UXR100040G

40kW@1000V Class B UL/CE High Protection Power Module

The UXR100040G is a fully potted charging module designed to meet the IEC 61851-23:2023 standard. It features ultra-high full-load operating temperature, ultra-wide constant power range, high power factor, high reliability, high power density, wide output voltage range, low noise, low standby power consumption, and excellent EMC performance.

+ Application scenarios

- Coastal area charging stations
- Industrial park charging stations
- PV-ESS-charging system
- Harsh environment charging stations (e.g., construction sites, mines)

+ Excellent advantages

High efficiency 96.5%

Utilizes SiC semiconductors to maintain high efficiency across the entire operating range, reducing energy loss.

Full load working during ultra-high temperature: 55℃

Reliable operation between -40°C and 75°C, with full-load capability from -40°C to 55°C.

Fully potted protection

Enhances reliability and environmental adaptability.

EMC Class B compliance

Low electromagnetic radiation and strong interference resistance.

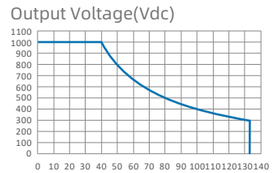
The module features ultra-low noise and an ultra-wide output voltage range, providing a quieter and more comfortable fast-charging experience for users.

Complies with CE/UL certifications and the latest IEC 61851-23:2023 standard, with EMC performance meeting Class B requirements.

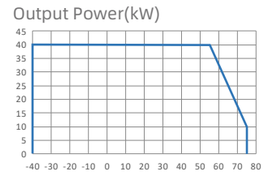
+ Key features

- Ultra-wide output voltage range of 50-1000Vdc;
- Ultra-wide constant power output range of 300-1000V at 40kW;
- No current retraction in low voltage areas;
- Built-in residual voltage discharge circuit;
- Complies with CE, UL, and UKCA certification requirements;
- High power density (46.7W/in³), Industry-leading compact design;

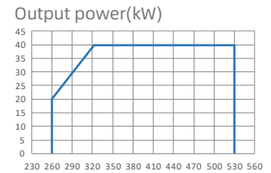
Output Voltage vs.Output Current Curve



Temperature Derating Curve



AC Input Power Limiting Curve



Item		Specifications
Basic Specifications	Dimensions	85mm (H) ×360 mm (W) ×459mm (D)
	Weight	≤20 kg
	Efficiency(full load)	≥96.3%
	Standby Power Consumption	Normal standby mode: 13W+/-0.5W ; Super standby mode: < 2W@380Vac
	Cooling Mode	Fan cooling
	Communication Bus Protocol	CAN Bus
	No.of Parallel Modules	≤60 pcs
	Indicator	Green: normal operation Yellow: alarm Red: fault
Input Characteristics	Input Voltage	260Vac ~ 530Vac , 3P + PE
	Input Current	< 80A
	Grid Frequency	45Hz ~ 65Hz
	Power Factor	≥0.95(8kW≤ output power ≤20kW); ≥0.98(20kW≤ output power ≤40kW)
	iTHD	≤5%
Output Characteristics	Output Power	40kW@Output voltage ≥300Vdc
	Voltage Range	50Vdc ~ 1000Vdc, default value: 200Vdc
	Current Range	0A ~ 133.3A
	Voltage Stabilization Accuracy	≤±0.5%
	Current Stabilization Accuracy	≤±1%
	Current Sharing Imbalance	≤±3%
	Ripple Voltage Peak Value Coefficient	≤1%
Electrical Isolation Method	Electrical Isolation Method	High Frequency Isolation
Environmental Conditions	Operating Temperature	-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
	MTBF	> 500,000 hrs
Protection Specifications	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