



## Introduction

PPA100 & PPA180 series, a single channel Programmable DC Power Supplies with high power density design, have wide range of voltage/current combinations. Within rated power, the auto-range power supply allows wider voltage and current output than a conventional power supply.

The auto-range DC power supply is available with rated power 100W and 180W, maximum rated voltage available with 40V, 80V and 160V, maximum rated current available with 2.5A, 4A, 5A and 10A.

For wide range voltage and current applications, one auto-range DC power supply can be used to test the input of both low voltage/high current and high voltage/low current DUTs. The auto-range DC power supply can be used in ATE system to replace multiple DC power suppliers, saving cost and space.

## Features

- ✓ Auto range (wide range) output, power ratio 2~4
- ✓ MINI size, high power density
- ✓ 4 digits LCD display for voltage, current, time and power
- ✓ Adjustable constant power output (set by computer)
- ✓ List mode function (set by computer)
- ✓ Ramp output (set by computer)
- ✓ Trigger function
- ✓ Remote sensing function
- ✓ Output terminals on front panel and rear panel
- ✓ 100x4 memories for voltage, current and timer setups (100 groups, 4 memories in each group)
- ✓ Multiple protections: OVP, OCP, OTP
- ✓ Standard interface: RS232 & RS485, SCPI & ModBus-RTU commands
- ✓ Optional interface: USB, LAN
- ✓ Data record software

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# Programmable Auto Range DC Power Supply

