



Power into the New Era

EV CHARGING MODULE

PRODUCT CATALOGUE



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NIUERA POWER INC.

Assembled in USA

Santa Fe Springs, California Production Line

Our Vision:

We are a proud US manufacturer of EV charging modules. By adhering to the Build America, Buy America (BABA) policy, we strive to establish a benchmark for sustainable and innovative manufacturing in Santa Fe Springs, CA. Our goal is to not only meet but exceed the expectations of our customers, driving the growth of the domestic energy infrastructure and contributing to a more self-reliant and prosperous American economy. Through continuous technological advancement and a commitment to quality, we aim to be at the forefront of the clean energy revolution, powering a brighter and greener future for generations to come.

What is BABA?

The "Build America, Buy America" (BABA) policy requires that for infrastructure projects and government procurement in the United States, American-made products and raw materials should be given priority. This not only helps to support the growth of the American manufacturing industry and create jobs but also ensures that the products meet the requirements of the BABA policy. When it comes to NIUERA Power, It allows us to provide our customers with charging modules that are domestically made, reliable, and in line with the government's preference for American products. This way, we are contributing to the development of the American economy while fulfilling our customers' needs for high-quality charging solutions.



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30KW Charging Module



30KW AC/DC Charging Module

This AC - DC charging module boasts high efficiency and power density. With a wide voltage range, it features a high power factor, minimal electromagnetic radiation and interference. Its top - notch protection and reliability make it ideal for fast - charging various EVs. It's energy - efficient, eco - friendly, and sets the international standard.

Super wide constant power

- Output voltage 150~1000V, better compatibility
- Ultra-wide constant power range, efficient output,continuous power of the whole segment without retraction, high reliability
- Output peak current up to 100A

Digital Control and Intelligent Design

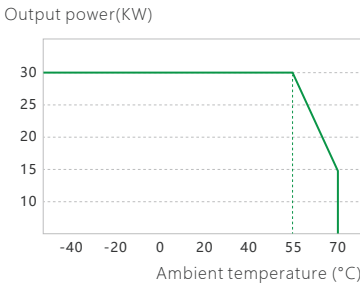
- Dual DSP digital control, support voltage and current adjustment
- Adopts hot swap technology to improve maintenance efficiency
- Intelligent fan speed regulation, reduce noise

Low power consumption
High efficiency

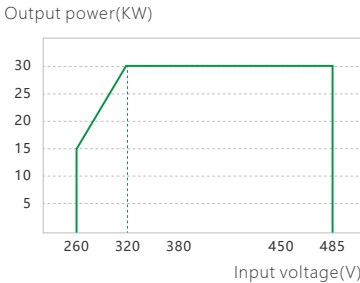
- High efficiency, small loss, the peak efficiency of the whole machine up to 96%
- Ultra-low standby power consumption (< 5W)

All-round support

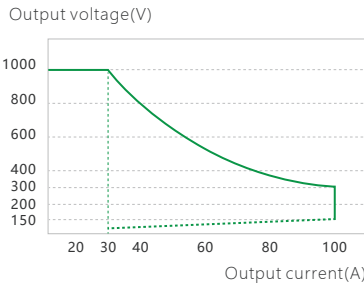
- Perfect protection and alarm function to ensure charging safety in all aspects
- The module comes with bleeder circuit to improve charging safety



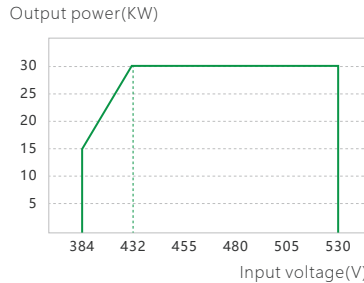
Power temperature curve



AC input power limit curve
(X-EH-30K-TX-03)



Output External Characteristic Curve



AC input power limit curve
(XEH-30K-TX-02)

Input	Product Model	XEH-30K-TX-02	X-EH-30K-TX-03
	Input voltage range	384~530 Vac (ETL Version)	260~485 Vac (CE version)
	Input frequency range	45~65Hz	
	Power factor	≥0.99	
	Total harmonic distortion	≤5%	
	Peak efficiency	≥96%	
Output	Constant power range	30KW (300~1000V)	
	Output current range	0~100A	
	Current stability accuracy	≤±1%	
	Voltage regulation accuracy	≤±0.5%	
	Current balancing accuracy	≤±3%	
	Communication interface	CAN, Max. 60	
Output High Voltage	Output voltage range	200~1000Vdc	
	Rated output voltage	1000Vdc	
	Rated output current	30A	
	Current limit adjustment range	0.5A≤I≤60A	
Output Low Voltage	Output voltage range	150~500Vdc	
	Rated output voltage	500Vdc	
	Rated output current	60A	
	Current limit adjustment range	0.5A≤I≤100A	
Product characteristics	Size (W*D*H)	300x437x84mm	
	Weight	≤17kg	
	Fan noise	<65dB (1 m from the device)	
Environmental condition	Ambient temperature	-40℃~70℃; The derated function is used when the temperature is above 55 ° C	
	Storage temperature	-40℃~85℃; Humidity :5%~90%, no condensation	
	Class of protection	IP20	
Protection function	Short circuit protection	After short circuit protection, the module has no output and can be restored manually 1 short circuit lock mode	
	Output overvoltage protection point	1050V±10V (manual recovery, starts locking mode after four times overvoltage)	
	Overtemperature protection	Automatic protection starts when detection temperature reaches the preset value; After protection,there is no output. After recovery, you need to start the system by running a command	

