

# SPECIFICATION

MODEL NO: GPW121215C

EDITION: V01

8KW, Immersion Version

Suit for: OverClocking Bitmain S19,S19Pro,S19J,S19JPro,S19A series

REV	DATE	Description	APPROVED
V00	2021/08/23	Basic functionality	Bao Yajun
V01	2023/05/26	Updated drawings	Jin Shaoting

拟 制	审 核	批 准
Jin Shaoting 2023/05/26	Xu Mengting 2023/05/26	年 月 日

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## 1. Introduction

GPW121215C is born for immersion cooling miners, it is a dual voltage input, high efficiency, high power factor power supply. The PSU has output short circuit protection, output over current protection, output over voltage protection, over temperature protection. The whole power supply is designed in strict accordance with safety regulations, in line with information technology equipment safety standards, product design in line with CE, FCC certification requirements.



## 2. Main specifications

Max output Power	Input voltage range	Output Voltage	Output Current	Regulation	Ripple & Noise (Max.)
8000W	260V—305Vac	12V-15V	0—550A	±1%	400mVp-p
		11.5V-12.5V	0—15A	±1%	200mVp-p

## 3. Environmental Requirement

No	Items	Technical Index	Unit	Remark
1	Operating Temperature	-20—+45	°C	
2	Store Temperature	-40—+85	°C	
3	Humidity	0—90%		(non-&shy;condensing)
4	Altitude	≤2000	m	
5	Cooling Method	immersion cooling		

## 4. Electrical Specification

1 Input Electrical Characteristics				
No	Items	Technical Index	Unit	Remark
1.1	Normal voltage range	277	Vac	
1.2	Input Voltage range	260—305	Vac	
1.3	Inrush current (cold start)	≤50	A	220Vac, 25°C
1.4	Max input ac	30	A	full load condition

	current				
1.5	Power Factor	$\geq 0.98$		full load condition	
1.6	Frequency range	47—63		Hz	
<b>2</b>	<b>Output Electrical Characteristics</b>				
No	Items	Technical Index		Unit	Remark
		Vo1	Vo2		
2.1	Output Current	0—550	0—15	A	
2.2	Rated current	485	15	A	
2.3	Output Voltage Range	12—15	11.5-12.5	V	
2.4	Output Voltage Regulation	$\pm 1\%$	$\pm 1\%$	%	
2.5	Load Regulation	$\pm 1\%$	$\pm 1\%$	%	
2.6	Voltage regulation accuracy	$\pm 1\%$	$\pm 1\%$	%	
2.7	Capacitive load	$\leq 5000$	$\leq 1000$	$\mu\text{F}$	
2.8	Intermodulation characteristics	$\pm 3\%$	$\pm 2\%$	%	
2.9	Efficiency	$\geq 90\%$			Max efficiency, No fans
2.10	Ripple & Noise	$\leq 400$		mVp-p	1) Measurements shall be made with an oscilloscope with 20MHz bandwidth. 2) Outputs shall be bypassed at the connector with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor to simulate system loading
2.11	DC output voltage rise time	$\leq 50$		ms	The output voltages shall rise from 10% to 90% of their output voltage
2.12	DC Output Overshoot At Turn On & Turn Off	$\pm 5\%$			
2.13	Output Transient Voltage Tolerance Limit	$\pm 5\%$			25% to 50% load and 50% to 75% load

	Response	Recovery time	$\Delta t \leq 500$		$\mu\text{S}$	
		Slew Rate	$\geq 0.5$		$\text{A}/\mu\text{S}$	
2.14	Temperature coefficient		$\pm 0.02$		$\%/^{\circ}\text{C}$	
2.15	Output Power Range		0—8000	0—150	W	
<b>3</b>	<b>Protection</b>					
No	Items	Technical Index		Unit	Remark	
		Vo1	Vo2			
3.1	Output Over Voltage Protection	17-20	14—17	V	Power supply restart	
3.2	Output Over current Protection	$\geq 600$ Power supply latch into shutdown state	$\geq 20$ Power supply restart	A		
3.3	Output Short Circuit Protection	Power supply latch into shutdown state	Power supply restart			
3.4	Over-temperature protection	Power supply restart				

## 5. Isolation

### 5.1 Table

Input To Output	DC500V 50MΩmin (at 25 degree C)
Input To FG	DC500V 50MΩmin (at 25 degree C)
Output To FG	Non Isolated

### 5.2 Table

Input To Output	2000Vac 50Hz 1minute ≤10mA
Input To FG	2000Vac 50Hz 1minute ≤10mA
Output To FG	Non Isolated

Note: FG and Output connected internally.

## 6. Weight

**3.6Kg**

## 7. Package

### 1,packing

The product name, model number, manufacturer's identification, inspection certificate from the manufacturer's quality department, manufacturing date, etc. Attached list is found in the packing case.

### 2, transportation,

Suitable for vehicle, ship, aircraft transport, transport should be awning, sunscreen, civilized loading and unloading.

### 3, storage

Products should be stored in the packing box when not in use. The ambient temperature of the warehouse is -40°C -- +85°C, and the relative humidity is 0% -- 95%. Harmful gases, inflammable and explosive products and corrosive chemicals are not allowed in the warehouse, and there is no strong mechanical vibration, impact and strong magnetic field effect. It should be at least 50cm away from the wall, heat source, window or air inlet, and the storage period under these conditions is generally 2 years. After 2 years, it should be re-inspected.

## 8. Dimension

### 1、253\*249\*67.9mm(No Fans, No Top Cover)

