

DC Submersible Solar Pump

Model: RA10000

Type	Description
RA100H020	AC Submersible Solar pump type: RA100H020
	Rated head:20mtr., 10 HP, Shut off head 25 mtr., With RA10000 controller
RA100H030	AC Submersible Solar pump type: RA100H030
	Rated head:30mtr., 10 HP, Shut off head 45 mtr., With RA10000 controller
RA100H050	AC Submersible Solar pump type: RA100H050
	Rated head:50mtr., 10 HP, Shut off head 70 mtr., With RA10000 controller
RA100H070	AC Submersible Solar pump type: RA100H070
	Rated head:70mtr., 10 HP, Shut off head 100 mtr., With RA10000 controller
RA100H100	AC Submersible Solar pump type: RA100H100
	Rated head:100mtr., 10 HP, Shut off head 150 mtr., With RA10000 controller

Type	RA100H020	RA100H030	RA100H050	RA100H070	RA100H100	
Rated head (mtr.)	20	30	50	70	100	Motor : AC Induction Motor
Optimum Head range (mtr.)	10-30	20-40	40-60	60-80	90-110	
Discharge (LPD)	4,05,000 [#]	2,88,000 [#]	1,71,000 [#]	1,17,000 [#]	76,500 [#]	Pump : SS-304 material (In contact with water)
Shut Off head (mtr.)	25	45	70	100	150	
Array Rating	9000 Wp (Min.)					Water output figures are on a clear sunny day with 3 times tracking of SPV panel, under “Average Daily Solar Radiation” condition of 7.15 KWh/sq.m on the surface of PV Array (i.e. coplanar with PV module)
Input Voltage (Vmp.)	> 540 V					
Input Max. Current	17 Adc					
Ambient Temperature Range	Up to 50° C					
MNRE test certificate reference (Report.no.)	-					Standard Test Condition : AM=1.5, E=1000W/m ² ,Cell Temperature : 25°C

[#] This water output is at STC conditions and testing as per MNRE's latest specifications for Solar water pumps.

Product Introduction

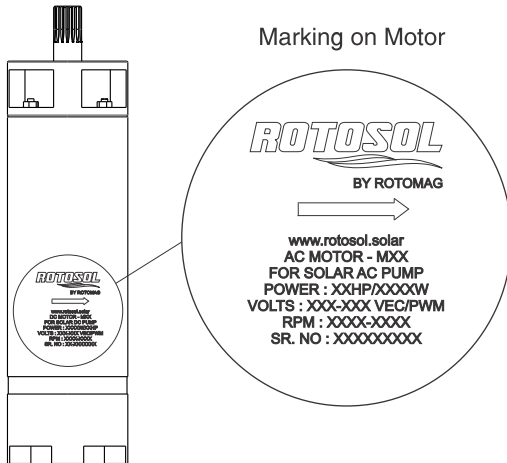
Rotosol solar submersible pump has a stainless steel SS-304 pump. This ensures long life and high reliability against dust, sand and abrasive elements. The pump elements are driven by a sealed "AC motor" filled with water. The motor is made from stainless steel 304 and sealed for life. High efficiency AC motors are used. The motor is driven by a controller which has inbuilt MPPT (Maximum power point tracker), dry running protection and overheating protection. A special thrust bearing supports the rotor of the motor to withstand the axial thrust of the water column when the pump is switched off. .

Application

- Drinking water supply
- Livestock watering
- Pond management
- Irrigation
- Village water supply

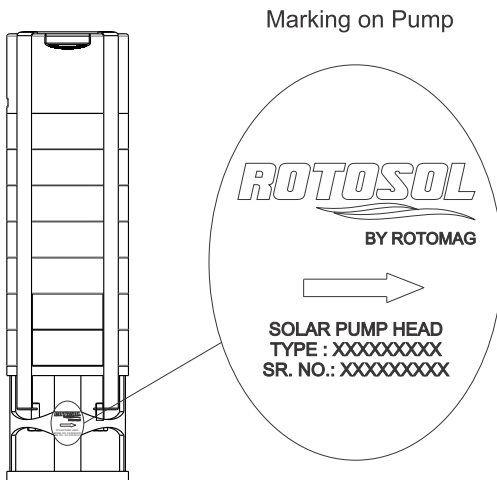


Specifications of AC Submersible motor:



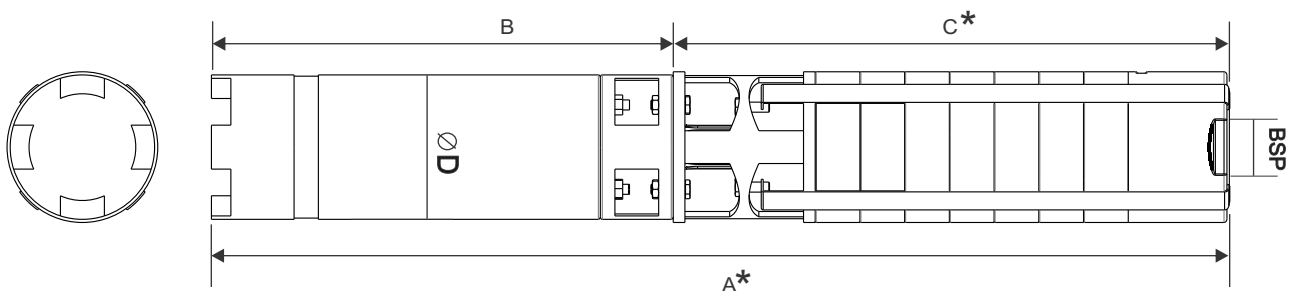
AC motor type	MA100
Power	7500W/10HP
Output VEC/PWM	290 - 340
RPM	1800-3300

Specifications of solar pump head:



Type	Rated head (mtr.)
RA100H020	20
RA100H030	30
RA100H050	50
RA100H070	70
RA100H100	100

Dimension of AC submersible solar pump head:



Model	Type	Dimensional Details					Module Details	
		A	B	C	D	BSP	Module Size	No. of Module
RA10000	RA100H020	1475	635	840	142	3"	300	30
	RA100H030	1475	635	840	142	3"	300	30
	RA100H050	1655	635	1020	142	2.5"	300	30
	RA100H070	1815	635	1180	142	2.5"	300	30
	RA100H100	1815	635	1180	142	2.5"	300	30

* The length is subject to change without notice as R&D is a continuous process and the modification may be required to suit the modification in I-V curves of the modules and the water output at varying heads.

