

niuera.



## Charging Module Product Manual

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Suzhou Niuera Energy Co., Ltd is a subsidiary of Suzhou Lumlux CORP in the new energy industry, which was established in 2016, with the mission of "create a new low-carbon life with science and technology", focusing on the innovation and application of power and electronic technology in the field of new energy.

Our company has Canadian CSA certified laboratories, EMC and other various High-end power electronics testing equipment. Based on strong R&D and manufacturing capabilities, we have successfully launched a new generation of Patented Circuit Design, DC charging modules with innovative technology. The product lines include AC/DC, DC/DC, V2G, and various small DC modules, etc., and are widely used in the field of electric vehicle charging and swapping to meet the needs of fast charging for all kinds electric vehicles, meanwhile achieving energy saving and environmental protection effects and reaching the international leading level.

In order to better grasp the product application environment and understand customer needs, NIUERA established an electric vehicle charging operation brand "Chagera" mainly serves Suzhou city and even the entire Yangtze River Delta region in China, promoting the rapid growth of new energy charging product business through investment and operation. Our company actively recruits outstanding talents, consolidates core technologies, and continuously develops innovation, for the purpose of becoming an innovative high-tech enterprise with a hard core and independent brand.



Suzhou, China

Headquarter | R&D center | Manufacturing



Los Angeles, USA

Manufacturing | Office | Warehouse



Düsseldorf, Germany

Office | Warehouse



Moscow, Russia

Office | Warehouse



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Company honor

In 2007, our factory passed the ISO9001 quality system certification, fully implemented RoHS control internally, and its products have obtained certifications including: CCC, CE, CSA, FCC, ETL, CQC China energy conservation certification, etc. And many products fill the domestic and even international technology gaps. At present, the company's R&D center is a laboratory recognized by the Canadian CSA certification agency. It has complete certification testing capabilities and the entire series of products have independent intellectual property rights.



- Canada CSA Authorized laboratory
- National postdoctoral research station
- Provincial engineering research Center
- South Jiangsu national independent innovation demonstration zone gazelle enterprises
- Jiangsu Province private science and technology enterprises
- High-tech enterprise
- Provincial engineering technology research center
- Provincial enterprise technology center

## Production environment



SMT automatic production line



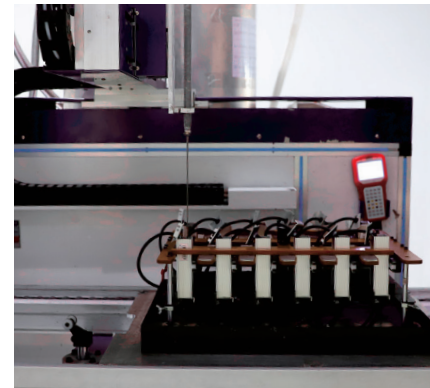
Coating machine



EMC laboratory



Stacked power robotic arms



Glue filling



Functional detection

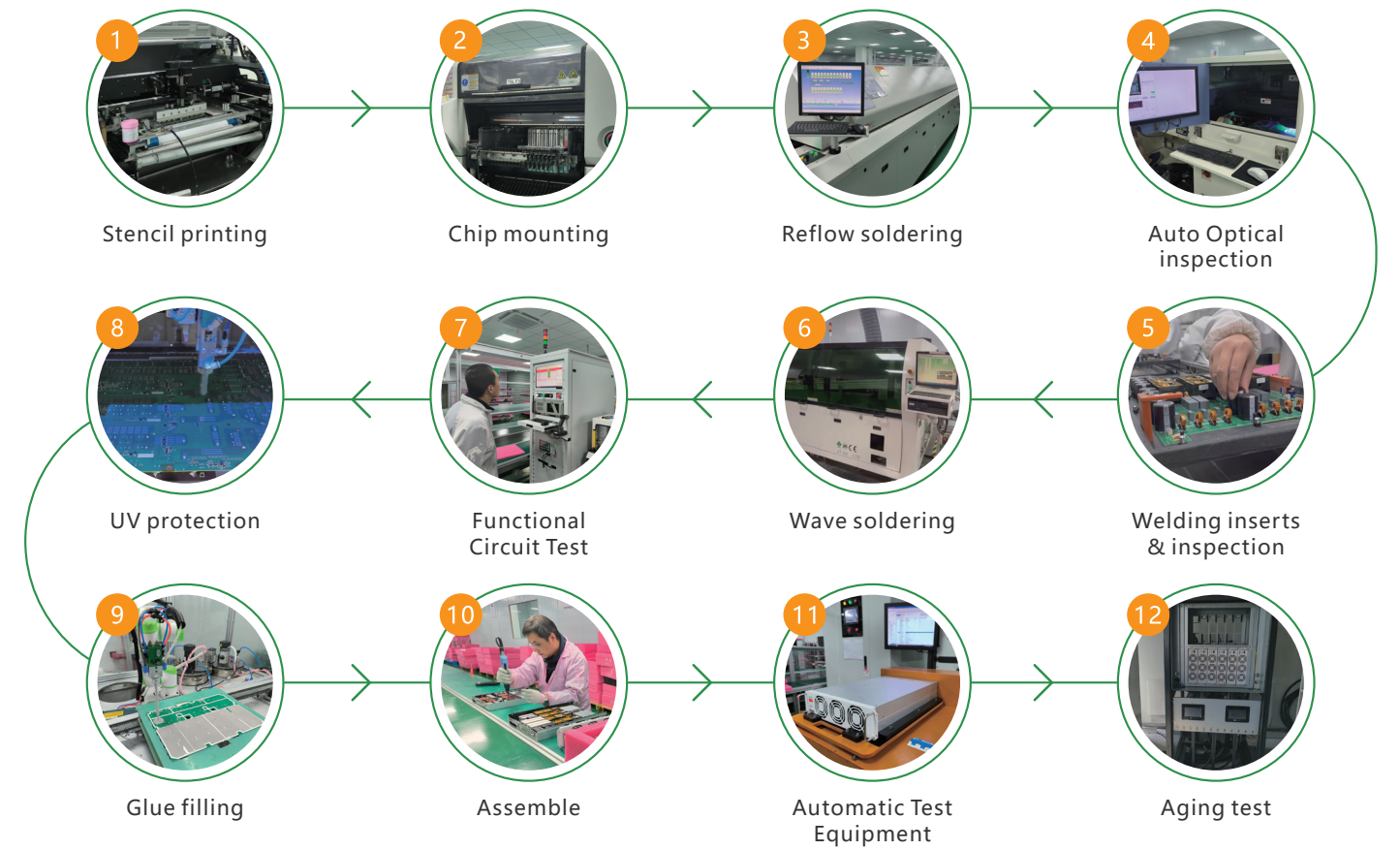


Wave soldering



Burn-in test system

## Production process and testing



Humidity test



Water-proof test



EMC testing



Performance Testing



Temperature test



Safety testing



Stress test



Lightning protection test

# 30KW

## AC-DC Charging Module



### 30KW AC/DC Charging module

This is a high efficiency, high power density AC-DC charging module, wide voltage range, high efficiency, high power factor, high power density, minimal electromagnetic radiation and interference, high protection performance, high reliability and other advantages, to meet the needs of various electric vehicles fast charging, energy saving and environmental protection effect is remarkable, to reach the international leading level.

