Programmable Switching DC Power Supply

Introduction

PPW series are high accuracy programmable DC power supply with single output. Using MPU control, RS-232/RS-485/USB interface for PC control, the PPW series facilitates auto test and auto control. The commands of the PPW series are compliant with SCPI commands. Users can easily develop programs to facilitate different applications in auto test and auto control. Digital input fulfilled by rotary dial and keypad input, fast and accurate. Voltage and current regulations by software, avoids human error and makes the PPW series more accurate.

Features

✔ High accuracy, high resolution

✔ 5 Digits 4.3-inch backlit Segment LCD display

✔ High speed rotary dial and keypad input

✔ CV/CC priority setup

✔ Remote sense function

✔ Load resistance measurement

✔ Battery curved charge mode

✔ Multiple protections: OVP, OCP, OLP, OTP and reverse polarity protections

✔ List mode function, 300 sets save & recall for voltage, current and time setups

✔ Communication interface: RS232 at default, optional RS85 and 0-5V analog interface

✔ Support SCPI & ModBus-RTU commands, support Labview

✔ Data record software

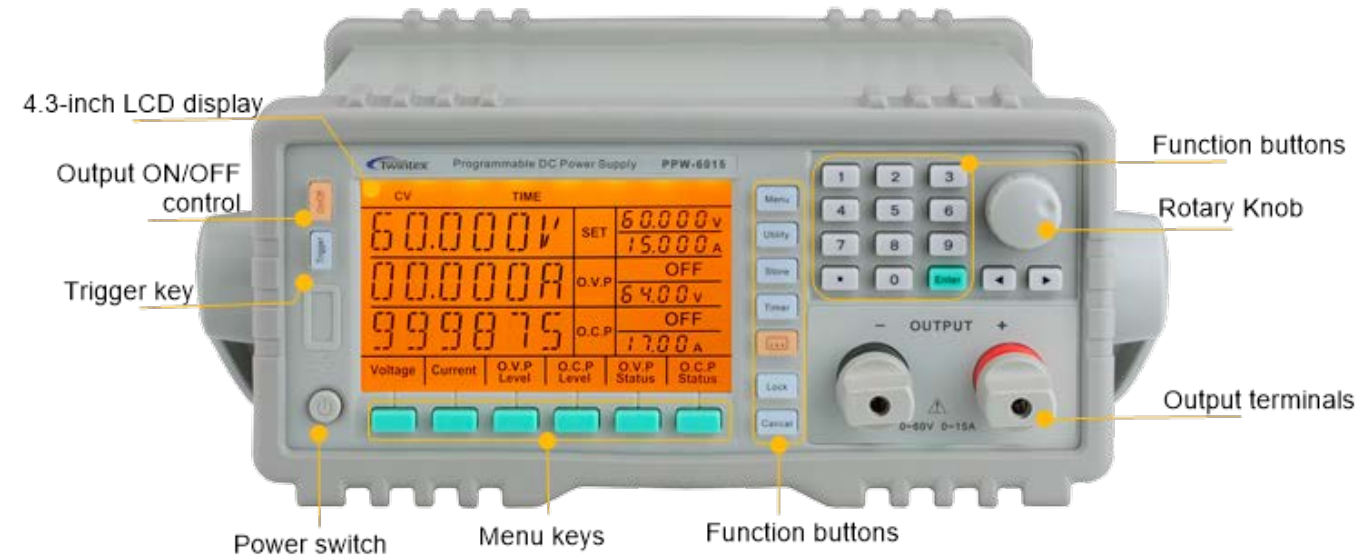# Programmable Switching DC Power Supply

Selection Guide

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

	PPA	PPA	PPS	PPW	PPH	PPM
Display	4 digits LCD	4.3-inch TFT LCD	4.3-inch TFT LCD	4.3-inch LCD	4.3-inch TFT LCD	4.3-inch LCD
Rated Power	100W 180W	400W 850W 1500W	300W 600W 900W	300W 600W 900W	300W to 360W	90W To 375W
Working Mode	Switching	Switching	Switching	Switching	Linear	Linear
Voltage Ripple	5mVrms	50mVpp	30mVpp	30mVpp	1mVrms	1mVrms
Constant Power (CP) Mode	√	√	×	×	×	×
Ramp Output	×	√	√	×	√	×
CV/CC Priority Set	×	√	√	√	×	×
V-limit & I-limit alarm	×	√	√	×	√	×
USB Host	×	√	√	×	√	×
USB Device	Optional	×	×	×	×	×
RS232	√	√	√	√	√	√
RS485	√	√	√	Optional	√	Optional
Analog Control 0-5V	×	×	√	Optional	√	Optional
Remote Sensing	√	√	√	√	√	√
Lithium Battery Charge Mode	×	√	√	√	√	√
Load Resistance Measurement	×	√	√	√	√	√
List Mode	√	√	√	√	√	√
19" Rack Compatible	√	√	√	√	√	√
Data record software	√	√	√	√	√	√

Programmable Switching DC Power Supply
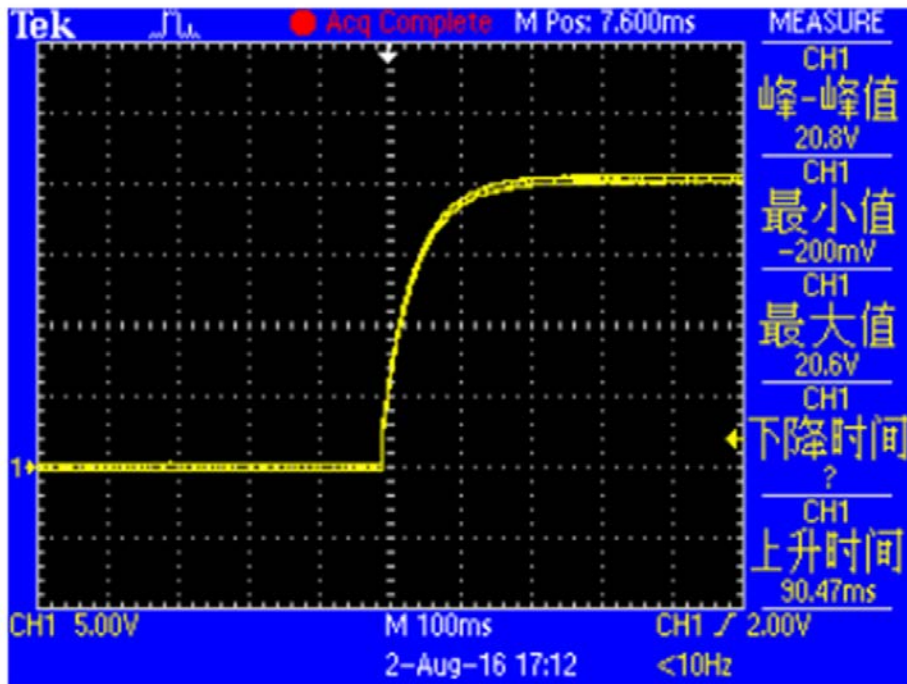
Twintex

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.

