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SOLAR PUMP CONTROLLER

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Over **18** years
Industry Experience



294
Effective IP Rights



80+
Worldwide Business Footprints



6
Key Marketing Zones

With 18 years of dedication and professionalism, SAJ has established itself as a pioneer in the renewable energy industry. We are committed to providing reliable products and services in Residential & Commercial Smart Energy Storage, Smart Power Generation, and Industrial Automation sectors. Our R&D team has mastered over 20 core technologies and

obtained over 260 patents in the energy field. With four R&D centers and over 500 square meters of highly equipped laboratories, we are constantly innovating and breaking through technological barriers. Our three intelligent manufacturing bases, with an area of about 18.2 hectares, ensure stable and fast delivery capacity. SAJ's products are welcomed in over 80 countries and regions. We have also established local professional marketing, technical, and service teams to respond quickly to customer needs.

Together with SAJ, build a greener and brighter future.



LET THE "SUNSHINE" BE THE PORTER OF WATER

Solar Pump Controller System Working Modes

1 PV INPUT MODE

Photovoltaic input refers to only photovoltaic dc source power supply.

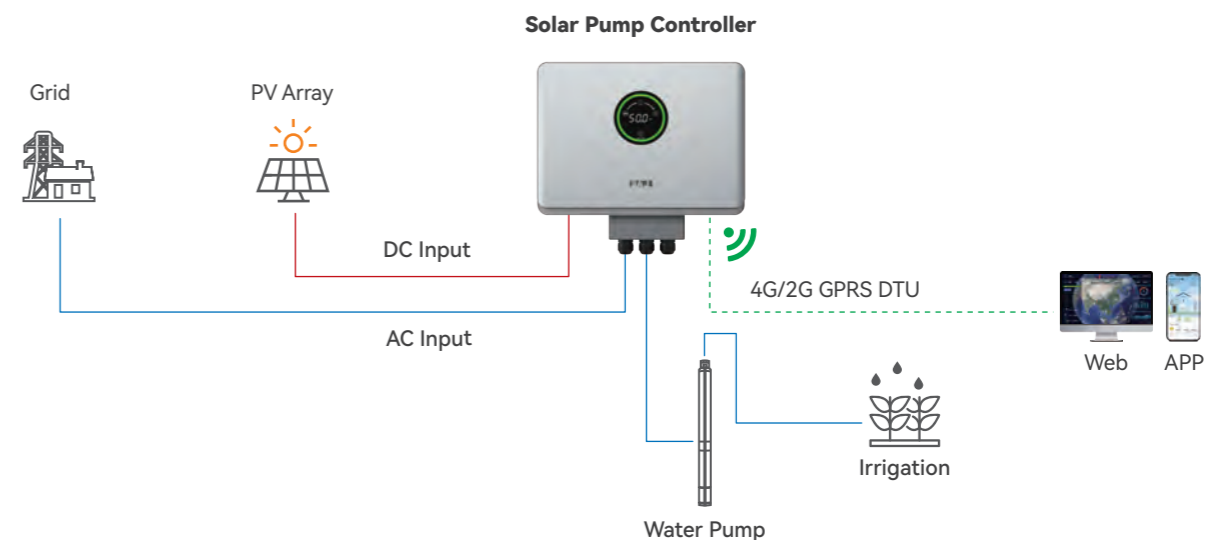
2 PV PRIORITY MODE

Which means that when ac and dc are connected at the same time, the pv will be used first, and the ac will be automatically connected when the pv power is insufficient.

3 POWER PRIORITY MODE

When ac and dc are connected at the same time, real-time power complementation ensures maximum power output.

THE SOLAR WATER PUMP CONTROLLER IS MAINLY USED IN SOLAR IRRIGATION AND SOLAR WATER CONSERVANCY PROJECTS. IT REALIZE THAT THE AC FROM THE GENERATOR OR THE GRID TO COMPENSATES THE SOLAR POWER,WHICH ALSO CALL HYBRID INPUT. AND NOT ONLY SOLVE THE PROBLEM OF WATER USE IN REMOTE AREAS, BUT ALSO HELP ACHIEVE THE GOAL OF CARBON NEUTRALIZATION AND CARBON PEAK.





