

Technical Specifications of 200V, 08A, IP67, Solar Powered Pump Controller (Suitable for Polycrystalline PV Panels)

The pump controller is a subset of the Mecwin® customised Indverter V3 Series, a high-performance Permanent Magnet Synchronous Motor (PMSM) drive with HCPL-21095R2 PCB. With proper selection of array voltage/current, the pump controller can be used for 0.5/1 HP nominal pump ratings with Poly-Crystalline Solar Photovoltaic (PV) panel arrays.

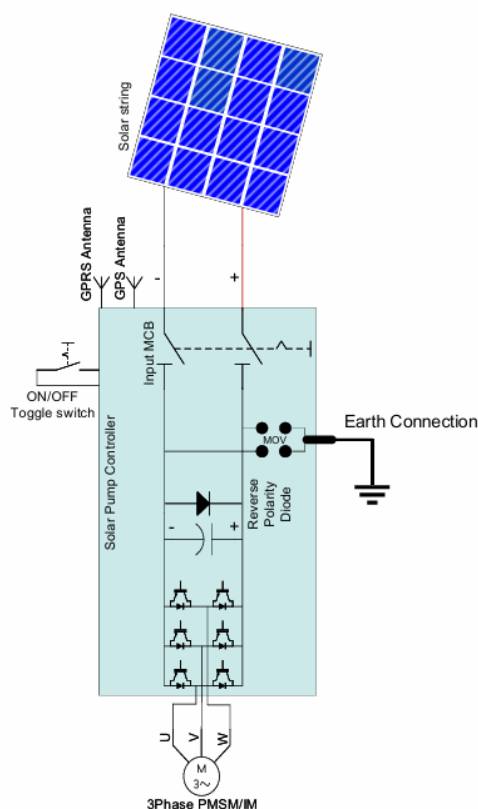
Controller Models	V20PV008x800, V20PV008x801 and V20PV008x802
Power input	From Solar PV Panels
Suggested PV Panel Configuration	3 x 330Wp or 4 x 330Wp for 1HP (VOC should not be more than absolute maximum DC Bus voltage)
Max.Output Current rating	08A
Overload	150% for one minute
Maximum Three Phase Output Voltage	120V
Applicable Pump ratings	1HP
Suggested Motor Voltage	72V (Output voltage can be set from 50-140V)
Nominal AC output Power	1200W
Output frequency	Variable from 0-300Hz
Control type	V/F Control for Induction Motor and Sensorless Vector Control for Permanent Magnet Synchronous Motor
Maximum Input Voltage	225V (in all conditions or VOC)
MPPT Voltage range	65-180V
Maximum PV Array short circuit current	10A (Isc)
Power input	1300W
Maximum Input Solar Power	1500Wp
MPPT Efficiency	more than 98%
Weight Without Packing	6.00kg
Weight With Packing	7.00kg
PV input Surge Protection	4KA, 585V DC PCB mounted MOVs
PV input MCB (inside the enclosure)	16A, 250V DC
Protections	Output Short/open circuit, Over Temperature, Over/ Under Voltage, Thermal Overload, Dry Run, Unbalance in the output, Reverse Polarity
Local ON/OFF control	Through toggle switch on the enclosure
Parameter updation	POTA (Parameter over the air) is available subject to availability of communication network.
Protection level	IP67

Motor types which can be used	PMSM and Induction Motor
Operating Ambient Temperature	-10°C to +45°C with relative humidity of maximum 90% RH (Non Condensing)
Cooling	Natural
Maximum Altitude and Audible noise	1000m from Sea level and less than 40dB
Controller Option	Controller with 2 line LCD Display and 4 keys (Remote Monitoring is not available)
	Controller with 2G Remote Monitoring Unit, 2 line LCD display and 4 keys (SIM and data charges are not included)
	Controller with MNRE specification compliant 4G fallback to 2G Remote Monitoring Unit, GPS, 2 line LCD display and 4 keys (SIM and data charges are not included)

