

Pixii Power Shaper XL



Flexible grid tied energy storage system

The PowerShaper XL from Pixii, is an IP55 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.

Each cabinet can house up to 60kW of power conversion and LFP batteries up to 200kWh. The PowerShaper XL 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 18 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 XL can be used in single or multiple cabinet solutions up to 1MW and beyond.



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 | 14 |
| Maximum nominal system capacity | 200kWh |

1) Down to 70% rest capacity

← 20 foot base, Prewired and including AC connection cabinet



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Flexible grid tied energy storage system up to 200kWh

| Performance data | | Performance data | |
|----------------------------|-------------------------------|-------------------------------|---------------------------------|
| Max Power (bi-directional) | Up to 60kW / 200kWh | Minimum operating temperature | -20 °C |
| Nominal AC voltage | 400VAC | Maximum operating temperature | 45 °C |
| Frequency | 50Hz | Dimensions (w x d x h) | 1200 x 950 x 2300 mm |
| Max AC current (50kW) | 96A | Weight (fully equipped) | 2000 kg |
| Nominal DC voltage | 48Vdc | Cabinet protection class | IP 55 |
| Max DC current (50kW) | 1350A | Color | RAL7035 |
| Communications protocols | MQTT, Modbus TCP, 4G, Wi-Fi + | Environmental management | Fan Cooled (Aircon Optional) |

Functions

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|---------------------|--|
| 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, 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) |