

## AC-coupled ESS Cabinet



# ESS-TRENE (Air cooling)

100kW  
215kWh



### Smart Management

- Advanced energy management system
- VPP ready with SolaX Cloud (2030.5, OpenADR)
- Support micro-grids and diverse scenarios
- Smart Schedule, Smart Scene and 7×24h TOU
- Wireless meter compatibility



### High Performance

- High power density, compact design
- Scalable up to megawatt-hours
- Optimised space utilisation



### Assured Reliability

- Four-level fire safety protection
- IP66 for inverter, IP55 for cabinet
- LiFePO4 battery cell & high-performance processors
- Type II SPD on AC side
- Advanced fault detection and response
- Support three-phase unbalance output



### Flexible Adaptability

- Grid-connected and off-grid support
- Self-developed BMS & EMS via SolaX Cloud
- One year of historical data storage

TRENE-P100B215	
AC INPUT & OUTPUT (ON-GRID)	
Rated output power	100 kW
Rated output current	144.4 A
Max. output apparent power	110 kVA
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
Nominal AC frequency	50 Hz / 60 Hz
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)
THDi (rated power)	< 3%
BATTERY	
Battery type	Lithium
Rated battery capacity	215 kWh
Rated battery voltage	768 V
Battery voltage range	636 ~ 876 V
Rated charge / discharge current	140 A
ENVIRONMENT LIMIT	
Ingress protection	IP55
Operating ambient temperature range <sup>①</sup>	-30 ~ 55°C
Max. operating altitude	3000 m
Relative humidity	0 ~ 95% RH (non-condensing)
GENERAL	
Dimensions (W × H × D)	1680 × 2420 × 1200 mm
Net weight	2800 kg
Cooling concept	Smart air cooling
Fire protection	Aerosol (Optional: Novec1230 ) / Water
Topology	Non-isolated
Certificates and approvals	IEC62619, IEC63056:2000, IEC61000, IEC62477-1, UN38.3, GB/T36276, GB/T34131

① Derating above +45°C

\*V1.0.1 Information may be subject to modify without notice. 650.00086.00

C&I ESS CABINET PCS

X3-TRENE-100K	
AC INPUT & OUTPUT (ON-GRID)	
Rated output power	100 kW
Rated output current	144,4 A
Max. output apparent power	110 kVA
Nominal AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
Max. AC input apparent power	110 kVA
Max. AC input current	160 A
Nominal AC frequency	50 Hz / 60 Hz
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)
THDi (Rated power)	< 3%
BATTERY	
Battery type	Lithium
Battery voltage range	600 ~ 876 V
Max. charge / discharge current	160 A
ENVIRONMENT LIMIT	
Ingress protection	IP66
Operating ambient temperature range <sup>①</sup>	-30 ~ 55°C
Max. operating altitude	3000 m
Relative humidity	0 ~ 95% RH (non-condensing)
GENERAL	
Dimensions (W × H × D)	665 × 950 × 310 mm
Net weight	85 kg
Cooling concept	Smart air cooling
Communication interfaces	RS485, CAN, Ethernet, DI
Topology	Non-isolated

① Derating above +45°C

C&I ESS CABINET PACK

HR140	
Battery type	Lithium
Battery capacity	14.3 kWh
Battery configuration	1P16S
Rated cattery voltage	51.2 V
Battery voltage range	40 ~ 58.4 V
Weight	115 kg
Charge / discharge rate	≤ 0.5C
Dimensions (W × H × D)	461 × 228 × 778 mm
Operating temperature range	-20 ~ 53°C
Relative humidity	0 ~ 95% RH (non-condensing)
Max. operating altitude	3000 m
Ingress protection	IP20
Communication to PCS	CAN

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 megawatt-hours
- Optimised space utilisation



Assured Safety

- 4+1 Fire safety design secures minimal risk and loss
- Battery Pack-Level Aerosol Fire Suppression for Precise Protection
- IP66 rating for inverter, IP55 for cabinet
- AC Type II SPD for electrical safety
- Advanced fault detection and response



