

# AC-coupled ESS Liquid Cooling Cabinet



## ESS-TRENE (Liquid cooling)

125kW /261kWh

### High Performance

- Premium LFP battery with guaranteed quality
- High power density, compact design
- Scalable up to MWh
- Optimised space utilisation

### Assured Safety

- 4+1 Fire safety design secures minimal risk and loss
- Aerosol Fire Suppression for Precise Protection
- IP67 for battery, IP66 for inverter, IP55 for cabinet
- Advanced fault detection and response

### Intelligent Design

- Advanced energy management system
- VPP ready with SolaX Cloud (IEEE 2030.5, OpenADR)
- Supporting remote monitoring and maintenance
- Supporting a variety of C&I energy storage scenarios

### Flexible Adaptability

- Grid-connected and off-grid support (with SolaX switching cabinet)
- Full-stack self-developed BMS, EMS, PCS & SolaXCloud
- One year of local historical data storage
- Cell-level balancing and smart temperature control

TRENE-P124B261L-E

TRENE-P125B261L-E

AC SIDE ( ON-GRID )		
Rated AC power	124.9 kW	125 kW
Max. output apparent power	124.9 kVA	125 kVA
Rated AC current	189.3 A @220 V 181.1 A @230 V	189.4 A @220 V 181.2 A @230 V
Max. output continuous current	189.3 A@220 V 181.1 A@230 V	189.4 A@220 V 181.2 A@230 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
AC voltage range	340 ~ 440 V	
Rated AC frequency	50 Hz / 60 Hz	
Adjustable power factor range	-1 ~ +1	
THDi (rated power)	< 3%	
DC component	< 0.5% (rated power)	
AC SIDE ( OFF-GRID )		
Rated AC output voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
Rated AC frequency	50 Hz / 60 Hz	
THDv (linear load)	< 3% (linear load)	
Unbalance load capacity (off-grid)	100%	
Overloading capacity	110%, long term; 120%, 1min	
Max. AC output continuous current	208.2 A @220 V 199.2 A @230 V	208.4 A @220 V 199.3 A @230 V
DC SIDE		
Battery type	LFP / 314 Ah	
Nominal energy	261 kWh	
Rated battery voltage	832 V	
Battery voltage range	650 ~ 936 V	
SYSTEM PARAMETE		
Dimensions (W×H×D)	1350 × 2355 × 1350 mm	
Weight	2810 kg	
Operating temperature range	-30 ~ 55°C (>45°C derating)	
Relative humidity	0 ~ 100% RH	
Max. operation altitude	3000 m	
Cooling concept	Liquid cooling	
Ingress protection	IP55	
Topology	Non-isolated	
Standards	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, IEC 62933, UN 38.3, UL9540A	
Communication interface	Ethernet	
Communication protocol	Modbus TCP	
Anti-corrosion degree	C4 (C5 optional)	
Configuration of safety	Gas fire suppression + Water-based fire suppression + Ventilation + Explosion-proof plates	
Max. parallel quantity (off-grid)	10	

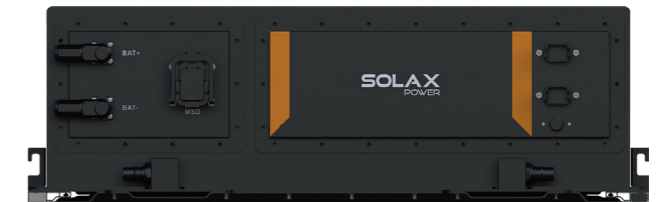
## PCS

	X3-TRENE-124.9K	X3-TRENE-125K
<b>AC SIDE ( ON-GRID )</b>		
Rated AC output power	124.9 kW	125 kW
Max. AC output apparent power	124.9 kVA	125 kVA
Rated AC output current	189.3 A @220 V 181.1 A @230 V	189.4 A @220 V 181.2 A @230 V
Max. AC output continuous current	189.3 A@220 V 181.1 A@230 V	189.4 A@220 V 181.2 A@230 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
AC voltage range	320 ~ 460 V	
Rated AC frequency	50 Hz / 60 Hz	
AC frequency range	50 ± 5 Hz / 60 ± 5 Hz	
Power factor range	-1~+1	
THDi (rated power)	< 3%	
DC component	< 0.5% (rated power)	
Unbalance load capacity (on-grid)	100%	
<b>AC SIDE( OFF-GRID )</b>		
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V	
Rated AC frequency	50 Hz / 60 Hz	
THDv (linear load)	< 3% (linear load)	
Unbalance load capacity (off-grid)	100%	
Overloading capacity	110%, long term; 120%, 1min	
Max. AC output continuous current	208.2 A @220 V 199.2 A @230 V	208.4 A @220 V 199.3 A @230 V
<b>DC SIDE</b>		
Battery voltage range	650 ~ 936 V	
Max. charge / discharge current	202.1 A	202.3 A
<b>GENERAL</b>		
Max. efficiency	98.0%	
Ingress protection	IP66	
Operating temperature range	-35 ~ 60°C (>45°C derating)	
Max. operation altitude	3000 m	
Relative humidity	0 ~ 100% RH	
Dimensions (W × H × D)	310 × 665 × 880 mm	
Weight	95 kg	
Cooling concept	Smart air cooling	
Communication interface	RS485, CAN, Ethernet, DI	

