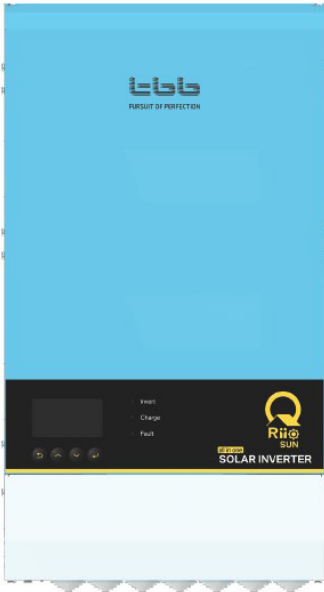


INV047 | INV048 | INV049 | INV071

RiIO SUN INVERTER



3kVA-M

MPPT 24V

3kVA-S

MPPT 48V

5kVA-S

MPPT 48V

6kVA-S

MPPT 48V

OVERVIEW

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 maximise 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.

FEATURES & BENEFITS

- 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 charger controller to Maximise 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
- TBS premium II battery charging management
- Built-in battery SOC estimation
- Equalisation 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

RiIO SUN	3KVA-M	3KVA-S	5KVA-S	6KVA-S
Product Code	INV047	INV048	INV049	INV071
Product Topology	Transformer based			
Generator Power Assist	Yes			
AC input voltage range(VAC)	175-265			
AC input Frequency range(Hz)	45-65			
AC input Current (transfer switch) (A)	32			

OFF GRID INVERTERS

RIIO SUN	3KVA-M	3KVA-S	5KVA-S	6KVA-S
INVERTER				
Nominal battery voltage (V)	24	48	48	
Input voltage range (V)	21~34	42~68	42~68	
AC output voltage(VAC)	220/230/240 +/- 2%			
AC output Frequency(Hz)	50/60 ±1%		50/60 ± 1%	
Harmonic distortion	<2%			
Load Power factor	1			
Cont. output power at 25°C (VA)	3000		5000	6000
Max. output power at 25°C (W)	3000		5000	6000
Peak power (3sec) (W)	6000		10000	12000
Surge	300%		3	
Maximum efficiency	91%	93%	94%	
Zero load power (W)	17		22	25
CHARGER				
Charge voltage 'absorption' (V)	28.8	57.6	57.6	
Charge voltage 'float' (V)	27.6	55.2	55.2	
Battery types	AGM / GEL / OPzV / Lead-Carbon / Li-ion / Flooded / Trac-tion / TBB SUPER-L		AGM / GEL / OPzV / Lead-Carbon / Li-ion / Flooded / Trac-tion / TBB SUPER-L	
Max AC charge current (A)	70	35	60	70
Temperature compensation	Yes			
SOLAR CHARGE CONTROLLER				
Max output current(A)	60		90	90
Maximum PV power(W)	2000	4000	6000	6000
PV open circuit voltage (V)	150		150	150
MPPT voltage range(V)	65~145		65~145	
PV short circuit current (A)	18	35	54	54
Charge voltage 'absorption' (V)	28.8	57.6	57.6	
Charge voltage 'float' (V)	27.6	55.2	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)		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)		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		570*310*154	
Net Weight (kg)	18		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			
Warranty	2 Years + 1 Year*			

*Add 1 year to your warranty when you link your product to the NOVA App