#### 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

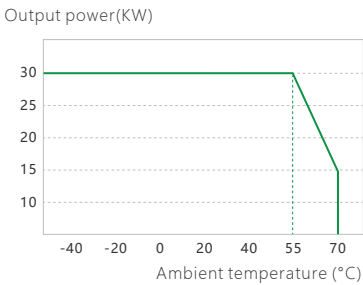
- Dual DSP digital control, support voltage and current adjustment
- Adopts hot swap technology to improve maintenance efficiency
- Intelligent fan speed regulation, reduce noise

#### Low power consumption High efficiency

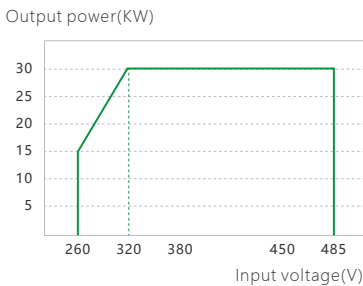
- High efficiency, small loss, the peak efficiency of the whole machine up to 96%
- Ultra-low standby power consumption (< 5W)

#### All-round support

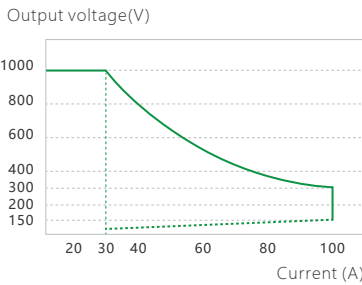
- Perfect protection and alarm function to ensure charging safety in all aspects
- The module comes with bleeder circuit to improve charging safety
- Module built-in battery current anti-backfilling protection circuit



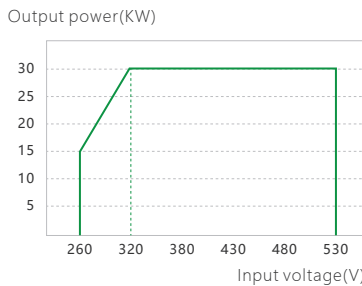
Power temperature curve



Input derating curve  
(X-EH-30K-TX-01/03)



Working mode curve



Input derating curve  
(XEH-30K-TX-02)

|                            |                                        |                                                                                                                                                                                               |                                 |                           |
|----------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------|
| Input                      | Product Model                          | X-EH-30K-TX-01                                                                                                                                                                                | XEH-30K-TX-02                   | X-EH-30K-TX-03            |
|                            | Input voltage range                    | China Standard<br>260~485VAC                                                                                                                                                                  | American Standard<br>260~530VAC | EU Standard<br>260~485VAC |
|                            | Input frequency range                  | 45~65Hz                                                                                                                                                                                       |                                 |                           |
|                            | Power factor                           | ≥0.99                                                                                                                                                                                         |                                 |                           |
|                            | Total harmonic distortion              | ≤5%                                                                                                                                                                                           |                                 |                           |
| Output                     | Peak efficiency                        | ≥96%                                                                                                                                                                                          |                                 |                           |
|                            | Constant power range                   | 30KW (300~1000V)                                                                                                                                                                              |                                 |                           |
|                            | Output current range                   | 0~100A                                                                                                                                                                                        |                                 |                           |
|                            | Current stability accuracy             | ≤±1%                                                                                                                                                                                          |                                 |                           |
|                            | Voltage regulation accuracy            | ≤±0.5%                                                                                                                                                                                        |                                 |                           |
|                            | Current balancing accuracy             | ≤±3%                                                                                                                                                                                          |                                 |                           |
| Output<br>High Voltage     | Communication interface                | CAN, Max. 60                                                                                                                                                                                  |                                 |                           |
|                            | Output voltage range                   | 200~1000V                                                                                                                                                                                     |                                 |                           |
|                            | Rated output voltage                   | 1000V                                                                                                                                                                                         |                                 |                           |
|                            | Rated output current                   | 30A                                                                                                                                                                                           |                                 |                           |
| Output<br>Low Voltage      | Current limit adjustment range         | 0.5A≤I≤60A                                                                                                                                                                                    |                                 |                           |
|                            | Output voltage range                   | 150~500V                                                                                                                                                                                      |                                 |                           |
|                            | Rated output voltage                   | 500V                                                                                                                                                                                          |                                 |                           |
|                            | Rated output current                   | 60A                                                                                                                                                                                           |                                 |                           |
| Product<br>characteristics | Current limit adjustment range         | 0.5A≤I≤100A                                                                                                                                                                                   |                                 |                           |
|                            | Size (W*D*H)                           | 300x437x84mm                                                                                                                                                                                  |                                 |                           |
|                            | Weight                                 | ≤17kg                                                                                                                                                                                         |                                 |                           |
|                            | Fan noise                              | <65dB (1 m from the device)                                                                                                                                                                   |                                 |                           |
| Environmental<br>condition | MTBF                                   | 400000 hrs (40°C)                                                                                                                                                                             |                                 |                           |
|                            | Ambient temperature                    | -40°C~70°C; The derated function is used when the temperature is above 55 ° C                                                                                                                 |                                 |                           |
|                            | Storage temperature                    | -40°C~85°C; Humidity :5~95%, no condensation                                                                                                                                                  |                                 |                           |
| Protection<br>function     | Class of protection                    | IP20                                                                                                                                                                                          |                                 |                           |
|                            | Short circuit protection               | After short circuit protection, the module has no output and can be restored manually<br>1 short circuit lock mode                                                                            |                                 |                           |
|                            | Output overvoltage<br>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;<br>After protection,there is no output. After recovery, you need to start the system by<br>running a command |                                 |                           |

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

# 40KW

## AC-DC Charging Module



### 40KW AC/DC Charging module

This is a high efficiency, high power density AC-DC charging module, wide voltage range, high efficiency, high power factor, high power density, minimal electromagnetic radiation and interference, high protection performance, high reliability and other advantages, to meet the needs of various electric vehicles fast charging, energy saving and environmental protection effect is remarkable, to reach the international leading level.

#### 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

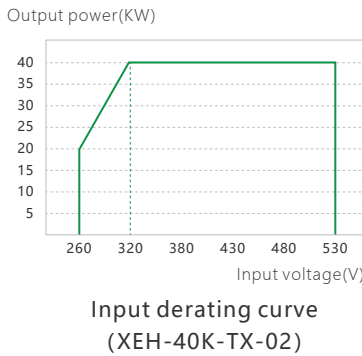
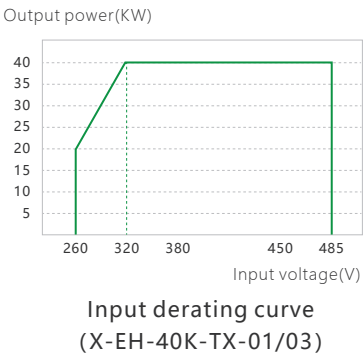
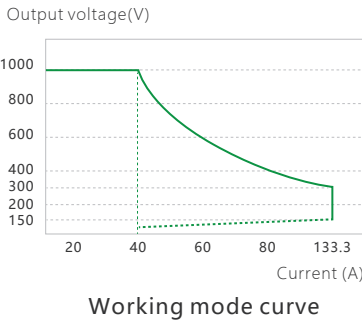
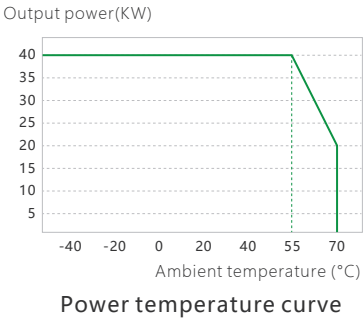
- Dual DSP digital control, support voltage and current adjustment
- Adopts hot swap technology to improve maintenance efficiency
- Intelligent fan speed regulation, reduce noise

#### 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
- Module built-in battery current anti-backfilling protection circuit



|                         |                                     |                                                                                                                                                                                         |                                 |                           |
|-------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------|
| Input                   | Product Model                       | X-EH-40K-TX-01                                                                                                                                                                          | XEH-40K-TX-02                   | X-EH-40K-TX-03            |
|                         | Input voltage range                 | China Standard<br>260~485VAC                                                                                                                                                            | American Standard<br>260~530VAC | EU Standard<br>260~485VAC |
|                         | Input frequency range               | 45~65Hz                                                                                                                                                                                 |                                 |                           |
|                         | Power factor                        | ≥0.99                                                                                                                                                                                   |                                 |                           |
|                         | Total harmonic distortion           | ≤5%                                                                                                                                                                                     |                                 |                           |
| Output                  | Peak efficiency                     | ≥96%                                                                                                                                                                                    |                                 |                           |
|                         | 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                | 200~1000V                                                                                                                                                                               |                                 |                           |
|                         | Rated output voltage                | 1000V                                                                                                                                                                                   |                                 |                           |
|                         | Rated output current                | 40A                                                                                                                                                                                     |                                 |                           |
|                         | Current limit adjustment range      | 0.5A≤I≤80A                                                                                                                                                                              |                                 |                           |
| Output Low Voltage      | Output voltage range                | 150~500V                                                                                                                                                                                |                                 |                           |
|                         | Rated output voltage                | 500V                                                                                                                                                                                    |                                 |                           |
|                         | 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)                                                                                                                                                            |                                 |                           |
|                         | MTBF                                | 400000 hrs (40°C)                                                                                                                                                                       |                                 |                           |
| Environmental condition | Ambient temperature                 | -40°C~70°C; The derated function is used when the temperature is above 55 ° C                                                                                                           |                                 |                           |
|                         | Storage temperature                 | -40°C~85°C; Humidity :5~95%, 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