## PCS

	X3-TRENE-124.9K	X3-TRENE-125K
<b>PROTECTION</b>		
Protections	AC over / under voltage protection, DC component monitoring, AC input phase sequence error protection, Grid frequency high / low protection, Communication failure protection, Type II SPD on AC side, etc.	
<b>STANDARD</b>		
Certifications	CE, EN50549, VDE4105, G99, AS4777, CEI 0-21, IEC61727, PEA / MEA, NRS-097-2-1, RD1699, TOR	

## PACK



	TB-HR522
Battery type	LFP 314 Ah
Battery capacity	52.2 kWh
Battery configuration	1P52S
Rated battery voltage	166.4 V
Battery voltage range	130 ~ 187.2 V
Weight	330 kg
Dimensions (W × H × D)	790 × 250 × 1140 mm
Charge / Discharge current	157 A
Relative humidity	0 ~ 95% RH (non-condensing)
Max. operation altitude	3000 m
Ingress protection	IP67
Communication	CAN

If there is any change in product size and parameters, please refer to the latest information without prior notice.



# AC Switching Cabinet

## NEXUS ZERO



### Intelligent Operation

- Seamless switching between grid and off-grid
- EMS 1000 PRO Inside: Seamlessly integrated, intelligent management of PV, ESS, and loads for optimal energy performance
- Supports a maximum switching power of up to 1.25MW



### Safer and Reliable

- Load-friendly design, protects equipment from unstable grid damage
- Supports Type II surge protection
- Supports water ingress alerts, over-temperature warnings, and door lock status feedback



### Environmental Adaptability

- IP55 protection rating, suitable for both indoor and outdoor use
- Supports operation in environments ranging from -30°C to 55°C
- Reliable operation at 3000 meters without derating
- C5-M corrosion protection standards for reliable performance in the harshest environments



### Versatile Applications

- Supports connection to diesel generators to ensure stable energy supply
- Intelligent operation, supports multiple operation modes
- Supports building on-grid/off-grid, solar-storage microgrid, and solar-storage-diesel microgrid solutions

Nexus Zero

SYSTEM PARAMETERS					
Model	ZERO-125	ZERO-250	ZERO-500	ZERO-750	ZERO-1250
Rated AC voltage	3 / N / PE, 230 / 400 V 3 / N / PE, 220 / 380 V				
Rated AC frequency	50 Hz / 60 Hz				
Rated AC current@230V	181.2 A	362.3 A	724.6 A	1087 A	1811.6 A
Rated AC current@220V	189.4 A	378.8 A	757.6 A	1136 A	1893.9 A
Disruption time of backup switch <sup>①</sup>	0 ms				
Power limit (grid)	Yes				
Grid breaker	250 A	500 A	1000 A	1600 A	2500 A
Load breaker	250 A	500 A	1000 A	1600 A	2500 A
Bypass breaker	250 A	500 A	1000 A	1600 A	2500 A
Ingress protection	IP55				
SPD	Type II				
Operating temperature	-30 to +55 °C				
Altitude	3000 m				
Dimension (W x H x D)	900 x 1600 x 800 mm	900 x 1600 x 800 mm	1200 x 2300 x 800 mm	1200 x 2300 x 800 mm	1900 x 2300 x 1200 mm
Weight (kg)	300 kg	330 kg	660 kg	730 kg	1500 kg
Rated short circuit current	10 kA	15 kA	30 kA	40 kA	60 kA
Certificates and approvals	EN/IEC61439-1, EN/IEC61439-2, IEC 61000, IEC 60730				

① Test conditions: In the open-circuit state of the power grid, the total rated power of all Power Conversion Systems (PCS) is higher than the total power of the backup loads.

Block Diagram

