UXG1K022

22kW Bidirectional ACDC (V2G) Charge-discharge Power 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 200-1000Vdc

Wide constant power operating range : 300-1000Vdc

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

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

Conversion efficiency of 97.5%

Promote energy conservation and environmental protection.

Electromagnetic compatibility meets Class B

Meet requirements for CE and UL certifications.EMC Meets Class B requirements of EN61000-6-1 and EN61000-6-3 standards, with low electromagnetic radiation and strong anti-interference capability.

AC side voltage range of 260-530Vac with a frequency range of 45-65Hz

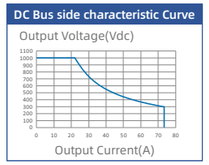
Adaptable to various grid environments.

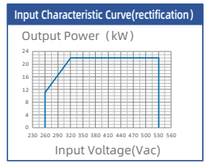
Ultra-wide DC voltage range, suitable for various fast charging and discharging scenarios of electric vehicles and battery packs.

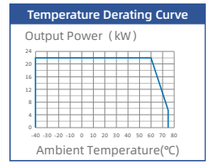
Ultra-wide AC voltage range, enabling energy interaction between electric vehicles of different voltage levels and the power grid.

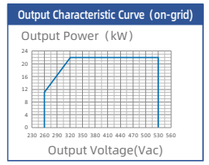
+ Key features

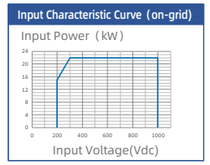
- Support bidirectional energy flow between the battery and the grid, facilitating applications such as peak shaving and valley filling for power batteries, as well as grid capacity expansion.;
- high-frequency transformer inside, ensuring high reliability for bidirectional energy exchange between the 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;
- Support a maximum single-phase output power of 6.6 kVA in off-grid mode;
- Ultra-high full-load operating temperature of 55℃, suitable for applications in various scenarios.;
- 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;
- High power density of 36W/in³, saving system layout space and reducing costs;











Item		Specifications
Basic Specificaitions	Dimensions	85mm（H）×300mm（W）×395mm（D）
	Weight	14kg
	Efficiency (full load)	>97%
	Cooling Mode	Fan cooling
	Communication Bus Protocol	CAN bus
	No. of Parallel Modules	≤8pcs
	Indicator	Green: normal operation Yellow: alarm Red: fault
AC Side - Rectified/ on-grid	Input System	3P+PE
	Voltage Range	260Vac-530vac
	Rated Voltage	380Vac
	Rated Current	33A
	Grid Frequency	45Hz ~ 65Hz, adjustable
	Rated Frequency	50Hz/60Hz
AC Side - off-grid	Input System	3P + N + PE
	Voltage Range	380Vac
	Rated Voltage	380Vac, not adjustable
	Rated Current	33A
	Rated Frequency	50Hz, not adjustable
	Output Voltage Phase Angle	<3° at balanced load
	THD	<3%
DC Side	Voltage Range	200Vdc-1000vdc
	Current Range	0-73.3A, current limiting point adjustable
	Rated Current	22A @1000V
	Voltage Stabilized Accuracy	<±0.5%
	Current Stabilized Accuracy	≤±1% output load 20% ~ 100% of rated range
	Load Regulation	≤±0.5%
Environmental Conditions	Operating Temperature	-40℃ ~ +75℃, derating required above 55℃
	Storage Temperature	-40℃ ~ +75℃
	Relative Humidity	≤95% RH, non-condensing
	Altitude	≤2000m
	MTBF	>500.000 hrs
EMC	Conduction Emission	Class B @ 0.15~30MHZ
	Radiation Emission	Class B @ 30MHZ-1GHZ