AC-DC Charging Module

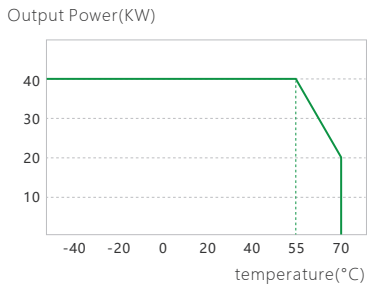


### Super wide constant power

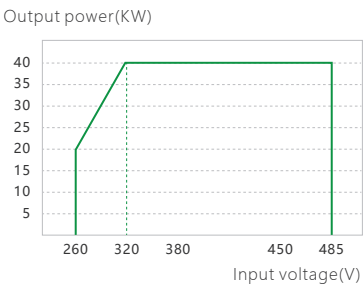
- Output voltage 150~1000V, better compatibility
- Ultra-wide constant power range, efficient output,continuous power of the whole segment without retraction, high reliability
- Output peak current up to 133.3A

### 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



Output power temperature limit curve



Input derating curve  
(XSC40KFGCN/EU-FAC)

### 40KW SiC AC/DC Charging Module

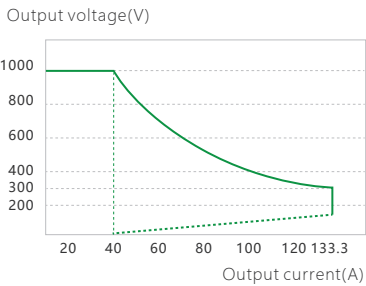
This is a high efficiency, high power density AC-DC charging module, wide voltage range, high efficiency, high power factor, high power density, minimal electromagnetic radiation and interference, high protection performance, high reliability and other advantages, to meet the needs of various electric vehicles fast charging, energy saving and environmental protection effect is remarkable, to reach the international leading level.

### Low power consumption High efficiency

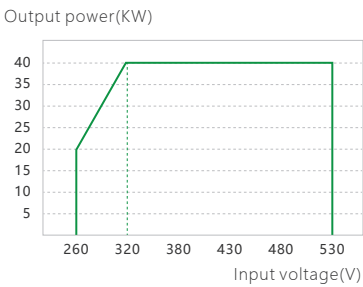
- High efficiency, small loss, the peak efficiency of the whole machine up to 97%
- Ultra-low standby power consumption (< 10W)

### 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



Operating mode curve



Input derating curve  
(XSC40KFGUS-FAC)

|                         |                                     |                                                                                                                                                                                         |                                 |                           |
|-------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---------------------------|
| Input                   | Product Model                       | XSC40KFGCN-FAC                                                                                                                                                                          | XSC40KFGUS-FAC                  | XSC40KFGEU-FAC            |
|                         | Input voltage range                 | China Standard<br>260~485VAC                                                                                                                                                            | American Standard<br>260~530VAC | EU Standard<br>260~485VAC |
|                         | Input frequency range               | 45~65Hz                                                                                                                                                                                 |                                 |                           |
|                         | Input current                       | < 80A                                                                                                                                                                                   |                                 |                           |
|                         | Power factor                        | ≥0.99                                                                                                                                                                                   |                                 |                           |
|                         | Total harmonic distortion           | ≤5%                                                                                                                                                                                     |                                 |                           |
| Output                  | Peak efficiency                     | ≥97%                                                                                                                                                                                    |                                 |                           |
|                         | 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                | 200~1000V                                                                                                                                                                               |                                 |                           |
|                         | Rated output voltage                | 1000V                                                                                                                                                                                   |                                 |                           |
|                         | Rated output current                | 40A                                                                                                                                                                                     |                                 |                           |
|                         | Current limit adjustment range      | 0.5A≤I≤80A                                                                                                                                                                              |                                 |                           |
| Output Low Voltage      | Output voltage range                | 150~500V                                                                                                                                                                                |                                 |                           |
|                         | Rated output voltage                | 500V                                                                                                                                                                                    |                                 |                           |
|                         | 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)                                                                                                                                                            |                                 |                           |
|                         | MTBF                                | 400000 hrs (40°C)                                                                                                                                                                       |                                 |                           |
| Environmental condition | Ambient temperature                 | -40°C~70°C; The derated function is used when the temperature is above 55 °C                                                                                                            |                                 |                           |
|                         | Storage temperature                 | -40°C~85°C; Humidity :5~95%, 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

AC-DC 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

### Full Glue Filling Technology Long Lifespan

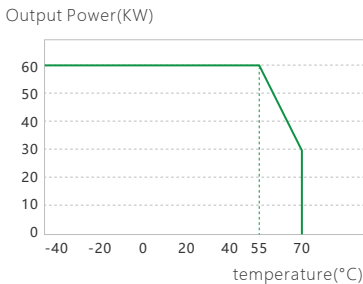
The full glue filling process is adopted to meet various harsh usage scenarios; The unique air duct design technology improves the heat dissipation efficiency and ensures a service life of more than 5 years

### New Generation High-speed Digital Processing TI Chip

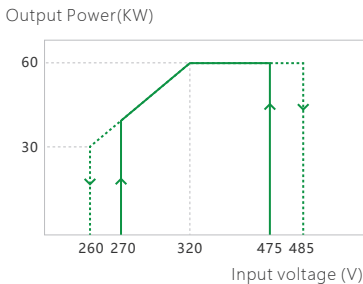
dopt Ti high-performance dual-core architecture DSP, dual-core 32-bit CPU, main frequency up to 100MHz, powerful processing capability and efficient multi-tasking performance to obtain lower harmonics and higher precision control capabilities

### Intelligent Air Cooling Design Low Noise

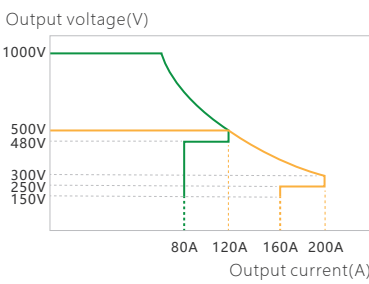
Ultra-low EMI design and intelligent fan control technology make the product lower noise and more user-friendly



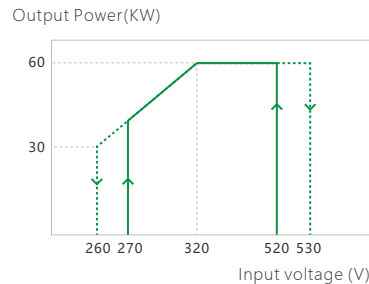
Output power temperature limit curve



Input derate curve (XSC60KFGCN/EU-FAC)



Operating mode curve



Input derate curve (XSC60KFGUS-FAC)

|                          |                                     |                                                                                                                 |                              |                        |
|--------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------------|
| Input                    | Product Model                       | XSC60KFGCN-FAC                                                                                                  | XSC60KFGUS-FAC               | XSC60KFGEU-FAC         |
|                          | Input voltage range                 | China Standard 260~485VAC                                                                                       | American Standard 260~530VAC | EU Standard 260~485VAC |
|                          | Input frequency range               | 45~65Hz                                                                                                         |                              |                        |
|                          | Power factor                        | ≥0.99                                                                                                           |                              |                        |
|                          | Total harmonic distortion (THD)     | ≤5%                                                                                                             |                              |                        |
| Output                   | Efficiency                          | ≥97%                                                                                                            |                              |                        |
|                          | 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                                | 400000 hrs (40°C)                                                                                               |                              |                        |
|                          | Size (W*D*H)                        | 397x573x87mm                                                                                                    |                              |                        |
|                          | Weight                              | ≤29kg                                                                                                           |                              |                        |
|                          | Fan noise                           | < 65dB                                                                                                          |                              |                        |
| Environmental condition  | Protection level                    | IP20                                                                                                            |                              |                        |
|                          | Ambient temperature                 | -40°C~70°C Use with derating above 55°C                                                                         |                              |                        |
|                          | Storage temperature                 | -40°C~85°C                                                                                                      |                              |                        |
|                          | Cooling fan                         | Intelligent air cooling                                                                                         |                              |                        |
| 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)                                   |                              |                        |
|                          | 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

# 60KW SiC

AC-DC Charging Module (G2)



