

# UXG1K022

## 22kW Bidirectional DC-DC (V2G) Charge-discharge Module



### + Introduction

UXG1K022 is a bidirectional AC/DC charge-discharge module, featuring a wide constant power voltage range, high efficiency, high power factor, high power density, low electromagnetic radiation and interference, and high reliability. It can be widely used in applications such as Vehicle-to-Grid (V2G), energy storage, retired battery secondary utilization, and production testing equipment.

### + Excellent advantages

DC side  
operating voltage range of **200-1000<sub>V<sub>dc</sub></sub>**

Meet the rapid charge and discharge requirements of various electric vehicles and battery packs.

Wide constant  
power operating range : **300-1000<sub>V<sub>dc</sub></sub>**

Suitable for fast charging and discharging in low-voltage scenarios.

EMC meets the requirements for **Class B**

Meet requirements for CE and UL certifications.

Conversion efficiency of **96.5%**

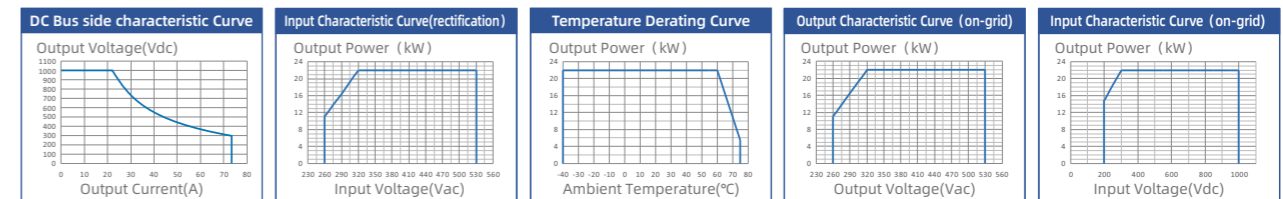
Promote energy conservation and environmental protection.

Ultra-high full-load  
operating temperature of **55<sub>°C</sub>**

Suitable for applications in various scenarios.

### + Key features

- high-frequency transformer inside, ensuring high reliability for bidirectional energy exchange between the battery and the grid;
- Supports both on/off-grid modes, enabling applications such as V2G and V2L, with quick switching between on&off-grid modes;
- High power density of 36W/in<sup>3</sup>, saving system layout space and reducing footprint;
- Dual DSP design enables full digital control, with multiple levels of software/hardware protection, ensuring safety and reliability;
- Potting with a high-protection process, utilized in scenarios with higher pollution levels;
- Bidirectional flow of both AC and DC energy, with rapid switching between charging and discharging;



Item		Specifications
Basic Specifications	Dimensions	85mm (H) ×300mm (W) ×395mm (D)
	Weight	14kg
	Efficiency (full load)	>95.5%
	Cooling Mode	Forced air cooling
	Communication Bus Protocol	CAN bus
	No. of Parallel Modules	≤8pcs
	Indicator	Green /Yellow / Red
AC Side - Rectified/ on-grid	Input System	3P+PE
	Voltage Range	260Vac-530vac
	Rated Voltage	380Vac
	Rated Current	33A
	Grid Frequency	45Hz ~ 65Hz, adjustable
AC Side - off-grid	Rated Frequency	50Hz/60Hz
	Input System	3P + N + PE
	Voltage Range	380Vac
	Rated Voltage	380Vac, not adjustable
	Rated Current	33A
	Rated Frequency	50Hz, not adjustable
DC Side	Output Voltage Phase Angle	<3° at balanced load
	THD	<3%
	Voltage Range	200Vdc-1000vdc
	Current Range	0-73.3A, current limiting point adjustable
	Rated Current	22A @1000V
	Voltage Stabilized Accuracy	<±0.5%
Environmental Specifications	Current Stabilized Accuracy	≤±1% output load 20% ~ 100% of rated range
	Load Regulation	≤±0.5%
	Operating Temperature	-40°C ~ +75°C, derating required above 55°C
	Storage Temperature	-40°C ~ +75°C
EMC	Relative Humidity	≤95% RH, non-condensing
	Altitude	≤2000 m no derating required;>1000m, the operating temperature decreases by 1°C for each additional 100m.
	MTBF	>500.000 hrs
EMC	Conduction Emission	Class B @ 0.15~30MHZ
	Radiation Emission	Class B @ 30MHZ-1GHZ