

## Inverter Charger

# Kinergier Pro

**CK-II 2kW / 3kW / 5kW / 8kW 230Vac**

Parallel and three-phase up to 9 units (2~72kW)  
 Feeding energy back into grid  
 Programmable smart port  
 For off-grid, ESS & Self-consumption applications  
 AGS, power assist & power control

Kinergier Pro CK-II is a multifunctional inverter charger, with feeding energy back into grid capability, an upgrade from CK. Based on all features of CK, CK-II boasts richer functionalities to meet more applications' need. In addition to off-grid application, CK-II, plus an external current sensor, can optimize the self-consumption without meter. With E4 LCD Monitor, CK-II is ideally suited for complex ESS applications for various countries.

More importantly, Kinergier Pro CK-II is equipped with a smart port which can be programmed as a generator input port to realize two AC inputs for the system, or as an AC output to power normal loads to realize smart load management during power outages.

- For off-grid, ESS applications
- Suitable for AC Coupled PV System, DC Coupled PV System and the combination of both
- Parallel and three-phase operation up to 9 units (72kW)
- With external current sensor to optimize self-consumption
- Realize ESS functionality via E4 LCD Monitor
- Time of Use: support scheduling multiple periods for battery charging and discharging
- Transformer-based, easily withstand the initial surge current from various heavy loads
- One programmable smart port for generator input or powering normal loads
- Feeding energy back into grid
- Compatible with SP600-120 to achieve a higher efficiency DC Coupled PV system
- Compatible with mainstream lithium battery brands and majority of generators
- Built-in with two relays for generator automatic start and stop (AGS)
- Power Assist and Power Control to maximize the use of limited AC power and prevent overload on the AC source
- Oms UPS transfer switch to protect mission critical loads
- Local monitoring and control via E4 LCD Monitor
- Remote monitoring and control via NOVA APP or Web

Model No .	CK-II 2.0M	CK-II 3.0M	CK-II 5.0M	CK-II 2.0S	CK-II 3.0S	CK-II 5.0S	CK-II 8.0S
Power Assist	Yes						
Feedback into Grid	Yes						
AC input voltage range(VAC)	175~265						
AC input Frequency range(Hz)	45~65						
AC input Current (transfer switch) (A)	32		50		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 ± 0.1%						
Harmonic distortion	< 2%						
Load Power factor	1.0						
Cont. output power at 25°C (VA)	2000	3000	5000	2000	3000	5000	8000
Cont. output power at 25°C (W)	1600	2500	4500	1600	2500	4000	6500
Output power (30min) at 25°C (W)	2000	3000	5000	2000	3000	5000	8000
Peak power (W)	6000	9000	15000	6000	9000	15000	24000
Cont. output power at 40°C (W)	1500	2200	3600	1500	2200	3700	5600
Maximum efficiency	94%	94%	94%	95%	95%	96%	96%
Zero load power (W)	11	14	23	11	14	18	26

## Charger

Charge voltage 'absorption' (VDC)	28.8			57.6			
Charge voltage 'float' (VDC)	27.6			55.2			
Battery types	AGM / GEL / OPzV / Lead-Carbon / Flooded / Traction / Lithium						
Max AC charge current (A)	50	80	150	25	40	70	110
Temperature compensation	Yes						

## General Data

AC Out1 Current (A)	32	50	32	50
Smart Port Current (A)	32	50	32	50
Transfer time	0ms (< 15ms in Weak AC source Mode)			
Remote on-off	Yes			
Programmable relay	2x			
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			
ComSync communication port	For parallel and three phase operation			
ComMON communication port	For remote monitoring and system integration			
Operating temperature range	-20°C~65°C			
Relative humidity in operation	95% without condensation			
Altitude (m)	2000			

## Mechanical Data

Dimension (mm) (max)	499*272*144		620*320*164		499*272*144		570*310*154		620*320*164	
Net Weight (kg)	16	19	32	16	19	30	36			
Cooling	Forced fan									
Protection category	IP21									

## Standard

Safety	EN-IEC 62477-1, EN-IEC 62109-1, EN-IEC 62109-2, EN-IEC 62040-1						
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	VDE-AR-N 4105*, NRS 097-2-1:2017*, AS/NZS 4777.2:2020*, NTS 2.1 (A)*, RD 1699*						

\* Coming soon

# For off-grid and ESS applications

As a transformer-based inverter charger with AGS function and excellent compatibility with generators and lithium batteries, Kinergie Pro CK-II is ideal for off-grid application, flexible to compose DC coupled PV system, AC Coupled PV system as well as the combination of both to meet various scenarios' need. On top of that, with an external current sensor, CK-II can optimize self-consumption without meter. With E4 LCD Monitor, CK-II can realize complex ESS functionality.

