INTELENERGI
Lightening Your Tomorrow

Solar DC Submersible Pump

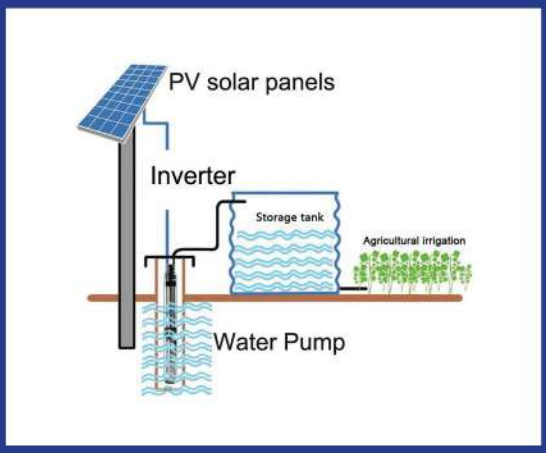
- Smarter Solar Powered Water Supply
- All Weather Technology
- Standalone System
- Highly Reliable & Very Efficient Design
- Simply More Water

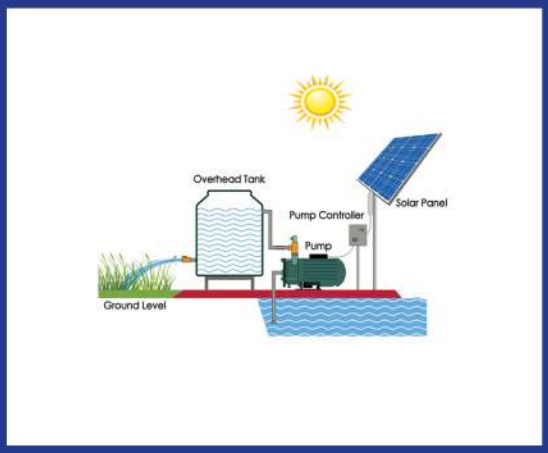
ISO 9001 2015 CERTIFIED

Principal

- Solar photovoltaic systems are energy conversion systems, which convert solar energy into electrical energy.
- Solar photovoltaic system operates on the basis of the photovoltaic effect in a silicon junction diode designed to facilitate the collection of usable magnitudes of electricity.
- Numbers of cells are string up in series to generate power at usable voltages.
- The solar panel contains solar cells which produce electricity when exposed to sunlight.
- A solar water pumping system essentially consists of a solar photovoltaic panel which powering a water pump through the pump controller.

Schematic Working Principal





A solar powered water pumping system is composed of several PV (photovoltaic) panels. Solar cells are the building block for solar panels.

The DC current is collected via the panel. This DC current is used to run the pump which pumps water whenever the sun shines and the excess water could be stored in an overhead water tank for the later usage .

The Photovoltaic water pump controller regulates the output current in accordance with sunlight intensity to achieve the maximum power point tracking (MPPT), maximizing the use of solar energy

Benefits of Solar Water Pumping Systems

- Clean and Pollution Free Energy, Eco Friendly.
- No fuel cost & minimum maintenance cost.
- High flow system for faster tank
- More economical than diesel pump sets in long run.
- MPPT- Maximum Power Point Tracking for maximizing efficiency of input power.
- Enable cultivation of extra crop
- Help in providing critical protective irrigation in water scare areas.
- Save times & labor.


Agriculture


Irrigation


Livestock Watering


Pond Aeration


Drinking Applicationst


Home Water System

Salient Features

- Ease of Installation and virtually no maintenance.
- Dry running as well as Over/Under voltage protections.
- Smooth surface reduced significance hydraulic losses
- Ensures most Compact design of Borewell Pumps
- Reduced Nos of Stages for equivalent performance
- Sustainable uniform performance for years.
- In-built MPPT for maximum Input Power.
- PV reverse polarity protection
- Assured High corrosive resistance
- Excellent result in high head conditions.
- Proven superior wear and tear resistance
- Ensures long life duraility.
- Driver system is optimizing for pumping under adverse input power conditions unique to solar array.
- Controller construction is ruggedized for hostile environmental conditions.