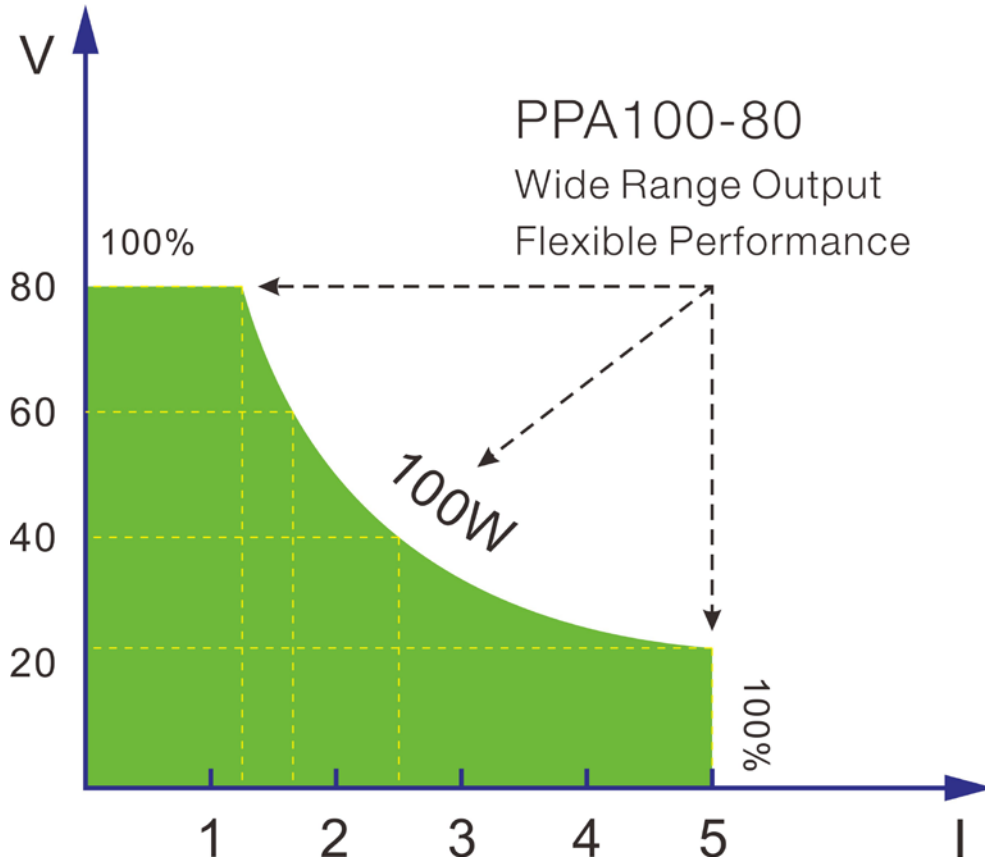
## Product photos



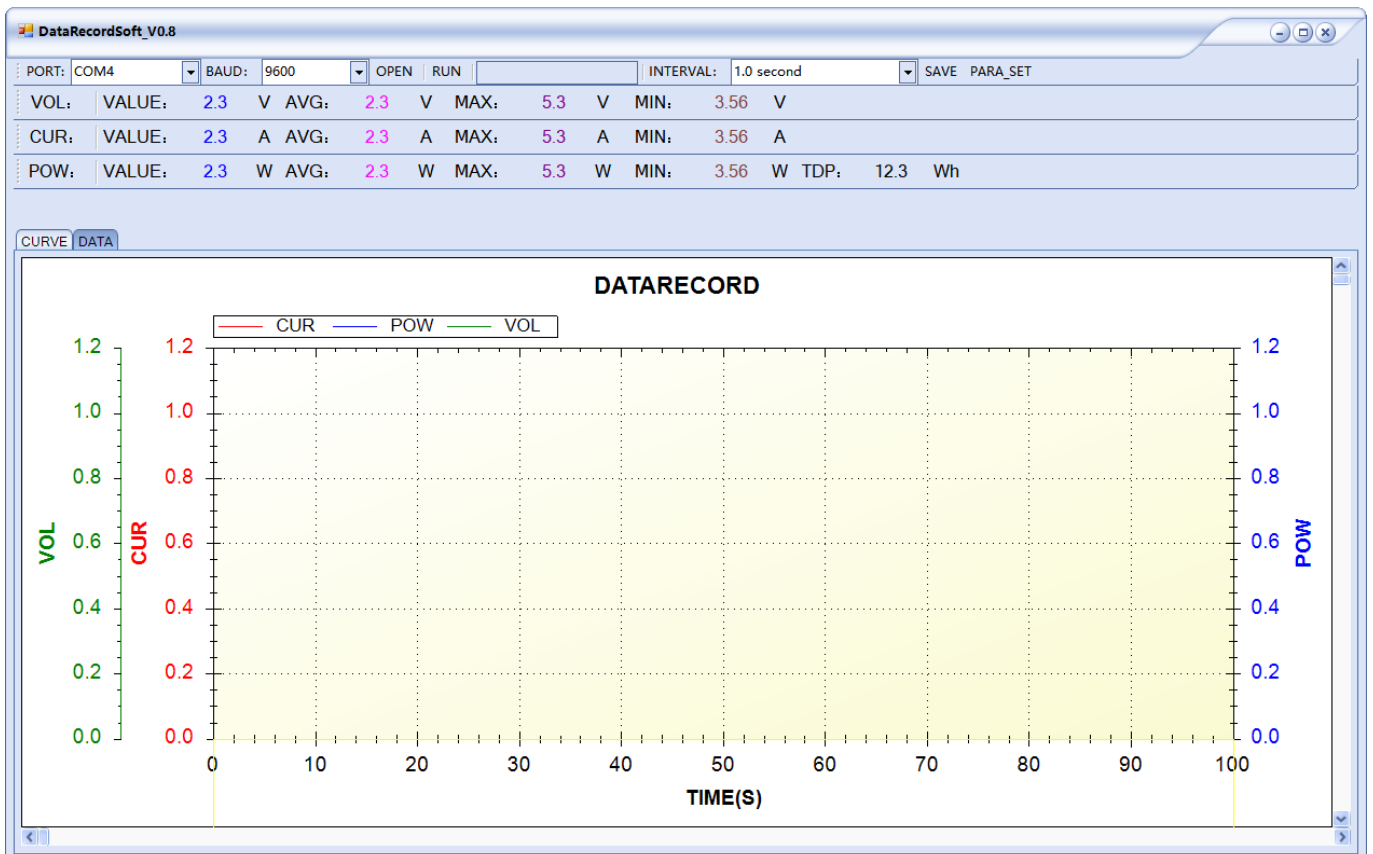
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Auto range output



Data record software



## 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	×	✓	✓	×	✓	✓
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	✓	✓	✓	✓	✓	✓