Note * The product is constantly updated, please refer to the latest information

40KW Charging Module

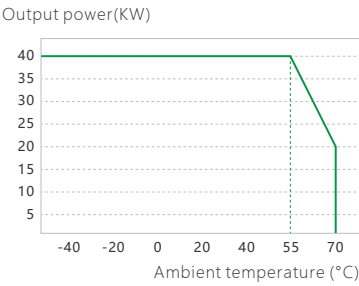


Super wide constant power

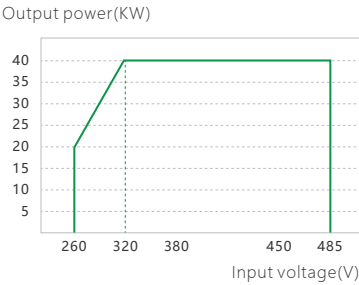
- Output voltage 150~1000V, better compatibility
- Ultra-wide constant power range, efficient output,continuous power of the whole segment without retraction, high reliability
- Output peak current up to 133.3A

Digital Control and Intelligent Design

- Dual DSP digital control, support voltage and current adjustment
- Adopts hot swap technology to improve maintenance efficiency
- Intelligent fan speed regulation, reduce noise



Power temperature curve



AC input power limit curve
(X-EH-40K-TX-03)

40KW AC/DC Charging Module

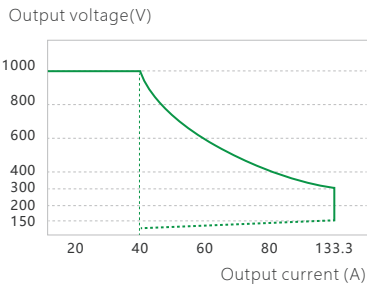
This AC - DC charging module boasts high efficiency and power density. With a wide voltage range, it features a high power factor, minimal electromagnetic radiation and interference. Its top - notch protection and reliability make it ideal for fast - charging various EVs. It's energy - efficient, eco - friendly, and sets the international standard.

Low power consumption
High efficiency

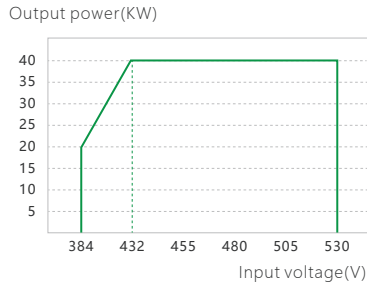
- High efficiency, small loss, the peak efficiency of the whole machine up to 96%
- Ultra-low standby power consumption (< 5W)

All-round support

- Perfect protection and alarm function to ensure charging safety in all aspects
- The module comes with bleeder circuit to improve charging safety



Output External Characteristic Curve



AC input power limit curve
(XEH-40K-TX-02)

Input	Product Model	XEH-40K-TX-02	X-EH-40K-TX-03
	Input voltage range	384~530 Vac (ETL Version)	260~485 Vac (CE version)
	Input frequency range	45~65Hz	
	Power factor	≥0.99	
	Total harmonic distortion	≤5%	
	Peak efficiency	≥96%	
Output	Constant power range	40KW (300~1000V)	
	Output current range	0~133.3A	
	Current stability accuracy	≤±1%	
	Voltage regulation accuracy	≤±0.5%	
	Current balancing accuracy	≤±3%	
	Communication interface	CAN, Max. 60	
Output High Voltage	Output voltage range	200~1000Vdc	
	Rated output voltage	1000Vdc	
	Rated output current	40A	
	Current limit adjustment range	0.5A≤I≤80A	
Output Low Voltage	Output voltage range	150~500Vdc	
	Rated output voltage	500Vdc	
	Rated output current	80A	
	Current limit adjustment range	0.5A≤I≤133.3A	
Product characteristics	Size (W*D*H)	300x437x84mm	
	Weight	≤17kg	
	Fan noise	< 65dB (1 m from the device)	
Environmental condition	Ambient temperature	-40℃~70℃; The derated function is used when the temperature is above 55 ° C	
	Storage temperature	-40℃~85℃; Humidity :5%~90%, no condensation	
	Class of protection	IP20	
Protection function	Short circuit protection	After short circuit protection, the module has no output and can be restored manually 1 short circuit lock mode	
	Output overvoltage protection point	1050V±10V (manual recovery, starts locking mode after four times overvoltage)	
	Overtemperature protection	Automatic protection starts when detection temperature reaches the preset value; After protection,there is no output. After recovery, you need to start the system by running a command	

Note * The product is constantly updated, please refer to the latest information

40KW SiC Charging Module



40KW SiC AC/DC Charging Module

This AC - DC charging module boasts high efficiency and power density. With a wide voltage range, it features a high power factor, minimal electromagnetic radiation and interference. Its top - notch protection and reliability make it ideal for fast - charging various EVs. It's energy - efficient, eco - friendly, and sets the international standard.

Super wide constant power

- Output voltage 150~1000V, better compatibility
- Ultra-wide constant power range, efficient output,continuous power of the whole segment without retraction, high reliability
- Output peak current up to 133.3A

Digital Control and Intelligent Design

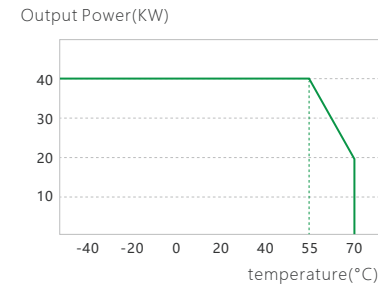
- Dual DSP digital control, support voltage and current adjustment
- Adopts hot swap technology to improve maintenance efficiency
- Intelligent fan speed regulation, reduce noise

High Efficiency 0 Standby Power

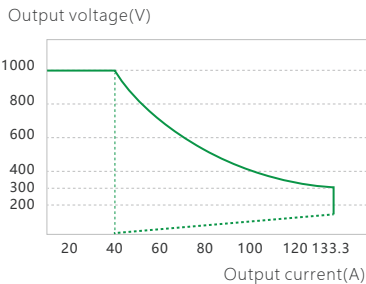
- High efficiency, small loss, the peak efficiency of the whole machine up to 97%
- Standby power consumption ≈0W