Specifications of AC Submersible controller:

Model	Input PV array	Input voltage (Vmp.)	Max. Open circuit voltage (Voc.)
RA10000	9000 W	> 540 Vdc	670 Vdc

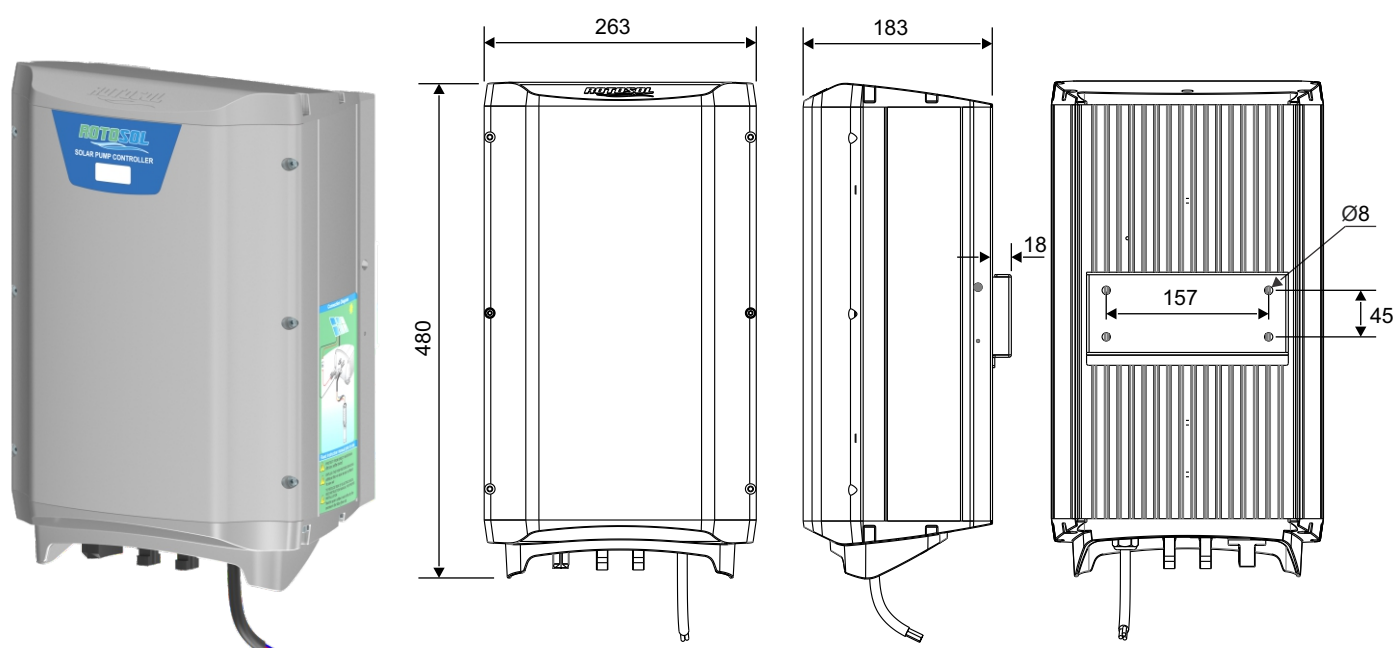
Features of Controller:

- ▶ Fully enclosed with IP65 protection. as per IEC 60529:2013-08 Edition 2.2
- ▶ Sensorless protection against "Dry Running", "Current Overload" and "Thermal Overload".
- ▶ Integrated MPPT (Maximum Power Point Tracking).

Protection against

Open Circuit	Over & under voltage protection
Overload protection	
Temperature protection	
Reverse Polarity	Accidental Short circuit (2 min. max.)
Dry run	

Mounting dimensions:



Installation Requirements:

Preferred Solar PV Array

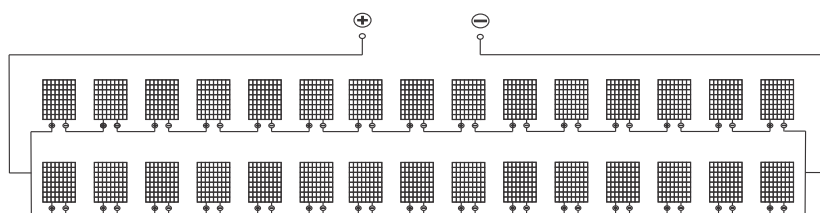
Controller Nett weight

11 ± 1 kg.

300 Wp, 72 Cell x 30 Panels: 9000 W

Panel specifications

Voltage at maximum power Vmax	38.88 V
Open circuit voltage Voc	44.56 V
Current at maximum power Imax	7.71 A
Short circuit current Isc	8.48 A



15 Series - 2 Parallel

Technical specifications/details mentioned in this datasheet are subject to change without prior notice. Please contact our sales/marketing team for any updated information or any change done.