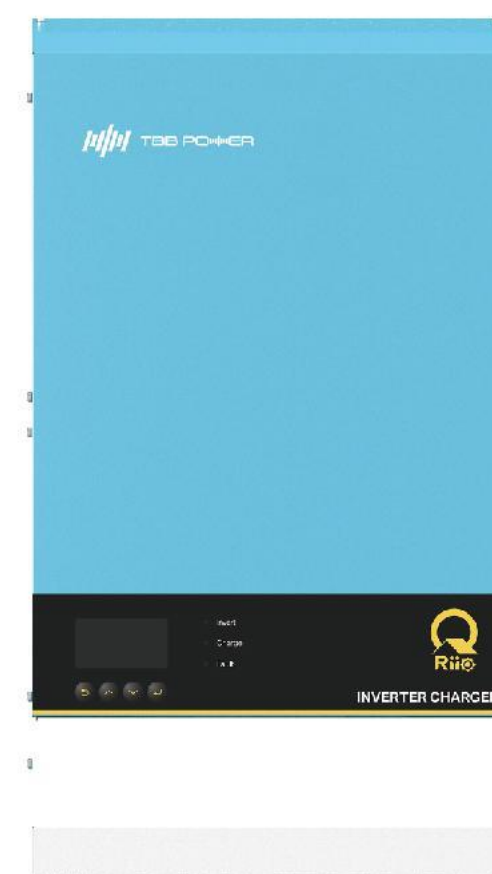


Inverter Charger

RIIO

2KVA-6KVA



RiiO is a powerful inverter charger designed for backup power applications in areas with unstable grid. It integrates multiple functions including a high-performance true sine wave inverter, a powerful battery charger, and a high-speed automatic transfer switch. Low frequency transformer-based design equips it with high surge capability, making it easy to power high-demanding appliances, such as fridges, freezers, water pumps and air-conditioners, etc.

Featuring high AC charging current, it is able to fully charge the lithium batteries in 2 hours at the earliest when the grid power is available, to secure the continuous power supply for home appliances during blackouts. 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 inverter charger 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.

- Power assist function enables limited AC sources to handle big loads
- Low-frequency transformer-based design, high surge capacity to start up motor loads easily
- Optional ECO mode to prolong the battery backup time (45% energy saving at max)
- Extremely high inverter efficiency up to 94%
- Harmonic distortion <2%
- Extremely low self-consumption power
- Ultra-short transfer time (0~4ms) to protect mission-critical loads like server and ATM
- Compatible with mainstream lithium battery brands
- TBB premium II battery charging management
- Built-in SOC estimation
- Equalization charging program available for flooded and OPzV battery
- Remote monitoring and control via NOVA Web & APP
- Fully programmable by APP



| Model NO. | RiiO 2KVA-M | RiiO 3KVA-M | RiiO 2KVA-S | RiiO 3KVA-S | RiiO 4KVA-S | RiiO 5KVA-S | RiiO 6KVA-S |
|--|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 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 | | | | 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 (3sec) (W) | 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 | | | | | | |

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) | 14 | 17 | 14 | 17 | 19 | 27 | 29 |
| Cooling | Forced fan | | | | | | |
| Protection index | IP21 | | | | | | |

Standards

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