

TS8102024R0A

TS8102024R0A – Technical Specifications of 900V PV/3- Φ Input, 20A Pump Controller

The pump controller is a subset of MECWIN® customised Inverter+ V3 Series High Performance Permanent Magnet Synchronous Motor (PMSM) drive. With proper selection of array voltage/current, the Pump controller can be used for 7.5/10HP nominal pump rating with Mono/Poly Crystalline Solar Photovoltaic (PV) panel array.

Parameter	Specification
Dual Input Pump Controller Model	V90AC020x876, V90AC012x877, V90AC020x878, V90AC020x879, V90AC020x880
Power Input	Both from Solar and Grid
Suggested PV Panel Configuration	14 × 505–550Wp for 7.5HP, 350V, 15A / 17 × 530–550Wp for 10HP, 380V, 17A
Max Output Current Rating	20A with 150% overload for one minute
Maximum Three Phase Output Voltage	380V
Applicable Pump Ratings	7.5HP and 10HP
Suggested Motor Voltage	270V for 5HP and 380V for 7.5HP
Nominal AC Output Power	10000W @ 0.8 Power Factor
Output Frequency	Variable from 0–300Hz
Control Type	V/F Control / Sensorless Vector Control (PMSM)
Maximum Input Voltage	900V
MPPT Voltage Range	250–650V
Max PV Array Short Circuit Current	15A (Isc)
Power Input	10500W
Max Input Solar Power	11500Wp
MPPT Efficiency	More than 98%
Weight Without/With Packing	TBD
PV Input Surge Protection (Optional)	40kA, 585V DC PV T2 SPD
PV Input MCB	32A, 1000V four pole MCB
Grid Input Specifications	Three Phase, 50/60Hz, 415V $\pm$ 10%–15%
Maximum Grid Input Power and Current	10000W and 20A
Grid Input Surge Protection (Optional)	40kA, 320VAC LN, T2 SPD
Grid Input Circuit Breaker	32A, 10kA Short Circuit rating, 3 Pole MCB
User Interface	2 line LCD, 4 Keys inside, RUN and Fault LEDs
Protections	Short/Open Circuit, Over Temp, Over/Under Voltage, Thermal Overload, Dry Run, Reverse Polarity
Protection Level	IP67

Parameter Updation	POTA (Parameter over the air) and FOTA (Firmware over the air) are available subject to availability of RMU and communication network.
Ambient Conditions and Derating	-25 C to 50 C and 90% RH non-condensing. No derating up to 45 C and 10% derating for 50 C.
Maximum Audible Noise	Less than 80dB at 1m.
Maximum Altitude	1000m from sea level.
Cooling	Forced Air with IP67 Fans.

OPTION

Option 1: Controller with 2 line LCD Display and 4 keys (Remote Monitoring is not available)

Option 2: Controller with 2G Remote Monitoring Unit, 2 line LCD display and 4 keys (SIM and data charges are not included)

Option 3: 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)

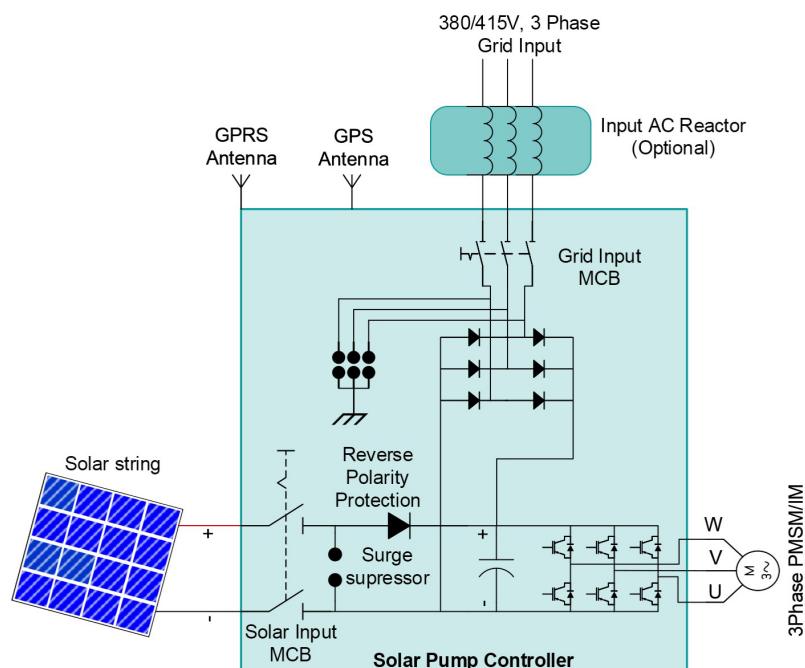
Option 4: Controller with MNRE specification compliant 4G fallback to 2G Remote Monitoring Unit, GPS, 2 line LCD display and 4 keys with Grid Input Surge Protection Device (SIM and data charges are not included)

Option 5: Controller with MNRE specification compliant 4G fallback to 2G Remote Monitoring Unit, GPS, 2 line LCD display, 4 keys with Grid & PV input Surge Protection Device (SIM and data charges are not included)

Notes :

- Do not connect rectified DC power to the PV input of the 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.