## 60KW AC-DC Air Cooling Charging Module

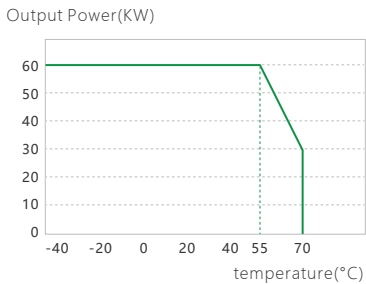
The charging module uses an isolated CAN communication interface, and the communication with the monitoring module uses the cAN communication protocol. Through system monitoring, the output voltage mode of the charging module can be set, and functions such as current limiting and module power on and off can be realized

### Super wide constant power

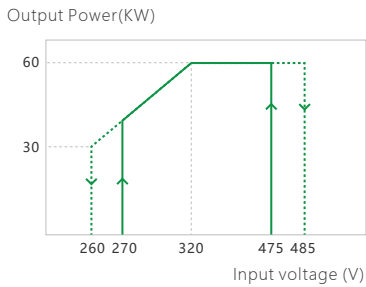
- Output voltage 150~1000V, better compatibility
- Output peak current up to 200A

### 0 Standby Power Consumption High Efficiency

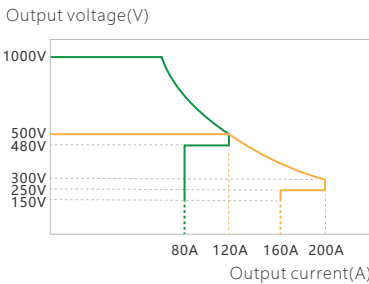
- High efficiency, small loss, the peak efficiency of the whole machine up to 96%
- Zero standby power consumption



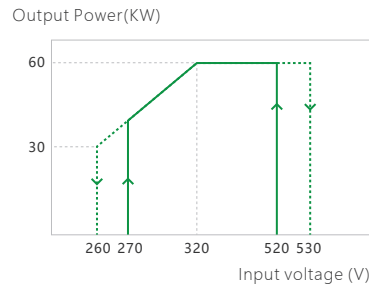
Power vs. Temperature Curve



Input Power Limit Curve



Output Characteristic Curve



Input derate curve  
(XSC60KFGUS-FAC(G2))

### All-round support

- Module built-in battery current anti-backfilling protection circuit
- Perfect protection and alarm function to ensure charging safety in all aspects

### Intelligent Air Cooling Design Low Noise

- Smart temperature control adjusts fan speed for efficient cooling and stable operation with noise levels < 60dB

|                          |                                     |                                                                                                                 |                              |                        |
|--------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------|------------------------|
| Input                    | Product Model                       | XSC60KFGCN-FAC(G2)                                                                                              | XSC60KFGUS-FAC(G2)           | XSC60KFGEU-FAC(G2)     |
|                          | Input voltage range                 | China Standard 260~485VAC                                                                                       | American Standard 260~530VAC | EU Standard 260~485VAC |
|                          | Input frequency range               | 45~65Hz                                                                                                         |                              |                        |
|                          | Power factor                        | ≥0.99                                                                                                           |                              |                        |
|                          | Total harmonic distortion (THD)     | ≤5%                                                                                                             |                              |                        |
| Output                   | Efficiency                          | ≥97%                                                                                                            |                              |                        |
|                          | 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                                | 400K hrs                                                                                                        |                              |                        |
|                          | Size (W*D*H)                        | 300x437x126mm                                                                                                   |                              |                        |
|                          | Weight                              | ≤29kg                                                                                                           |                              |                        |
|                          | Fan noise                           | < 60dB                                                                                                          |                              |                        |
| Environmental condition  | Protection level                    | IP20                                                                                                            |                              |                        |
|                          | Ambient temperature                 | -40℃~70℃ Use with derating above 55℃                                                                            |                              |                        |
|                          | 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 Charging 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.

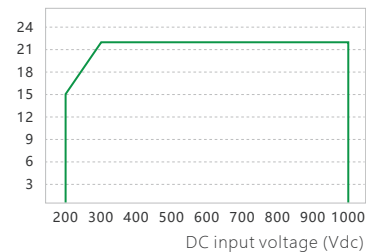
#### V2G & V2L Capable

- 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

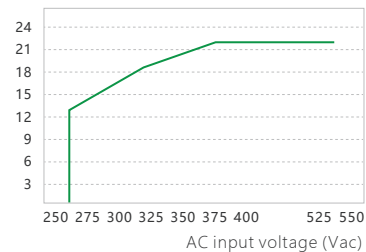
- Adopting high protection technology of glue filling, it is used in scenes with higher pollution level.

AC output power (KW)



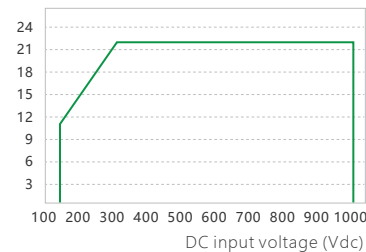
input external characteristic curve  
(off-grid inverter mode)

DC output power (KW)



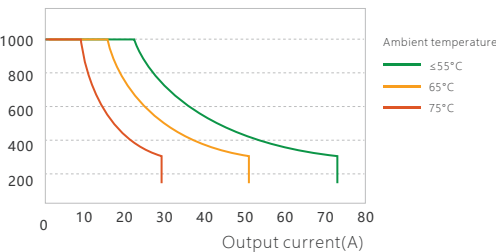
output power and input voltage curve  
(rectifier mode)

AC output power (KW)



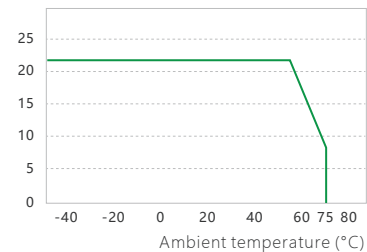
AC output power and DC input voltage curve  
(grid-connected rectifier mode)

Output voltage(V)



Output external characteristic curve  
(rectifier mode)

Output power (KW)



Temperature limit power curve

|                                        |                                      |                                                                                                   |
|----------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------|
| Basic Info                             | Product Model                        | XEV22KHG                                                                                          |
|                                        | Efficiency                           | ≥96%                                                                                              |
|                                        | CAN communication                    | Rectification/grid-tied ≤ 60 units, off-grid ≤ 8 units                                            |
| AC port<br>Rectification<br>/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<br>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 (1m away from the device)                                                                  |

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

# 40KW

## Uni-directional DC-DC Charging Module



### 40kW Uni-directional DC/DC Charging 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

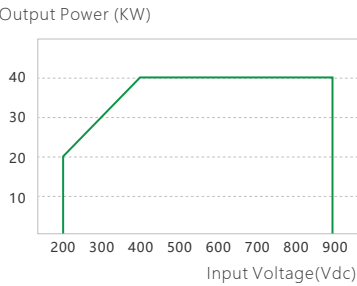
- 46.7W/in<sup>3</sup> high power density and industry-leading volume design, save internal space and reduce the footprint of the charger
- Increase system reliability, extend equipment life, and improve system flexibility

#### Low power consumption High efficiency

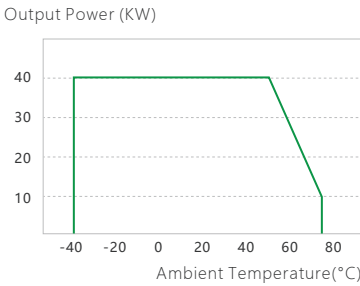
- High efficiency, small loss, the peak efficiency of the whole machine up to 97.5%

#### All-round support

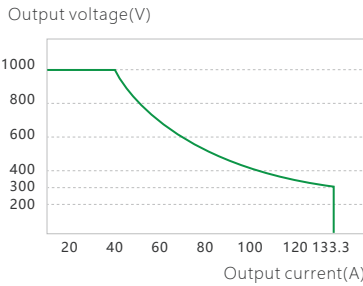
- Adopting semi-independent air duct design to enhance the module's protection capability and improve its environmental adaptability
- Small electromagnetic radiation and strong anti-interference ability



Output power and input voltage derating curve



Temperature derating curve



Output external characteristic curve

|                         |                                       |                                                                                         |
|-------------------------|---------------------------------------|-----------------------------------------------------------------------------------------|
| Input                   | Product Model                         | XED40KHG                                                                                |
|                         | 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°C                                                     |
|                         | 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°C ~ 70°C ; Derate use above 50°C                                                    |
|                         | Storage temperature                   | -40°C ~ 75°C ; 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