No Overshoot

This power supply has no overshoot during voltage output, giving very stable output. Stable output is key to protect devices under test (DUT).
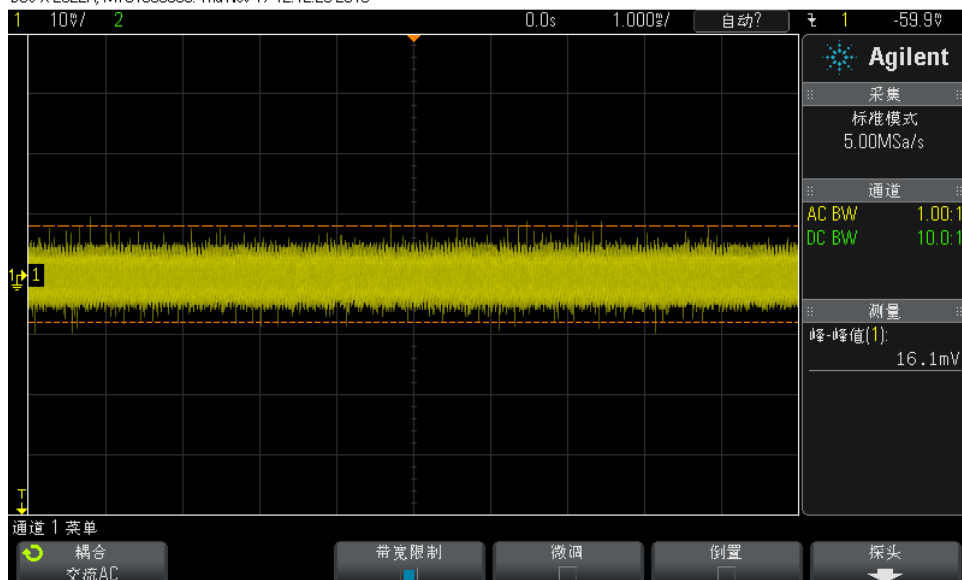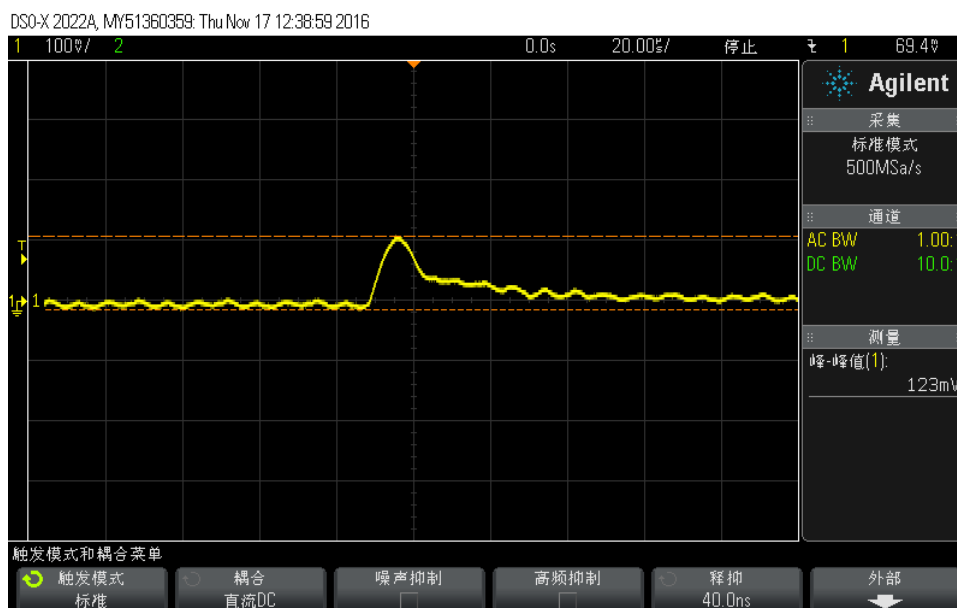

Low Ripple, Pure Output

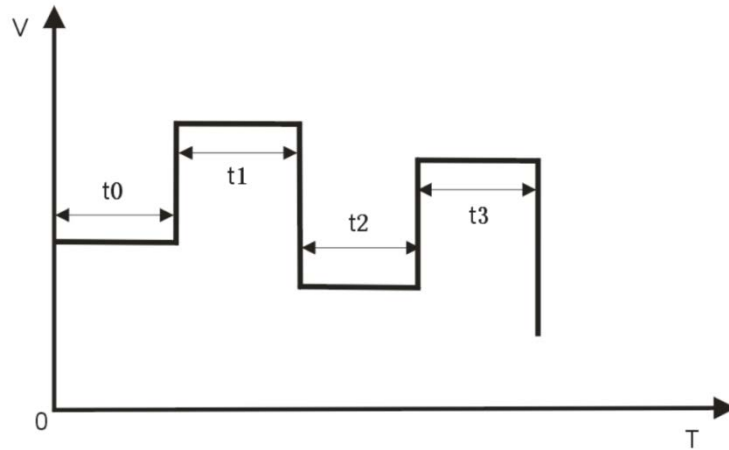Voltage ripple <30mVpp (load 1Ω, 30V)