Intelligent Design

- Advanced energy management system
- VPP ready with SolaX Cloud (2030.5, OpenADR)
- Supports micro-grids and diverse scenarios
- 7x24h remote monitoring and maintenance



Flexible Adaptability

- Grid-connected and off-grid support
- Self-developed BMS & EMS via SolaX Cloud
- One year of local historical data storage
- Cell-level balancing and smart temperature control

\*V1.1. Information may be subject to modify without notice. 650.00000.00

TRENE-P125B261L-E	
AC INPUT & OUTPUT (ON-GRID)	
Rated AC power	125 kW
Rated AC current	181.2 A
Max. output apparent power	137.5 kVA
Max. output continuous current	208.3 A
Nominal AC voltage	400 V
Nominal AC frequency	50 Hz / 60 Hz
Adjustable Power Factor range	~ 1 (0.8 lagging to 0.8 leading)
THDi (Rated power)	< 3%
BATTERY	
Battery type	LFP 314Ah
Battery capacity	261 kWh
Rated battery voltage	832 V
Battery voltage range	650 ~ 936 V
Max. charge / discharge current	160 A
Cycle life①	≥ 8000
GENERAL	
Max. efficiency	98%
Dimension (WxDxH)	1350 × 1350 × 2355 mm
Weight	2810 kg
Operating ambient temperature range	-30 ~ 55°C
Relative humidity	0 ~ 95% RH
Max. operating altitude	3000 m
Cooling concept	Liquid cooling
Ingress protection	IP55
Fire protection	Aerosol (Optional:Novec1230) / Water
Topology	Non-isolated
Certificates and approvals	IEC62619, IEC63056, IEC61000, IEC62477-1, UN38.3, VDE 2510-50, EN 50549

① Rated for 8000 cycles at 0.25C with EOL at 70% capacity

C&I ESS CABINET PCS

X3-TRENE-125K	
AC INPUT & OUTPUT (ON-GRID)	
Rated AC output power	125 kW
Rated AC output current	181.2 A
Max. AC output apparent power	137.5 kVA
Max. AC output continuous current	208.3 A
Nominal AC voltage	3 / (N) / PE, 230 / 400 V 3 / (N) / PE, 220 / 380 V
Rated AC frequency	50 Hz / 60 Hz
Power Factor range	~ 1 (0.8 lagging to 0.8 leading)
THDi (Rated power)	< 3%
BATTERY	
Battery type	Lithium - ion
Battery voltage range	650 ~ 936 V
Max. charge / discharge current	160 A
GENERAL	
Max. efficiency	98%
Ingress protection	IP66
Operating ambient temperature range	-35~ 60°C
Max. operating altitude	3000 m
Relative humidity	0 ~ 95% RH
Dimensions (W × H × D)	880 × 665 × 310 mm
Net weight	95 kg
Cooling concept	Smart air cooling
Communication interfaces	RS485, CAN, Ethernet, DI
Protection	
Protections	Over / under voltage protection, DC reverse-polarity protection, Residual current detection, Anti-islanding protection
Surge protection (AC)	Type II

X3-TRENE-125K	
Standard	
Safety	EN / IEC62477
EMC	EN61000-6-2/4, EN61000-3-11/12, EN5011, EC62920
Cetification	VDE4105, G99, AS4777, EN50549, CEI 0-21, IEC61727, PEA, MEA, NRS-097-2-1, RD1699, TOR

C&I ESS CABINET PACK



TB-HR522	
Battery type	LFP 314Ah
Battery capacity	52.2 kWh
Battery configuration	1P52S
Rated battery voltage	166.4 V
Battery voltage range	130 ~ 187.2 V
Weight	330 kg
Charge / Discharge current	≤ 0.5C
Relative humidity	0 ~ 95% RH (non-condensing)
Max. operating altitude	3000 m
Ingress protection	IP67
Communication to PCS	CAN