All-round support

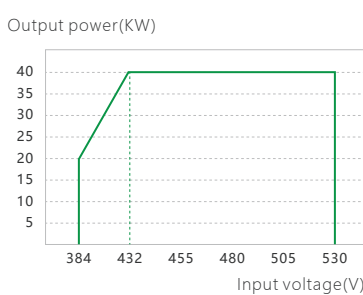
- Perfect protection and alarm function to ensure charging safety in all aspects
- The module comes with bleeder circuit to improve charging safety
- Module built-in battery current anti-backfilling protection circuit



Output power temperature limit curve



Operating mode curve



Input derate curve

Input	Product Model	XSC40KFGUS-FAC
	Input voltage range	384~530Vac
	Input frequency range	45~65Hz
	Input current	< 80A
	Power factor	≥0.99
	Total harmonic distortion	≤5%
	Peak efficiency	≥97%
Output	Constant power range	40KW (300~1000V)
	Output current range	0~133.3A
	Current stability accuracy	≤±1%
	Voltage regulation accuracy	≤±0.5%
	Current balancing accuracy	≤±3%
	Communication interface	CAN, Max. 60
Output High Voltage	Output voltage range	200~1000Vdc
	Rated output voltage	1000Vdc
	Rated output current	40A
	Current limit adjustment range	0.5A≤I≤80A
Output Low Voltage	Output voltage range	150~500Vdc
	Rated output voltage	500Vdc
	Rated output current	80A
	Current limit adjustment range	0.5A≤I≤133.3A
Product characteristics	Size (W*D*H)	300x437x84mm
	Weight	≤17kg
	Fan noise	< 65dB (1 m from the device)
Environmental condition	Ambient temperature	-40℃~70℃; The derated function is used when the temperature is above 55 ° C
	Storage temperature	-40℃~85℃; Humidity :5%~90%, no condensation
	Class of protection	IP20
Protection function	Short circuit protection	After short circuit protection, the module has no output and can be restored manually 1 short circuit lock mode
	Output overvoltage protection point	1050V±10V (manual recovery, starts locking mode after four times overvoltage)
	Overtemperature protection	Automatic protection starts when detection temperature reaches the preset value; After protection,there is no output. After recovery, you need to start the system by running a command

Note * The product is constantly updated, please refer to the latest information

60KW SiC Charging Module



60KW SiC AC/DC Charging Module

This AC - DC charging module boasts high efficiency and power density. With a wide voltage range, it features a high power factor, minimal electromagnetic radiation and interference. Its top - notch protection and reliability make it ideal for fast - charging various EVs. It's energy - efficient, eco - friendly, and sets the international standard.

High-efficiency IGBT + SiC MOS + SiC Diode

By using 1200V silicon carbide MOS, 1200V silicon carbide diode, high-efficiency IGBT, magnetic integration technology, and multi-phase interleaved parallel technology, the module peak efficiency can be up to 97% and a full-load efficiency of 96.5%

New Generation High-speed Digital Processing TI Chip

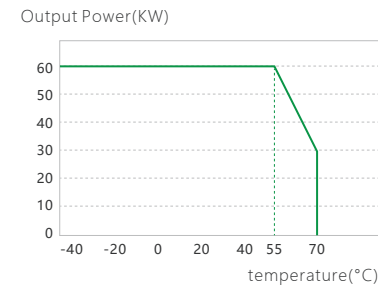
dopt Ti high-performance dual-core architecture DSP, dual-core 32-bit CPU, main frequency up to 100MHz, powerful processing capability and efficient multi-tasking performance to obtain lower harmonics and higher precision control capabilities

Full Glue Filling Technology Long Lifespan

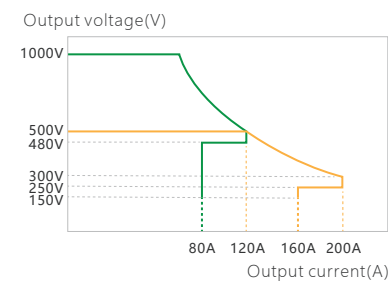
The full glue filling process is adopted to meet various harsh usage scenarios; The unique air duct design technology improves the heat dissipation efficiency and ensures a service life of more than 5 years

Intelligent Air Cooling Design Low Noise

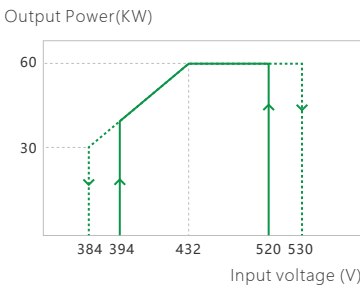
Ultra-low EMI design and intelligent fan control technology make the product lower noise and more user-friendly



Output power temperature limit curve



Operating mode curve



Input derate curve

Input	Product Model	XEH60KFGUS-FAC
	Input voltage range	384~530Vac
	Input frequency range	45~65Hz
	Power factor	≥0.99
	Total harmonic distortion (THD)	≤5%
	Efficiency	≥97%
Output	Constant power range	60KW (300~1000V)
	Output current range	0~200A
	Steady flow accuracy	≤±1%
	Voltage stabilization accuracy	≤±0.5%
	Current balancing accuracy	≤±5%
	CAN protocol	CAN, maximum 30
Output High voltage mode	Output voltage range	200~1000Vdc
	Rated output voltage	1000Vdc
	Rated output current	60A
	Current limiting adjustment range	0.5A≤I≤120A
Output Low voltage mode	Output voltage range	150~500Vdc
	Rated output voltage	500VDC
	Rated output current	120A
	Current limiting adjustment range	0.5A≤I≤200A
Product characteristics	MTBF	120K hrs
	Size (W*D*H)	397x573x87mm
	Weight	≤29kg
	Fan noise	< 65dB (1 m from the device)
Environmental condition	Protection level	IP20
	Ambient temperature	-40℃~70℃ Use with derating above 50℃
	Storage temperature	-40℃~85℃
Protection function	Cooling fan	Intelligent air cooling
	Short circuit protection	After short circuit protection, the module has no output and can be restored manually 1 short circuit lock mode
	Output overvoltage protection point	1050V±10V (manual recovery, starts locking mode after four times overvoltage)
	Over temperature protection	When the detection temperature reaches the preset value, it will automatically protect

Note * The product is constantly updated, please refer to the latest information

22KW V2G Charging Module



22kW V2G Power Module

XEV22KFG is a high-frequency isolated bidirectional AC/DC conversion module with the advantages of wide constant power voltage range, high efficiency, high power density, high reliability, and low electromagnetic radiation. It can be widely used in scenarios such as V2G, energy storage, second life battery utilization, and DC power supply aging test equipment.