PDS51


SOLAR PUMP CONTROLLER



PDS51-2S2R2-E | PDS51-4T2R2-E | PDS51-4T004-E
 PDS51-4T5R5-E | PDS51-4T7R5-E | PDS51-4T011-E

 Floating display
stylish appearance

 Intelligent hybrid
compensation

 Support multiple-pump
linked function

SVC Applicable to various
types of motors

IP65 Can be installed in both
indoor & outdoor

4G Support 4G/2G
remote monitoring

Model	PDS51-2S2R2-E	PDS51-4T2R2-E	PDS51-4T004-E	PDS51-4T5R5-E	PDS51-4T7R5-E	PDS51-4T011-E
DC Input						
Max. Input Voltage [V]	450			900		
Start Voltage [V]	100			220		
Min. Input Voltage [V]	70			200		
MPPT Voltage Range [V]	200-450			400-750		
Recommended Input Working Voltage [V]	330			560		
Num. of DC Input [MC4 Connection]	1			2		
Booster Function	Standard			/		
AC Input						
Input Voltage [V]	1PH 150-230	3PH 280-480				
Input Frequency [Hz]	50/60					
AC Output						
Output Power [kW]	2.2	2.2	4	5.5	7.5	11
Rated Current [A]	9	4.8	9.9	13	17	26
Output Voltage [V]	3PH 0-220	3PH 0-380				
Output Frequency [Hz]	0-50/60					
Control Performance						
Control Mode	V/F, SVC					
Supported Motor Type	Asynchronous and Synchronous					
Overload Capability	150% of rated current:60 seconds; 180% of rated current:1 seconds					
Protection						
Undervoltage Protection	Integrated					
Overvoltage Protection	Integrated					
Overload Protection	Integrated					
Short-circuit Protection	Integrated					
Overheat Protection	Integrated					
Lack of Water Protection	Integrated					
Surge Protection	Integrated					
General Data						
Ingress Protection Degree	IP65					
Cooling Mode	Natural Convection					
External Interface	External LED Keypad					
Communication Interface	4G/2G GPRS DTU					
Ambient Operating Temperature	-20°C ~ 60°C (>45°C, rated power will be derated for 1% by every additional 1°C)					
Operation Altitude	recommend <3000m (the rated power will be decreased for 1% by every additional 100m when the altitude is ≥ 2000m)					
Dimension [H*W*D] [mm]	295*396*180.5			315*430*186		
Weight [kg]	9.1			12		
Standard Warranty [Month]	18					
Certification Standards	CE					

Notes: 1. Total power of PV arrays can be 1.2~1.6 times of power of water pump as per irradiation conditions in different countries and areas.
 2. Inductor is suggested to be added to the solar pumping system if the distance between solar pump controller and water pump is over 50m.

PDS33

SOLAR PUMP CONTROLLER



PDS33-2S2R2-E | PDS33-4T2R2-E | PDS33-4T004-E
 PDS33-4T5R5-E | PDS33-4T7R5-E | PDS33-4T011-E
 PDS33-4T015-E | PDS33-4T018R5-E

Up to 99.8% MPPT efficiency

AM PMSM single phase,
Multi types of pumps

Automatic start and stop

Multi pump protection

Automatic hybrid compensation

Zero programming

Model	PDS33-2S2R2-E	PDS33-4T2R2-E	PDS33-4T004-E	PDS33-4T5R5-E	PDS33-4T7R5-E	PDS33-4T011-E	PDS33-4T015-E	PDS33-4T018R5-E
DC Input								
Max. Input Voltage [V]	400			800				
Start Voltage [V]	180			350				
Min. Input Voltage [V]	150			220				
MPPT Voltage Range [V]	275~380			500~750				
Recommended Input Working Voltage [V]	330			560				
Recommended PV Array Power [kW]	2.7~3.5	2.7~3.5	4.8~6.4	6.6~8.8	9~12	13.2~17.6	18~24	22.2~29.6
AC Input								
Input Voltage [V]	220 (±15%)		380(±15%)					
Input Frequency [Hz]	50/60							
AC Output								
Output Power [kW]	2.2	2.2	6	5.5	7.5	11	15	18.5
Rated Current [A]	9.6	5.1	9	13	17	25	32	37
Output Voltage [V]	3PH 0~220		3PH 0~380					
Output Frequency [Hz]	0~50/60							
Control Performance								
Control Mode	V/F, SVC							
Overload Capability	150% of rated current: 60 seconds; 180% of rated current: 1 seconds							
Protection								
Undervoltage Protection	Integrated							
Overvoltage Protection	Integrated							
Overload Protection	Integrated							
Short-circuit Protection	Integrated							
Overheat Protection	Integrated							
Lack of Water Protection	Integrated							
Surge Protection	Integrated							
General Data								
Ingress Protection Degree	IP20							
Cooling Mode	Air cooling							
Communication Interface	RS485 communication interface							
Ambient Operating Temperature	-20°C ~ 60°C (>45°C, rated power will be derated for 1% by every additional 1°C)							
Operation Altitude	Ecommend <3000m (the rated power will be decreased for 1% by every additional 100m when the altitude is ≥ 2000m)							
Physical Dimension [H*W*D] [mm]	187*88*138	207*100*147	247*130*167	360*182*197	385*219*197			
Weight [kg]	1.4	1.7	2.6	2.7	7.05	7.15	10.35	
Standard Warranty [Month]	18							
Certification Standards	CE							