Fast Transient Response Time

This power supply has fast transient response time, <50us when 25% to 75% load change. When there is transient change on load current, the output voltage can recover to its setting value very fast, so as to ensure stable and high quality output. Some DUT, such as cell phones, WIFI, wireless sensors, its fast change is far over transient response speed of the power supply. When testing such DUT, the power supply is not able to make output as per its setting values, and more over may cause shut down or repeating restart on the DUT. With fast transient response time, our power supply ensures high quality output.

Timing Output

When the timing output is ON, the power supply outputs the preset voltage and current values (max 300 groups) to truly simulate the various kinds of running status of power supply. Output curve of timing output can be displayed in the way of waveform.

Press "Timer" key to set timing output parameters and press "On/Off" key to start output. Max 300 groups of parameters can be set. Many groups of parameters can be set into one running cycle. The power supply makes output according to preset cycles. In each cycle, output voltage, output current and output time can be set differently. Numbers of cycles can be set as INFINITE or set during 1 to 99999 cycles.
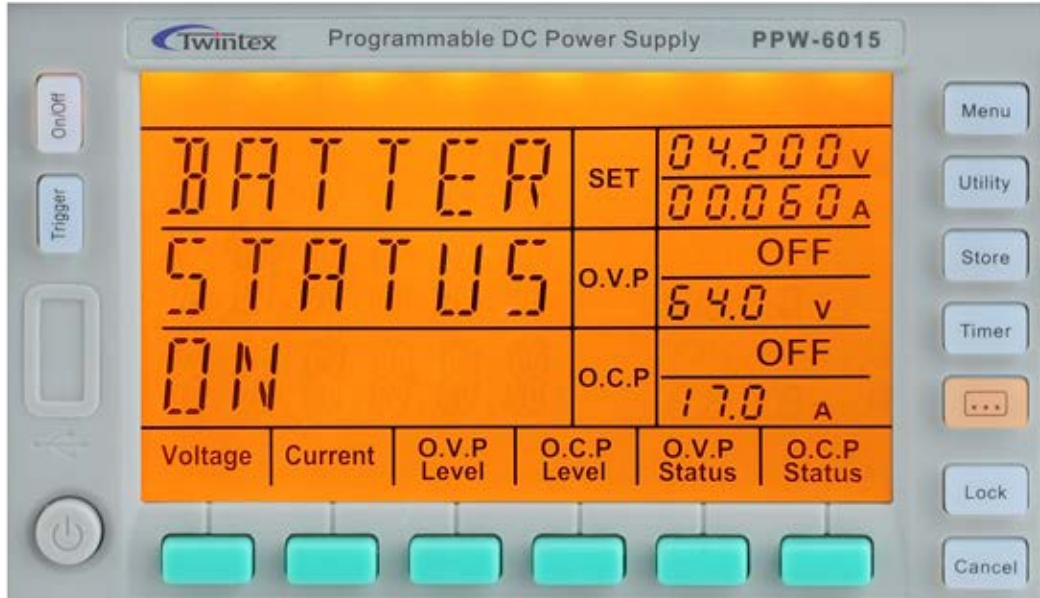
The preset cycles can be set to run in different modes:
AUTO: Automatically run preset cycles.
STEP: Run a single step upon a trigger.

Programmable Switching DC Power Supply

Twintex

Battery Curved Charge

Instead of same charging voltage and current through out the whole charging operation, a curved charge operation can perfectly protect batteries under charge.

Voltage Self Check

When output voltage self test is ON, the power supply will monitor output voltage at output terminal and adjust output voltage to minimize the error between real output value and preset output value.

Programmable Switching DC Power Supply

Low Resistance Measurement

The power supply can measure load resistance and display it on screen.

