Flex-EV

The most flexible all-in-one EV charging system for future proofing infrastructure

continu energy

Balancing energy efficiency

- 300kW ESS based DC EV charging
- Variable fast charging configurations
- Modular for progressive investment
- Reduces or avoids grid upgrades
- Solar ready

Flex-EV is the most flexible all in one EV charging system on the market today

- Reduces or removes the need for grid upgrades
- Energy trading & grid services
- Easily Transported and relocationable
- Suitable for most carparks
- Compact for a small footprint
- Manufactured in Great Bratain
- Renewable Ready
- Optional Extras
- Suitable for fleet management

Our **Flex-EV** charger is a fully-factory-built and tested, high-density, modular energy solution designed for direct fast and rapid charging of EVs. It offers reduced project risk and cost thanks to its simple installation, small footprint, and lightweight construction. It bears low operating costs thanks to its enclosed cooling and durable housing. Integrating KORE Power energy storage and our ground-breaking hybrid Inverter, **Flex-EV** achieves an industry-leading, optimising footprint for applications where space is constrained or at a premium. Working with multiple power sources and output configurations, **Flex-EV** provides the ultimate, flexible approach for most EV charging applications alongside potential grid services and energy trading revenue streams.

KOREPOWER

Mark1 Battery Modules, total
832 kWh in each housing

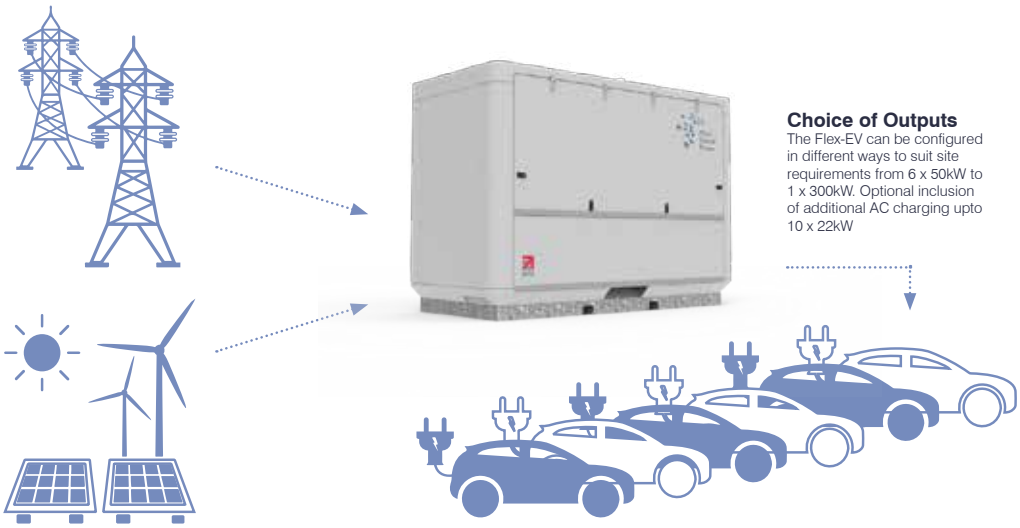
LI-ION TAMER®
Protection

epcpower
PD250 or PD250(H)

LAYOUT

Existing Grid Connection
The Flex-EV Charger uses storage to build a reservoir of energy form existing limited grid connections to deliver fast and rapid charging EVs on demand, reducing or eliminating the need for large scale grid upgrades to enable EV charging

Optional Renewable Input
The Flex-EV Charger is solar ready, easily incorporating additional local clean power sources



Choice of Outputs
The Flex-EV can be configured in different ways to suit site requirements from 6 x 50kW to 1 x 300kW. Optional inclusion of additional AC charging upto 10 x 22kW

Flex-EV for low cost project overheads

INVERTER

- Liquid-cooled for low op-ex
- DC Coupled giving unrivalled flexibility when sizing your solar & storage
- UPS function offering protection to your facility
- Both Off & On grid forming and following
- Peak efficiency 98.6% lowest 97%
- Outdoor housing IP64 (indoor version available)
- Solar MPPT Hybrid 300 KwP

STORAGE

- Long lifespan with all components designed to last 5000 to 6000 cycles and 10/15/20 year lifespan
- British-engineered 10/15/20-year performance and 5/10/15 year product extendable warranty
- Maximum safety, modules certified to UL9540A
- Easily expandable flexible energy storage system can be sized according to need
- Optimised battery performance via the Master/String-Rack Controller (SRC)
- Li-ion Tamer protected

BESS

Modular and expandable, the **FLEX-EV** offers installers a plug-and-play, factory built-and-tested, solution.

The thermally insulated and ultra durable housing ensures ideal climatic conditions for the ESS. Parasitic loads are minimised by water cooling the inverter and HVAC for the KORE Mark 1 batteries resulting in class leading efficiencies.

- Ultra low footprint - 2.5m x 3.4m x 1.5m (HxWxD)
- Easily transported on site by forklift or Hiab
- Factory-built and tested
- Secure and ultra-durable
- Thermally optimised
- Maximum energy density
- Flexible layout options
- Plug-and-play, delivery to commissioning hours, not days
- Outdoor housing IP64 (indoor version available)

APPLICATION

Modular and expandable, the **FLEX-EV** charger offers installers a plug-and-play, factory-built-and-tested, easily-installed solution. The thermally insulated and durable housing ensures ideal climaic conditions for the system to operate safely and reliably throught its life. Parasitic loads and maintenance are minimised by liquid cooled power conversion, together with split air HVAC for the battery modules, resulting in class leading efficiences and warranty protection.

