

Solar Pump Controller



1. Solar Or Battery Input . Compatible with Battery Mode 24/36/48/96/110v
2. Automatic MPPT Function to Identify the Voc and Vmp of Solar Panel
3. Support Sensorless DC Motor 24/36/48/96V/110v
4. Protection:

Solar DC Input Over-Voltage	Solar DC Input Anti-reverse	Output Short Circuit
Input Over Load Over Temperature	Output Over Current	Water Over Flow of Tank(By Sensor)
Well Water Empty(By Sensor)	Output Phase lost	Battery Low Voltage/Over Voltage Protection
5. Variable Speed Drive(FOC drive)
6. FOC drive compared to BLDC has bellow advantages:

a.Low Noise	b.High efficiency	c.Large torque
-------------	-------------------	----------------

DC Motor(PMSM) Contoller Specifications

Model No.		HBDC750			HBDC1100	HBDC1500
Solar Panel DC Input	Max Voc Voltage	100V			200V	
	Min Vmp Voltage	20V			70V	
	Recommend Vmp Voltage	> Motor Voltage			> Motor Voltage	
	Max MPPT Efficiency	98%			98%	
	Max Input Current	25A			18A	24A
	Number Of Strings Mc4	1 (+,-)				
	Note	Automatic MPPT Function to Identify the Voc and Vmp of Solar Panel,without programming				
Battery Input	Voltage	24 / 36 / 48 /96 /110 V Depend on the Pump Voltage				
	Max Input Current	25 A			18A	24A
	Battery Protection Voltage MIN, RECOVERY, MAX	21.3V 23V 30V @ 24V	32.5V 35V 40V @ 36V	42.6V 46V 52V @ 48V	86.4V 92V 108.8V @96V	
	Max Adapted DC Pump Horse Power	1 HP			1.5HP	2HP
DC Output Parameters	Max Adapted DC Pump	750W			1100W	1500W
	Drive Mode	3Phase Variable Speed Drive				
	Output Voltage	24 / 36 / 48V			96/110V	
	Max Output Current	25A			18A	24A
	Water level Sensor(well / tank)	Yes				
Display	Led display (Power, Solar, Battery, Battery Low, Tank, Well, Error status)					
Waterproof	N					
Noise	< 50dB					
Cooling Method	Natural cooling			Fan Cooling		
Protection	Solar DC input Over Voltage Solar DC Input Reverse Polarity Battery Protection DC Output Short-circuit DC Output Phase Lose (3Phase) Over Temperature Over Flow of Tank					
Operating Environment	Operating environment temperature	-10 to 60°C, Above 60°C need to derate load				
	Max Humidity	95%RH				
	Using altitude	< 3000m, Above 3000m need to derate load				
	Others	Prohibiting the installation location: direct sunlight, thick dust, corrosive gas or oil mist, flammable gas, liquid,etc				

Solar Submersible Pump

Advantage of solar pump

Maintenance-Free Brushless DC Motor
Integrated DSP & MPPT(Maximum Power Point remote controlTracking)
Suitable for Wide DC voltage Operation
Control inputs for well probe,dry running protection
Battery Operation,low voltage disconnect for battery etc.
Overload and high Adjustable speed control of motor
Temperature Protection and against reverse polarity



Material of Parts



01

Outlet

Cast Iron



02

Inlet

Cast Iron



03

Bottom support

Cast Iron

Performance Datasheet

Model No.	Solar Pump Model No.	Motor Voltage	Motor Power	Controller Power	Solar panels Reference	Max Flow & Lift		Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)
1	HBPSQD-72-550-13-20	72	550	750	450w *2PCS	13m3/h	20m	G2" 50mm
2	HBPSQD-96-750-14-23	96	750	750	450w *3PCS	14m3/h	23m	G2" 50mm
3	HBPSQD-150-1100-16-25	150	1100	1100	540w *3PCS	16m3/h	25m	G2" 50mm
4	HBPSQD-180-1300-17-30	180	1500	1500	335w*6PCS, 3pcs *2 strings	17m3/h	30m	G2" 50mm

Curve