BLOCK DIAGRAM

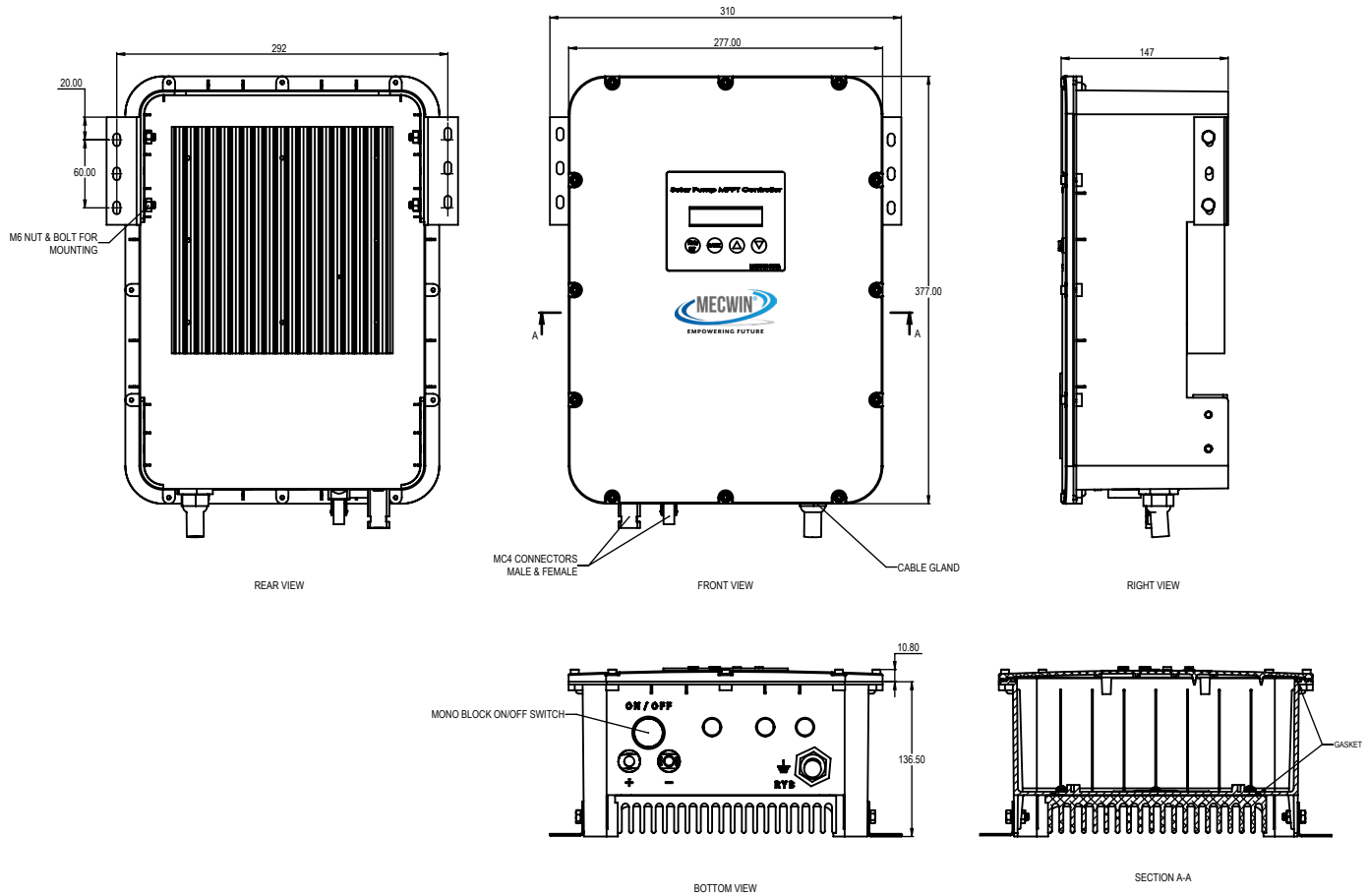


For More Information, Contact Mecwin :

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Mechanical Dimension :



Orderable Parts :

Part Number	Description	Dimension
V90AC020x876	900V PV/3- ϕ input, 20A, Pump controller with 2 line LCD Display and 4 keys (Remote Monitoring is not available)	300 (Width) x 545 (Height) x 210 (Depth) All dimensions are in mm
V90AC020x877	900V PV/3- ϕ input, 20A, Pump controller with 2G Remote Monitoring Unit, 2 line LCD display and 4 keys (SIM and data charges are not included)	
V90AC020x878	900V PV/3- ϕ input, 20A, 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)	
V90AC020x879	900V PV/3- ϕ input, 20A, Pump controller with MNRE specification compliant 4G fallback to 2G Remote Monitoring Unit, GPS, 2 line LCD display, 4 keys and Grid input Surge Protection Device (SIM and data charges are not included)	
V90AC020x880	900V PV/3- ϕ input, 20A, Pump controller with MNRE specification compliant 4G fallback to 2G Remote Monitoring Unit, GPS, 2 line LCD display, 4 keys, Grid & PV input Surge Protection Device (SIM and data charges are not included)	

Note: "x" in the part number may be either M or F or R or S during supply.