

Pixii Power Shaper



Flexible grid tied energy storage system

The PowerShaper2 from Pixii, is an IP55 complete modular energy storage system. It is fully integrated with and ready to be connected to the grid for applications as solar self consumption, demand charge reduction, peak shaving, arbitrage and various ancillary services.

Each cabinet can house up to 48kW of power conversion and LFP or NMC batteries to match different applications and requirements.

The PowerShaper can provide a variety of energy saving or grid supporting services. These functions can be executed autonomously or controlled by commands and settings from higher level energy management systems communicating over different protocols.

The power conversion in the PowerShaper is achieved using the Pixiibox, a bidirectional 3,3kW AC/DC converter module. There is room for up to 15 PixiiBoxes in each cabinet.

The system includes the Pixii Gateway controller providing advanced monitoring and control applications as well as communication and interoperability via the internet, wifi or the wireless network .

For applications requiring more power or energy, additional cabinets can be installed. The PowerShaper can be used in applications from 10kW up to 1MW.



Highlights

- Modular and scalable
- For applications 10kW to 1 MW
- Compact energy storage
- Fast response (charge to discharge)
- Integrated & battery inverter solution
- Wide range of functions
- Galvanically isolated AC to DC
- 48V battery voltage for ease of service

Battery type	Max no:	MaxkW ¹⁾	MaxkWh ²⁾
LFP 5kWh ³⁾	10	50kW	50kWh
NMC 12,9kWh ³⁾	8	40kW	103kWh
NMC 15,2kWh	8	40kW	120kWh

1) Converter capacity. Actual capacity limited by battery, please see additional information on batteries. 2) Usable capacity typically 80% of nominal, 3) Normally kept in stock.

20 foot base, Prewired and including AC connection cabinet

PixiiPowerShaper

Flexible grid tied energy storage system up to 50kW

Performance data		Performance data	
Max Power (bi-directional)	Up to 50kW	Minimum operating temperature	-20 °C
Nominal AC voltage	230/400VAC	Maximum operating temperature	45 °C
Frequency	50 or 60Hz	Dimensions (w x d x h)	706 x 932 x 2115 mm
Max AC current (50kW)	80A	Weight (fully equipped)	600-800 kg
Nominal DC voltage	48Vdc	Cabinet protection class	IP 55
Max DC current (50kW)	1125A	Color	RAL7035
Communications protocols	M-bus, Modbus RTU, TCP/ IP Ethernet, 4G Wi-Fi	Environmental management	Fan Cooled (Aircon Optional)

Functions	
Voltage support	Monitor and maintain ideal line voltage in remote locations at low cost, by using our power management and storage solution as a buffer, enabling you to inject and absorb active/reactive power to and from the grid.
Peak shaving	Reduce your demand charges and save cost by shifting your power dependency from grid to battery, shaving the peaks of your power consumption. It also allows you to boost available power without having to upgrade your grid connection.
Grid support	Improve local peak power capacity by increasing maximum power capacity through smart energy storage systems. In locations with temporary overloads, energy storage systems can be installed to cover the overload to avoid having to upgrade larger parts of the grid.
Arbitrage	Support loads from battery when electricity rates are high, and charge battery when electricity rates are low
PV self-consumption	Get the most out of your solar investment and reduce your dependency on the grid through smart power management, enabling you to re-direct excess power generation to batteries for later use during peak hours.
Flexibility markets	Unlock the value of your battery energy storage system and monetize your system's flexibility by selling stored energy or providing ancillary services, such as frequency regulation, to the electricity grid.
FCAS (Frequency Control Ancillary Services)	Participate in the frequency control market with Pixii's smart energy storage solution, allowing you to provide first-response frequency support and help stabilize the grid by taking part in VPP.

Applicable standards	
Safety	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62040-1, IEC/EN 62477, (Batteries) IEC 62619, IEC 62368, UN38.3, RPEQ Mechanically certified for lifting, Load Restraint Guide 2018 for Transportation
Grid	AS/NZS 4777-2, VDE-AR-N 4105, 50549-1, TF 3.3.3 B1, EREC G99 (others pending)
EMC	IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4
Environment	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 3.2)