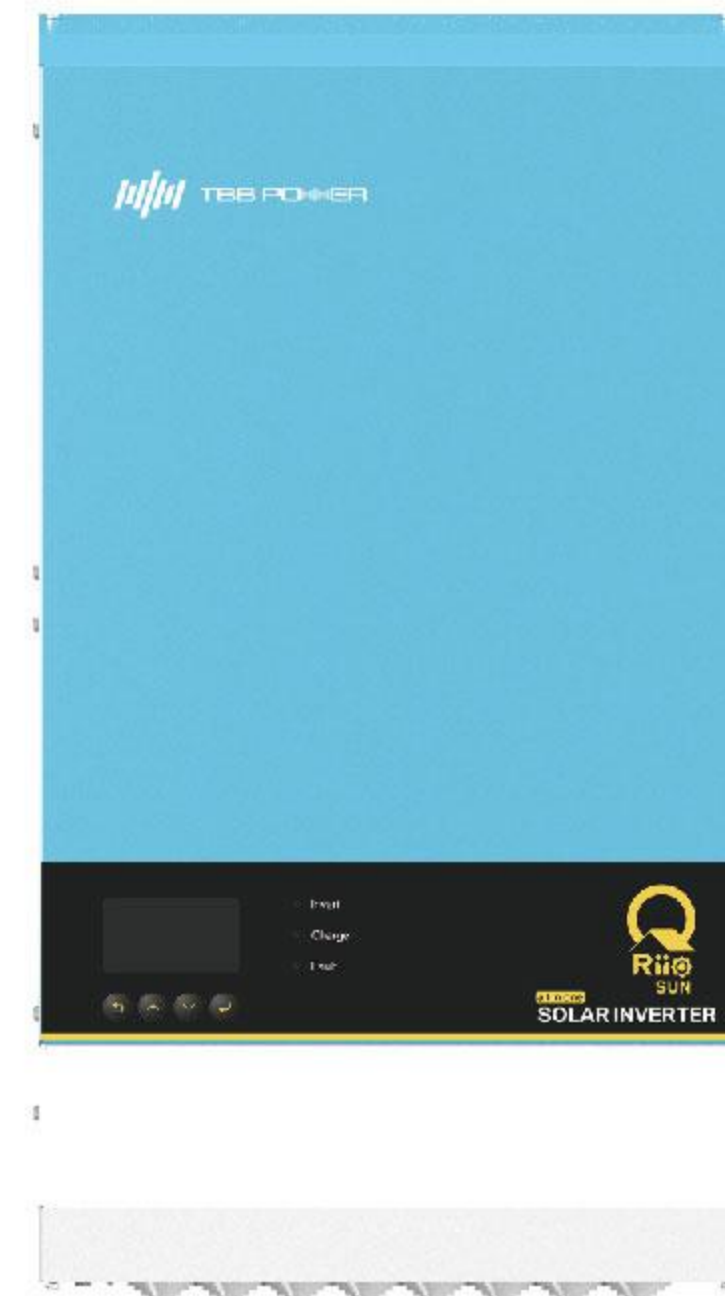


All in One Solar Inverter

RIIO SUN

2KVA-6KVA (230Vac)

Transformer Based



RiiO Sun is a powerful all-in-one solar inverter equipped with a high-performance sine wave inverter, AC charger, an MPPT solar charge controller, and a high-speed transfer switch. Its professional MPPT technology can maximize and regulate the use of solar energy to charge batteries efficiently. The transformer-based design makes it worry-free to start up motor loads. Its built-in high-speed automatic transfer switch ensures you uninterrupted power supply all the time, which makes it an ideal solution for backup power and basic off-grid applications.

Its ECO mode can also be used to prolong the battery backup time while maintaining loads' normal operation. Thanks to its power assist and power control function, it works well with limited AC sources such as generators or limited grid. RiiO Sun can automatically adjust its charging current by taking loads into account to protect the AC source from overload. Once the temporary peak power appears, it can also discharge the battery to supply power to compensate the insufficient part of the limited AC source.

