



BATTERY ENERGY STORAGE SYSTEMS

Blue Planet Line



terra

The **TERRA** model is a compact energy storage that offers a higher added value and a comprehensive set of usable functionalities for smaller renewable applications.

KEY FEATURES



Build-in control system with machine learning algorithms



Compact block for quick installation and commissioning



Serially manufactured standardized product



24/7 monitoring and tracking of key performance indicators to ensure high availability (up to 99.5%), operational reliability and low service costs



Top technology that ensures a high number of cycles and significantly reduces degradation of the system's performance

KEY APPLICATION



Cooperation with renewable resources to cover imbalances in their operation



Peak shaving application for electromobility charging points to cover peaks in consumption demand



Optimization of electricity consumption at the time of a more advantageous economic tariff



Use of battery flexibility as a source of additional revenue through virtual power plant concepts

Lifetime

15+ years

Capacity

151k Wh

Power

50-92 kW

PERFORMANCE PARAMETERS

POWER OUTPUT	Nominal power	50-92 kVA
	Manufacturer	KACO
	AC output voltage	400 V +/- 10%
	Nominal frequency	50 Hz
	Max load capability	100%
	Cos fi (adjustable)	-0.3/+0.3
	Efficiency	>97.5% (charge) >98.2% (discharge)
BATTERY BLOCK	Cooling type	forced air
	Size H x W x D	760 x 500 x 425 mm
	Weight	75 kg
	Nominal capacity	151.6 kWh
	Manufacturer	KOKAM
	Chemistry type	Li ion NMC
	C-rate	up to 2.0
	Battery cell type	103 Ah
	Depth of discharge	90%
	Guaranteed cycles	8000@80% DoD 6000@90% DoD
SYSTEM PARAMETERS	Residual capacity	70%
	RTE efficiency	>93%
	Cooling type	HVAC
	Weight	960 kg
	Reaction time	<500 ms
	Ramp up time	<1 s
	Total RTE efficiency	>89.6%@20 °C,80% DoD
Connectivity	Ethernet	
Protocol	Modbus TCP	
Control system	AMOS (own developed)	
Grid standard	ENTSO-E complian.	

SYSTEM FUNCTIONALITIES

Peak shaving
Time shifting
Price arbitrage
Cooperation with PV
VPP-ready
Cos fi control

MECHANICAL SPECIFICATIONS

Standard color scheme	RAL7035 (option to any RAL colour scheme design)
System size H x W x D	2.4 x 2.4 x 1.2 m
System weight	2200 kg

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-20 °C / +40 °C
Operating altitude	<2000 m
Environment	indoor & outdoor
Ingress rating	IP54
Noise level	<40 dB @ 5 m
Operating humidity (RH)	30-95% noncond.

STANDARD EQUIPMENT

Single container, outdoor operation, predictive thermal management, intelligent energy management system, HVAC, internal UPS, communication interfaces, AC grid protection unit, battery racks, inverter unit(s), cabling, commissioning, initial set-up of functionalities with the client, related engineering for project design

WARRANTY

Technical service life	15+ years
Degradation warranty	15 years
Technology warranty	2 years

CERTIFICATION

EN61439-1, EN61000-6-2, EN61000-6-3, EN50581, EN62485, EN62619, EN62620, EN63056, ISO14121-2, UL1642, U1973, UN38.3

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