



OSWAL SOLAR PUMP CATALOG

PUMPS & MOTORS
Solar | Domestic | Agriculture | Industrial
True Partner!

Energy Efficient Range...



Infinite Solar Pumping Energy



www.oswalpumps.com

OSWAL SOLAR PUMP CONTROLLER

(Solar Pump Inverter, IP65)

A transformer-less inverter system with 110/160/230/320/415Vac, 3-phase output voltage and V/F control to manage pump starting conditions (soft start). The equipment is micro controller-based and operates with software for digital control of inverter parameters, fault diagnosis, and digital I/O signaling.

Protection: Automatically shuts down in case of

- Dry run
- High or low voltage surge
- Phase Loss
- Reverse polarity safety
- Surge protection
- Over Heating
- Short Circuit



Oswal Solar Water Pump Controller Technical Specification

MPPT Controller

With the Inbuilt MPPT (Maximum Power Point Tracking) function, it regulates the output frequency according to irradiation in real time to achieve the maximum power. Adopting the proposed dynamic VI maximum power point tracking (MPPT) control method, fast response and stable operation, better than the conventional methods, which may lead to the problems including poor tracking performance, unstable or even cause water hammer damaging when the irradiation on the array changes rapidly.

Salient features of Oswal Solar Pump Controller

- When solar power is not available, controller can be manually switched to an AC supply input.
- High Resolution LCD display shows speed (RPM), input DC voltage, output AC/PWM voltage and current system status.
- Uses MPPT technology to maximize water delivery at various solar energy levels.
- MPPT maximizes power point tracking for maximizing the efficiency of input power.
- GSM option available to control and monitor remote location pumps.
- Remote telemetry capability through RS485 continuous data points (Optional).
- High flow system for faster tank fill and significant water output.
- Simple installation and easy maintenance.
- The control unit converts DC power into PWM Sine Wave 3-Phase AC power and supplies it further to the submersible pump through cable.
- Operate through Oswal Kisan Sewa App.
- Remote software update is supported.

RATING	3 HP	5 HP	7.5 HP	10 HP
Pump Controller Rating	2.2 kW	3.7 kW	5.5 kW	7.5 kW
MPPT Range	200-450 VDC	350-550 VDC	500-900 VDC	650-900 VDC
Controller I/P Voc	60-450 VDC	60-530 VDC	240-900 VDC	240-900 VDC
Controller I/P Vmp	60-450 VDC	60-530 VDC	220-900 VDC	220-900 VDC
Controller I/P Current DC	12 Amp	12 Amp	13 Amp	13 Amp
Controller O/P Current	12 Amp	12 Amp	14 Amp	14Amp
Enclosure Protection	IP65	IP65	IP65	IP65
MPPT Tracking	Yes	Yes	Yes	Yes
Operating Temperature	C(-10) to C(+55)	C(-10) to C(+55)	C(-10) to C(+55)	C(-10) to C(+55)
Inside the Control Box	Up to 60°C	Up to 60°C	Up to 60°C	Up to 60°C
Relative Humidity	Less than 95%	Less than 95%	Less than 95%	Less than 95%
Controller Overload Capacity	120% rated current for 60s	120% rated current for 60s	120% rated current for 60s	120% rated current for 60s

Oswal Stainless Steel Submersible Pumps

Special Features

Oswal Sheet Metal Stainless Steel Submersible Pump are specially designed, with the use of latest manufacturing techniques. Years of experience, superior design and better manufacturing techniques have resulted into development of this range of pumps, which are efficient and reliable in operation. Strict quality assurance standards during the total process assure trouble free and reliability in operation requiring minimum maintenance. The pump range consist of many pump sizes is available with an optional 30% higher efficient.

Suitable to 5", 6" & 8" Submersible Motor.

All bearings are water-lubricated and have a square shape, enabling sand particles, if any, to leave the pump together with the pumped liquid.

Bearing bush is made of anti friction rubber-NBR to withstand wear resistance.

Non return Valve made in stainless steel (AISI 304 Grade). The valve casing is designed for optimum hydraulic properties to minimize the pressure loss across the valve and, thus, contributes to the high efficiency of the pump.

