



TriP2-LB-3P 20K INVERTER

TECHNICAL SPECIFICATION SHEET

QUICK SPECS

TriP2-LB-3P 20K	
Rated Output Power (W)	20000W (PV + Battery)
System Type	Hybrid (On-grid / Off-grid)
Rated Battery Voltage (V)	48 / 51.2
Battery Type	Lithium-ion / Lead-Acid
Max. Charge/Discharge Current	250A
Switching Time (UPS)	≤10ms
Rated Output Voltage	3L / N / PE, 230 / 400 Vac
Waveform	Sine wave
Max. AC Input Power (W)	30000
Parallel Operation	Up to 10 units
Dimensions (W × H × D) mm	480 × 703 × 258mm
Weight (kg)	53kg
IP Rating	IP66
Warranty	10 years

Built for hybrid solar and battery storage systems, the TriP2-LB-3P 20K combines high PV input capability with powerful low-voltage battery performance. Designed for three-phase applications, it delivers intelligent energy management and seamless switching between grid and backup power for both on-grid and off-grid operation. With three independent MPPTs, dedicated generator and smart load support, and parallel capability for up to 10 units, it provides a flexible and scalable solution for residential and commercial energy systems.

MONITORING & INSTALLATION

- Remote monitoring via LuxpowerTek app
- RS485, Wi-Fi, and CAN communication
- Integrated battery and load breakers for simplified install

BATTERY PAIRING

The TriP2-LB-3P 20K is designed to integrate seamlessly with the Fogstar Energy 48V battery range, supporting efficient energy storage and flexible system configurations. Its compact design, IP66-rated enclosure, and installer-friendly setup make it suitable for both new installations and system upgrades.

Minimum Setup: Fogstar Energy 16.1kWh ECO or 16.1kWh IP-Rated (PACE)

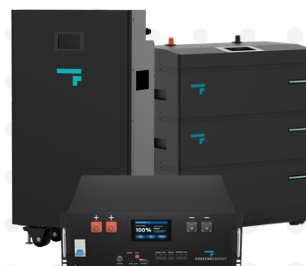
- A compact entry-level solution, ideal for basic energy storage and essential backup applications.

Recommended: Fogstar Energy 48V 32kWh Battery

- A balanced setup offering improved storage capacity and performance, well suited to most residential systems.

Full Headroom: Fogstar Energy 48V 48.3kWh Modular Battery

- Higher capacity options designed for extended runtimes and increased energy usage, ideal for larger or more demanding installations.



INPUT (PV DC)		TriP2-LB-3P 20K
Max. PV input power (W)		30000
Rated PV input voltage (V)		690
Number of independent MPPT inputs		3 / (1:1:1)
Max. PV input voltage (V)		1000
MPPT voltage range (V)		200 ~ 900
Start-up voltage (V)		100
Max. PV input current per MPPT (A)		20 / 20 / 20
Max. PV short-circuit current input per MPPT (A)		25 / 25 / 25
Battery		
Max. charging/discharging current (A)		250
Max. charging/discharging power (W)		12000
Charging Strategy for Li-ion Battery		Self-adaption to BMS
Grid		
Rated AC voltage (V)		3-phase (3L / N / PE), 230 / 400Vac
Rated AC frequency (Hz)		50 / 60
Rated AC output power (W)		20000
Rated AC output current (A)		29.0
Max. AC input current (A)		36.25
PF		0.99 (Adjustable from 0.8 leading to 0.8 lagging)
THDI		< 3%
Max. continuous AC passthrough current (A)		70
GEN		
Rated GEN voltage (V)		3-phase (3L / N / PE), 230 / 400Vac
Rated GEN frequency (Hz)		50 / 60
Rated GEN input current (A)		30
Rated GEN input power (W)		20700
UPS		
Rated output power (W)		20000 (PV + Battery)
Rated output voltage (V)		3-phase (3L / N / PE), 230 / 400Vac
Rated output current (A)		29.00
Rated output frequency (Hz)		50 / 60
Surge power (duration)		1.5 × rated power for 5min
Switching time		≤10ms
Wave form		Sine wave
THDV		< 3%
Efficiency		
Max. efficiency		97.7%
Max. charge/discharge efficiency		94.0%
Protection		
PV reverse polarity protection		YES
Over current/voltage protection		YES
Anti-islanding protection		YES
AC Short-circuit protection		YES
Leakage current protection		YES
Grid monitoring		YES
DC switch		YES
Ingress protection		YES
DC Surge protection		Type III
AC Surge protection		Type III
General		
Operating environment temperature range (°C)		-25 ~ +60°C (>45°C derating)
Storage temperature range (°C)		-25 ~ +60°C
Relative humidity		0 ~ 100
Display & Communication interface		Touch color screen, RS485 / Wi-Fi / CAN
Cooling method		Smart cooling
Topology		Transformerless
Max. Operating Altitude (m)		2000
Noise emission (dB)		50
Standard & Certification		
EN 62109 / EN 61000, IEC 61683, EN 50549-10, PTPIREE TypeA, G99, G100, IEC62116, IEC61727, MEA/PEA		