## Specifications 100W

(0°C~40°C)		PPA100-40	PPA100-40A	PPA100-80	PPA100-160
Rated Output	Voltage	0.5~40.5V	0.5~40.5V	0.5~81V	0.5~162V
	Current	0~5.1A	0~10.2A	0~5.1A	0~2.6A
	Power	100W	100W	100W	100W
	Power ratio	2.064	4.131	4.131	4.212
	OVP	0.5~44V	0.5~44V	0.5~88V	0.5~176V
	OCP	0.1~5.5A	0.1~11A	0.1~5.5A	0.1~2.75A
Line regulation	Voltage	≤0.01%+3mV			
	Current	≤0.1%+5mA			
Load regulation	Voltage	≤20mV	≤30mV	≤20mV	≤10mV
	Current	≤10mA	≤10mA	≤10mA	≤10mA
Setting accuracy	Voltage	≤0.05% +10mV	≤0.05% +10mV	≤0.05% +10mV	≤0.05% +100mV
	Current	≤0.2% + 2mA	≤0.3% +5mA	≤0.2% +2mA	≤0.2% +2mA
Reading accuracy	Voltage	≤0.05% +10mV	≤0.05% +10mV	≤0.05% +10mV	≤0.05% +100mV
	Current	≤0.2% + 2mA	≤0.3% +5mA	≤0.2% +2mA	≤0.2% +2mA
Setting resolution	Voltage	10mV	10mV	10mV	100mV
	Current	1mA	10mA	1mA	1mA
Reading resolution	Voltage	10mV	10mV	10mV	100mV
	Current	1mA	10mA	1mA	1mA
Ripple&Noise (20Hz-20MHz)	Voltage	≤5mVrms	≤5mVrms	≤10mVrms	≤15mVrms
	Current	≤5mArms	≤8mArms	≤8mArms	≤5mArms
Rise time	Empty load	≤300ms	≤300ms	≤300ms	≤500ms
	Full load	≤300ms	≤300ms	≤300ms	≤500ms
Fall time	Empty load	≤300ms	≤300ms	≤500ms	≤1s
	Full load	≤300ms	≤200ms	≤200ms	≤500ms
Max compensation voltage		2V	1V	2V	3V
Recovery time		≤5ms (50% load change)			
Efficiency		80% typical			
Power factor		0.9 typical			
Protection		Over voltage, over current and over temperature protections			
Standard Interface		RS232 & RS485 interface, Support SCPI & ModBus-RTU commands			
Optional interface		USB, LAN			
External trigger		Through 2-pin terminal on rear panel			
Memory		100x4 memories (100 groups, 4 memories in each group)			
Withstanding voltage		I/P-FG: 2KVAC/min ≤5mA			
Insulation		O/P-FG: 500VDC >100MΩ			
Operating environment		0~40°C, ≤80%			
Storage environment		-10°C~70°C, ≤70%RH			
Power source		AC 100V~240V, 47~63Hz			
Accessories		Power cord x1, Operation manual x1, RS232 cable x1, Software CD x1			
Dimension		55Wx140Hx315D mm			
Weight		1.8kg			

## Specifications 180W

(0°C~40°C)		PPA180-40	PPA180-80	PPA180-160
Rated Output	Voltage	0.5~40.5V	0.5~81V	0.5~162V
	Current	0~16.4A	0~8.2A	0~4.1A
	Power	180W		
	Power ratio	3.69		
	OVP	0.5~44V	0.5~88V	0.5~176V
	OCP	0.1~17.6A	0.1~8.8A	0.1~4.4A
Line regulation	Voltage	≤0.01%+3mV		
	Current	≤0.1%+5mA		
Load regulation	Voltage	≤40mV	≤30mV	≤20mV
	Current	≤10mA	≤10mA	≤10mA
Setting accuracy	Voltage	≤0.05% +10mV	≤0.05% +10mV	≤0.05% +100mV
	Current	≤0.3% + 10mA	≤0.2% +5mA	≤0.2% +5mA
Reading accuracy	Voltage	≤0.05% +10mV	≤0.05% +10mV	≤0.05% +100mV
	Current	≤0.3% + 10mA	≤0.2% +5mA	≤0.2% +5mA
Setting resolution	Voltage	10mV	10mV	100mV
	Current	10mA	1mA	1mA
Reading resolution	Voltage	10mV	10mV	100mV
	Current	10mA	1mA	1mA
Ripple&Noise (20Hz-20MHz)	Voltage	≤6mVrms	≤10mVrms	≤15mVrms
	Current	≤10mA <sub>rms</sub>	≤8mA <sub>rms</sub>	≤10mA <sub>rms</sub>
Rise time	Empty load	≤300ms	≤300ms	≤500ms
	Full load	≤300ms	≤300ms	≤500ms
Fall time	Empty load	≤300ms	≤500ms	≤1s
	Full load	≤100ms	≤300ms	≤500ms
Max compensation voltage		1V	2V	3V
Recovery time		≤5ms (50% load change)		
Efficiency		80% typical		
Power factor		0.9 typical		
Protection		Over voltage, over current and over temperature protections		
Standard Interface		RS232 & RS485 interface, Support SCPI & ModBus-RTU commands		
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External trigger		Through 2-pin terminal on rear panel		
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Withstanding voltage		I/P-FG: 2KVAC/min ≤5mA		
Insulation		O/P-FG: 500VDC >100MΩ		
Operating environment		0~40°C, ≤80%		
Storage environment		-10°C~70°C, ≤70%RH		
Power source		AC 100V~240V, 47~63Hz		
Accessories		Power cord x1, Operation manual x1, RS232 cable x1, Software CD x1		
Dimension		55Wx140Hx315D mm		
Weight		1.8kg		

**Specifications are subject to change without prior notice.**