



» Features

- Powerful & Efficient-12kW pure sine wave inverter with 98% peak efficiency
- Smart Battery System-20.48kWh LiFePO4 battery, intelligent BMS for safety
- High-Performance Solar Input-Supports 12kW PV, 60-500VDC, 120A MPPT
- Flexible Grid Integration-Works on/off-grid, supports UPS mode
- Reliable & Durable-Anti-dust design, IP21 protection, fan cooling system
- Compact & Practical-800×440×365mm, optimized for home or business use

RPES-SMAIO2(12KW PLUS-400AH)

PV (DC Input)

Recommended Max. PV Input Power	12000W
Max. hput Voltage	500V
MPPT Operating Voltage Range	85V~450V (@75V start up)
Number of MPPT	2
Max. Number of hput Strings Per MPPT	1
Max. input Current Per MPPT	27A/13A (MAX:40A)
Max. Short-Circuit Current Per MPPT	37A/17.5A

Grd (AC Input)

Max output power	12000W
Max output current	70A
Rated grid voltage	220/230/240V (L, N, PE)
Rated grid frequency	50/60Hz
Acceptable range	170-280 Vac (for UPS) 90-280 Vac (for home application)

Battery Parameters (Bidirection)

Battery type	LiFePO4
Battery voltage range	40-60 Vdc
Battery capacity	20.48kWh
Rated Battery Voltage	48Vdc/51.2Vdc
Max. charge/discharge current	210A/240A
BMS Communication Mode	Software Version

Back-up Output (AC output)

Rated output power	12000W/12000VA
Rated output current	54.5A
Rated output voltage/Frequency	220/230/240V (L, N, PE) 50/60Hz
Surge power	22000VA5s
THDV (@Linear load)	<3%

Efficiency

Peak Efficiency	98%
Max. MPPT Efficiency	99.90%
IP Rating	IP21

General Parameters

Operating temperature range	-10°C ~ 50°C
Relative humidity range	10% ~ 95%
Max. operating altitude	>2000m derating
Standby self-consumption	20W
Installation type	Installation type
Cooling mode	Fan Cooling
Dimension D*W*H	800x440x365 (mm)
Weight	=170kg