

## PRODUKT



# SOLARWATT C&I ESS-Trene (Air Cooled)

## AC-coupled ESS Cabinet

### Reliable operation, flexible deployment

The commercial energy storage system impresses with robust technology, intelligent energy management and a well-designed concept that integrates seamlessly into existing systems. Smart control profiles and time-based tariffs ensure efficient, stable operation day and night – delivering measurable benefits and dependable performance.

The system is highly adaptable: compact in design, scalable from one to ten megawatt-hours via grid-connected or off-grid deployment. Continuous monitoring and permanently available operating data provide transparency for users and enable rapid responses in service situations.

Safety is a key design principle. A multi-layer fire protection concept minimises risks to both the installation and its surroundings during continuous operation.

Whether for a new project or future-proof reinvestment in commercial operations, SOLARWATT supports partners from planning and energy management through to after-sales service.

## PRODUCT FEATURES

- Fully integrated C&I solution
- Air cooled
- 100 kW AC inverter + 215 kWh LFP battery (280 Ah)
- Scalable through parallel connection of up to 10 systems
- Flexible deployment: on-grid / off-grid / microgrid / PV / EV / generator
- Four-stage fire protection system
- Intelligent energy management: BMS / EMS / PCS
- VPP-ready, AI optimisation, cloud monitoring
- Real-time data & monitoring (10 s); 1 year of local data storage
- 10-year performance warranty\* on the battery system

## SOLARWATT SERVICE

### Project Consulting & Planning

Personalised consulting, technical feasibility assessment and system design with the appropriate storage selection.

### Business Case Analysis

Calculation of returns, payback periods and optimisation potential for the project with different usage scenarios.

### Advanced Storage Solutions

With Aelio and Trene commercial storage systems, we provide powerful solutions for a wide range of requirements

### Technical & Commissioning Support

Remote or on-site assistance for initial commissioning, configuration and integration.

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Certified acc. to DIN EN ISO 9001, 14001, 45001, 50001

**Manufacturer / Distributor: SolaX Power Network Technology (Zhejiang) Co., Ltd.** | No.278, Shizhu Road, Tonglu Economic Development Zone | Tonglu County, Zhejiang 310000 | P.R.China

\* Manufacturer's warranty in accordance with SolaX's warranty conditions

## TRENE-P100B215

AC INPUT AND OUTPUT (GRID-CONNECTED)	
Rated power	100 kW
Maximum apparent output power	110 kVA
Rated AC current	151.9 A @380 V 144.4 A @400 V
Max. continuous output current	167.1 A @380 V 158.8 A @400 V
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V
AC voltage range	340 - 460 V
AC frequency	50 Hz / 60 Hz
Power factor	adjustable from 1 leading to -1 lagging
THDi (rated power)	< 3%
DC current component	< 0.5% (rated power)

DC SIDE	
Battery type	LFP / 280 Ah
Total battery capacity	215 kWh
Rated battery voltage	768 V
Battery voltage range	650 - 876 V

GENERAL DATA	
Dimensions (W × H × D)	1,680 × 2,420 × 1,200 mm
Nettogewicht	2,800 kg
Operating temperature range	-30 to +50°C (derating above +45°C)

AC SIDE (OFF-GRID)	
Rated 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)
Unbalanced load capability (off-grid)	100 %
Overload capability	110% continuous operation; 120% for 1 min.
Max. continuous AC output current	151.9 A @380 V 144.4 A @400 V

GENERAL DATA	
Relative humidity	0–95% (non-condensing)
Max. operating altitude	3,000 m
Cooling concept	Intelligent air cooling
Protection rating	IP55
Topology	Transformerless
Standards	IEC62619, IEC63056, IEC61000, IEC62477-1, IEC62040, UN38.3, GB/T36276, GB/T34131
Communication interfaces	Ethernet
Communication protocol	Modbus TCP
Corrosion protection rating	C4 (C5 optional)
Safety configuration	Aerosol fire suppression system + water-based fire suppression + ventilation
Max. number of systems in parallel (off-grid)	10

## POWER CONVERSION SYSTEM (PCS) X3-TRENE-100K

AC SIDE (GRID-CONNECTED)	
Rated AC power	100 kW
Max. apparent output power	110 kVA
Rated AC current	151,9 A @380 V 144,4 A @400 V
Max. AC output current	167,1 A @380 V 158,8 A @400 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	adjustable from 1 leading to -1 lagging
THDi (rated power)	< 3%
DC current component	< 0.5% (rated power)
Unbalanced load capability (grid-connected)	100 %

DC SIDE	
Battery voltage range	650 - 936 V
Max. charge/discharge current	161.8 A

AC SIDE (OFF-GRID)	
Rated 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)
Unbalanced load capability (off-grid)	100 %
Overload capability	110% continuous operation; 120% for 1 min.
Max. continuous AC output current	167.1 A @380 V 158.8 A @400 V

## TRENE-P100B215

GENERAL DATA	
Maximum efficiency	98.0 %
Protection rating	IP66
Operating temperature range	-30 - 55°C (derating über +45°C)
Max. operating altitude	3,000 m
Relative humidity	0-95% (non-condensing)
Dimensions (W × H × D)	310 × 665 × 880 mm
Weight	85 kg
Cooling concept	Intelligent air cooling
Communication interfaces	RS485, CAN, Ethernet, DI

CERTIFICATIONS
CE, EN50549, VDE4105, G99, AS4777, CEI 0-21, IEC61727, PEA / MEA, NRS-097-2-1, RD1699, TOR

SAFETY	
Safety features	AC overvoltage and undervoltage protection DC component monitoring AC input phase sequence fault protection Grid overfrequency and underfrequency protection Communication failure protection Type II surge protection device (SPD) on the AC sid

## PACK HR140

GENERAL DATA	
Battery type	LFP / 280 Ah
Battery capacity (single module)	14.3 kWh
Battery configuration	1P16S
Nominal battery voltage	51,2 V
Battery voltage range	40 - 58.4 V
Net weight	115 kg

GENERAL DATA	
Dimensions (W × H × D)	461 × 228 × 778 mm
Charge/discharge current	140 A
Maximum operating altitude	3,000 m
Protection rating	IP20
Communication with PCS	CAN

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