

# RiiO II

## - Inverter Charger -



RiiO II Series is a versatile transformer-based inverter charger, designed for backup power, off-grid and ESS applications. It features high surge power for heavy loads and a 4ms quick transfer for uninterrupted critical load support during outages, supports up to 9 parallel units, three-phase expansion, and AGS function. Its smart port allows for dual AC inputs or outputs configurations, enhancing system power flexibility and load management.

Outperforming conventional transformer-based inverters, RiiO II transformer-based hybrid inverter maximizes solar energy use by preferentially powering loads, charging batteries, and feeding surplus back to the grid, minimizing waste.

### Enhanced Flexibility

- Versatile for backup power, off-grid and ESS
- Parallel & three-phase up to 9 units, 72kVA
- Built-in a smart port for Gen input or 2nd AC output\*
- AGS function, Power assist & power control
- Compatible with mainstream lithium battery brands and generators

### ESS Capabilities

- Maximize self-consumption
- Lower electricity bills via peak shaving & time-of-use
- Grid feed-in for utility credits

### Superior Reliability

- Transformer-based, high surge power
- 4ms ultra-fast switch to battery power
- Maximize solar energy utilization and minimize energy waste
- ECO Mode to prolong backup time
- Extremely low self-consumption power
- Max inverter efficiency 94%

### Easy O&M

- Auto restart when the AC is recovering
- Local monitoring via E4 LCD Monitor
- Remote monitoring and control via Nova Web & APP

\*Only available for 5kVA/6kVA/8kVA model

Model	RiiO II 1KVA-L	RiiO II 1.5KVA-M	RiiO II 2KVA-M	RiiO II 3KVA-M
Power Assist	Yes			
AC Input Voltage Range (VAC)	175~265			
AC Input Frequency Range (Hz)	45~65			
AC Input Current (Transfer Switch) (A)	16	16	32	32

### Inverter

Nominal Battery Voltage (V)	12	24		
Input Voltage Range (V)	10.5-17	21-34		
AC Output Voltage (VAC)	220/230/240 ± 2%			
AC Output Frequency (Hz)	50/60 ± 0.1%			
Harmonic Distortion	<2%			
Cont. Output Power at 25°C (VA)	1000	1500	2000	3000
Max Output Power at 25°C (W)	1000	1500	2000	3000
Peak Power (W)	2000	3000	4000	6000
Surge	300%			
Maximum Efficiency	89%	91%	91%	91%
Zero Load Power (W)	12	12	13	17

### Charger

Charge Voltage 'Absorption' (V)	14.4	28.8		
Charge Voltage 'Float' (V)	13.8	27.6		
Battery Types	AGM / GEL / OPzV / Lead-Carbon / Flooded / Traction / Lithium			
Max AC Charge Current (A)	40	35	40	70
Temperature Compensation	Yes			

### Charger

AC Out1 Current (A)	16	16	32	32
Smart Port Current (A)	N/A			
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)			
Programmable Relay	1x (30Vdc/3A or 250Vac/3A)			
Operating Temperature Range	-20°C to 65°C			
Relative Humidity in Operation	95% without condensation			
Altitude (m)	2000			

### Mechanical Data

Dimension (mm) (max)	462*255*144		499*272*144	
Net Weight (kg)	11	12	13	17
Cooling	Forced fan			
Protection Index	IP21			

### Standards

Safety	EN-IEC 62477-1, 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			
Grid Regulation	/		NRS 097	

Model	RiiO II 2KVA-S	RiiO II 3KVA-S	RiiO II 4KVA-S	RiiO II 5KVA-S	RiiO II 6KVA-S	RiiO II 8KVA-S
Power Assist	Yes					
AC Input Voltage Range (VAC)	175~265					
AC Input Frequency Range (Hz)	45~65					
AC Input Current (Transfer Switch) (A)	20	32	32	50	50	50

### Inverter

Nominal Battery Voltage (V)	48					
Input Voltage Range (V)	42~68					
AC Output Voltage (VAC)	220/230/240 ± 2%					
AC Output Frequency (Hz)	50/60 ± 0.1%					
Harmonic Distortion	<2%					
Cont. Output Power at 25°C (VA)	2000	3000	4000	5000	6000	8000
Max Output Power at 25°C (W)	2000	3000	4000	5000	6000	8000
Peak Power (W)	4000	6000	8000	10000	12000	16000
Surge	300%					
Maximum Efficiency	93%	93%	93%	94%	94%	95%
Zero Load Power (W)	14	17	19	22	25	32

### Charger

Charge Voltage 'Absorption' (V)	57.6					
Charge Voltage 'Float' (V)	55.2					
Battery Types	AGM / GEL / OPzV / Lead-Carbon / Flooded / Traction / Lithium					
Max AC Charge Current (A)	20	35	50	60	70	90
Temperature Compensation	Yes					

### Charger

AC Out1 Current (A)	20	32	32	50	50	50
Smart Port Current (A)	N/A			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)					
Programmable Relay	1x (30Vdc/3A or 250Vac/3A)					
Operating Temperature Range	-20°C to 65°C					
Relative Humidity in Operation	95% without condensation					
Altitude (m)	2000					

### Mechanical Data

Dimension (mm) (max)	462*255*144	499*272*144		570*310*154		620*320*164
Net Weight (kg)	13	17	19	27	29	32
Cooling	Forced fan					
Protection Index	IP21					

### Standards

Safety	EN-IEC 62477-1, 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					
Grid Regulation	NRS 097					



TBB POWER



Riio II