UXR100030S

30kW@1000V High-Power Density Fully Potted Power Module

The UXR100030S is a high-power density, fully potted charging module. It features an ultra-wide voltage range, high full-load operating temperature, and superior efficiency. The module is designed for high reliability, low noise, and low standby power consumption.

+ Application scenarios

- Public charging stations
- Intelligent battery - swapping station
- Electric heavy-duty truck charging and swapping stations
- Mobile charging equipment

+ Excellent advantages

Super standby mode

Standby power consumption <2W.

Zero reactive power

Built-in circuit reduces reactive power loss in the off state.

Fully potted protection

Enhances reliability and environmental adaptability.

Full load working during ultra-high temperature: 55℃

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

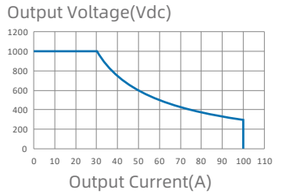
The UXR100030S can operate at full load @ 55℃ environment, ensuring fast charging even in high-temperature conditions.

The UXR100030S features an ultra-wide constant power output voltage range, enabling fast charging for electric vehicles of different voltage levels.

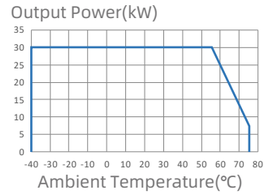
+ Key features

- Ultra-wide output voltage range of 50-1000Vdc;
- Ultra-wide constant power output range of 300-1000V at 30kW;
- No current retraction in low voltage areas for faster charging;
- Built-in residual voltage discharge circuit to reduce system cost and enhance reliability;

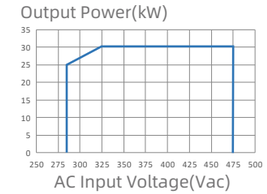
Output Voltage vs.Output Current Curve



Temperature Derating Curve



AC Input Power Limiting Curve



Item		Specifications
Basic Specifications	Dimensions	84mm (H) ×300 mm (W) ×432.9mm (D)
	Weight	≤17 kg
	Efficiency(full load)	≥96.3%
	Standby Power Consumption	Normal standby mode: 7W+/-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	285Vac ~ 475Vac , 3P + PE
	Input Current	< 60A
	Grid Frequency	45Hz ~ 65Hz
	Power Factor	≥0.95(6kW≤ output power ≤15kW); ≥0.98(15kW≤ output power ≤30kW)
	iTHD	≤5%
Output Characteristics	Output Power	30kW@Output voltage ≥300Vdc
	Voltage Range	50Vdc ~ 1000Vdc, default value: 200Vdc
	Current Range	0A ~ 100A
	Voltage Stabilized Accuracy	≤±0.5%
	Current Stabilized 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