Press "Utility" key to choose display of load resistance or output power.

Programmable Switching DC Power Supply

Remote Sense

The power supply can automatically compensate for the voltage drop caused by the load lead to ensure that the power supply output value set by users is consistent with the voltage acquired by the load.

Rack Mount Compatible

The power supply units can be locked onto 19-inch cabinet, providing 3U rack panel or 4U rack panel.

Programmable Switching DC Power Supply

TWINTEX

Specifications (300W/600W)

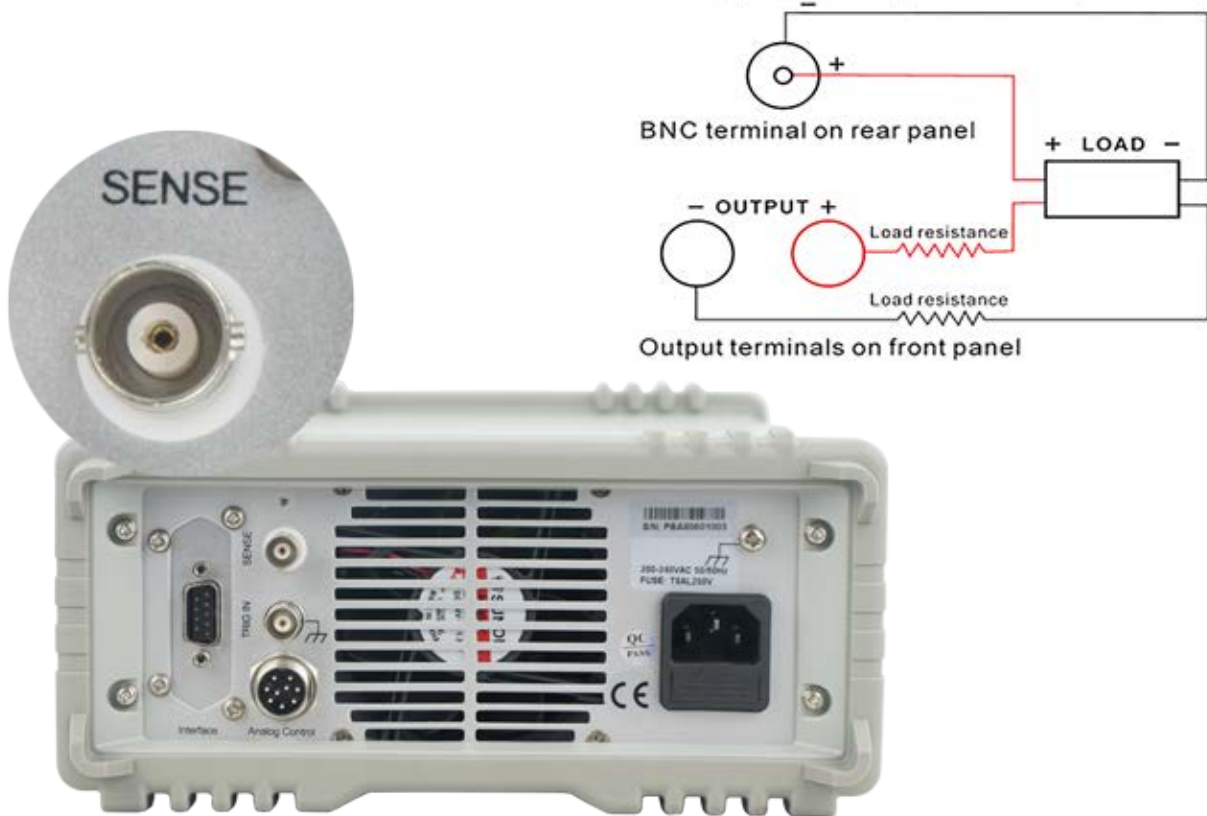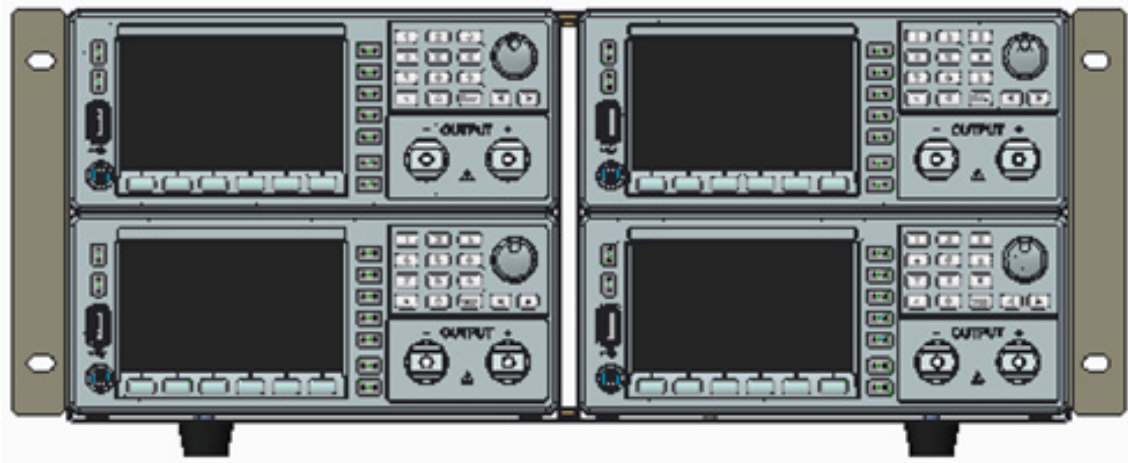| (0℃~40℃)		PPW-3010	PPW-2030	PPW-3020	PPW-6010	PPW-8008
Rated Output	Voltage	0~31V	0~20.5V	0~31V	0~60.5V	0~80.5V
	Current	0~10.5A	0~30.5A	0~21A	0~10.5A	0~8.0A
Line regulation	Voltage	≤0.01%+4mV				
	Current	≤0.1%+3mA				
Load regulation	Voltage	≤0.1%+5mV				
	Current	≤0.1%+5mA				
Setting accuracy	Voltage	±(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
Recovery time		≤1.5ms (50% load change)				
Temperature Coefficient		≤100ppm/℃				
Efficiency		80% typical				
Power factor		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 interface, Support SCPI; Optional RS485 interface, support ModBus commands				
Analog interface		Optional 0-5V analog control for output ON/OFF, voltage & current control & monitor				
Memory		300 sets				
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				

