



# ELS Series PCS

**Single-phase Low Voltage  
Battery Inverter  
for residential storage**

## ELS-5K

## Introduction

**APstorage introduces its 1st generation of smart Power Conversion Systems with the ELS-5K battery charger solution.**

Together with compatible low voltage batteries connected, it becomes the ideal AC coupling storage solution for residential PV applications. With automatic energy management features based on intelligent software and integrated monitoring, system owners can choose between back-up, self-consumption, peak valley time, and peak shaving modes to secure critical loads during power outages and maximize energy savings for their houses.

## Features

### Safety

- ▶ Ingress protection IP65
- ▶ 48V low battery voltage input
- ▶ Intelligent charging technology, protecting battery life
- ▶ High and low voltage isolation topologies, ensuring personal safety

### Flexible

- ▶ Compatible with multiple battery brands
- ▶ AC-Coupled solution for new or existing installations
- ▶ Support Off-grid PV function

### Intelligent

- ▶ UPS-level switching time <10ms
- ▶ Innovative multiple energy control modes: Backup power supply, Self-consumption, Peak and valley, and Peak shaving
- ▶ 24-hour intelligent energy management system
- ▶ AI mode allows users to take advantage of dynamic electricity tariffs and optimize their savings
- ▶ Intelligent operation and maintenance platform with EMA

### Performance

- ▶ Nominal power rating up to 5000VA
- ▶ Peak backup power up to 7500VA
- ▶ Max efficiency up to 96.5%

**Model**  
**Region**

**ELS-5K**  
**EMEA**

## General Specifications

Dimensions W/H/D	847×502×197mm
Weight	29kg
Maximum Efficiency	96.5%
Temperature Range	-25°C-65°C (-13°F-149°F)
Ingress Protection	IP65
Relative Humidity	10%-90%
Ventilation	Natural convection
Communication Ports	Ethernet/WIFI/RS485/CAN
Zigbee Frequency Range	2405MHz - 2480MHz
Zigbee Maximum Power	8.94 dBm
Wi-Fi Frequency Range	2412MHz - 2472MHz
Wi-Fi Maximum Power	16.97 dBm
Grid Regulation	VDE-AR-N 4105; TOR Erzeuger; OVE-Richtlinie R 25; XP C15-712-3; VFR; CEI 0-21; G98; G99; UNE 217002; NTS; RD647; PN-EN 50549-1; EN 50549-1; EN 50549-10; NF EN50549-1; NF EN50549-10
Safety	IEC/EN 62477-1
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Warranty	10 years

## Battery Input/Output Data

DC Battery Input Voltage	40-60VDC
Charging Strategy for Li-Ion Battery	Self-adaption to BMS
Max Continuous Charge Current	100A/96A(DE) <sup>(1)</sup>
Max Continuous Discharge Current	100A/96A(DE) <sup>(1)</sup>

## AC Output Data (On-grid)

Max. Continuous Output Power	5000VA/4600VA(DE) <sup>(1)</sup>
Max. Continuous Output Current	21.7A/20A(DE) <sup>(1)</sup>
Max. Continuous Current From Utility Grid	43.4A <sup>(2)</sup> /40A(DE) <sup>(1)</sup>
Nominal Output Voltage	230V
Adjustable Output Voltage Range	184-253V <sup>(3)</sup>
EPS Switch Time	10ms
Nominal Output Frequency/Range	50Hz/47.5-51.5Hz <sup>(3)</sup>
Output Power Factor	>0.99(Adjustable from 0.8 leading to 0.8 lagging)
THD	<3%
Grid Connection	Single-phase

## AC Output Data (Backup)

Max. Output Apparent Power	5000VA/4600VA(DE) <sup>(1)</sup>
Peak Output Apparent Power	7500VA/6900VA(DE) <sup>(1)</sup> (10s)
Max. Output Current	21.7A/20A(DE) <sup>(1)</sup>
Nominal Output Voltage	230V
Nominal Output Frequency	50Hz

(1) The value is for VDE-AR-N 4105.

(2) The current is limit to 32A when select EN50549 as the grid profile.

(3) Voltage/frequency range can be adjusted if required by local utility.

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Specifications subject to change without notice please ensure you are using the most recent update found at web : [emea.APsystems.com](http://emea.APsystems.com)

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