High Efficiency Low Power Consumption

- High Efficiency, low power loss, peak Efficiency up > 97%
- Effectively reduce energy loss and achieve energy saving and environmental protection

Digital Control and Intelligent Design

- Dual SDP fully digital control, multiple levels of software and hardware over-current, over-voltage, over-temperature protection, etc.

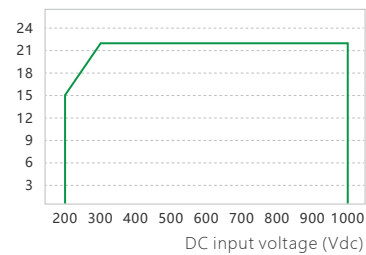
V2G & V2L Capable

- Supports three working modes: rectification, grid-connected and off-grid. In off-grid mode, it can support single and three-phase output, with a single-phase maximum output power of 6.6kVA

All-round support

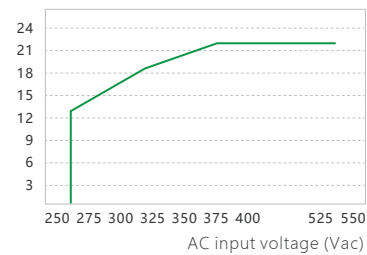
- Adopting high protection technology of glue filling, it is used in scenes with higher pollution level.

AC output power (KW)



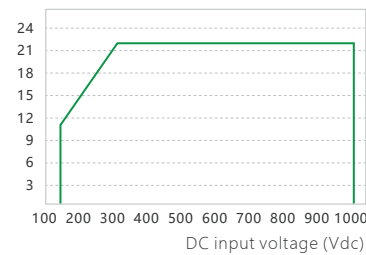
input external characteristic curve (off-grid inverter mode)

DC output power (KW)



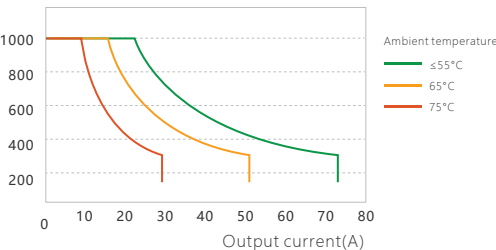
output power and input voltage curve (rectifier mode)

AC output power (KW)



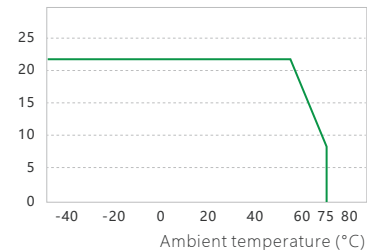
AC output power and DC input voltage curve (grid-connected rectifier mode)

Output voltage(V)



Output external characteristic curve (rectifier mode)

Output power (KW)



Temperature limit power curve

Basic Info	Product Model	XEV22KHGUS-FAC
	Efficiency	≥96%
	CAN communication	Rectification/grid-tied ≤ 60 units, off-grid ≤ 8 units
AC port Rectification /Grid-tied	Rated voltage	380Vac/400Vac/480Vac
	Input voltage	260 ~ 530Vac
	Rated current	33A
	Rated frequency	50/60Hz
	Power Factor	Rectification mode ≥0.99
AC port Off-grid mode	Rated voltage	380Vac/400Vac
	Voltage range	323 ~ 437Vac
	Rated current	33A
	Rated frequency	50/60Hz
	Voltage deviation	< 5%
	Power Factor	0.8 leading ~ 0.8 lagging, adjustable
DC port	Voltage range	Rectification/grid-tied: 150V-1000Vdc Off-grid: 200-1000Vdc
	Current range	Rectification: 0~73.5A Inversion: 2-78A (current limit can be set)
	Rated current	22A@1000Vdc
	Current stability accuracy	≤ ±1%
	Voltage stabilization accuracy	< ±0.5%
Protect	Short circuit protection	After a short circuit, the module current shrinks and enters the current limiting state
	Output over-voltage protection point	1030Vdc
	Over temperature protection	If the detected temperature is higher than the preset value of 75°C it will automatically protect
Environment	Ambient temperature	-40°C~75°C; Derate use above 55°C
	Storage temperature	-40°C~75°C; Humidity:5%-95%, non-condensing
	Protection level	IP20
Product characteristics	MTBF	≥ 500,000 hours
	Size (W*D*H)	300x395x85mm
	Weight	≤15kg
	Fan noise	< 65dB (1 m away from the device)

Note * The product is constantly updated, please refer to the latest information

40KW DC-DC Charging Module



40kW Directional DC/DC Power Module

The XED40KFG is a high-power isolated unidirectional DC-DC charging module. It features ultra-wide input/output voltage ranges and ultra-wide constant power ranges. It also provides high protection and high efficiency. This product is widely used in applications such as integrated photovoltaic-storage-charging stations, DC charging stations for all kinds of EVs, solar MPPT front-end converters, mobile robot charging, second-life battery utilization, and mobile charging vehicles etc.

Super wide constant power

- Ultra-wide input voltage constant power range 50~1000Vdc
- It can be applied to more charging scenarios, meeting the fast charging needs of various electric vehicles and battery packs.

