

Pixii Power Shaper XL Indoor



Flexible grid tied energy storage system

The PowerShaper XL Indoor from Pixii, is a complete modular energy storage system designed for energy oriented application. 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.

The system consist 2 battery cabinets and one cabinet with bi-directional inverter modules and batteries. The system can be equipped with up to 50kW inverter capacity and 288kWh of energy storage capacity.

The PowerShaper XL Indoor can provide a variety of cost and energy saving functions as well as 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 XL is achieved using the

Pixiibox, a bidirectional 3,3kW AC/DC converter module. There is room for up to 15 PixiiBoxes in the power/ battery 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, several systems can be connected together and operated as one.

Highlights

- Modular and scalable
- Compact energy storage
- Fast response (EV charging support, frequency response etc.)
- Integrated & battery inverter solution
- Designed for shipment with batteries installed
- Wide range of functions
- Galvanically isolated AC to DC
- 48V battery voltage for ease of service

Battery details

Technology	LFP
Module Capacity	14,4kWh
Cycle life ¹⁾	7200
Maximum DoD (Depth of Discharge)	90%
Maximum number of battery modules	20
Maximum nominal system capacity	288kWh

1) Down to 70% rest capacity



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Flexible grid tied energy storage system up to 288kWh

Performance data		Performance data	
Max Power (bi-directional)	50 kW	Minimum operating temperature	0 °C
Nominal AC voltage	400VAC	Maximum operating temperature	45 °C
Frequency	50Hz	Dimensions (w x d x h)	3 x 600 x 850 x 2 000mm
Max AC current (50kW)	80A	Weight (fully equipped)	2400 kg
Nominal DC voltage	~48V	Cabinet protection class	IP 20
Max DC current (50kW)	1125A	Communications protocols	MQTT, Modbus TCP, 4G, Wi-Fi +

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.
Ancillary services	Unlock the value of your energy storage system through frequency stabilising ancillary or balance services like, FFR, FCR-D up an/or down, FCR-N, FCAS etc.

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
Grid	AS/NZS 4777-2:2020 ²⁾ , EN50549-1:2019 Type A & B, VDE-AR-N 4105:2018-11 ²⁾ , VDE-AR-N 4110:2018-11 (prototype), EREC G99 Issue 1 – Amendment 6, 09 March 2020 ²⁾
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)

2) Currently valid for PixiiBox, system approval pending