

RIIO SUN II

RiiO Sun II, all-in-one inverter, combining a pure sine wave inverter, battery charger, MPPT solar charge, transformed based, with parallel and three-phase option up to 54 kVA.



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RiiO Sun / Kinergy WIFI Antena

RiiO Sun II series is TBB's brand-new versatile all-in-one solar inverter for off-grid, ESS and self-consumption applications, combining a pure sine wave inverter, battery charger, MPPT solar charge controller and a high-speed automatic transfer switch in a compact casing with a better display interface design and better human machine interface. RiiO Sun II boasts higher PV open circuit voltage, higher PV charging power and current, and supports parallel and three-phase operation up to 9 units to achieve higher power output (up to 54KVA). It is optional to work without battery and only use solar energy to power loads directly. You can start with the comprehensive system or a smaller solution and gradually expand it, depending on what best suits your needs and budget. A programmable smart port is also equipped in both 5KVA and 6KVA model for generator input or load management.

Worth to mention, that RiiO Sun II supports energy feeding back to power loads on the AC input to maximize self-consumption and cut down system investment. AGS function now is also available for RiiO Sun II. Its power assist and power control function enable it work well with limited AC sources such as generators or limited grid. RiiO Sun II 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 in an extremely short time to compensate the insufficient part of the limited AC source.

Main specifications

- All-in-one, plug and play design for easy installation
- Transformer-based, easily withstand the initial surge current
- Versatile for solar off-grid, ESS, self-consumption and backup power system
- Support parallel and three-phase (RiiO Mate required)
- Support energy feeding back into grid *
- Maximize self-consumption
- Optional to work without battery
- Auto restart when the PV or AC is recovering
- Higher PV open circuit voltage
- Higher PV charging power and current
- 2 MPPT trackers for 5KVA and 6KVA models
- Programmable output relay for generator start and stop
- A programmable smart port for 5KVA and 6KVA models
- Ultra-short transfer time (2ms) for mission-critical loads
- Better display interface design and better human machine interface
- Power assist and power control
- Built-in ECO Mode to prolong the battery backup time
- Compatible with mainstream lithium battery brands
- Max inverter efficiency 94%, max MPPT efficiency 98%
- Extremely low self-consumption power
- Remote monitoring and control via Nova Web & APP
- Fully programmable by APP

* Check with your provider if this function is available in your area.

SPECIFICATIONS

	Riio Sun II 2 kVA-M	Riio Sun II 3 kVA-M	Riio Sun II 3 kVA-S	Riio Sun II 5 kVA-S	Riio Sun II 8 kVA-S
Electrical Specifications					
PowerAssist	Yes				
AC input range	175 - 265 Vac (45-65 Hz)				
AC input Current / Transfer Swithc	32 A	32 A	32 A	50 A	50 A
Inverter					
Nominal input voltage	24 V		48 V		
DC input voltage range	21 - 34 V			42 - 68 V	
AC Output	230 Vac \pm 2%				
Frequency	50 Hz / 60 Hz				
Cont. Output Power at 25 °C	2000 VA	3000 VA	3000 VA	5000 VA	8000 VA
Max. Output power at 25 °C	2000 W	3000 W	3000 W	5000 W	8000 W
Peak Power	4000 W	6000 W	6000 W	10000 W	16000 W
Maximum efficiency	91 %	91 %	93 %	94 %	95 %
Zero load power	13 W	17 W	17 W	22 W	32 W
Charger					
Charge voltage, absorption	28,8 V			57,6 V	
Charge voltage, float	27,6 V			55,2 V	
Battery Types	Stationary / AGM / GEL / Lead-Carbon / Li-Ion / Traction				
Max. charge current	40 A	70 A	35 A	60 A	90 A
Temperature compensation	Yes				
Solar Charge controller					
Max. Output current	80 A	80 A	60 A	100 A	100 A
Max. PV open circuit voltage	150 V	150 V	250 V	250 V	250 V
MPPT Voltage range	40 - 145 V	40 - 145 V	65 - 245 V	65 - 245 V	65 - 245 V
Number of MPPT Trackers	1	1	1	2	2
Max. PV current per tracker	36 A	36 A	36 A	36 + 36 A	36 + 36 A
Max PV shortcircuit current per tracker	40 A	40 A	40 A	40 + 40 A	40 + 40 A
Max PV power per tracker	3600 W	3600 W	5200 W	4400 + 4400 W	4400 + 4400 W
Absorption voltage	28,8 V	28,8 V	57,6 V	57,6 V	57,6 V
Float voltage	27,6 V	27,6 V	55,2 V	55,2 V	55,2 V
Max charger efficiency	98 %				
MPPT efficiency	> 99,5 %				
Protections	Output short circuit; Overload; Battery voltage too high; Battery voltage too low; Temperature too high; Input voltage out of range				
General data					
AC output current	32 A	32 A	32 A	50 A	50 A
Smart Port output current	NA	NA	NA	50 A	50 A
Transfer time	4 ms (<15 ms in save energy mode)				
Protections	Output short circuit; Overload; Battery voltage too high; Battery voltage too low; Temperature too high; Input voltage out of range; Input voltage ripple too high; Fan block.				
Communication port	RS485 (WLAN Optional)				
Programmable relay	1 x (30 Vdc / 3A or 250 Vac / 3 A)				
Operating temperature range	-20 to 65 °C				
Humidity	95 % without condensation				
Altitude max	2000 mts.				
Mechanical data					
Dimmensions	499 x 272 x 144 mm	499 x 272 x 144 mm	499 x 272 x 144 mm	570 x 310 x 154 mm	610 x 320 x 164 mm
Weight	14 kgr	18 kgr	18 kgr	29 kgr	34 Kgr
Cooling	Forced fan				
Protection grade	IP21				
Standards					
Security	EN-IEC 60335-1, EN-IEC 60335-2-29, EN-IEC 62109-1, EN-IEC 62109-2				
EMC	EN-IEC 61000-6-1, EN-IEC 61000-6-2, EN 61000-6-3, EN 61000-6-4 EN 61000-3-11, EN 61000-3-12				

DOWNLOADS

CATÁLOGO RIIO SUN II

 [RiiO_Sun_II_All_in_One_Bornay_es_V1.7.pdf](#) Size: 1.2 MiB


CERTIFICADO RED ESPAÑA RIIO SUN II 5 - 6 KVA S

 [RiiO Sun II 5KVA-S&6KVA-S Spain Grid Regulation Certificate.pdf](#) Size: 1.01 MiB

CERTIFICADO RED ESPAÑA RIIO SUN II 2 - 4 KVA M / S

 [RiiO Sun II 2KVA-4KVA-M S Spain Grid Regulation Certificate.pdf](#) Size: 294.11 KiB

CERTIFICADO RED ESPAÑA RIIO SUN II 8 KVA S

 [RiiO Sun II 8KVA-S Spain Grid Regulation Certificate.pdf](#) Size: 282.64 KiB
