C&I ESS CABINET

ESS-TRENE

Air cooling

SAFE

- Intelligent air cooling for optimal heat dissipation
- Four-level fire protection
- AC&DC type II SPD

ECONOMIC

- Advanced LFP battery quality assured
- High power density with less space
- Expandable to MWh

INTELLIGENT

- Smart energy management strategy*
- VPP ready, SolaX cloud supports resource aggregator (2030.5, OpenADR)
- Support Micro-grid and a variety of scenarios
- Support 7x24h remote O&M and schedule deployment

ROBUST

- Support on-grid and off-grid solution
- Self-developed BMS&EMS on SolaX Cloud platform
- 1 year history system data backed up on EMS
- Support Cell level balance, smart temperature check and control

* Under development

SOLAX POWER | BVB 09 PARTNER

TRENE

"INTRODUCTION"

TRENE series C&I energy storage cabinet

is a highly integrated, all-in-one solution with versatile application scenarios.

TRENE series C&I energy storage cabinet is a highly integrated, all-in-one solution with versatile application scenarios. TRENE air-cooled series provides efficient, safe, and stable smart energy storage solutions.

Firstly, the cabinet adopts high-density, high-safety, and high-performance LFP cells. With a capacity of 215kWh per cabinet, it can reliably perform charging and discharging operations for single or multiple cabinets, with a lifespan of over 10 years. The large-capacity 280Ah battery cells also reduce the overall system investment cost.

Secondly, the cabinet is equipped with a self-developed Energy Management System (EMS) that can monitor the working status and abnormal alerts of each battery cell, PCS, and fire protection system in real-time. The local data storage capability allows for data analysis and verification for up to 1 year. The advanced EMS system also has leading advantages in intelligent control of different smart operation strategies, autonomous scheduling based on local electricity prices, and comprehensive management of photovoltaic, energy storage systems, EV charging and generators at power plant level. These features improve the overall system efficiency and shorten the investment return period.

Additionally, the cabinet integrates multiple safety protection measures. It has built-in protection functions such as overvoltage, overcurrent, and over-temperature, as well as fire-resistant materials and 4-level fire protection system to promptly detect and respond to potential fire risks. This effectively controls the spread of fires and reduces the risk of safety accidents.

The cabinet is suitable for various commercial and industrial scenarios, including peak shaving, demand response, backup mode, photovoltaic and energy storage integration, and stable load consumption curves. It also supports applications such as virtual power plants(VPP) and frequency regulation

	TRENE-P100B215I
AC Side	
Rated AC power [kW]	100
Rated AC current [A]	144.4
Max. AC apparent power [kVA]	110
Nominal grid voltage [V]	400 (-20% ~ +15%)
Nominal grid frequency [Hz]	50 / 60
Adjustable power factor range	0.99leading ~ 0.99lagging
THDi (Rated power) [%]	< 3
Max. efficiency [%]	98%
Battery	
Battery type	LFP 280Ah
Battery capacity [kWh]	215
Rated battery voltage [V]	768
Battery voltage range [V]	600 ~ 876
Discharge depth [%]	90
Rated charge/discharge current [A]	140
General	
Dimension (W×H×D)[mm]	1680 × 2420 × 1200
Weight [kg]	2800
Operating temprature range [℃]	-30 ~ 55
Relative humidity(Non-condensing) [%]	0 ~ 95
Altitude [m]	3000
Cooling concept	Smart air cooling
Ingress protection	IP55
Fire protection	Aerosol(Optional:Novec1230) / Water
Topology	Non-isolated
Certificates	IEC62619, IEC63056:2000, IEC61000, IEC62477-1, UN38.3, GB/T36276, GB/T34131

C&I ESS CABINET
PCS

	X3-TRENE-100KI
AC Side	
Rated AC power [kW]	100
Rated AC current [A]	145.0
Max. AC apparent power [kVA]	110(10mins)
Nominal grid voltage [V]	3P/(N)/PE, 400/230, 380/220
Nominal grid frequency [Hz]	50 / 60
Power factor range	0.99 leading ~ 0.99 lagging
THDi (Rated power) [%]	< 3
Battery	
Battery type	Lithium - ion
Battery voltage range [V]	600 ~ 950
Max. charge / discharge current [A]	140
General	
Max. efficiency [%]	98
Ingress protection	IP20
Operating ambient temperature range [°C]	-25 ~ 60
Max. operating altitude [m]	3000
Relative humidity [%]	0 ~ 95
Dimensions (W×H×D) [mm]	480 × 260 × 720
Net weight [kg]	70
Cooling concept	Force air cooling
Communication interfaces	RS485/CAN/Ethernet/DI
Topology	Non-isolated
Protection	
Over/under voltage protection	Yes
DC reverse-polarity protection	Yes
Residual current detection	Yes
Anti-islanding protection	Yes

C&I ESS CABINET
Pack

	TB-HR140
Battery type	LFP 280Ah
Battery capacity [kWh]	14.3
Battery configuration	1P16S
Rated cattery voltage [V]	51.2
Battery voltage range [V]	40-58.4
Weight [kg]	115
Charge/Discharge Rate	≤ 0.5C
Dimensions(W×H×D) [mm]	461 × 228 × 778
Operating temperature range [℃]	-20 ~ 53
Relative humidity(non-condensing) [%]	0 ~ 95
Max. operating altitude [m]	3000
Ingress protection	IP20
Communication to PCS	CAN

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