Bi-directional DC-DC Charging Module



### 20kW Bi-directional DC/DC Charging 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

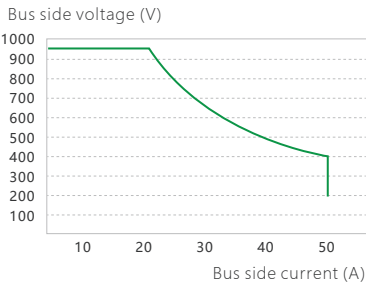
- 45.4W/in<sup>3</sup> high power density, saving system space

#### Low power consumption High efficiency

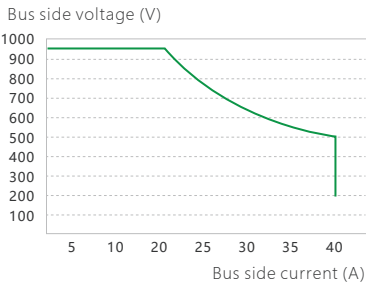
- High efficiency, small loss, the peak efficiency of the whole machine up to 98.5%
- Effectively reduce energy loss and achieve energy saving and environmental protection

#### Seamless Energy Transfer

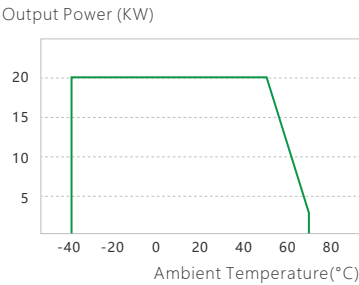
- Fast forward and reverse switching to achieve "senseless switching" of energy transmission direction



Battery side charge & discharge external characteristic curve



DC bus side charge & discharge external characteristic curve



Temperature limit power curve

|                         |                                       |                                                                |
|-------------------------|---------------------------------------|----------------------------------------------------------------|
| Product Characteristics | Product Model                         | XDD20JHG                                                       |
|                         | 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%                                                           |
| DC bus side             | Efficiency                            | ≥98.5%                                                         |
|                         | Voltage range                         | 200~950Vdc                                                     |
|                         | Current range                         | Maximum40A                                                     |
|                         | Voltage stabilization                 | ≤±0.5%                                                         |
|                         | Steady flow accuracy                  | ≤±1%                                                           |
|                         | Ripple Peak                           | ≤1%                                                            |
| Alarm and protection    | Current imbalance                     | ≤±5%                                                           |
|                         | Efficiency                            | ≥98.5%                                                         |
|                         | 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

# 3.5KW

AC-DC Charging Module



### 3.5kW AC/DC Charging Module

The XEH3K5H series rectifier modules are AC-DC modules with an AC voltage input and adjustable DC voltage output. These modules utilize DSP digital control, resonant soft switching, and active PFC technology, and are protected by multiple patents. They offer high power density, high power factor, low harmonics, and high efficiency, and can be connected in parallel with multiple modules.



#### Environmental Adaptability & Easy Maintenance

- Wide Operating Temperature Range – Performs reliably in harsh environments.
- Hot-Swappable Design – Simplifies maintenance and enhances convenience.



#### Grid Compatibility & Flexibility

- Low Input Harmonics – Reduces grid pollution and improves grid adaptability.
- Wide Input & Output Voltage Range – Compatible with various voltage applications.



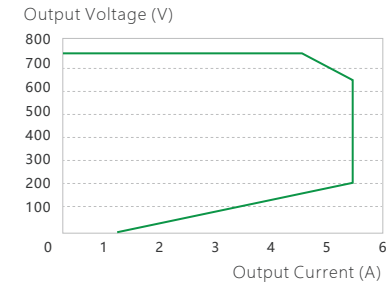
#### High Performance & Efficiency

- High Efficiency – Minimizes energy loss, meets energy-saving standards, and reduces electricity costs.
- High Power Density – Saves installation space and lowers system cost.

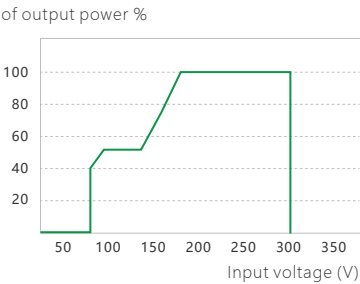


#### Intelligent Control & Reliability

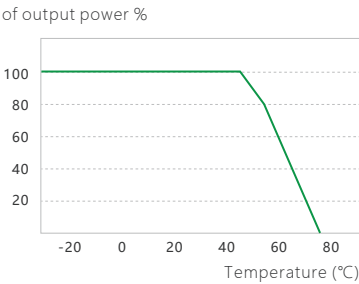
- DSP Digital Control – Ensures high stability, reliability, and easy scalability.
- High Voltage Surge Protection – Greatly improves system reliability.



XEH3K5H Output V/I curve



Input power limit curve



Temperature limit power curve

|                         |                                    |                                                                                                                              |
|-------------------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Product Characteristics | Product Model                      | XEH3K5H                                                                                                                      |
|                         | MTBF                               | > 120,000 hours                                                                                                              |
|                         | Size (W*D*H)                       | 125x303x41mm                                                                                                                 |
|                         | Weight                             | 2kg                                                                                                                          |
|                         | Communication interface            | CAN                                                                                                                          |
|                         | Max number of parallel connections | 60                                                                                                                           |
| AC input                | Rated input voltage                | 220VAC/220VDC; 110VAC/110VDC (half load)                                                                                     |
|                         | Input voltage range                | 176VAC to 300VAC (full load); 176VAC to 85VAC (reduced load)<br>176VDC to 420VDC (full load); 176VDC to 85VDC (reduced load) |
|                         | Input current                      | < 25A                                                                                                                        |
|                         | Frequency                          | 45Hz ~ 65Hz                                                                                                                  |
|                         | Power Factor                       | ≥0.99                                                                                                                        |
|                         | THD                                | ≤5%                                                                                                                          |
| DC output               | Rated output power                 | 3.5kW                                                                                                                        |
|                         | Rated output current               | 5A                                                                                                                           |
|                         | Output voltage range               | 200~750Vdc                                                                                                                   |
|                         | Current limiting adjustable range  | 10%~110% stepless adjustable                                                                                                 |
|                         | Peak-to-peak noise                 | ≤±0.5%                                                                                                                       |
|                         | Voltage Stability Accuracy         | ≤±0.5%                                                                                                                       |
|                         | Current Stability Accuracy         | ≤±1%                                                                                                                         |
|                         | Current Sharing                    | ≤±5%                                                                                                                         |
| Functional protection   | Efficiency                         | 100% load ≥ 93%; 50% load ≥ 93.5%                                                                                            |
|                         | Short Circuit protection           | Output current limiting works and can automatically recover after the fault is eliminated                                    |
|                         | Overcurrent protection             | The module will shut down due to overcurrent and will automatically recover after the fault is eliminated                    |
|                         | Overvoltage protection             | Automatic shutdown and locking, after the fault is eliminated, the module is powered on again or reset                       |
|                         | Input protection                   | Insurance; lightning protection circuit                                                                                      |
| Environment             | Working temperature                | Normal operation at -40°C ~ 45°C; derating output at 45°C~75°C                                                               |
|                         | Storage temperature                | -40°C~75°C                                                                                                                   |
|                         | relative humidity                  | 0 ~ 95%                                                                                                                      |
|                         | altitude                           | 2000m full load output                                                                                                       |

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

# 10KW

AC-DC Charging Module



### 10kW AC/DC Charging Module

The XEH10H series high-frequency switching rectifier modules are AC-DC modules with AC voltage input and adjustable DC voltage output. These modules utilize DSP digital control, resonant soft switching, and active PFC technology, and are protected by multiple patents. They offer high power density, high power factor, low harmonics, and high efficiency, and can be connected in parallel with multiple modules.



#### Environmental Adaptability & Easy Maintenance

- Wide Operating Temperature Range – Performs reliably in harsh environments.
- Hot-Swappable Design – Simplifies maintenance and enhances convenience.



#### Grid Compatibility & Flexibility

- Low Input Harmonics – Reduces grid pollution and improves grid adaptability.
- Wide Input & Output Voltage Range – Compatible with various voltage applications.