Simpler design

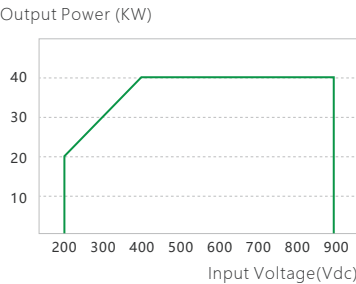
- 46.7W/in³ high power density and industry-leading volume design, save internal space and reduce the footprint of the charger
- Increase system reliability, extend equipment life, and improve system flexibility

Low power consumption
High efficiency

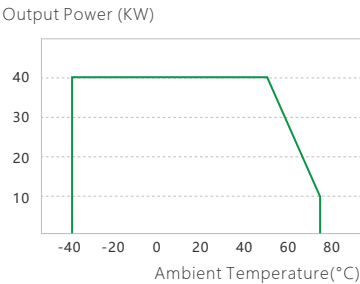
- High efficiency, small loss, the peak efficiency of the whole machine up to 97.5%

All-round support

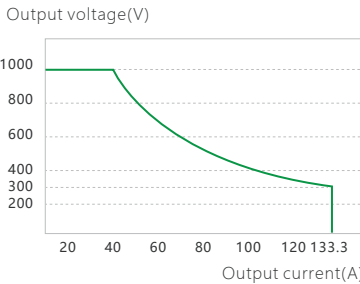
- Adopting semi-independent air duct design to enhance the module's protection capability and improve its environmental adaptability
- Small electromagnetic radiation and strong anti-interference ability



Output power and input voltage derating curve



Temperature derating curve



Output external characteristic curve

Input	Product Model	XED40KHGUS-FAC
	Input voltage range	200~850Vdc
	Constant power input voltage	400~850Vdc
Output	Input Current	Maximum Value 110A
	Efficiency	≥97.5% (full load)
	Output voltage range	50~1000V
	Output Power	40kW
	Adjustment range	0 A≤ I ≤133 A
	Current stability accuracy	±1%
	Voltage stabilization accuracy	±0.5%
	Current balancing accuracy	±3%
	Startup time cold start	3s ≤ t ≤ 8s
Protect	Output voltage ripple factor	≤ 1 %
	Short circuit protection	After a short circuit, the module current shrinks and enters the current limiting state
	Output over-voltage protection point	1025Vdc
	Over temperature protection	Auto shut down if temperature >75℃
	Input over-voltage protection	1025V has hysteresis
	Input under-voltage protection	45Vdc has hysteresis
Environment	Fan failure alarm	The module fan fails: If it stops rotating
	Ambient temperature	-40℃~70℃；Derate use above 50℃
	Storage temperature	-40℃~75℃；Humidity:5%-90%, non-condensing
	Protection level	IP20
	Cooling fan	Intelligent air cooling
	Atmospheric pressure at high altitude	79kPa ~ 106kPa; Altitude <2000m; Derating required above 2000m
Product characteristics	MTBF	≥ 500,000 hours
	Size (W*D*H)	360x459x85 mm
	Weight	≤20kg
	Fan noise	< 65dB (1 m away from the device)
	CAN communication	Maximum 60 pcs

Note * The product is constantly updated, please refer to the latest information

20KW DC-DC Charging Module



20kW Bi-directional DC/DC Power Module

XDD20JFG is a high-frequency isolated bidirectional DC/DC conversion module with core advantages such as ultra-wide voltage range, ultra-high full-load operating temperature, and ultra-high efficiency. High protection and high power density are also the main features of this module. It is widely used in application scenarios where DC bus and battery energy interact, such as energy storage, photovoltaic storage and charging, battery cascade utilization, data centers and other multi-energy complementary scenarios.

Super wide constant power

- With wide working voltage range
DC bus side: 200V-950V
Battery side: 200V-950V

Compact Design

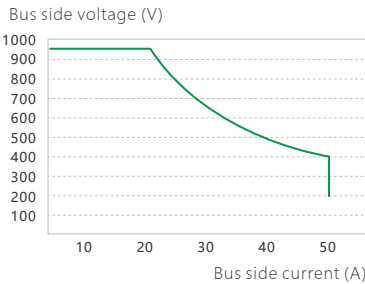
- 45.4W/in³ high power density, saving system space

Low power consumption
High efficiency

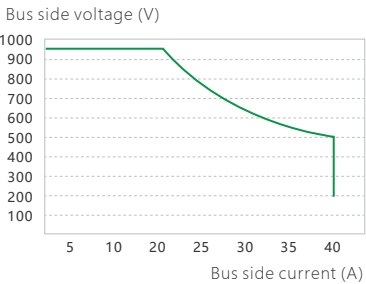
- High efficiency, small loss, the peak efficiency of the whole machine up to 98.5%
- Effectively reduce energy loss and achieve energy saving and environmental protection

Seamless Energy Transfer

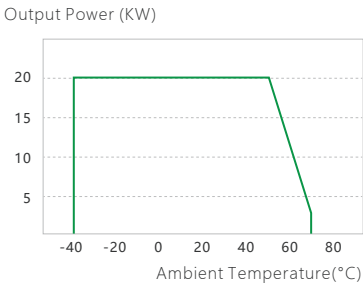
- Fast forward and reverse switching to achieve "senseless switching" of energy transmission direction



Battery side charge & discharge external characteristic curve



DC bus side charge & discharge external characteristic curve



Temperature limit power curve

Product Characteristics	Product Model	XDD20JHGUS-FAC
	MTBF	≥ 500,000 hours
	Size (W*D*H)	226x376x85mm
	Weight	≤9.5kg
	Communication	CAN communication
	Number of parallel machines	≤60pcs
Battery side	Voltage range	200~950Vdc
	Current range	0~50A
	Voltage stabilization	≤±0.5%
	Steady flow accuracy	≤±1%
	Ripple Peak	≤1%
	Current imbalance	≤±5%
	Efficiency	≥98.5%
DC bus side	Voltage range	200~950Vdc
	Current range	Maximum40A
	Voltage stabilization	≤±0.5%
	Steady flow accuracy	≤±1%
	Ripple Peak	≤1%
	Current imbalance	≤±5%
	Efficiency	≥98.5%
Alarm and protection	Input overvoltage/und	Shutdown can automatically recover
	Output overvoltage	Shutdown requires manual recovery
	Overcurrent and short circuit	Shutdown requires manual recovery
	Over temperature	Shutdown can automatically recover
Environment	Ambient temperature	-40℃~75℃; Derate use above 55℃
	Storage temperature	-40℃~75℃; Humidity:5%-95%, non-condensing
	Protection level	IP20
	Cooling method	Forced air cooling
	Atmospheric pressure at high altitude	79kPa ~ 106kPa; Altitude <2000m; Derating required above 2000m

