Pixii **Power Shaper** ID

Flexible grid tied indoor energy storage system

The PowerShaper ID from Pixii, is an IP20 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 50kWh energy storage capacity in LFP 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.

The PowerShaper ID is modular battery energy storage system (BESS) that allows you to grow your system according to needs.

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 4,8kWh[3)]	10	48kW	50kWh

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.

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Flexible grid tied indoor energy storage system up to 48kW

Performance data	
Max Power (bi-directional)	Up to 48kW
Nominal AC voltage	230/400VAC
Frequency	50 or 60Hz
Max AC current (50kW)	80A
Nominal DC voltage	48Vdc
Max DC current (50kW)	1125A
Communications protocols	MQTT,M-bus, Modbus RTU, TCP/IP Ethernet, 4G Wi-Fi

Performance data	
Minimum operating temperature	0 °C
Maximum operating temperature	45 °C
Dimensions (w x d x h)	600 x 650 x 1964 mm
Weight (fully equipped)	550 - 650 kg
Cabinet protection class	IP 20
Color	RAL9005
Environmental management	Fan Cooled

Functions	
Grid support/voltage support	Improve quality of electricity supply for DSO's (DNSP's) on grids not prepared for the green transition. Through phase balancing, active and reactive power compensation, the Pixii BESS is a cost effective solution to quickly increase power capacity and ensure a supply of electricity within national regulations.
Peak shaving	Lower demand charges and save cost by shifting your power dependency from grid to battery, shaving the peaks of your power consumption.
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 making your power and energy available for flexibility markets. (FCR-D, FCAS, FFR etc.)

Applicable standards	
Safety	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62040-1, IEC/EN 62477-1, (Batteries) IEC 62619, IEC 62368-1, 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 3.1)