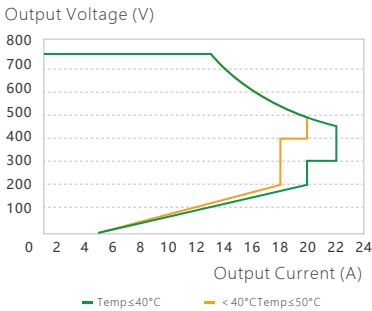
#### High Performance & Efficiency

- High Efficiency – Minimizes energy loss, meets energy-saving standards, and reduces electricity costs.
- High Power Density – Saves installation space and lowers system cost.

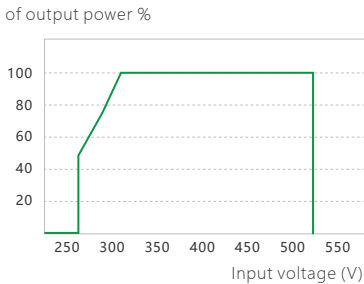


#### Intelligent Control & Reliability

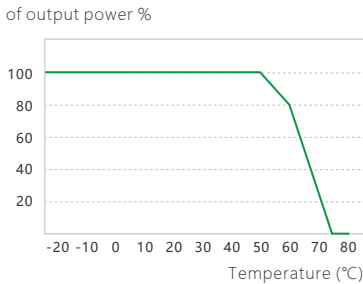
- DSP Digital Control – Ensures high stability, reliability, and easy scalability.
- High Voltage Surge Protection – Greatly improves system reliability.



XEH10H Output V/I curve



Module input power limit curve



Module temperature limit power curve

|                         |                                    |                                                                              |
|-------------------------|------------------------------------|------------------------------------------------------------------------------|
| Product Characteristics | Product Model                      | XEH10H                                                                       |
|                         | MTBF                               | > 120,000 hours                                                              |
|                         | Size (W*D*H)                       | 240x398x85mm                                                                 |
|                         | Weight                             | 8kg                                                                          |
|                         | Communication interface            | CAN                                                                          |
|                         | Max number of parallel connections | 60                                                                           |
| AC input                | Rated input voltage                | Three-phase 380Vac/480Vac                                                    |
|                         | Input voltage range                | 305Vac ~ 530Vac (full load), 305Vac ~ 260Vac (linearly reduced to half load) |
|                         | Input current                      | < 20A                                                                        |
|                         | Frequency                          | 45Hz ~ 65Hz                                                                  |
|                         | Power Factor                       | ≥ 0.99                                                                       |
|                         | THD                                | ≤ 5%                                                                         |
| DC output               | Rated output power                 | 10kW                                                                         |
|                         | Rated output current               | 20A                                                                          |
|                         | Output voltage range               | 200~750Vdc                                                                   |
|                         | Current limiting adjustable range  | 10%~110% stepless adjustable                                                 |
|                         | Peak-to-peak noise                 | ≤ ±0.5%                                                                      |
|                         | Voltage Stability Accuracy         | ≤ ±0.5%                                                                      |
|                         | Current Stability Accuracy         | ≤ ±1%                                                                        |
|                         | Current Sharing                    | ≤ ±5%                                                                        |
| Environment             | Efficiency                         | ≥ 95%                                                                        |
|                         | Working temperature                | Normal operation at -40°C ~ 50°C; derating output at 50°C~75°C               |
|                         | Storage temperature                | -40°C~75°C                                                                   |
|                         | relative humidity                  | 0 ~ 95%                                                                      |
|                         | altitude                           | 2000m full load output                                                       |

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

# 10KW

LEVDC Charging Module



### 10kW LEVDC Charging Module

The output integrates 12V BMS auxiliary power supply and integrated output relay; it has the characteristics of good safety, high reliability, high efficiency, good electromagnetic compatibility, small size, light weight, elegant appearance, simple installation, easy use and easy maintenance.



### Low power consumption High efficiency

- High efficiency, small loss, the peak efficiency of the whole machine up to 94%
- Effectively reduce energy loss and achieve energy saving and environmental protection



LOW VOLTAGE INPUT POWER  
REDUCTION PROTECTION



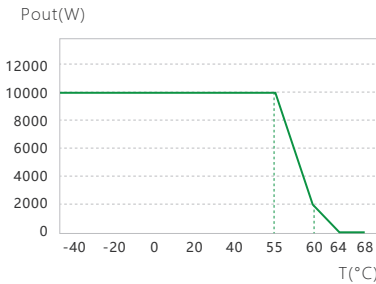
OUTPUT OVERCURRENT  
PROTECTION



OVER TEMPERATURE  
PROTECTION



OUTPUT SHORT CIRCUIT  
PROTECTION



Air inlet temperature/output power relationship diagram



### All-round protection

- Automatic discharge of residual charge,simplifies system design and improves system reliability
- 10-layer protection to improve charging safety



OUTPUT UNDERVOLTAGE  
PROTECTION



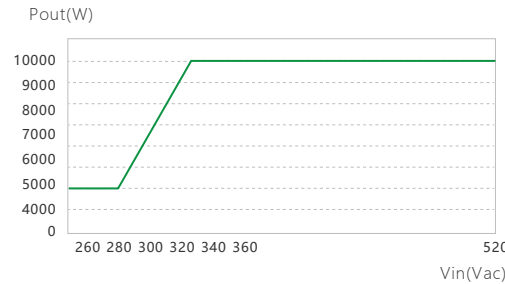
OUTPUT OVERVOLTAGE  
PROTECTION



INPUT UNDERVOLTAGE  
PROTECTION



INPUT OVERVOLTAGE  
PROTECTION



Input voltage/output power relationship diagram

### Application Areas

It is suitable for the design of DC portable ev charger, which can be easily carried on car for convenient and fast charging. It is suitable for small electric vehicles, electric motorcycles and electric tricycles, some electric commuter vehicles, electric sightseeing vehicles and track vehicles, some electric light commercial vehicles.



|                           |                                 |                                                                                                                                                                                                                                                                                                      |
|---------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical specifications | Product Model                   | XNY 10kT-100100                                                                                                                                                                                                                                                                                      |
|                           | Input voltage                   | 260~520VAC                                                                                                                                                                                                                                                                                           |
|                           | Maximum power                   | 10000W                                                                                                                                                                                                                                                                                               |
|                           | Rated input voltage             | 380VAC                                                                                                                                                                                                                                                                                               |
|                           | Maximum input voltage           | 530VAC                                                                                                                                                                                                                                                                                               |
|                           | Maximum input current           | 20A                                                                                                                                                                                                                                                                                                  |
|                           | Efficiency                      | ≥94%                                                                                                                                                                                                                                                                                                 |
|                           | Power factor                    | ≥0.99                                                                                                                                                                                                                                                                                                |
|                           | Leakage current                 | <10mA                                                                                                                                                                                                                                                                                                |
|                           | Adjustable output voltage range | 30 ~ 120VDC                                                                                                                                                                                                                                                                                          |
| Output Characteristics    | Output current range            | 5~100A                                                                                                                                                                                                                                                                                               |
|                           | Output Voltage                  | 100VDC                                                                                                                                                                                                                                                                                               |
|                           | Maximum output current          | 100±1A                                                                                                                                                                                                                                                                                               |
|                           | Output current accuracy         | ≤±1% @Output ≥60V Output ≥20A                                                                                                                                                                                                                                                                        |
| Working environment       | Work Temp                       | -20℃~65℃(-40℃ can start normally)                                                                                                                                                                                                                                                                    |
|                           | Storage Temp                    | -40℃ ~80℃                                                                                                                                                                                                                                                                                            |
|                           | Relative humidity               | 0℃~93℃ relative humidity (non-condensing)                                                                                                                                                                                                                                                            |
| Product characteristics   | Communication Function          | The module uses CAN communication                                                                                                                                                                                                                                                                    |
|                           | Protection Function             | Output overcurrent protection , Output short circuit protection , Output undervoltage protection , Output overvoltage protection , Input current limiting , Phase loss protection , Over temperature protection Input overvoltage protection , Input undervoltage protection , Communication failure |
|                           | Cooling Method                  | forced air cooling                                                                                                                                                                                                                                                                                   |
|                           | Size(W*D*H)                     | 212.3x383.8x70mm                                                                                                                                                                                                                                                                                     |
|                           | Weight                          | < 6.5kg                                                                                                                                                                                                                                                                                              |
|                           | Housing IP protection grade     | IP20                                                                                                                                                                                                                                                                                                 |

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

# 6KW

LEVDC Charging Module



### 6kW LEVDC Charging Module

The output integrates 12VBMS auxiliary power supply and integrated output relay; it has the characteristics of good safety, high reliability, high efficiency, good electromagnetic compatibility, small size, light weight, elegant appearance, simple installation, easy use and easy maintenance.