Note * The product is constantly updated, please refer to the latest information

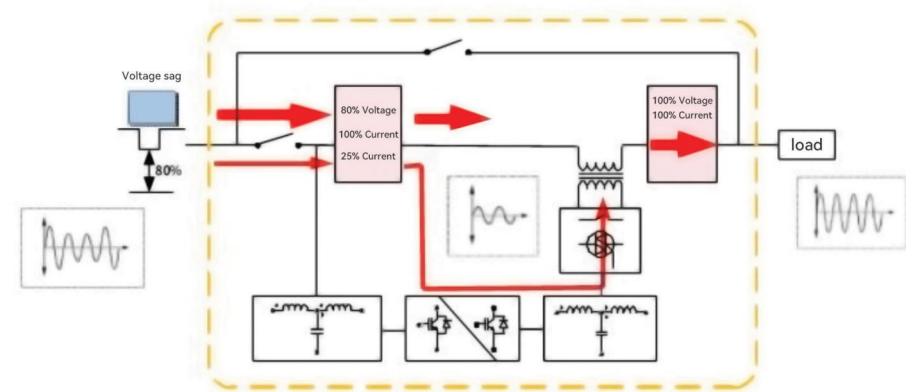
Dynamic Voltage Regulation Equipment (VQC/VQCP)

Product Principle

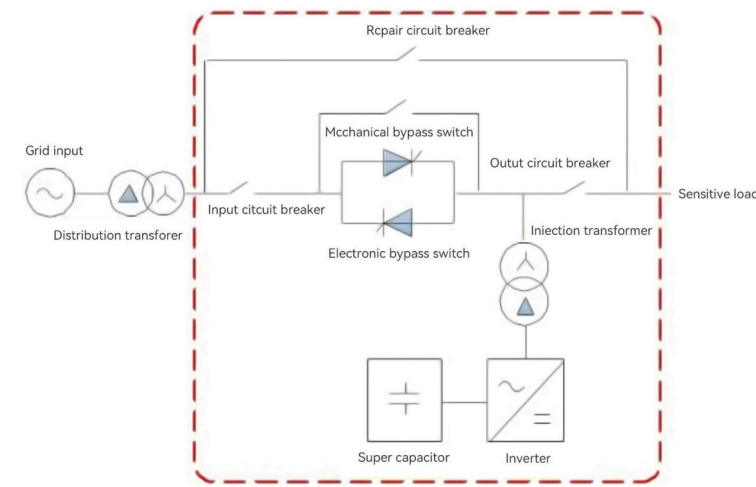
The Dynamic Voltage Regulation Equipment is a product developed to manage voltage sags. It can quickly adjust voltage levels, protecting the user's equipment from power quality events such as voltage sags and swells.

There are currently two main product series available to accommodate various customer requirements:

(VQC series) Solutions without energy storage capability



(VQCP series) Solutions with energy storage capability (energy storage cabinet with 3-second support)



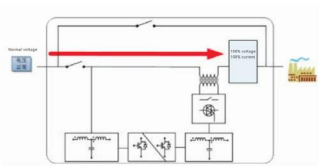
Online Voltage Sag Management Device (VQC)

The VQC series of voltage sag compensators utilizes advanced power electronics technology. Connected in series with the distribution system, it effectively addresses power quality issues such as voltage sags, swells, fluctuations, and harmonics, ensuring stable and reliable operation for the connected loads.

Key Features

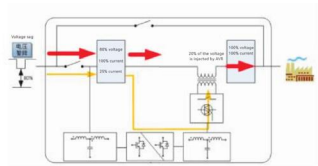
- High reliability**
The main circuit does not require any semiconductor devices in series, and with a built-in triple-redundant bypass, device faults will not cause power outages.
- High-quality waveform, no harmonic pollution**
The output voltage distortion rate is less than 3%, which does not produce harmonic pollution to the grid or load.
- No need for batteries or super capacitors**
Minimal maintenance, low cost, and no environmental pollution.
- Large capacity with compact size and small footprint**
A capacity of up to 2500kVA suitable for high-power concentrated load protection, and a significantly smaller footprint compared to other solutions.
- Strong environmental adaptability**
It can operate in ambient temperatures up to 45°C without additional air conditioning systems.
- Modular components for easy installation**
The power unit, electronic bypass unit, and storage unit are designed with a modular approach, simplifying installation.

Working Principle



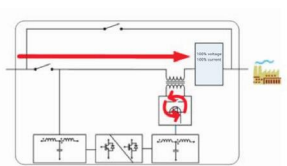
When grid voltage is normal

The grid voltage supplies power directly to the load through the secondary winding of the VQC's injection transformer. The load voltage is equal to the grid voltage.



During a grid voltage sag

The VQC rapidly inverts and generates a voltage equal to the sag value, which is added to the grid voltage, ensuring load voltage stability. During this event, the load voltage is the sum of the grid voltage and the inverter's output voltage.



In case of VQC fault

The VQC device automatically enters bypass operation, the inverter does not generate voltage, and grid voltage supplies power directly to the load through the secondary winding of the injection transformer, thus ensuring there is no interruption in power to the downstream load.

