

# 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
Well Water Empty(By Sensor)	Output Phase lost	Water Over Flow of Tank(By Sensor)
		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
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## 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	
	DC Output Parameters	Max Adapted DC Pump Horse Power	1 HP			1.5HP
	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℃, Above 60℃ 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 Deep well 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**

Stainless Stell  
AISI 304 SS/316SS



**02**

**Inlet**

Stainless Stell  
AISI 304 SS/316SS



**03**

**Bottom support**

Stainless Stell  
AISI 304 SS/316SS

## Peformance Datasheet

Model No.	Solar Pump Model Name	Voltage	Controll er Power	Motor Power	Solar panels Reference	Max Flow & Lift		Well Diameter	Outlet
		V/DC	W	W	Power(W/PCS)	Max.flow	Max.head	(inch)	(inch)
1	HBP3S-24-120-1.2-56	24	300	120	335w *1PC	1.2m3/h	56m	G 4" 100mm	G 3/4" 19mm
2	HBP3S-36-210-1.2-77	36	300	210	335w *1PC	1.2m3/h	77m	G 4" 100mm	G 3/4" 19mm
3	HBP3S-48-500-1.7-109	48	750	500	335w *2PCS	1.7m3/h	109m	G 4" 100mm	G 3/4" 19mm
4	HBP3S-96-750-2.0-150	96	750	750	450w *3PCS	2m3/h	150m	G 4" 100mm	G 3/4" 19mm
5	HBP3S-110-1100-2.2-180	110	1100	1100	540w *3PCS	2.2m3/h	180m	G 4" 100mm	G 3/4" 19mm
6	HBP4S-48-500-1.7-70	48	750	500	335w *2PCS	1.7m3/h	70m	G 5" 125mm	G 1" 25mm
7	HBP4S-96-750-2.0-95	96	750	750	450w *3PCS	2m3/h	95m	G 5" 125mm	G 1" 25mm
8	HBP4S-110-1300-2.2-150	110	1500	1300	335w*6PCS, 3pcs *2	2.2m3/h	150m	G 5" 125mm	G 1" 25mm

## Curve

