

# Pixii Power Shaper TC

ID, Hybrid, LFP

**BESS with 48Vdc Telecom UPS, all-in-one  
Up to 40kW / 40kWh**

The Pixii PowerShaper TC is a modular energy storage system with 48Vdc telecom applications in mind. With an integrated solution that includes PixiiBox bi-directional rectifiers you can utilize Lithium-ion batteries and generate additional income from your power infrastructure.

The Pixii PowerShaper TC is a dual-purpose solution, seamlessly integrating the functionalities of an uninterruptable Telecom Power Supply (UPS) and a Battery Energy Storage System (BESS).

Designed to provide reliable 48Vdc output, it ensures uninterrupted power for telecom sites while the bi-directional rectifiers enable the system to feed energy back to the grid. This makes it possible for the telecom power system to participate in lucrative markets that supports the stability of the grid and electricity system as a whole.

With a big number of sites, solid grid connections and distributed energy storage, telecom infrastructure is the perfect candidate to become Virtual Power Plants (VPP's).

The Pixii system offers a wide range of grid support services which make it possible to combine services to optimize the additional revenue potential.

With the software defined functionality in the PixiiBox and built-in energy management, it is also possible to seamlessly integrate solar energy or other alternative energy sources for optimal resilience, energy cost and environmental footprint.

Compliant with international telecom standards, as well as the required grid codes required to feed energy back to the grid, the PowerShaper TC is suitable for most markets.



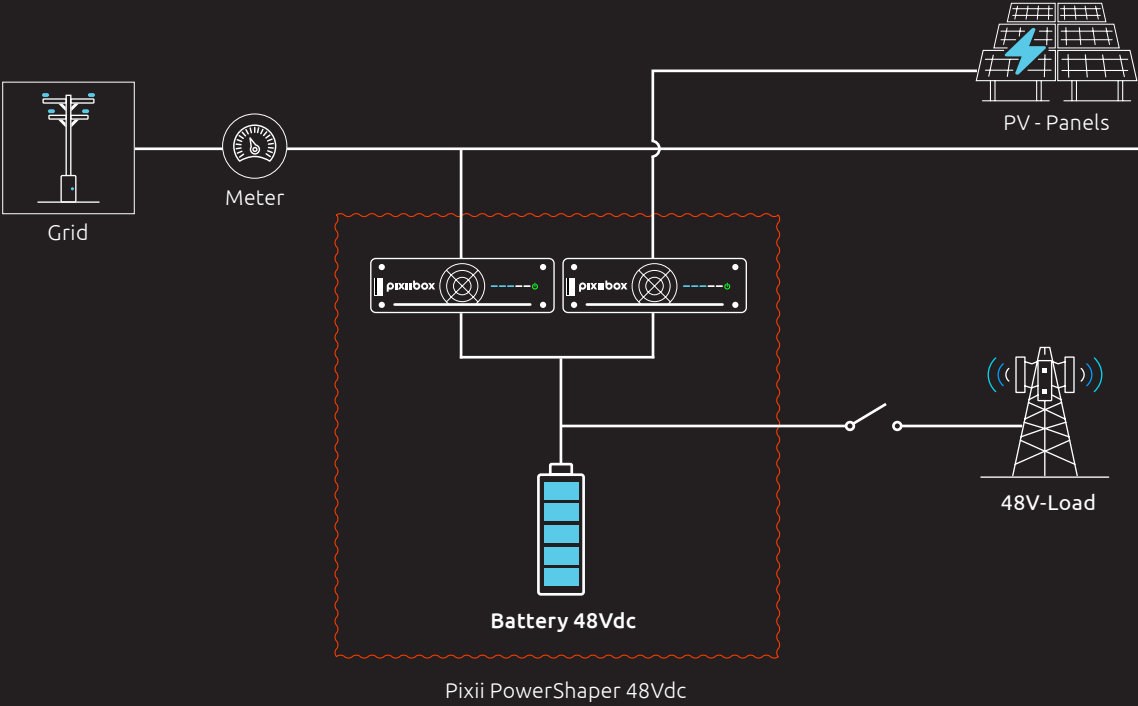
## Highlights

- Global standards compliance
- Bidirectional power management
- Modular and scalable
- Energy and cost efficient
- Hybrid system compatible



*The PowerShaper TC Hybrid for telecom is also available in outdoor IP55 version.*

# BESS and 48Vdc UPS, all-in-one



The Pixii system combines the uninterrupted high quality 48Vdc supply for telecom systems with advanced BESS functionality enabling participation in lucrative ancillary services and flexibility markets.

Reliable backup power	Bidirectional conversion technology	Additional revenue opportunities
Modular and redundant design for optimal power resilience.	Enabling grid support through energy feed back to the grid.	Maximize additional revenue potential through stacking several grid support services.

LFP batteries	Compliant with global telecom standards	Sustainability and carbon footprint	Software defined product
Switching to LFP batteries for backup power increases lifespan, efficiency, and safety, reduces maintenance, performs better in extreme temperatures, and lowers long-term costs.	Designed to meet international telecom standards.	Lower emissions by seamless integration of renewable energy and reduce reliance on diesel generators, supporting environmental sustainability goals.	The multifunctional PixiiBox provides optimal flexibility with minimum inventory and hardware variants.

# Pixii PowerShaper TC

40kW / 40kWh, ID, Hybrid

Performance data		Performance data	
Max. AC power, grid connection (bi-directional)*		Frequency	50 Hz
Nominal AC voltage	230/400Vac	Min. operating temperature	0°C
AC voltage range	100 - 277Vac	Max. operating temperature	45°C
Max. power, PV connection (MPPT)	20kW	Dimensions	600 x 650 x 1964 mm
DC voltage range (string voltage)	44 - 59 Vdc	Weight (fully equipped)	520 - 620 kg
Max. AC current (40kW)*	64A	Cabinet protection class	IP20
Nominal DC voltage	48Vdc	Color	RAL9005
Max DC current (40kW)	833A	LVLd / LVBD	Configurable
Communication protocol	M-Bus, Modbus RTU, TCP/IP Ethernet, MQTT, 4G, Wi-Fi	DC distribution	Up to 23 CB per distribution 6A-63A 1pol / 125A 2pol

\*40kW reflects the maximum power capacity, all dedication to PV will deduct from the total.

Functions	
48V Telecom load	The system is designed to supply a stable 48Vdc output for telecommunications loads. In the event of a main power failure, the system ensures continuity by utilizing a battery backup.
DC or AC coupled solar and PV self-consumption	With MPPT functionality the PowerShaper TC is a complete DC coupled hybrid system. Our technology operates with most grid tied PV inverters, in on or off-grid mode. Get the most out of your solar investment and reduce your dependency on the grid.
AC back-up	Protect your network against power cuts with our smart battery storage system kicking in to ensure uninterrupted power supply.
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.
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
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.

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)