System parameters	System capacity	30~2500kVA
	Rated voltage class	208~480V
	Rated supply frequency	50Hz
	Efficiency of complete machine	>98%
	Connection mode	3P4W
	Circuit structure	Tri-level

Correction capability	Three-phase grid voltage sag correction	Restores 60% residual supply voltage to 100%, long-term duration
	Three-phase grid undervoltage correction	Elevates voltage from 60% of rated to 100%, sustained correction
	Three-phase grid overvoltage correction	Reduces voltage from 120% of rated to 100%, sustained correction
	Phase angle error correction	Equipped
	Phase angle error correction	Equipped
	Grid voltage harmonic correction	Capable of suppressing harmonics up to the 25th order.
Performance indicators	Start threshold range	-10%~+10%(adjustable)
	Voltage regulation precision	<2%
	Fault bypass	Equipped
	Maintenance bypass	Optional
	Compensation response time	<700us
	Total response time	<2ms
	Voltage distortion	Under the condition of a linear load, THDU<3%
	Protection function	Improved module protection function
Human-machine interaction	Display screen	7-inch color touch screen
	Incident and data logging	Equipped with event and data recording functions
	Communication interface	Ethernet/RS485/GPRS/Dry Contact
	Communication protocol	Modbus Protocol
	Parameter settings and data display	Operating status, main wiring diagram, operation log, electrical parameter data, fault record, etc.
Mechanical characteristics	Combination mode	Whole cabinet style, cabinet color(RAL7035)/or as customized by the customer
	Incoming mode	Bottom in/bottom out, or as customized by the customer
Load requirements	Load power factor	0.5 ~ 0.9 (lead)
Standards to be followed	Standard	DL/T1229-2013 Dynamic Voltage Restorer Technical Specifications SemiF47
Environmental requirements	Cooling mode	Air cooling
	Noise	<65db
	Pollution grade	2
	IP grade	IP20, other protection levels can be customized
	Altitude	Whole cabinet style <2000m; for altitudes over 2000 meters, use according to derating requirements specified in GB/T3859.2 (1% power reduction for every 100m increase)
	Operating temperature	-10℃~45℃
	Relative humidity	<95%, no condensation



Energy Storage Type Voltage sag Management Device (VQCP)

The VQCP is a high-reliability power supply protection device based on energy storage technology and seamless voltage source switching technique. It uses independent power modules as base units, which can be paralleled to expand capacity according to different requirements. It continuously monitors the system power supply voltage, and upon detecting a deviation from the rated voltage level, the thyristor is disconnected. By controlling the output of the PWM converter and via an injection transformer, it supplies power to the load, ensuring that the protected load is not affected by voltage sags.



Super capacitor



Injection transformer



Converter



Thyristor and contactor

Technical features

• The system is efficient and responds quickly

Efficiency up to 98%, response time ≤ 2ms

• Strong voltage regulation capability

0-130% remaining voltage compensated to 100%.
The rated voltage can be set between -10% and +10%.

• High reliability, designed for industrial use

Multi-level protection, simple circuits, high reliability,
maintenance-free, unattended.

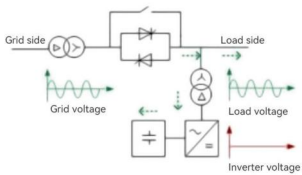
• Advanced parallel expansion capabilities, modular design

The parallel expansion function not only increases the capacity of the VQC system but also provides redundancy for each other, further enhancing the reliability of the power supply.

• High IP grade

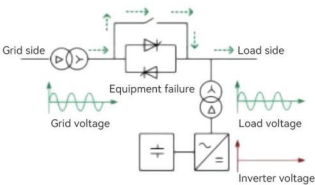
The module internally adopts advanced thick film coating technology, with a high IP grade, making it suitable for use in high altitude areas.

Working principle



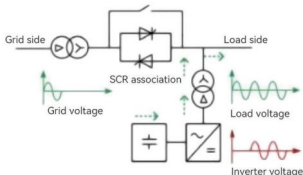
When grid voltage is normal

The control thyristor is in a conducting state, the energy storage unit is fully charged, and the converter is on standby. It remains in sync with the grid voltage to act immediately should an abnormality occur.



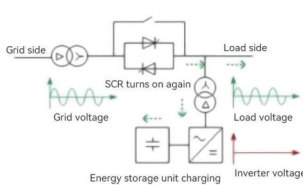
Device failure

The load current is automatically transferred to the fault-safe bypass. That means the current flows through a contactor that is parallel-connected to the anti-parallel thyristors, directly powering the load until the fault is cleared to switch back to main power supply.



Grid voltage anomaly

In the event of an instantaneous anomaly in the grid, the thyristor is rapidly turned off to isolate from the grid. The converter operates in inversion mode to supply power to the load.



Restoration of grid voltage

The thyristor conducts again, the converter switches from inversion to rectification mode to recharge the super capacitors while the load is once again powered by the grid.

System parameters	Rated capacity	30~1000kVA
	Operatingvoltage class	208~480V
	Rated supplyfrequency	50Hz
	Efficiency of complete machine	>98%
	Connection mode	3P4W
Performance indicators	Correction capability	0~130% remaining supply voltage corrected to 100% for 0.5s~3s; longer durations can be customized.
	Start threshold range	-10%~+10%(adjustable)
	Voltage regulation precision	<2%
	Fault bypass	Equipped
	Maintenance bypass	Optional
	Compensation response time	<700us
	Total response time	<2ms
	Voltage distortion	Under the condition of a linear load,THDu<2%
Human-machine interaction	Display screen	7-inch touch screen
	Incident and data logging	Equipped with event and data recording functions
	Communication interface	LAN/RS485/GPRS/Dry Contact
	Communication protocol	Modbus Protocol
	Over temperature	Operating status, main wiring diagram, operation records, electrical parameter data, fault records, etc.
Mechanical characteristics	Combination mode	Full cabinet style, cabinet color (Chinese standard RAL7035)/or as customized by the customer
	Incoming mode	Bottom in/bottom out, or as customized by the customer
Environmental requirements	Cooling mode	Air cooling
	Noise	<65db
	Pollution grade	2
	IP grade	IP20, other protection levels can be customized
	Altitude	<2000m; for altitudes over 2000 meters, use according to derating requirements specified in GB/T3859.2
	Operating temperature	-10°C~45°C
	Relative humidity	<95%, no condensation
Standards to be followed	Standard	DL/T1229-2013 Dynamic Voltage Restorer Technical Specifications SemIF47
Load requirements	Load power factor	0.5 ~ 0.9 (lead)

