

Liquid-cooled Energy Storage System



TRENE-P500B1044L-2H
TRENE-P499B1044L-2H



High Performance

- Premium LFP battery with guaranteed quality
- High power density, all-in-one design
- Optimised space utilisation, Reduce the time for on-site debugging



Assured Safety

- Multi-level monitoring ensures system reliability
- Fire-resistant compartments for thermal runaway prevention
- Integrated detection and suppression system for immediate risk mitigation



Intelligent Design

- Advanced energy management system
- Supports micro-grids and diverse scenarios
- 7x24h remote monitoring and maintenance



Flexible Adaptability

- Modular design for enhanced uptime and scalability
- IP55 outdoor cabinet and IP65 components for reliable performance in demanding environments
- Rapid maintenance with part replacement within 1 hour

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AC SIDE (ON-GRID)

Rated output power	500 kW	499.6 kW
Max. output apparent power	500 kVA	499.6 kVA
Rated output current	181.2A*4@230 V 189.4A*4@220 V	181.1A*4@230 V 189.3A*4@220 V
Max. output continuous current	199.3A*4@230 V 208.4A*4@220 V	199.2A*4@230 V 208.2A*4@220 V
Max. output continuous current	3 / N / PE, 230 / 400 V 3 / N / PE, 220 / 380 V	
AC voltage range	340 ~ 440 V	
Nominal AC frequency	50 Hz / 60Hz	
Adjustable Power Factor range	1 (0.8 Leading ~ 0.8 Lagging)	
Total harmonic distortion (THDi)	< 3% (Rated power)	
DC Component	< 0.5% (Rated power)	

AC SIDE (OFF-GRID)

Rated AC output voltage	3 / N / PE, 230 / 400 V 3 / N / PE, 220 / 380 V	
Rated AC frequency	50 Hz / 60 Hz	
THDv (Linear load)	< 3% (Linear load)	
Unbalance load capacity (Off-grid)	100%	
Overloading capability	110%, long term; 120%, 1min	
Max. AC output continuous current	199.3A*4@230V 208.4A*4@220V	199.2A*4@230V 208.2A*4@220V

DC SIDE

Battery type	LFP / 314Ah
Battery capacity	1044 kWh
Rated battery voltage	832 V
Battery voltage range	650 V ~ 936 V

SYSTEM PARAMETER

Dimension (W × D × H)	2991 x 2438 x 2896 mm
Net weight	13 t
Operating ambient temperature range	-30 ~ 55°C
Relative humidity	0 ~ 100%
Max. operating altitude	3000 m
Cooling concept	Liquid cooling
Ingress protection	IP55
Topology	Non-isolated
Standard	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, IEC 62933, UN 38.3, UL9540A
Communication interfaces	Ethernet
Communication protocol	Modbus TCP
Anti-corrosion degree	C4-M
Fire suppression system	Flammable gas detector, Smoke detector, Heat detector, Alarm sounder, Aerosol, Sprinkler