



PowerShaper XD

50kW/145kWh, Aircon, NMC



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



EMS for remote monitoring, configuration and control, eliminates the need for complex on-site configuration.

Flexible, scalable energy storage

PowerShaper XD is a modular IP55 system for on-grid, off-grid, and hybrid use. Built for solar self-consumption, peak shaving, grid support, and other value-stacking applications.

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.

Pixii Energy Architect (EMS)

Managing power in on-grid and micro-grid setups. It automatically controls and balances different power sources like solar panels and generators. Tracking battery health, charge level, and energy use.

Easy deployment

The system is designed for easy deployment, shipped with batteries installed, and can operate autonomously or be integrated with higher-level energy management systems.

Highlights

- Shipped with batteries installed
- High density NMC batteries
- Modular and scalable
- Galvanic isolation (AC-DC)
- Quiet operation at full power
- Safe ~48V installation and operation

Key functions

- Hybrid and off-grid configurable
- Modular and scalable system
- On/off-grid compatible
- Backup and fast response



You can add up to 3 cabinets as your energy need evolves

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AC specifications	
Grid connection type ¹	IT / TT / TN
Phase config. (grid)	1ph / 3ph
AC voltage (-10/+15%)	230V / 400V
Nominal frequency (grid)	50Hz
Nominal AC current	72Arms (3Ph+N+PE)
Max. AC current (input)	83Arms (3Ph+N+PE)
Nom. cont. AC power (±2%) ²	50kW
Max. AC power (±2%)	50kWp
Max. apparent power	50kVA
Max. reactive power	45kVAr
Power factor (Cos φ leading)	0.5
Power factor (Cos φ lagging)	0.5
THDi (grid connection)	<5%
Off-grid operation support	Yes
Generator backup support	Yes
Phase config. (genset)	1ph, 3ph
Frequency range (genset)	45 - 66Hz

1. TN includes TN-S and TN-C-S (MEN).
2. 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)	145.5kWh
Usable capacity (max)	116.4kWh
Max. system capacity	145.5kWh
Nominal DC voltage	~51.2V

Efficiency	
Max. efficiency (inverter)	96.9%

Communication and connectivity	
Wired interfaces	Ethernet LAN
Wireless interfaces	Wi-Fi hotspot (local AP), 4G (optional kit)
Internal comm. protocols	Modbus TCP/RTU
External comm. protocols	MQTT

Safety	
Ingress Protection (IP)	IP55
Protection class	I
Overvoltage category (OVC)	II
Fire suppression (optional)	StatX, FirePro

Operating conditions	
Operating environment	Outdoor
Thermal management ¹	Heater, Aircon
Acoustic noise 1m distance	<57dB(A)
Operating amb. temp. range ²	-20 - +55°C
Operating relative humidity ³	5 - 95% NC
Max. operating altitude	2000m

1. 400 W DC air conditioner with 120 W/K heat exchanger, 1000 W heater, and integrated dehumidifier.
2. Derating from 45 °C
3. Non-condensing.

Physical specifications	
Dimensions (HxWxD)(mm)	1155x835x2300
Net. weight (cabinet only)	560kg
Net weight (equipped) ¹	1502kg
Color	RAL 7035
Status indicator (type)	-
Installed batteries (2U)	16
Max. batt. capacity (2U)	16
Installed PixiiBoxes	15
Max. PixiiBox capacity	18

1. Includes PixiiBoxes and batteries.

Battery	
Battery ID	NMC 180Ah 14S 2U 23in P
Battery chemistry	NMC
Cells in series (qty)	14
Battery block capacity (Ah)	180Ah
Battery block capacity (kWh)	9.09kWh
Max. depth of disch. (DoD)	80%
Max. charge/discharge cur.	90/90A
Max. C-rate	0.5C
Rack height (Units)	2U
Over-current protection	Breakers
Dimensions (HxWxD)(mm)	87x544x725
Net. weight (battery block)	57kg
Battery connection type	Screw
Cycle life (cycles @%DoD) ¹	3650 (80%)

1. EOL: 70% SoH

Warranty and compliance	
Battery standards IEC/EN 62368, IEC/EN 62619, 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. VDE-AR-N 4105 currently valid for PixiiBox. System approval pending.
2. Whichever comes first. EoL defined as ≥70% SoH. See [warranty document](#) for details.