- All-in-one design for easy installation and reduce hardware costs
- Ideal for DC Coupled PV System, Power backup system, solar hybrid system
- Transformer-based design and high surge capacity for all kinds of heavy loads
- Built-in MPPT solar charge controller to maximize the use of green solar energy
- Ultra-short transfer time (0~4ms) to protect mission-critical loads like server and ATM
- Built-in ECO Mode to prolong the battery backup time (45% energy saving at max)
- Power assist function enables limited AC to power heavy loads
- Compatible with mainstream lithium battery brands
- TBB premium II battery charging management
- Built-in battery SOC estimation
- Equalization charging program available for flooded and OPZS battery
- Extremely high inverter efficiency up to 94%
- Extremely high MPPT efficiency up to 98%
- Remote monitoring and control via NOVA Web & APP
- Fully programmable by APP

Model NO.	RiiO Sun 2KVA-M	RiiO Sun 3KVA-M	RiiO Sun 2KVA-S	RiiO Sun 3KVA-S	RiiO Sun 4KVA-S	RiiO Sun 5KVA-S	RiiO Sun 6KVA-S
Product Topology	Transformer based						
Generator power assist	Yes						
AC input range	175~265VAC (45~65Hz)						
AC input Current (transfer switch) (A)	32				50		

Inverter

Nominal battery voltage (V)	24		48				
Input voltage range (V)	21~34		42~68				
AC output voltage (VAC)	220/230/240 ± 2%						
AC output Frequency (Hz)	50/60 ± 1%						
Harmonic distortion	< 2%						
Load Power factor	1.0						
Cont. output power at 25°C (VA)	2000	3000	2000	3000	4000	5000	6000
Max Output power at 25°C (W)	2000	3000	2000	3000	4000	5000	6000
Peak power (W) for 3 sec	4000	6000	4000	6000	8000	10000	12000
Surge	300%						
Maximum efficiency	91%	91%	93%	93%	93%	94%	94%
Zero load power (W)	13	17	13	17	19	22	25

Charger

Charge voltage 'absorption' (V)	28.8		57.6				
Charge voltage 'float' (V)	27.6		55.2				
Battery types	AGM/GEL/OPZV/Lead-Carbon/Li-ion/Flooded/Traction/TBB SUPER-L						
Max AC charge current (A)	40	70	20	35	50	60	70
Temperature compensation	Yes						

Solar Charge Controller

Max output current (A)	60	60	40	60	60	90	90
Maximum PV power (W)	2000	2000	3000	4000	4000	6000	6000
PV open circuit voltage (V)	150						
MPPT voltage range (V)	65~145						
Max. PV short circuit current (A)	18	18	27	35	35	54	54
Charge voltage 'absorption' (V)	28.8		57.6				
Charge voltage 'float' (V)	27.6		55.2				
MPPT charger maximum efficiency	98%						
MPPT efficiency	> 99.5%						
Protection	a) output short circuit; b) overload; c) battery voltage too high d) battery voltage too low; e) temperature too high; f) input voltage out of range						
CAN BUS Communication Port	For communication with the lithium battery						

General Data

Output (AC Out) Current (A)	32				50		
Transfer time	4ms (<15ms in Weak AC source Mode)						
Protection	a) output short circuit; b) overload c) battery voltage too high; d) battery voltage too low e) temperature too high; f) input voltage out of range; g) input voltage ripple too high; h) Fan block						
General purpose com. Port	RS485 (GPRS,WLAN optional with Kinergy)						
Operating temperature range	-20°C to 65°C						
Relative humidity in operation	95% without condensation						
Altitude (m)	2000						

Mechanical Data

Dimension (mm) (max)	499x272x144				570x310x154		
Net weight (kg)	15	18	15	18	20	29	31
Cooling	Forced fan						
Protection index	IP21						

Standards

Safety	EN-IEC 62477-1, EN-IEC 62109-1, EN-IEC 62109-2						
EMC	EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-3-11,EN61000-3-12						