverse polarity protections			
O.V.P setting range		0.1~64V	0.1~88V	0.1~132V	0.1~160V
O.C.P setting range		0.1~17A	0.1~12A	0.1~8A	0.1~6.6A
Remote sense function		Maximum compensation voltage 5% of FS			
Battery charge		Lithium battery curve charge			
Digital interface		RS232 & RS485 interface, Support SCPI & ModBus commands			
Analog interface		0-5V analog control for output ON/OFF, voltage & current control & monitor			
Memory		300 sets internal save, support save to USB flash driver			
Insulation		Between base and terminals: ≥20MΩ/500VDC Between base and AC line: ≥30MΩ/500VDC			
Operating environment		Indoor use	Altitude: ≤2000m	Ambient temperature: 0~40℃	
		Relative humidity: ≤80%	Installation category: II	Pollution degree: 2	
Storage environment		-10℃~70℃, ≤70%RH			
Power source		AC220V±10%, 50/60Hz			
Accessories		Power cord x1, Operation manual x1, RS232 cable x1, Software CD x1			
Dimension (WxHxD)		215x89x412mm			
Weight		5.5kg			

Specifications are subject to change without prior notice.

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