Active Power Filter(APF)

Product Profile

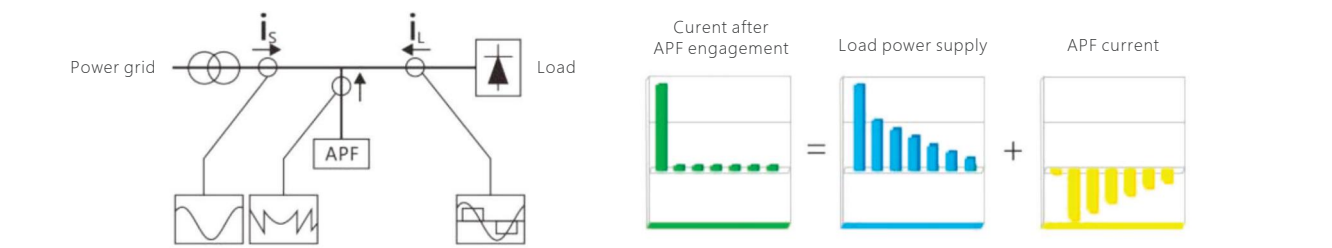
This is a single-module high-capacity active power filter designed based on site load characteristics, with module capacities covering 10A (iBook SiC technology), 10A~40A (high precision), 50, 75A, 100A, 150A, 200A, etc. The capacity of a single cabinet can reach up to 1500A. its application fields include various industrial power distribution sites such as equipment manufacturing, petrochemical industry, metallurgy, textile industry, building materials industry, light industry, etc.; civil architecture industries like large data centers, hospitals, airports, large venues, and high-end buildings; and urban/rural smart grids, the semiconductor industry, photovoltaic industry, urban rail transit industry, among others. The high-precision products are mainly used in special industries such as industrial air conditioning.

Equipment appearance



Product Principle

The Active Power Filter (APF) connects in parallel to the power grid. By real-time monitoring of the harmonic components in the load, it uses PWM conversion technology to inject a current of equal magnitude but opposite direction into the power distribution system.



Indicators	Technical Parameters
Input voltage	380V , -30%~20% ; 208V , -10%~20%
Input frequency	50Hz , ±10%
Connection mode	3P3W/3P4W(compatible with both)
Module capacity	10A、 20A、 30A、 40A、 50A、 75A、 100A、 150A、 200A
Single cabinet capacity	50~1500A
Response time	≤5ms
Power loss	<3%
Hamonic compensation times	2 to 61 times
Compensation rate	Not less than 95%
Compensation function	Harmonics,three-phase imbalance, reactive power, priority selectable.
Compensation mode	Harmonic full compensation, harmonic and imbalance,specific order compensation, harmonic source/reactive power source.
CT scan requirements	5A,sampling available on both the grid side and the load side
Protection	Multiple protection functions such as overcurrent, overheating, over and under voltage protection
IP grade	Module: IP20, complete machine: IP30; higher IP grades for the complete machine can be customized.
Ambient temperature	Working temperature:-10°C~50°C (derating above 40°C) ; Storage temperature:-25°C~70°C
Ambient humidity	≤95%(45°C) , no condensation
Altitude	<2000m; for altitudes over 2000 meters, use according to derating requirements specified in GB/T3859.2
Incoming mode	Whole cabinet: Top entry line/bottom entry line/through-busbar on top ofthe cabinet
Overall dimensions(WxDxH: mm)	10A(ibook):243mmx167mmx88mm(2U) 10A~40A(High precision):380mmx400mmx88mm(2U) 50A/75A:440mmx560mmx88mm(2U) 100A/150A:440mmx560mmx145mm(3.3U) 200A:440mmx560mmx228mm(5.2U) Complete machine: 800x 1000x2200; dimensions ofthe complete machine can be customized
Installation method	Module: rack-mounted orwall-mounted; complete machine: freestanding installation
Display screen	7-inch touch screen
Display content	Voltage, load current, compensating current, grid-side current, voltage distortion rate, cument distortion rate
Communication interface and communication mode	RS485, LAN, WiFi (optional configuration)
Communication protocol	Modbus Protocol

Indicators	Technical Parameters
Input voltage	500V/600V/690V , ±10%
Input frequency	50Hz , ±5%
Connection mode	3P3W
Module capacity	100A,125A,150A
Single cabinet capacity	100~600A
Response time	≤10ms
Power loss	<3%
Hamonic compensation times	2 to 25 times
Compensation rate	Not less than 90%
Compensation function	Harmonic,reactive power, priority selectable
CT scan requirements	5A,sampling available on both the grid side and the load side
Protection	Multiple protection functions such as overcurrent, overheating, over and under voltage protection
IP grade	Complete machine: IP20; higher IP grades for the complete machine can be customized
Ambient temperature	Working temperature:-10°C~50°C (derating above 40°C) ; Storage temperature:-25°C~70°C
Ambient humidity	≤95%(45°C) , no condensation
Altitude	<1000m; for altitudes over 1000 meters, use accordingto derating requirements specifiedin GB/T3859.2
Incoming mode	Whole cabinet: Top entry line/bottom entry line/through-busbar on top ofthe cabinet
Overall dimensions(WxDxH: mm)	Completemachine:1400x1000x2200;dimensions of the complete machine can be customized
Display screen	7-inch touch screen
Display content	Current,voltage,power,harmonic distortion rate, etc.
Communication interface and communication mode	RS485
Communication protocol	Modbus Protocol



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