Note: Total power of PV arrays can be 1.2~1.6 times of power of water pump as per irradiation conditions in different countries and areas.


PDS33


SOLAR PUMP CONTROLLER





PDS33-4T022-E | PDS33-4T030-E | PDS33-4T037-E
 PDS33-4T045-E | PDS33-4T055-E | PDS33-4T075-E
 PDS33-4T093-E | PDS33-4T110-E


 Up to 99.8% MPPT efficiency

 AM PMSM single phase,
Multi types of pumps

 Automatic start and stop

 Multi pump protection

 Automatic hybrid compensation

 Zero programming

Model	PDS33-4T022-E	PDS33-4T030-E	PDS33-4T037-E	PDS33-4T045-E	PDS33-4T055-E	PDS33-4T075-E	PDS33-4T093-E	PDS33-4T110-E
DC Input								
Max. Input Voltage [V]	800							
Start Voltage [V]	350							
Min. Input Voltage [V]	220							
MPPT Voltage Range [V]	500~750							
Recommended Input Working Voltage [V]	560							
Recommended PV Array Power [kW]	26.4~35.2	36~48	44~59.2	54~72	66~88	90~120	112~149	132~176
AC Input								
Input Voltage [V]	380(±15%)							
Input Frequency [Hz]	50/60							
AC Output								
Output Power [kW]	22	30	37	45	55	75	93	110
Rated Current [A]	45	60	75	91	112	150	176	210
Output Voltage [V]	3PH 0-380							
Output Frequency [Hz]	0-50/60							
Control Performance								
Control Mode	V/F, SVC							
Overload Capability	150% of rated current: 60 seconds; 180% of rated current: 1 seconds							
Protection								
Undervoltage Protection	Integrated							
Overvoltage Protection	Integrated							
Overload Protection	Integrated							
Short-circuit Protection	Integrated							
Overheat Protection	Integrated							
Lack of Water Protection	Integrated							
Surge Protection	Integrated							
General Data								
Ingress Protection Degree	IP20							
Cooling Mode	Air cooling							
Communication Interface	RS485 communication interface							
Ambient Operating Temperature	-20°C ~ 60°C (>45°C, rated power will be derated for 1% by every additional 1°C)							
Operation Altitude	Ecommend <3000m (the rated power will be decreased for 1% by every additional 100m when the altitude is ≥ 2000m)							
Physical Dimension [H*W*D] [mm]	360*219*197	442*256*228	543*310*280	580*358*328				
Weight [kg]	10.45	13.5	13.8	22.3	22.7	38.93	39.45	40.07
Standard Warranty [Month]	18							
Certification Standards	CE							


Note: Inductor is suggested to be added to the solar pumping system if the distance between solar pump controller and water pump is over 50m.