Programmable Switching DC Power Supply

Specifications (900W)

(0℃~40℃)		PPW-1560	PPW-2045	PPW-3030	PPW-3625	PPW-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	≤0.2%+3mA				
Load regulation	Voltage	≤0.1%+5mV				
	Current	≤0.2%+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	≤300ms	≤300ms
	Full load	≤300ms	≤1s	≤1s	≤1s	≤1s
Fall time	Empty load	≤2s	≤2s	≤2s	≤3s	≤3s
	Full load	≤2ms	≤2ms	≤2ms	≤3ms	≤3ms
Recovery time		≤1.5ms (50% load change)				
Temperature Coefficient		≤100ppm/℃				
Efficiency		80% typical				
Power factor		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 interface, Support SCPI; Optional RS485 interface, support ModBus commands				
Analog interface		Optional 0-5V analog control for output ON/OFF, voltage & current control & monitor				
Memory		300 sets				
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				

Programmable Switching DC Power Supply

Specifications (900W)

(0℃~40℃)		PPW-6015	PPW-8011	PPW-12H75	PPW-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	≤0.2%+3mA			
Load regulation	Voltage	≤0.1%+5mV			
	Current	≤0.2%+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
Recovery time		≤1.5ms (50% load change)			
Temperature Coefficient		≤100ppm/℃			
Efficiency		80% typical			
Power factor		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 interface, Support SCPI; Optional RS485 interface, support ModBus commands			
Analog interface		Optional 0-5V analog control for output ON/OFF, voltage & current control & monitor			
Memory		300 sets			
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.