- Ultra-low foot print -2.5mx 3.4m x 1.5m (HxWxD)
- Easily transported on site by forklift or hiab
- Factory-built-and-tested
- Plug-and-play, delivery to commissioning hours not days
- Secure and ultra-durable
- Thermally optimised
- Maximum energy density
- Flexible layout options
- IP 64 rated enclosure

FEATURES & BENEFITS

- Choice of DC fast/rapid charging configurations
- Additional capacity for multiple AC charging at 7 to 22kW
- Hybrid high-power multi-port inverter eliminates separate solar & storage inverters
- Galvanicly isolated, compliant DC-DC connections increase efficiency and eliminate multi-stage conversion components
- Advanced KORE Power energy storage
- Revenue stacking capabilities through energy trading and/or grid services
- Whole site UPS/SRT/Grid bridging capabilities
- Visually unobtrusive and available in any RAL colour
- Significant reduction in OPEX from ultra-low maintenance
- Rapid installation reduces site costs
- IP 64 rated enclosure

Flex-EV Controller

MONITORING

Capable of integration with existing plant infrastructure using Industrial Ethernet communication protocols (for example Modbus TCP/IP, SCADA) for remote control and monitoring of the system from a centralised control room.

Battery health is continuously monitored via the KORE Power BMS, providing real-time data of battery system health and performance.

Our bespoke software allows an operator to monitor total system performance from input power source to output.

The system is also supported with remote performance monitoring for servicing and maintenance.

Flex-EV Specifications

INVERTER

AC	Power	250 kVA | 201 ARMS
	AC Voltage	480 VRMS +10%/-12%
	Overload capacity	275 kVA, 10 mins | 312.5 kVA, 10 secs
	Nominal frequency range	50-60 Hz field settable
	Power factor/reactive power	0 leading … 0 lagging (full 4-quadrant operation)
	Max aux. power consumption	750W
	CEC efficiency	98.0% (>97% throughout operational range)
	Peak AC to DC efficiency	98.40%
DC	Battery DC port	550ADC | up to 1000 VDC | 375 kW
	Solar DC port	550 ADC | 200 - 650VDC | 3 0 0 kW
	Peak efficiency / Lowest efficiency	Space - 98.6% - 97.0%
Other	Warranty	10/15/20 years

-

Charging

Standard	CCS
Voltage range	200V to 650V
Power options	6 x 50kW; 3 x 100kW; 2 x 150kW; 1 x 300kW or comb
Cables	Phoenix Contact (water cooling on 150kW + versions)
Lengths	Client specified, 5 to 10 meters
AC charging output	22 kW via CCS sockets / 7 kW via CCS
Separate AC outlet	Up to 10 x 22kW stand alone AC chargers / 35 x 7 kW or a combination
Minimum / maximum grid connection	50kW / 500kW

Flex-EV Specifications

SYSTEM

Power	250 kVA AC output
Storage	416kWh standard per housing
AC voltage	380/400/415/480/600 VRMS 3phase 3wire delta (Delta-Wye Transformer required for specific Voltage requirements, and for 4 wire distribution.)
AC frequency	50-60 Hz
Communication protocol	Modbus TCP/IP (others available)
Ambient temperature (operation)	-20°C to 45°C
Shipping dimensions & weight	2.5m x 3.4m x 1.5m (HxWxD), 8 metric tons *(H&W + or - 30 mm)*
Maintenance envelope (openings etc)	1.2m projection to front
Footprint (pad) size	3.5m x 1.5m
Site power requirements	None, Self-powered
Blackstart capablity	Yes
Warranty	10/15/20 years

Technical

Modular and expandable, **FLEX-EV** offers installers a plug and play, factory-built and tested easily installed solution. The thermally insulated and ultra-durable housing ensures ideal climatic conditions for the EES. Parasitic loads are minimised by water cooling the power conversion technologies and, DC split air HVAC for the KORE Mark 1 batteries results in class-leading efficiencies.

- Ultra-low foot print - 2.5mx 3.4m x 1.5m (HxWxD)
- Easily transported on site by forklift or hiab
- Factory-built-and-tested
- Plug-and-play, delivery to commissioning hours not days
- Secure and ultra-durable
- Thermally optimised
- Maximum energy density
- Flexible layout options
- IP 64 rated enclosure

SYSTEM SECURITY

Hosted on Microsoft Azure, with guaranteed uptime and security, **FLEX-EV**'s system controller is compliant with IEC 62351 for security in energy management system and associated data exchange.

Back office

FLEX-EV is provided with a standard back office solution or it can integrate with customers' existing or preferred solutions.

OTHER AVAILABLE PRODUCTS

- **Flex-ESS 1000**
- **Flex-ESS 250**
- **Flex-ESS 500**
- **Flex-EV**

Continu Energy Ltd
9 Harbour Court
Heron Road
Belfast BT3 9HB
T +44 (0) 2890 454 900
E info@continu-ups.com
W www.continu-ups.com

@ContinuUPS

Continu Ltd