



## Power System



Add: Economic Development Zone, Jiangyan district, Taizhou, Jiangsu, China.

Zip: 225500

Tel: +86 523-88521888

Fax: +86 523-88521244

E-mail: [office@shuangdeng.com.cn](mailto:office@shuangdeng.com.cn)

**shoto**<sup>®</sup>

## Product Description

The small system AC power supply is a new generation of intelligent environment-friendly inverter power supply system. Main feature: advanced digital control technology, combined lightning, DC current limiting, peak surge absorption, comprehensive automatic protection, unattended, intelligent remote monitoring and other functions into one, natural cooling system.

## Product Applications

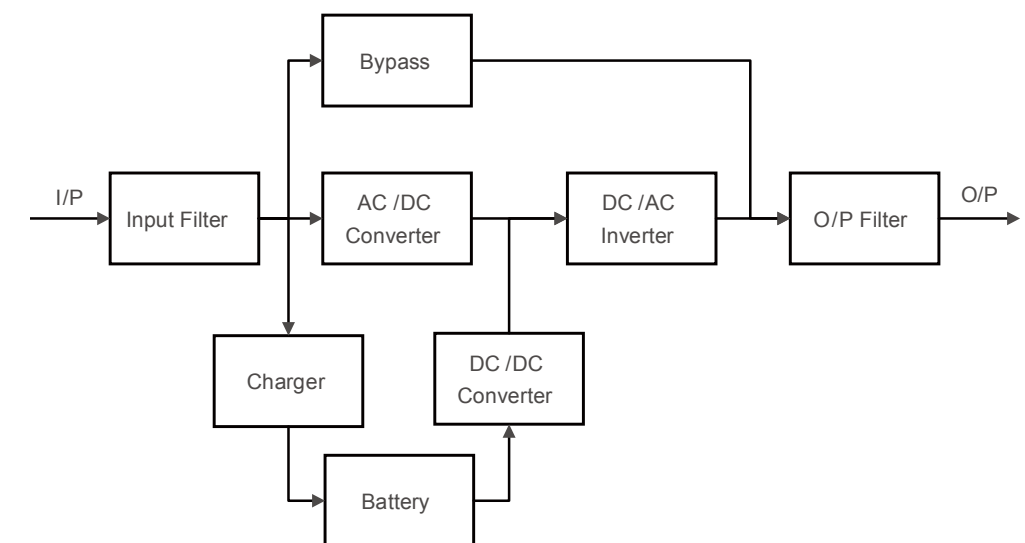
- ▣ Micro Base Station
- ▣ Light pole station
- ▣ Marginal station
- ▣ Indoor distribution system
- ▣ Outdoor pull away station
- ▣ Ordinary backup scene

## Product Features

- ▣ The system has Wide range of AC input that avoid frequent switching to battery power and then extend battery life, reduce battery replacement costs;
- ▣ Aluminum alloy shell comes with heat sink, natural cooling;
- ▣ High efficiency, energy saving, the module power efficiency in the battery mode up to 90% or more without mains supply, the mains supply mode efficiency of 98% or more;
- ▣ The system has perfect protection function with battery over voltage and under voltage protection, output over voltage protection, output under voltage alarm, output short circuit, over temperature protection and others;
- ▣ The system can automatically turn on and charge the battery after the electricity is restored to normal which effectively protect the battery, extend battery life, it can be configured lead-acid battery, you can also configure the iron lithium battery;
- ▣ The system configuration intelligent communication interface and standard RS232 communication interface can directly remote debugging and monitoring the operation of the power system through the monitoring software, simplifying the network management and improve system reliability;
- ▣ Dry contact communication interface including mains power, low battery, the system alarm interface.

## Product Theory

The block diagram of the whole system is shown as below:



When the mains supply is normal: UPS outputs to the load equipment directly through the switch by the bypass of mains supply, at the same time to charge the battery through the charger.

When the mains supply is abnormal: UPS directly invert into 220Vac/50Hz output to the load device from the battery through the DC/AC inverse after DC/DC converter.

The system including optional package: rectifier module and power down protection device with output power 2KVA to meet the various needs of users. Equipment with battery over-voltage and under-voltage protection, output over-voltage protection, output under-voltage alarm, output short circuit, over temperature protection and other functions. The power equipment designed for communication that support indoor and outdoor wall hanging pole installation that can reported information through the RS232 communication.

