



PowerShaper XL

50kW/321kWh, Indoor, LFP



Fully integrated, pre-wired and factory configured system that reduces the installation time significantly.



The BESS that pays for itself by earning from electricity markets and saving cost through peak shaving and power boost.

High-capacity BESS for long-duration use

Designed for energy-oriented applications. Ideal for optimizing energy use through PV self-consumption, peak shaving and demand charge reduction, saving operational costs and meeting green targets

Built for future-proof performance

Designed and manufactured in Europe. Combining robust engineering with high-quality components to deliver modular, scalable and reliable energy storage for critical applications and demanding environments.

Secure, connected, and compliant

Our 48V systems are built for always-on operation. Encrypted communications, secure remote access, and full GDPR compliance, enabling uninterrupted connectivity, real-time insight, and maximum ROI through value stacking.

Resilient by design, reliable in use

Pixii BESS feature built-in redundancy, active monitoring, and automated recovery protocols. This ensures secure operation even under failure or cyber threat, ideal for mission-critical energy storage needs.

Pre-wired, pre-configured

PowerShaper XL is delivered pre-wired and pre-configured using standard Pixii components, including Pixii Gateway. To simplify installation, systems can be shipped with batteries already in place.

Comprehensive Service Level Agreement (SLA) and support

Proactive maintenance, fast response, and certified installers help maximize uptime and extend lifespan. SLAs secure optimal performance and ROI throughout the system lifetime.

321kWh storage capacity

Consisting of two battery cabinets and one cabinet with bi-directional inverter modules, the system offers up to 50kW inverter capacity and 321kWh storage capacity.

Highlights

- Compact footprint for indoors
- Safe and stable LFP batteries
- Modular and scalable
- Galvanic isolation (AC-DC)
- European quality & GDPR compliance
- Safe ~48V installation and operation

Key functions

- PV self-consumption
- Peak shaving
- Balance market participation
- Electricity market participation



PowerShaper XL is also available in a robust, weatherproof outdoor series.

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AC specifications	
Grid connection type	TT / TN
Phase config. (grid)	3ph
AC voltage (-10/+15%)	400V
Nominal AC voltage range	207 - 260V
Nominal frequency (grid)	50Hz
Nominal AC current	72Arms (3Ph+N+PE)
Max. AC current (input)	82.5Arms (3Ph+N+PE)
Nom. cont. AC power ($\pm 2\%$) ¹	50kW
Max. AC power ($\pm 2\%$)	50kWp
Max. apparent power	50kVA
Max. reactive power	45kVAr
Power factor (Cos ϕ leading)	0.5 - 1
Power factor (Cos ϕ lagging)	0.5 - 1
THDi (grid connection)	<5%
Off-grid operation support	No
Generator backup support	No

1. 1. The stated power and energy capacities are baseline, or nominal, values. Actual performance can vary and may be constrained by several factors, including the state of charge (SoC), state of health (SoH) of the system, as well as thermal conditions.

DC specifications	
Installed capacity (max)	321.5kWh
Usable capacity (max)	289.4kWh
Max. system capacity	321.5kWh
Nominal DC voltage	~48V

Efficiency	
Max. efficiency (inverter)	96.9%

Communication and connectivity	
Wired interfaces	Ethernet LAN, RS 485 (Modbus), Digital IO
Wireless interfaces	Wi-Fi hotspot (local AP)
Internal comm. protocols	CAN bus, Modbus TCP/RTU
External comm. protocols	MQTT

Safety	
Ingress Protection (IP)	IPXXB
Protection class	I
Overvoltage category (OVC)	III
Max. short-circuit current	10kA
Min. required SC current	1kA

Operating conditions	
Operating environment	Indoor
Thermal management	Fan
Operating amb. temp. range	10 - +30°C
Operating relative humidity ¹	5 - 95% NC
Max. operating altitude	2000m

1. Non-condensing.

Physical specifications	
Dimensions (HxWxD)(mm)	2000x1800x900
Net. weight (cabinet only)	435kg
Net weight (equipped) ¹	2965kg
Color	RAL 9005
Status indicator (type)	-
Installed batteries (5U)	20
Max. batt. capacity (5U)	20
Installed PixiiBoxes	15
Max. PixiiBox capacity	15

1. Includes PixiiBoxes and batteries.

Battery	
Battery ID	LFP 314Ah 16S 5U 19in A
Battery chemistry	LFP
Cells in series (qty)	16
Battery block capacity (Ah)	314Ah
Battery block capacity (kWh)	16.08kWh
Max. depth of disch. (DoD)	90%
Max. charge/discharge cur.	157/157A
Max. C-rate	0.5C
Rack height (Units)	5U
Over-current protection	Breakers, Electronic
Dimensions (HxWxD)(mm)	219.5x440x780
Net. weight (battery block)	125kg
Battery connection type	Quick
Cycle life (cycles @%DoD) ¹	7600 (90%)

1. Temp. 25 \pm 5°C and C-rate 0,5, EOL: 70% SoH

Warranty and compliance	
Security and safety standards	
RED (2014/53/EU) - Cybersecurity (effective Aug 2025)	
Grid standards¹	
EREC G99 (Type A & B) (UK), IEC/EN 50549-1 (Type A & B) (EU), VDE-AR-N 4105 (DE), VDE-AR-N 4110 (DE)	
EMC standards	
IEC/EN 61000-6-2, IEC/EN 61000-6-4	
Environment standards	
ETSI EN 300 019-2-1 (Class 1.2), ETSI EN 300 019-2-2 (Class 2.3), ETSI EN 300 019-2-3 (Class 3.6)	
Battery standards	
IEC/EN 62619, UL1973, UL9540A, UN38.3	
Warranty (years/cycles)²	See note

*1. Designed in accordance with the relevant national and international standards listed above. Certification to specific revisions available on request. Additional local requirements may apply. EREC G99 (Type A & B) currently valid for PixiiBox. **System approval pending.***
2. Warranty terms may vary based on your SLA agreement. Please review the [warranty document](#) for details