NXREC01

20kW@750V DC Charging Module

+ Introduction

NXREC01 is a charging power module designed to overcome the bottleneck of charging station industry with prominent advantages of ultra-high full load working temperature and ultra-wide constant power range in the industry. At the same time, key features of this module include high reliability, high efficiency, high power factor, high power density, wide output voltage range, wide temperature range and low standby power consumption.

+ Excellent performance advantages

Ultra-high full load working temperature: 60 °C

Charging station is a product used for outdoor applications. During summer, temperature at air intake is normally 50 to 60°C, thus thermal dissipation is a serious problem for charging power module. Most of the modules on market which cannot withstand the high temperature environment (ambient temperature limit for full load working condition is usually 50-55°C in the industry) could only operate in derating condition by limiting output power and therefore the charging speed is hugely reduced.

Ultra-wide constant power range: 400V–750V

Wide constant power range is a feature promoted by State Grid, satisfying charging demends at different voltage level for both electric buses and passenger vehicles. NXR75030H is a 20kW charging power module is fully meet Chinese State Grid standards in power, size and dimension.

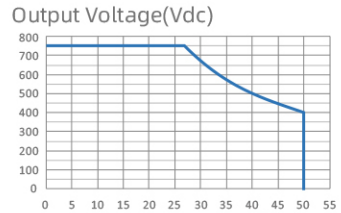
NXREC01 works at full power under 60°C ambient temperature, ensuring fast charging speed in high temperature environment.

NXREC01 is 20kW charging module fully meets State Grid's wide constant power range requirements with State Grid standardized size and dimensions.

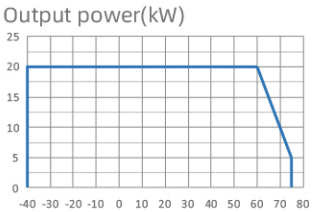
+ Key features

- Wide output voltage, 50~750Vdc, suitable for different types EVs;
- Ultra low standby power consumption, under 8W for whole series of products;
- Full-power Wide working temperature, -40~60℃;
- Full-load working efficiency ≥ 95.5%, high efficiency infull working range, extra energy saving;
- Pass CE certification and meet RoHS requirements;
- No current retraction in low voltage range, faster charging rate;
- Built-in residual voltage releasing circuit, lower cost and higher reliability;

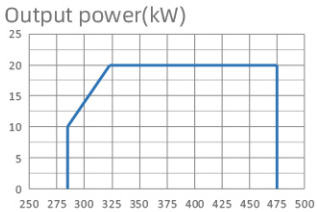
Output Voltage vs.output Current Curve



Temperature Derating Curve



AC input Power Limiting Curve



Item		Specifications
Basic Specifications	Dimensions	84mm（H）×226mm（W）×390mm（D）
	Weight	≤11kg
	Efficiency (full load)	>95.5%
	Standby Power Consumption	< 8W
	Cooling Mode	Forced air cooling
	Communications bus protocol	CAN bus
	No. of Parallel Modules	≤60pcs
	Indicator	Green: normal operation Yellow: alarm Red: fault
Input Characteristics	Input Voltage	285Vac~475Vac,Three phase+Protective Earth
	Input Current	<40A
	Grid Frequency	45Hz~65Hz
	Power Factor	≥0.99
	ITHD	≤5%
Output Characteristic	Output Power	20kW@output voltage≥400Vdc
	Voltage Range	50Vdc ~ 750Vdc，defaut value：200Vdc
	Current Range	0A~ 50A
	Voltage stabilized accuracy	≤±0.5%
	Current stabilized accuracy	≤±1%
	Current Sharing Imbalance	≤±5%
	Ripple voltage peak value coefficient	≤1%
Environmental Specifications	Operating Temperature	-40℃ ~ +75℃，output derating at above 60℃
	Storage Temperature	- 40℃ ~ + 75℃
	Relative Humidity	≤ 95% RH，non-condensing
	Altitude	≤2000 m. Full power;> 1000 m, the operating temperature decreases by 1°C for each additional 100 m.
	MTBF	>500,000 hours
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