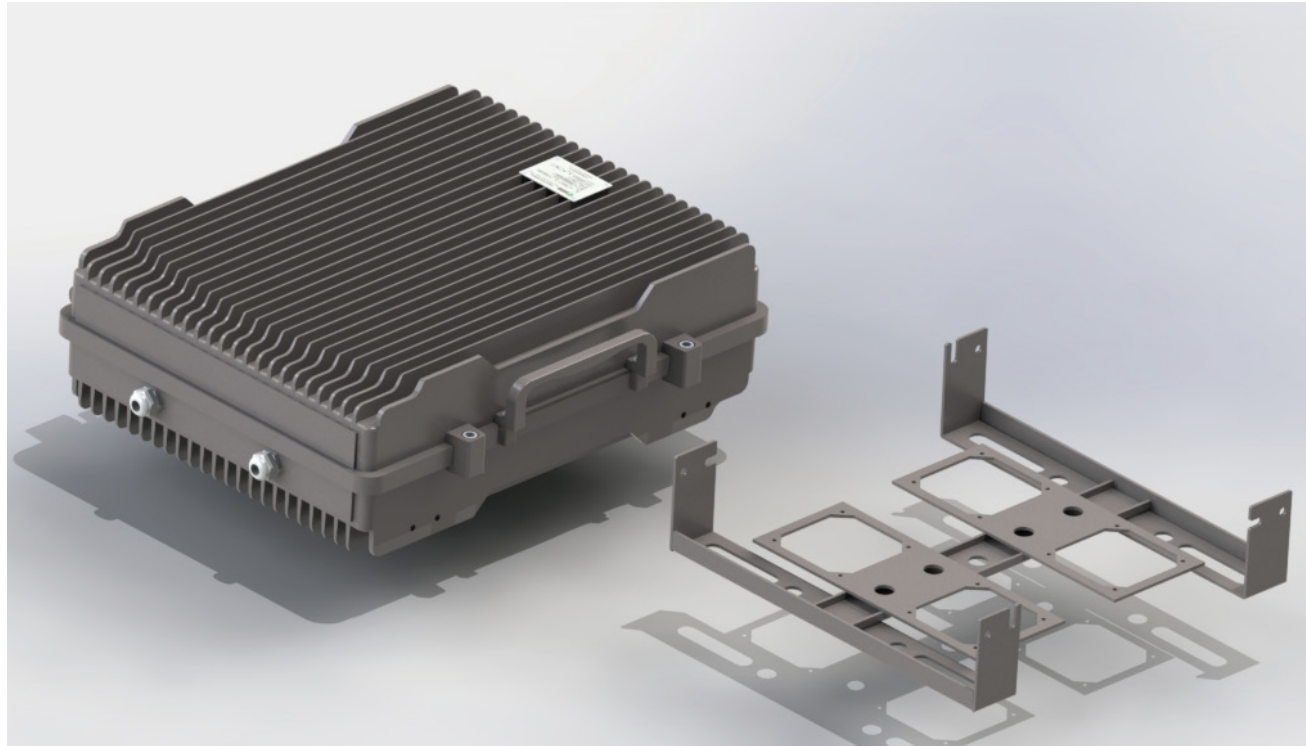


## Product Electrical Characteristics

Product model		WJZDY-02			
Number	Items	Technical Requirement	Unit	Notes	
1	Input Characteristics				
1.1	Mains input voltage	176-250	VAC		
1.2	Battery pack voltage	48	VDC		
1.3	Battery voltage range	43-56	VDC		
1.4	Cooling mode	Nature cooling			
1.5	Mains input current	≤8	AMAX		
1.6	Input frequency range	50±5%	Hz		
1.7	Power factor	≥0.99			
2	Output Characteristics				
Number	Items	Technical Requirement	Unit	Notes	
2.1	AC output	Rated output power	2000	VA	Battery inverter
		Output valid power	1600	W	Single battery inverter output 800W, multiple batteries can reach 1600W in parallel
		Rated output voltage	220	VAC	Battery inverter
		Output voltage range	220±3%	VAC	Battery inverter
		Output efficiency	≥90	%	Battery inverter, rated input, rated output
		Rated output frequency	50	Hz	
		Output frequency range	49-51	Hz	Battery inverter
		Output wave	Pure sine wave		Battery inverter
		Output wave distortion rate	≤3	%	Battery inverter, Rated pure resistance load
		2.2	DC output	Rated voltage	48V
Rated current	6A				
2.3	Mains / Inverter convert time	≤10	mS	With load (rated load)	

3 Protection characteristics				
Number	Items	Technical Requirement	Unit	Notes
3.1	Mains input under voltage switch	≤176	VAC	Hysteresis≥10VAC, the switching value of high and low temperature only for reference
3.2	Mains input over voltage switch	≥250	VAC	Hysteresis ≥ 10VAC, the switching value of high and low temperature only for reference
3.3	Over temperature protection	yes		Automatic recovery
3.4	Battery under voltage protection	≤40	VDC	
3.5	Battery under voltage alarm	43±0.5	VDC	
3.6	Battery over voltage protection	≥60	VDC	
3.7	Battery overvoltage recovery	≥55	VDC	
3.8	Output over current protection			
	100%<load≤125%	Protection after 10min		
	150%<Load	Protection after 10s		
3.9	Over temperature protection	yes		
3.10	Output short circuit protection	yes		Prohibited short circuit test when electricity is connected
3.11	Battery reverse protection	yes		
3.12	Output over voltage protection	≥245V	VAC	Battery inverter
3.13	Output under voltage alarm	≤200V	VAC	Battery inverter
4	Battery pack configuration			
Number	Items	Technical Requirement	Unit	Notes
4.1	Battery pack rated voltage	48	VDC	
4.2	Charging voltage	57.6	VDC	Can be customized according to customer requirements within the allowable range of 50-59VDC
4.3	Charging current	3	A	According to the selected charging module
4.4	Battery capacity	20	Ah	Optional 10Ah
4.5	Protection voltage	40	VDC	
5	Dimensions:			
5.1	W*D*H(mm):	500*470*220		Different models may differ in depth without mounting bracket

## Product installation



According to the power line identification corresponding wiring, support wall installation or pole installation.

**Make it excellent to  
“connect you and me”**

Shoto, as the leading green storage integration service supplier in Big Data age, using the forward-looking energy technology to share the green earth with our customers.