ZBC500-250 | 400/230 V | 50HZ

Technical specifications

ZenergiZe

ZBC500-250

Voltage: 400/230 V
Frequency: 50HZ

Image for commercial purposes

General description

The 10 ft container for Energy Storage System is designed to meet the requirements for off and on grid applications. Ideal for renewable power plants. Based in lithium ion batteries, this portable product is ready to supply power in the most demanding situation, working in island mode, hybrid solution together with a diesel generator or in parallel with more ESS.
A greener solution for a more efficient performance.

TECHNICAL INFORMATION

Rated power	kVA	500
Rated energy storage capacity	kWh	246
Net energy storage capacity*	kWh	220
Rated voltage (50Hz)	VAC	400
Battery rated voltage	VDC	768
Rated current discharge	A	721
Recharge time 100% rated power	h	0,5
Depth of discharge (DoD%)	%	80%
Total energy through output up to	MWh	1040
End of Life (EoL%)	%	70%
Battery type		Lithium Ion phosphate LiFePO4
Operating temperature**	ºC	-10 to 50
Dimensions (L x W x H)	mm	2991 x 2438 x 2896
Weight	kg	9.900
Sound pressure level (7 meter)	dB(A)	<70

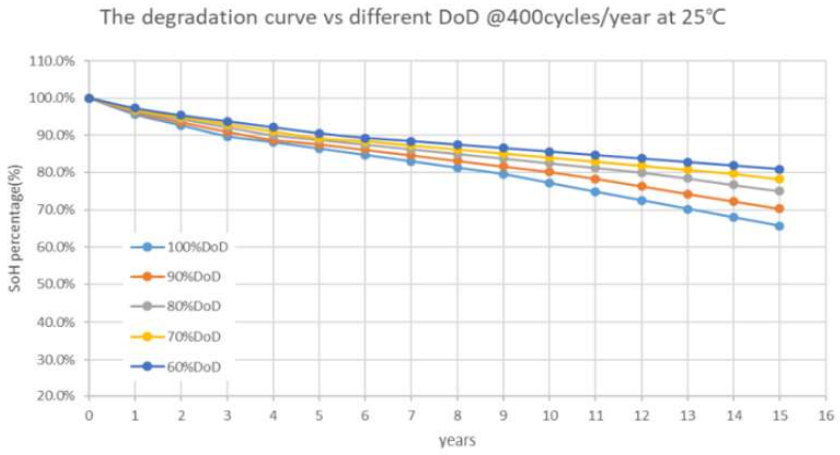
The standard reference conditions are: 25 ºC, 100 kPa and 30% relative humidity. For nominal values efficiencies, deratings and DoD are not considered and tested parameter related to PF=1. *Due to use this may decrease
**Options for Cold weather (heaters) might be needed. Atlas Copco will keep the rights to change any data when necessary due to any reason.
EN-IEC 61000, EN-IEC 60335, EN-IEC 60335, EN-IEC 62109, EN 55014, UL1741, IEEE1547, UL1741, UL9540, NEMA250, ADR class 9, UN 3536, CE, NEN3140, NEN3840, ISO9001, ISO14001, Low Voltage Directive 2014/35/EU, EMC directive 2014/30/EU

Batteries

Lithium-iron-phosphate (LiFePO4 or LFP) is the safest of its family. Also does not need to be fully charged to perform correctly. Service life even slightly improves in case of partial charge instead of a full charge. This is a major advantage, in addition, its wide operating temperature range, excellent cycling performance, low internal resistance and high efficiency.
LFP is therefore the chemistry of choice for very demanding applications

Quantity	20	**C-rate discharge**	2 C
Rated voltage (VDC)	76,8	**Weight (kg)**	110,7
Rated capacity* (Ah)	160	**Expected cycle life (@DoD,EOL,25ºC)**	6000
Rated capacity* (Wh)	12.300	**Standards**	IEC62619, IEC63056,CE, UN38.3,UL1973, UKCA

**@25ºC*



Terms:
SOC%: State of Charge, measures the remaining energy content in a battery
SOH%: State of Health, ratio of the recharging capacity, compared to a new battery
DOD%: Depth of discharge, defines the energy consumed in the battery
Cycle: Complete charge and discharge of its usuable energy stored (DoD%)
EoL%: End of life, SOH is at this value

Inverter

Power electronics that combines inverter and charger. It is needed to transform the energy supply from batteries (DC) to the loads (AC) with or without additional sources as diesel generators or grid.

Quantity	8	**Peak efficiency %**	96%
Input DC voltage range (VDC)	600-900v	**Peak power %**	110%
Rated apparent power (kVA)	500	**Maximum power time (min)**	<30
Rated active power (kW)	500	**Power factor**	-1…1

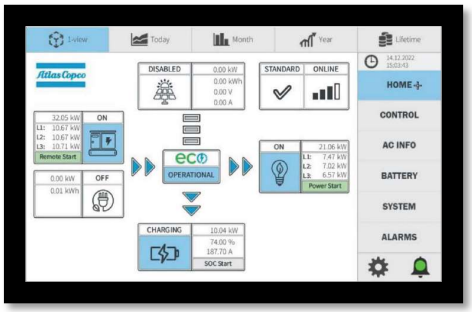
Nominal values for standard conditions and performance

Controller and performance

ECO Energy controller optimizer, provides intuitive control and monitoring for all batteries and power electronics integrated in the battery pack. A highly customizable start/stop system. Use state of charge, voltage, load and other parameters. Define a special set of rules for quiet times, and optionally a monthly test run.

Discharge autonomy 100% / 75% rate power (h)	0,4 / 0,6	**Generator size recommended**	>50kVA
Discharge autonomy 50% / 25% rated power (h)	0,9 / 1,8	**Derating Temperature**	> 40 ºC
Maximum auxiliary consumption (kW)	22	**Heating & Cooling**	HVAC
Maximum passthrough current (A)	No limitation**	**Monitoring & GPS**	Yes

** Option*
***Paralleling/Synchronizing capabilities*
Nominal values for standard conditions and performance



ENERGY CONTROLLER