LOW VOLTAGE INPUT POWER  
REDUCTION PROTECTION



OUTPUT OVERCURRENT  
PROTECTION



OUTPUT UNDERVOLTAGE  
PROTECTION



OUTPUT OVERVOLTAGE  
PROTECTION



OVER TEMPERATURE  
PROTECTION



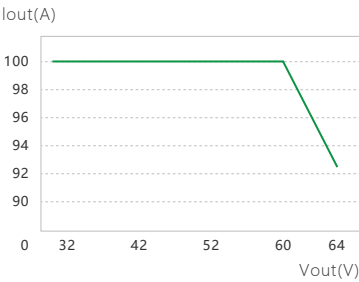
OUTPUT SHORT CIRCUIT  
PROTECTION



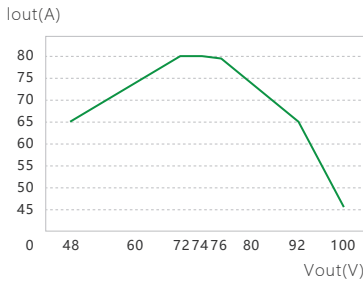
INPUT UNDERVOLTAGE  
PROTECTION



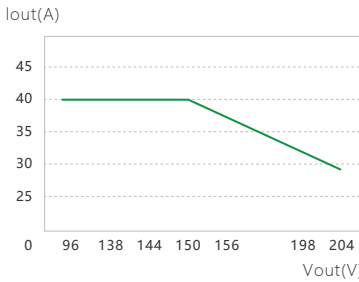
INPUT OVERVOLTAGE  
PROTECTION



Output power curve  
(XNY B6000T-48100)



Output power curve  
(XNY B6000T-8080)



Output power curve  
(XNY B6000T-14440)

### Application Areas

It is suitable for the design of DC portable ev charger, which can be easily carried on car for convenient and fast charging. It is suitable for small electric vehicles, electric motorcycles and electric tricycles, some electric commuter vehicles, electric sightseeing vehicles and track vehicles, some electric light commercial vehicles.



|                      |                        |                                                                                                           |                                               |                  |                               |
|----------------------|------------------------|-----------------------------------------------------------------------------------------------------------|-----------------------------------------------|------------------|-------------------------------|
| Specifications       | Product Model          | XNY B6000T-48100                                                                                          | XNY B6000T-8080                               | XNY B6000T-14440 | XNY B6000T-9650               |
|                      | Output voltage range   | 32~64VDC                                                                                                  | 48~100VDC                                     | 96~204VDC        | 64~136VDC                     |
|                      | Input voltage range    | 320~440VAC                                                                                                | 320~480VAC                                    |                  |                               |
|                      | Output rated voltage   | 48VDC                                                                                                     | 80VDC                                         | 144VDC           | 96VDC                         |
|                      | Maximum output current | 100A                                                                                                      | 80A                                           | 40A              | 50A                           |
|                      | Maximum output power   | 6000W                                                                                                     |                                               |                  |                               |
| Technical Parameters | Input frequency range  | 47~63Hz                                                                                                   |                                               |                  |                               |
|                      | Maximum input current  | 12A                                                                                                       |                                               |                  |                               |
|                      | Power factor           | ≥0.93@380Vac 50~100% Load                                                                                 |                                               |                  | ≥0.92<br>@380Vac 50~100% Load |
|                      | Efficiency             | ≥94%<br>220Vac 50~100% Load                                                                               | ≥94%<br>380Vac 50~100% Load                   |                  | ≥93%<br>380Vac 50~100% Load   |
|                      | Working temperature    | -20C to +45°C<br>It can start normally at -40°C                                                           | -20C to +55°C(It can start normally at -40°C) |                  |                               |
|                      | Storage temperature    | -40°C to +70°C                                                                                            |                                               |                  |                               |
|                      | Protection level       | IP20                                                                                                      |                                               |                  |                               |
|                      | Size(W*D*H)            | 188*346*68mm                                                                                              |                                               |                  |                               |
|                      | Cooling method         | forced air cooling<br>(the module has its own fan with temperature control and speed regulation function) |                                               |                  |                               |

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

# 3.2KW

Low Voltage Charging Module



### 3.2KW AC/DC Charging Module

It has the characteristics of good safety, high reliability, high efficiency, good electromagnetic compatibility, small size, light weight, elegant appearance, simple installation, easy use and maintenance, etc.



LOW VOLTAGE INPUT POWER  
REDUCTION PROTECTION



OVER TEMPERATURE  
PROTECTION



OUTPUT SHORT CIRCUIT  
PROTECTION



OUTPUT OVERCURRENT  
PROTECTION



OUTPUT UNDERVOLTAGE  
PROTECTION



INPUT UNDERVOLTAGE  
PROTECTION



OUTPUT OVERVOLTAGE  
PROTECTION



INPUT OVERVOLTAGE  
PROTECTION

### Application Areas

It is suitable for the design of DC portable ev charger, which can be easily carried on car for convenient and fast charging. It is suitable for small electric vehicles, electric motorcycles and electric tricycles, some electric commuter vehicles, electric sightseeing vehicles and track vehicles, some electric light commercial vehicles.



| Model                      | Power | Access method               | Input voltage    | Maximum input current | Rated output voltage | Rated output current | Adjustable current range | Efficiency | Output voltage adjustable range | Communication                          | Size (W*D*H)           |
|----------------------------|-------|-----------------------------|------------------|-----------------------|----------------------|----------------------|--------------------------|------------|---------------------------------|----------------------------------------|------------------------|
| XNYB3200-24100             | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 24Vdc                | 100±3A               | 1~100A                   | 92%        | 16 ~ 32Vdc                      | CAN communication                      | 102.7mm 273.8mm 83.8mm |
| XNYB3200-24100-B           | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 24Vdc                | 100±3A               | 1~100A                   | ≥92%       | 16 ~ 32Vdc                      | CAN communication                      | 102.7mm 273.8mm 83.8mm |
| XNYB3200-24100-K           | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 24Vdc                | 100±3A               | 1~100A                   | ≥92%       | 0 ~ 34Vdc                       | CAN communication                      | 102.7mm 273.8mm 83.8mm |
| XNYB3200-24100-KB          | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 24Vdc                | 100±3A               | 1~100A                   | ≥92%       | 0 ~ 34Vdc                       | CAN communication                      | 102.7mm 273.8mm 83.8mm |
| XNYB3000S-24100 Integrated | 3kw   | Single-phase two-wire input | 180Vac to 265Vac | 16A                   | 24Vdc                | 100±1A               | 1~100A                   | ≥92%       | 16 ~ 32Vdc                      | CAN communication                      | 128mm 326mm 64mm       |
| XNYB3000S-4860 Integrated  | 3kw   | Single-phase two-wire input | 180Vac to 265Vac | 16A                   | 48Vdc                | 60±1A                | 1~60A                    | ≥92%       | 32 ~ 64Vdc                      | CAN communication                      | 128mm 326mm 64mm       |
| XNYB3200-4860              | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 48Vdc                | 60±0.6A              | 1~60A                    | ≥94%       | 32 ~ 64Vdc                      | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-4860-k            | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 48Vdc                | 60±0.6A              | 1~60A                    | ≥94%       | 0 ~ 68Vdc                       | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-7240              | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 72Vdc                | 40±0.4A              | 1~40A                    | ≥94%       | 48 ~ 96Vdc                      | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-7240-K            | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 72Vdc                | 40±0.4A              | 1~40A                    | ≥94%       | 0 ~ 112Vdc                      | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-9630              | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 96Vdc                | 30±0.3A              | 1~30A                    | ≥94%       | 64 ~ 128Vdc                     | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-14420             | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 144Vdc               | 20±0.2A              | 1~20A                    | ≥94%       | 96 ~ 192Vdc                     | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-14420-K           | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 144Vdc               | 20±0.2A              | 1~20A                    | ≥94%       | 0 ~ 200Vdc                      | RS485 or CAN communication, choose one | 102.7mm 273.8mm 83.8mm |
| XNYB3200-5005              | 3.2kw | Single-phase two-wire input | 90Vac to 265Vac  | 16A                   | 500Vdc               | 5±0.1A               | 0~5A                     | ≥94%       | 250 ~ 750Vdc                    | CAN communication                      | 102.7mm 273.8mm 83.8mm |