PDS33


SOLAR PUMP CONTROLLER





PDS33-4T132-E | PDS33-4T160-E
PDS33-4T185-E | PDS33-4T200-E


 Up to 99.8% MPPT efficiency

 AM PMSM single phase,
Multi types of pumps

 Automatic start and stop

 Multi pump protection

 Automatic hybrid compensation

 Zero programming

Model	PDS33-4T132-E	PDS33-4T160-E	PDS33-4T185-E	PDS33-4T200-E
DC Input				
Max. Input Voltage [V]	800			
Start Voltage [V]	350			
Min. Input Voltage [V]	220			
MPPT Voltage Range [V]	500~750			
Recommended Input Working Voltage [V]	560			
Recommended PV Array Power [kW]	158~211	192~256	222~296	240~320
AC Input				
Input Voltage [V]	380(±15%)			
Input Frequency [Hz]	50/60			
AC Output				
Output Power [kW]	132	160	185	200
Rated Current [A]	253	304	340	377
Output Voltage [V]	3PH 0-380			
Output Frequency [Hz]	0-50/60			
Control Performance				
Control Mode	V/F, SVC			
Overload Capability	150% of rated current: 60 seconds; 180% of rated current: 1 seconds			
Protection				
Undervoltage Protection	Integrated			
Overvoltage Protection	Integrated			
Overload Protection	Integrated			
Short-circuit Protection	Integrated			
Overheat Protection	Integrated			
Lack of Water Protection	Integrated			
Surge Protection	Integrated			
General Data				
Ingress Protection Degree	IP20			
Cooling Mode	Air cooling			
Communication Interface	RS485 communication interface			
Ambient Operating Temperature	-20°C ~ 60°C (>45°C, rated power will be derated for 1% by every additional 1°C)			
Operation Altitude	Ecommend <3000m (the rated power will be decreased for 1% by every additional 100m when the altitude is ≥ 2000m)			
Physical Dimension [H*W*D] [mm]	1199*502*355			1570*600*408
Weight [kg]	87.68	88.42	88.9	179.8
Standard Warranty [Month]	18			
Certification Standards	CE			

Note: Inductor is suggested to be added to the solar pumping system if the distance between solar pump controller and water pump is over 50m.

DATA COLLECTOR



eSolar 4G-E | DTU-G100-4G-E

eSolar Pump O&M Platform

- Real Time Monitoring
- Intelligent Alert
- Remote Setup
- Device Management
- Data Analysis
- Smart Operation

Model	eSolar 4G-E	DTU-G100-4G-E
General Parameters		
Connecting Inverters No. [Pcs]	1	1
Inverter Communication Port	USB	RS485
Communication	4G	4G
Operating Frequency	LTE-TDD, LTE-FDD	LTE-TDD, LTE-FDD
Data Collection Interval [min]	1~30 (Optional), 10 (Standard)	1~30 (Optional), 10 (Standard)
Firmware Update Method	Serial Port/ Remote	Serial Port/ Remote
Access Data Method	Integrated Webpage/ Remote Sever	Integrated Webpage/ Remote Sever
Display	LED	LED
Electrical Parameters		
Input Voltage	DC 5~7V (±5%)	DC 24V (±5%)
Static Consumption [W]	< 0.25	< 0.25
Max. Instant Consumption [W]	< 18	< 18
Environment		
Operating Temperature Range	-25°C~+75°C	-25°C~+60°C
Storage Temperature Range	-40°C~+90°C	-30°C~+70°C
Dimensions [H*W*D][mm]	125*53*31	84.4*36*65.5
Weight [g]	87	600
Ingress Protection	IP65	IP20
Others		
Mounting Method	Plug-in	Rail
Warranty [Year]	2	2



SOLAR PUMPING SOLUTION



315kW Controllers: 4*PDS33-4T075 + 4*PDS33-4T18R5
Location: Sichuan Province, China



246kW Controllers: 2*PDS33-4T075 + 2*PDS33-4T015
Location: Sichuan Province, China



145kW Controllers: 3*PDS33-4T037 + 1*PDS33-4T015
Location: Sichuan Province, China



143kW Controllers: 3*PDS33-4T030 + 1*PDS33-4T015
Location: Sichuan Province, China



4.8kW Controller: 1*PDS51-4T2R2-E
Location: Shanxi Province, China



160kW Controllers: 4*PDS33-4T037
Location: Sichuan Province, China



98kW Controllers: 2*PDS33-4T037
Location: Yunnan Province, China



95kW Controllers: 2*PDS33-4T037
Location: Sichuan Province, China



18.9kW Controllers: 3*PDS51-4T004-E
Location: Inner Mongolia, China

GLOBAL STRUCTURE

2 Manufacturing Bases

80+ Worldwide Business Footprints

6 Key Marketing Zones

