UXC95050B

20kW@950V Isolated Bi-directional DC/DC Charging-discharging Power Module

UXC95050B power module is a DC-DC module designing for direct micro-grid. This module has competitive advantage in wide range of voltage and high efficiency. It also contains high level of protection, power density and wide range of working temperature as core features.UXC95050B can be widely used in interaction between DC bus side and battery side, such as energy storage, PV, ESS and charging, battery cascade utilization, data center and other multi-energy complementary scenarios.

+ Application scenarios

- Battery cascading utilization
- Data centers and emergency power supply systems
- Integrated photovoltaic-storage-charging stations
- Energy storage systems

+ Excellent advantages

Dual-end Ultra-wide output voltage range : 200-950 Vdc

Meet the requirement of DC bus energy interaction in various level of voltage.

Outstanding conversion efficiency: 98.8%

Sharply reduces system energy consumption.

EMC Class B compliance

Low electromagnetic radiation and strong interference resistance.

Dual-end wide constant power range

Bus Side: 500-950 Vdc Battery Side: 400-950 Vdc

Ultra-wide dual-end voltage range, meeting charging needs across various electric vehicles and bus supply environments.

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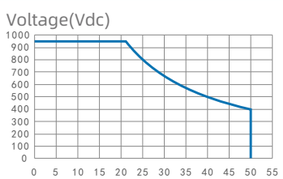
High-standard electromagnetic compatibility design simplifies power system design.

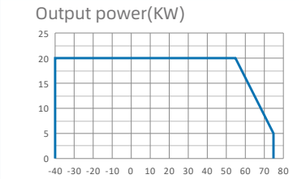
+ Key features

- Wide working output voltage range，DC bus side 200V~950V, Battery side 200V~950V;
- Bidirectional fast switching enables "seamless switching" of energy transmission;
- Full-load working efficiency ≥98.5%;
- Inside high frequency isolated transformer, high safety & reliability;
- High power density of 45.4W/in³, saving system space;
- Semi-independent air ductdesign, suitable for all environment;

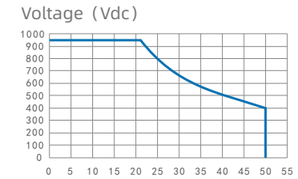
DC Bus side characteristic Curve



Temperature /Power Limiting Curve



DC battery side Characteristic Curve



Item		Specifications
Basic Specifications	Dimensions	85mm（H）×226mm（W）×376mm（D）
	Weight	≤9.5kg
	Efficiency (full load)	≥98.5%
	Cooling Mode	Fan cooling
	Communications Bus Protocol	CAN bus
	No. of Parallel Modules	≤60pcs
	Indicator	Green: normal operation Yellow: alarm Red: fault
DC Bus side	Voltage Range	200Vdc~950Vdc
	Current Range	0~40A
	Steady Voltage Accuracy	≤±0.5%
	Steady Current Accuracy	≤±1% (output power in 20%~100%)
	Ripple Voltage Peak Value	≤1%
	Current Sharing Imbalance	≤±5%
Battery side	Voltage Range	200Vdc ~ 950Vdc
	Current Range	0 ~ 50A
	Steady Voltage Accuracy	≤±0.5%
	Steady Current Accuracy	≤±1% (output power in 20%~100%)
	Ripple Voltage Peak Value	≤1%
	Current Sharing Imbalance	≤±5%
Electrical Isolation Method	Electrical Isolation Method	High Frequency Isolation
Environmental Conditions	OperatingTemperature	- 40℃ ~ +75℃，output derating at above 55℃
	Storage Temperature	- 40℃ ~ +75℃
	Relative Humidity	≤ 95% RH，non-condensing
	Altitude	No derating@ 2000m. When altitude ≥ 2000m, operating temperature decreases by 1℃ for every 100m. The actual altitude value needs to be set @1000m
Protection Specifications	MTBF	>500,000 hours
	Input Over/Undervoltage Protection	Automatic recovery after power-off
	Output Overvoltage Protection	Manual recovery after power-off
	Overcurrent and Short-circuit Protection	Manual recovery after power-off
	Over Temperature Protection	Automatic recovery after power-off