Pump motor coupling is according to NEMA standard.

Radial flow and mixed flow impellers & bowl made from stainless steel (AISI 304 Grade).

Stop Ring which is designed as thrust bearings limits axial movements of pump shaft.

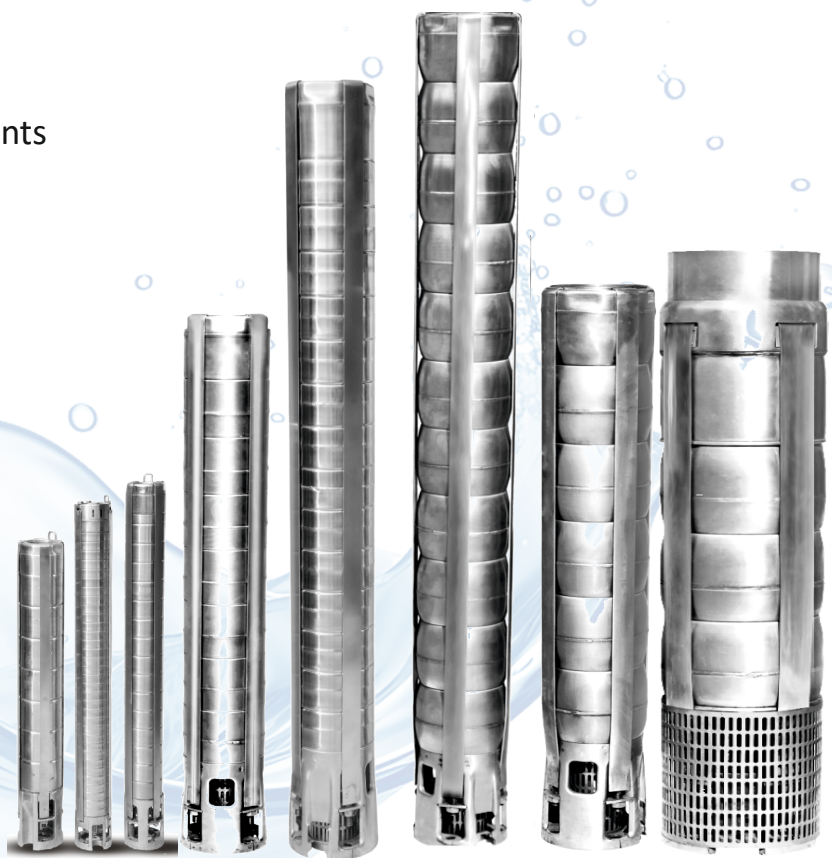
Suction Case, stage casing and discharge chambers are made by stainless steel (AISI 304 Grade).

Application in

- Water supply from bore well
- AC and solar energy compatible
- Municipal & irrigation purpose
- Water supply in commercial establishments
- Small farms, gardening & nurseries

Head Range: 10 - 100 Mtr.

Discharge Range: 1166 - 12 LPM.



OSWAL SOLAR AC/DC SUBMERSIBLE MOTOR

DC MOTOR BENEFITS

- 30% higher efficient compare to AC submersible motor.
- 30% higher discharge compare to AC submersible motor.
- Require lower torque and low power to operate.
Star early in the morning.
- 100% stainless Steel 304.

Features

- IP68 grade protection
- Stainless steel casing(SS304), shaft (SS431)
- Equipped with mechanical seal and sand guard for maximum sand protection



Comparison of Solar DC Motor Over Induction Motor

Sr. No.		PMSM MOTOR	INDUCTION MOTOR
1	Speed Range	0-3600 RPM	2850 RPM
2	Solar Array	Less	More
3	Size for same power ratio	Less	More
4	Power Density for same size	More	Less
5	Requirement of Current for same load	Less	High
6	Efficiency	Higher (>85%)	Lower (<85%)
7	Drive (AC/DC/DC-AC)	Compulsory	Optional
8	Frequency Injection	Variable	N.A.
9	Frequency of Motor	0-120 Hz (Variable)	50Hz
10	Overloading	150%	120%
11	System Efficiency (Drive-Motor-Pump)	Higher	Lower



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GLOBAL PRESENCE



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