## Optimize Self-consumption

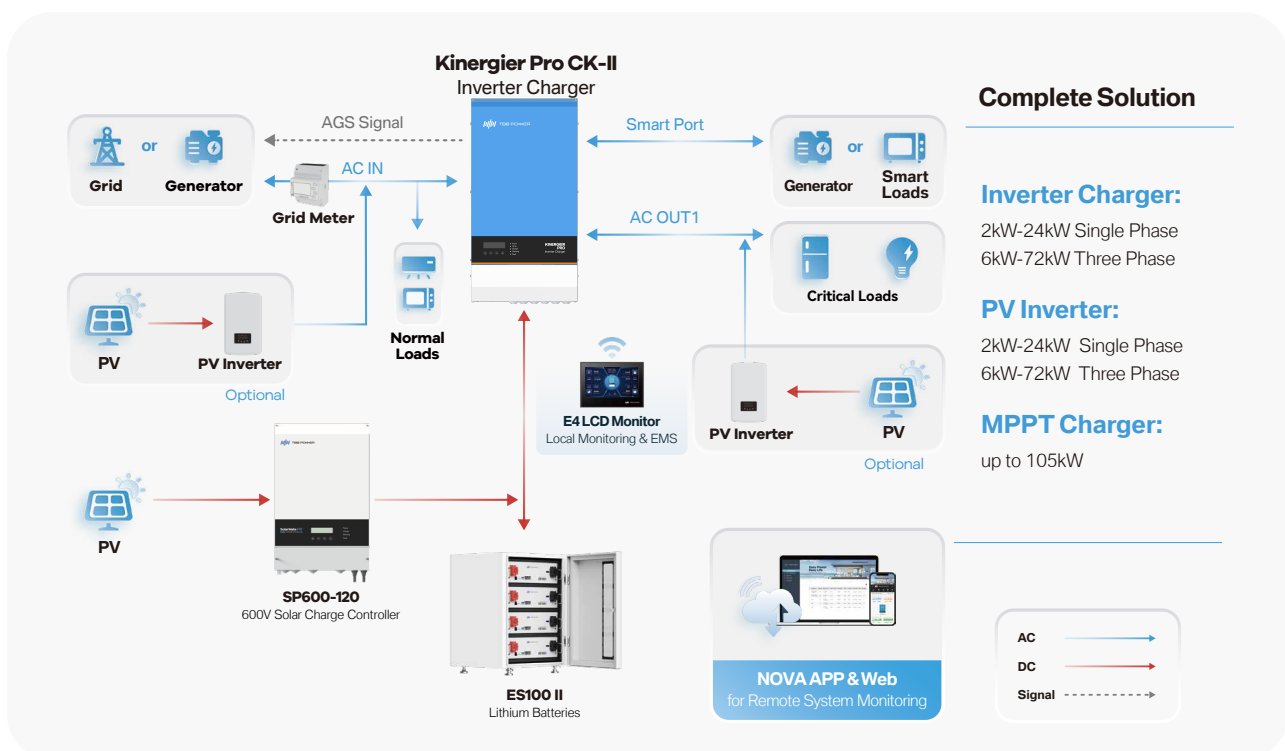
CK-II can maximize self-consumption with solar and battery to cut down on high electricity expense. Connect some normal loads to the AC input of CK-II, the solar energy will be used to power loads and charge batteries to a certain level. When there is any surplus, it can be fed back to power normal loads on the AC input, to maximize self-consumption and greatly reduce the system investment and save electricity bills.

## AC+DC Coupled PV System

with ESS Functionality

2kW-72kW

For Residential & Commercial



## Retrofit Existing Grid-tie System

When the subsidy of feeding energy into grid is greatly reduced or canceled, CK-II can be applied to retrofitting the existing grid-tie system into energy storage system to store solar energy into the battery for local use rather than feeding back into the grid.

## Peak Shaving

When there is large peak-to-valley price difference, CK-II can charge batteries with grid electricity during low price periods and discharge batteries to power loads during high price periods. If there is still any surplus and the subsidy is high, it can be fed back into grid, to make a profit and greatly reduce electricity bills.

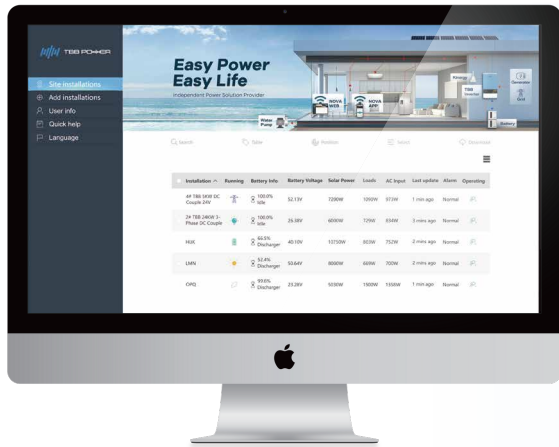
## Self-consumption and Backup Power

The reserved battery SoC is configurable, depending on the grid failure is rare or common, to realize most efficient self-consumption and energy management & dispatch.

# TBB NOVA APP & Web

## Monitor and Control Your Solar System Anywhere Anytime

NOVA App and NOVA Web are FREE energy management and monitoring system designed by TBB Renewable, displaying real-time data of all system components and history records, providing easy access to controlling the power generation and power consumption. According to historical data, users can actively adjust and optimize power consumption habits.



### Devices for remote monitoring communication



**Ether-Link**



**E4 LCD Monitor**



**Kinergy II-WiFi**  
Wireless Data Logger

## Comprehensive Monitoring

- Live data and status overview and system analysis
- System configuration and parameter setting
- Customizable alarm setting
- Detailed report for power harvest, storage and consumption in visual chart and graph
- WEB compatible for Windows and Mac PC
- APP available for Android and iOS phone

## Intelligent Management for Dealers / Installers

- Comprehensive management for multiple installations
- Catch potential issues early with alarm setting to prevent system failure
- Optimize the energy harvest and usage with history graphs and detailed analytical reports
- Proactive maintenance services to keep good relationship with customers
- Customizable banner to show dealers information and slogan



**Android**



**iOS**

[nova.tbbrenewable.com](http://nova.tbbrenewable.com)

