

SMART POWER FOR A SMARTER FUTURE

SM-ORRA-3KW

— SOLAR INVERTER —



— Key Features —



3KW with PV & Battery
2.5KW with Battery
Only



PV Input 4KW
Max. PV Input Current
18A



MPPT Voltage
Range 30 ~ 400VDC



Works with &
without Battery



Built-in
Anti-Dust Kit



Built-in
BMS & Wifi

⌚ LINE MODE SPECIFICATIONS

Input Voltage Waveform	Sinusoidal (Utility or Generator)
Nominal Input Voltage	230Vac
Low Loss Voltage	170Vac±7V (UPS); 90Vac±7V (UPS)
Low Loss Return Voltage	180Vac±7V (UPS); 100Vac±7V (Appliances)
High Loss Voltage	280Vac±7V
High Loss Return Voltage	270Vac±7V
Max AC Input Voltage	300Vac
Nominal Input Frequency	50Hz / 60Hz (Auto Detection)
Low Loss Frequency	40±1Hz
Low Loss Return Frequency	42±1Hz
High Loss Frequency	65±1Hz
High Loss Return Frequency	63±1Hz
Output Short Circuit Protection	Circuit Breaker
Efficiency (Line Mode)	>95% (Rated R load, Battery full charged)
Transfer Time	10ms typical (UPS); 20ms typical (Appliances)



INVERTER MODE SPECIFICATIONS

Rated Output Power	3KW with PV and Battery, 2.5KW with battery only
Output Voltage Waveform	Pure Sine Wave
Output Voltage Regulation	230Vac±5%
Output Frequency	50Hz
Peak Efficiency	93%
Overload Protection	5s@≥120% load; 30s @103%~120% load
Surge Capacity	2* rated power for 5 seconds
Nominal DC Input Voltage	24Vdc
Cold start Voltage	23.0Vdc
Low DC Warning Voltage	23.0Vdc (@ Load < 50%), 22.0Vdc (@ Load ≥ 50%)
Low DC Warning Return Voltage	23.5Vdc (@ Load < 50%), 23.0Vdc (@ Load ≥ 50%)
Low DC Cut-off Voltage	21.5Vdc (@ Load < 50%), 21.0Vdc (@ Load ≥ 50%)
High DC Recovery Voltage	31Vdc
High DC Cut-off Voltage	32Vdc
No Load Power Consumption	<35W



CHARGE MODE SPECIFICATIONS

Charging Algorithm	3-Step
AC Charging Current (Max)	80Amp (@V _{lp} =230Vac)
Bulk Charging Voltage	Flooded Battery 29.2Vdc AGM / Gel Battery 28.2Vdc
Floating Charging Voltage	27Vdc



MPPT SOLAR CHARGING MODE

Max. PV Array Power	4000W
Nominal PV Voltage	240Vdc
Start-up Voltage	70Vdc +/- 10Vdc
PV Array MPPT Voltage Range	30~400Vdc (Min. 60V without Battery)
Max. PV Array Open Circuit Voltage	450Vdc
Max. Input Current	18Amp
Max. Charging Current (AC Charger + Solar Charger)	100Amp



GENERAL SPECIFICATIONS

Safety Certification	CE
Operating Temperature Range	-10°C to 50°C
Storage Temperature	-15°C ~ 60°C
Humidity	5% to 95% Relative Humidity (Non-condensing)
Dimension (D* W* H), mm	90 x 288 x 357
Net Weight, Kg	7.2



Reliable Power



Smart Technology



Energy Efficient