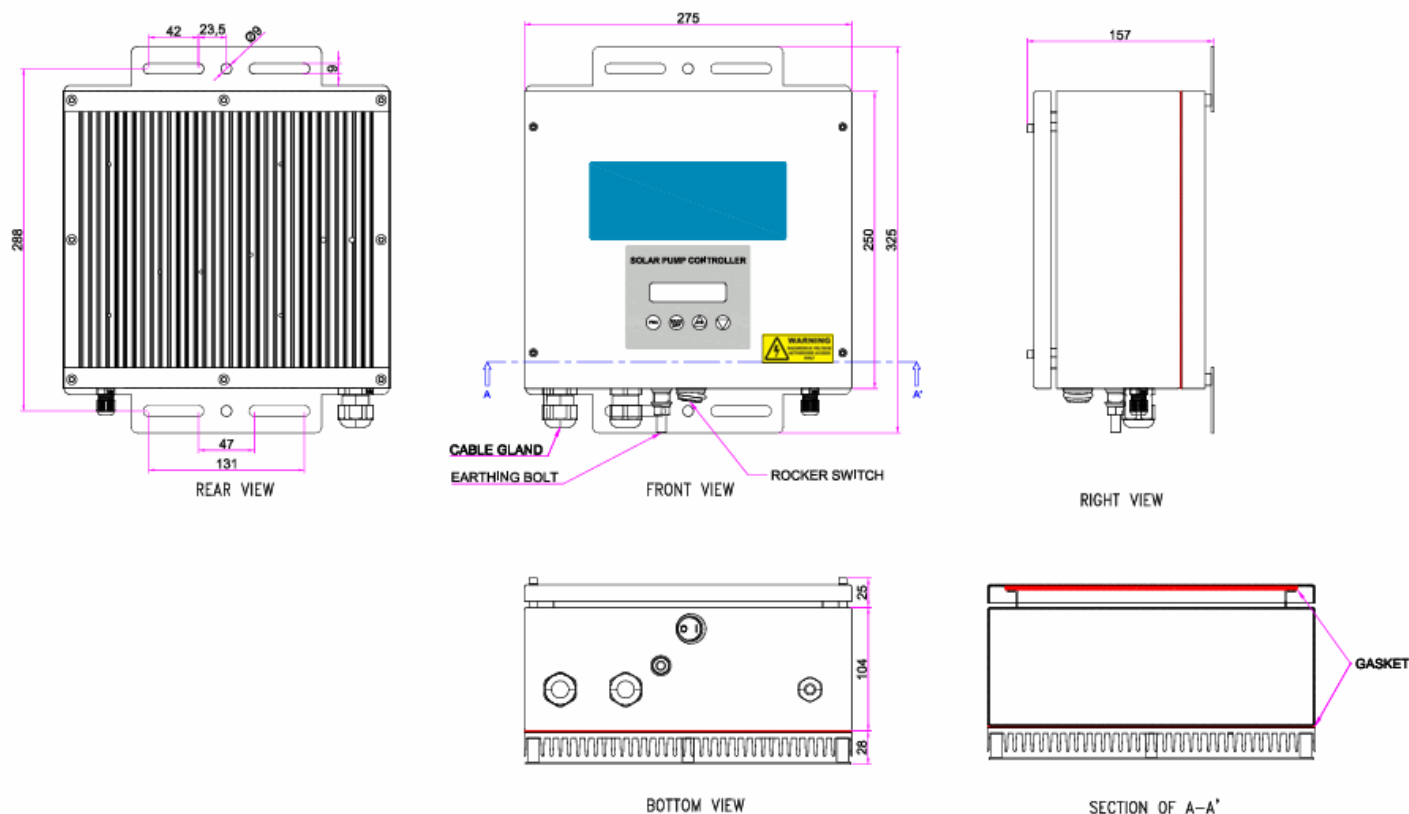
Note :

- **Do not connect rectified DC power to the Solar Pump controller. Use Solar Power only.**
- Selection of Drive module should be based on current rating. The Current rating should be equal or more than the Motor current rating. The details like Power, kVA etc. are indicative only.

Single line Diagram:



Mechanical Dimensions:



Orderable Parts:

Part Number	Description	Dimension
V20PV008x800	200V,08A, IP65 Solar Pump controller with 2 line LCD Display and 4 keys (Remote Monitoring is not available)	275 (Width) x 325 (Height) x 157 (Depth)
V20PV008x801	200V,08A, IP65 Solar Pump controller with 2G Remote Monitoring Unit, 2 line LCD display and 4 keys (RMU is NOT MNRE specification compliant. SIM and data charges are not included)	
V20PV008x802	200V,08A, IP65 Solar Pump controller with MNRE specification compliant 4G fallback to 2G Remote Monitoring Unit, GPS, 2 line LCD display and 4 keys (SIM and data charges are not included)	All Dimensions are in mm
"x" in the part number may be either M or F or R or S during supply		

Revision Number	Date	Details
ROB	6-May-24	Added Part Numbers
ROA	14-Aug-23	Tentative

The above specifications are subject to change without notice