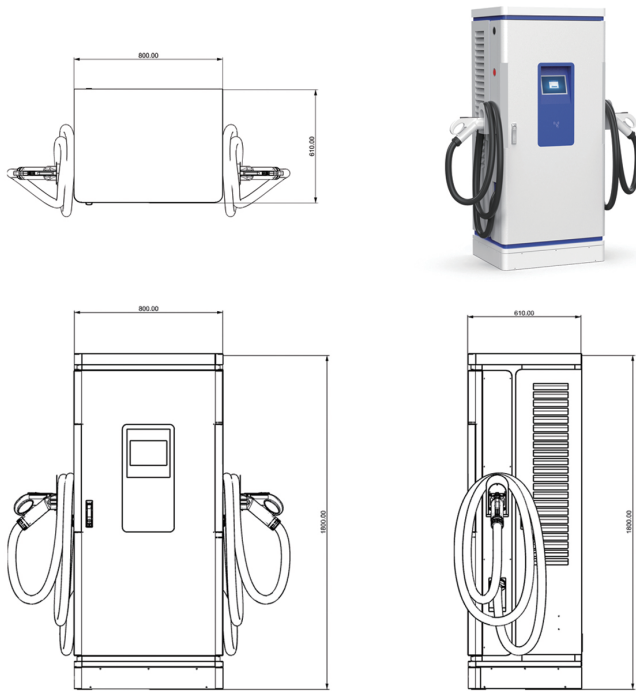
Note \* The product is constantly updated, please refer to the latest information

# One-stop Service for Localized DC Charging Station Production

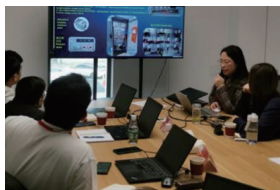
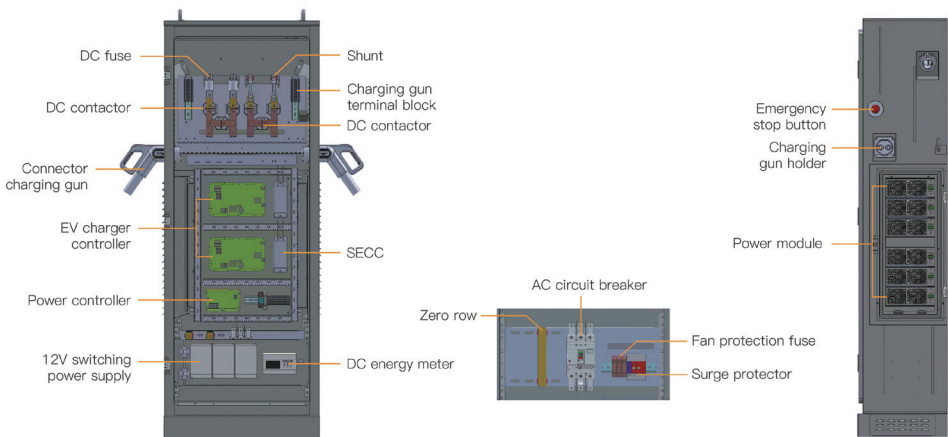
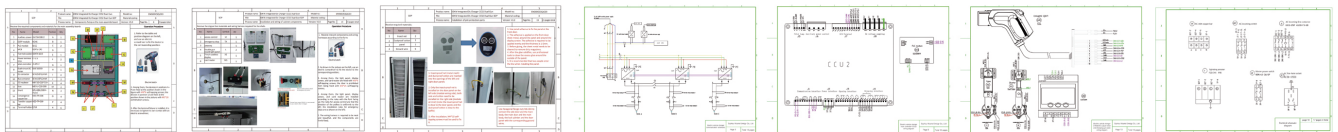
SKD/CKD Service

## Contents Provided

- 1
- Provide product design (charger outlook, inside layout, standard, etc.)
- 2
- Provide whole set of components & technical documents (SOP, electrical drawing, specifications, etc.)
- 3
- Provide training course for DC charger production, EV charging station O&M
- 4
- Provide technical support during production



- Main controller
- OCPP board
- PLC Board
- Power module
- Meter
- Molded-case circuit breaker
- Micro circuit breaker
- HMI
- Fuse
- Flange
- Emergency Stop Button
- CCS2 Charging Connector



## Training Course Arrangement

DC EV Charger Training Course Timetable

| Theme & Course                                                                    | Outline & Content                                                                                                                                                                                                                                                                                                                                                                                                                                             | Training Method            |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Welcome Ceremony & Company Visit                                                  | 1. Company introduction<br>2. personal introduction<br>3. course introduction<br>4. company visit                                                                                                                                                                                                                                                                                                                                                             | On-site visit              |
| EV Charging Station Visit and learning                                            | Visit and explain the characteristics of charging stations in five different scenarios                                                                                                                                                                                                                                                                                                                                                                        | On-site visit&learning     |
| In-depth report on charging pile industry analysis of new energy vehicle industry | 1. Ev Charger: a rapidly developing blue ocean market<br>2. New energy + new policies + new markets, the three major driving forces help the industry grow rapidly<br>3. New technology + new business formats shape the future development trend of the industry<br>4. Charging pile prosperity is on the rise, and a 100-billion-dollar blue ocean market is expected<br>5. The development of charging piles may revolve around the following four trends: | PPT                        |
| Charging station location and type                                                | 1. Charging station location factors<br>2. Positive and negative list for charging station construction<br>3. Charging station construction types and construction requirements                                                                                                                                                                                                                                                                               | PPT+On-site learning       |
| Theoretical knowledge of electric vehicle charging                                | 1. AC Ev Charger<br>2. DC Ev Charger                                                                                                                                                                                                                                                                                                                                                                                                                          | PPT                        |
| Theoretical knowledge of electric vehicle charging                                | 1. AC Ev Charger<br>2. DC Ev Charger                                                                                                                                                                                                                                                                                                                                                                                                                          | On-site learning           |
| Charging station layout design and construction management                        | 1. Preliminary investigation (site, electricity, related supporting facilities);<br>2. Scheme design;<br>3. Supply and procurement management;<br>4. Construction management;<br>5. Project cases                                                                                                                                                                                                                                                             | PPT + on-site case study   |
| Electric vehicle charging station operation investment report                     | 1. Charging operation market space<br>2. Profit model<br>3. Barriers to competition<br>4. Development trends<br>5. Risk factors                                                                                                                                                                                                                                                                                                                               | PPT                        |
| Visit to ev charger sheet metal factory                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                               | On-site visit and learning |
| Electric vehicle charging station operation investment report                     | 1. Charging operation market space<br>2. Profit model<br>3. Barriers to competition<br>4. Development trends<br>5. Risk factors                                                                                                                                                                                                                                                                                                                               | PPT                        |
| Charging pile factory visit                                                       | Charging pile factory visit                                                                                                                                                                                                                                                                                                                                                                                                                                   | On-site visit & learning   |
| On Charging pile assembly                                                         | 1. Device list and specification model confirmation;<br>2. Wire processing;<br>3. Component assembly;<br>4. Device test;<br>5. Wire connection;<br>6. Wire verification;<br>7. Confirm screw tightening;                                                                                                                                                                                                                                                      | PPT+practical assembly     |
| On Charging pile debugging                                                        | 1. Software configuration and adjustment;<br>2. Wiring and electrical debugging;<br>3. Troubleshooting and maintenance;                                                                                                                                                                                                                                                                                                                                       | PPT+practical operation    |
| Charging pile quality system&supply chain management                              | 1. Quality management of the design and development process<br>2. Quality control during production, including the establishment and implementation of quality management systems, inspection standards, defective product handling, etc.<br>3. Purchasing management and management<br>4. Supplier evaluation and selection;                                                                                                                                 | PPT                        |

The training content can be customized as your team requirement and expectation

## Process in Achieving Localized Production

- Step1
- Purchase one unit DC Charger sample for reference and R&D purpose
- Step2
- Purchase one set DC Charger ( without wiring ), try to do wiring part based on Schematic diagram + Wiring Diagram
- Step3
- Purchase one set DC Charger in CKD format, try to assemble the whole charger
- Step4
- Purchase main part components (main controller, power module, charging gun..), purchase other parts locally to reduce cost