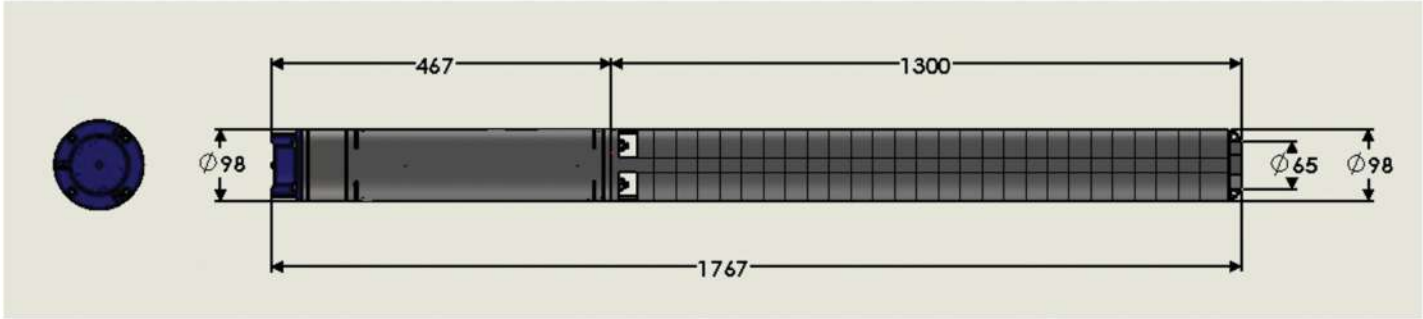
Features of Pump Controller

- MPPT based design.
- Multiple fault diagnosis indications.
- Fully enclosed with IP54 protections.
- Protection against "Short Circuit, Open Circuit, Reverse Polarity, Dry Run, Over & Under Voltage protection.

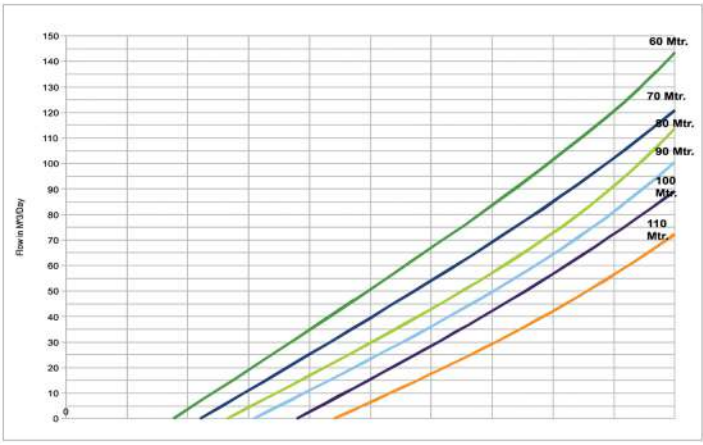
Specification of Solar Pump Controller

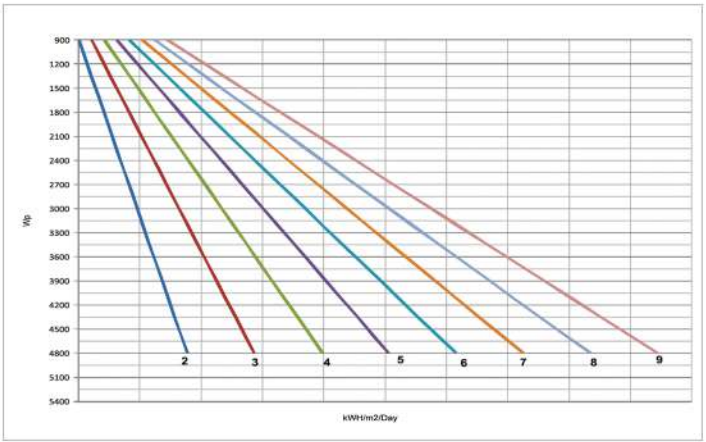
Input PV array (WP)	Input Voltage (Vmp)	Open Circuit Voltage (Voc)	Output VEC
1200Wp	>105V	180V	40-90V
1800Wp	>105V	180V	40-90V
3000Wp	>170V	270V	110-170V
5000Wp	>270V	444V	170-250V
6600W- 7200Wp	390-432V	484-530V	290-340V
8400W-9600Wp	504-576V	616-704V	290-340V

Internal View of Solar Submersible Pump(5HP)



Performance Characteristics (5HP@100mtr)





Product Range

Model	Array Rating (Wp)	Motor Power	SPV Array (VOC)	Input Voltage (Vmp)	Discharge (LPD)	Disharge Calculated at (m)	Shut Off Head (m)
SSD1200	1200	750W(1HP)	148-222	129-194	60000	20	25
					42100	30	45
					25100	50	70
					16750	70	150
					11350	100	150
SSD1800	1800	1500W(2HP)	222-326	194-284	63010	30	45
					37700	50	70
					25000	70	150
					17100	100	150
SSD3000	3000	2250W(3HP)	250-450	180-400	150010	20	45
					105010	30	45
					63000	50	70
					42100	70	150
					28500	100	150
SSD5000	4800	3750W(5HP)	400-770	300-620	240000	20	45
					168000	30	45
					100800	50	70
					67000	70	150
					45600	100	150
SDS7500	7500	5625W(7.5HP)	484-530	390-432	141700	50	70
					94000	70	150
					64000	100	150
SDS10000	10000	7500W(10HP)	616-604	504-576	189000	50	70
					85500	100	150

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