



## Shijiazhuang Maxwell Technology Co., Ltd

Address: No.99 Shifang Road, Chang'an District, Shijiazhuang City 050000 Hebei Province, PR. China

Phone: 0086-311-81659598, 008613138197592

Email: info@maxwellpower.cn
Website: www.maxwellpower.cn

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Company profile - 01/02 50KW/40KW/30KW/20KW@1000V DC Charging Power Module ♦ MXR100050B + 03/04  $\Delta MXR100040B + 05/06$ ♦ MXR100040 + 07/08 ♦ MXR100030B → 09/10 ♦ MXR100030 — 11/12 \* MXR100020 - 13/14 20kW Low Voltage & High Current DC Charging Power Module ♦ MXR100200B + 15/16 ♦ MXR100200 + 17/18 ♦ MXF100200 + 19/20 ♦ MXR200150 + 21/22 40KW/30KW DC-DC Charging Power Module ♦ MXR100040-DC — 23/24 ♦ MXR100030-DC + 25/26 20KW Bidirectional DC-DC Power Module ♦ MXC95050B — 27/28 **30KW High Protective DC Charging Module** ♦ MXR100030L — 29/30



# Company profile







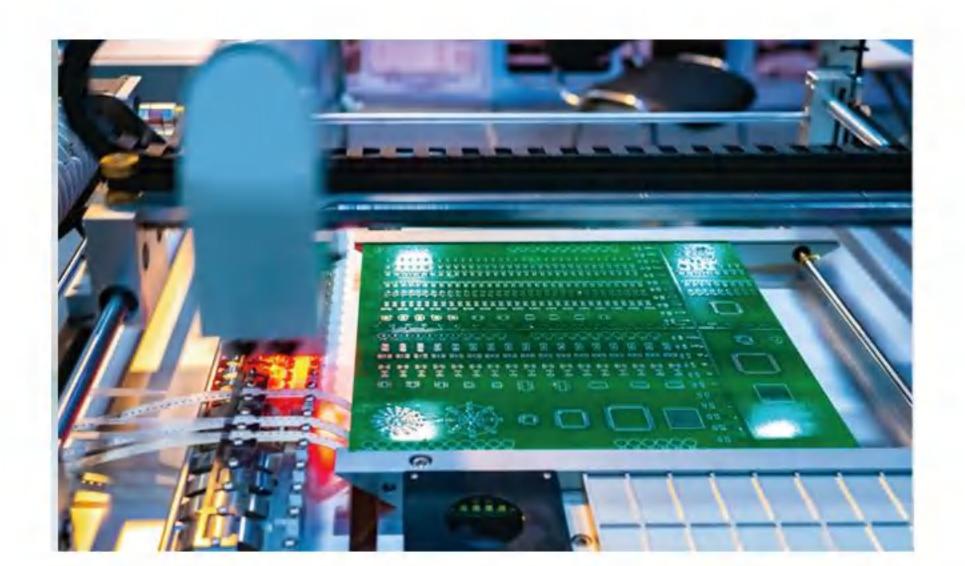
Shijiazhuang Maxwell Technology Co., Ltd. is a state-level high-tech enterprise and one of the leading enterprises of new energy and energy internet supported by Shijiazhuang municipal government. We focus on the research and development, production and sales of power electronic products, positioning services for midto-high-end DC power supply system manufacturers, based on owning independent intellectual property rights, insisting on independent research and development and technological innovation in the course of operation, providing customers with equipment supporting and its services realize the growth of corporate value and customer value together.

More than ten years since its establishment, the company has been working hard to build a high-quality R&D team, actively serving as an explorer and practitioner of technological innovation in the power supply industry, and has obtained multiple national invention patent technologies and software copyrights. At the same time, we insist on manufacturing high-quality products in line with national standards and European and American standards, forging professional marketing service elites.At present, the company's products are widely used in automotive, electric power, railway, metallurgy, communications and other fields, and its performance cases are spread all over the country and around the world.

In order to devote itself to the market development of new energy electric vehicles, the company has started the development of automotive DC charging modules since 2011. There are currently more than 20 models of products of 15kW, 20kW, 30kW and 40kW series. Currently the typical projects include the charging station of Shijiazhuang Convention and Exhibition Center, the charging station of Shijiazhuang International Airport, the bus charging station of Nanjiao Passenger Terminal, the large charging center of Hebei Normal University and other projects, which enjoy a high reputation in the field of new energy vehicle charging stations.

## COMPANY ADVANTAGES

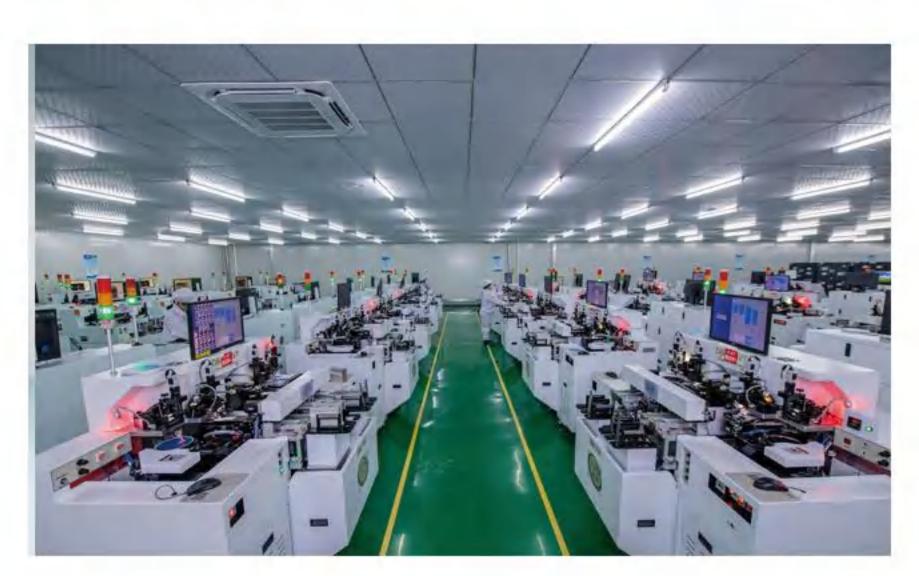




#### **Technical Advantages**

Over 10 years professional experience for power supply products design and manufacturing. All-process manufacturing system for design, production to test, burn-in and analysis.

High efficiency process flow managed by ULTIMUS BPM platform. Self-own 100,000 square meter production facilities and EMC darkroom.



#### **Production Capacity**

Complete production process equipment, annual production capacity 8 million units. High quality production line, first Pass Yield rate over 98%. 3 hours quick response production.



## Supply-chain Management

ERP system applied.

Production order and lead-time plan managed with MPS/MRP.

Material and production process controlled by advanced E-code Management System (EMS).

Tracing available in all-process flow.

Modernized storage and logistics management.



#### **R&D** Ability

Experienced R&D team with international experts; Professional design reason ability analysis and performance evaluation; Analysis and improvement suggestions on MTBF,FMEA,EMC,EMI,HOT-P and etc.





#### **CE & cTUVus Certificates**



ISO9001, ISO14001, OHSAS18001 and TS16949 quality system. 3C, CE, TUV, cTUVus, UL, KC, RoHS certified

# MXR10050B

## 50KW@1000V EV DC Charging Power Module



MXR100050B



#### **EXCELLENT ADVANTAGES**

#### > Ultra-high

Full-load operating temperature 55°C MXR100050B can output fullpower at 55°C, Effectively ensuring the charging speed in high temperature environment.

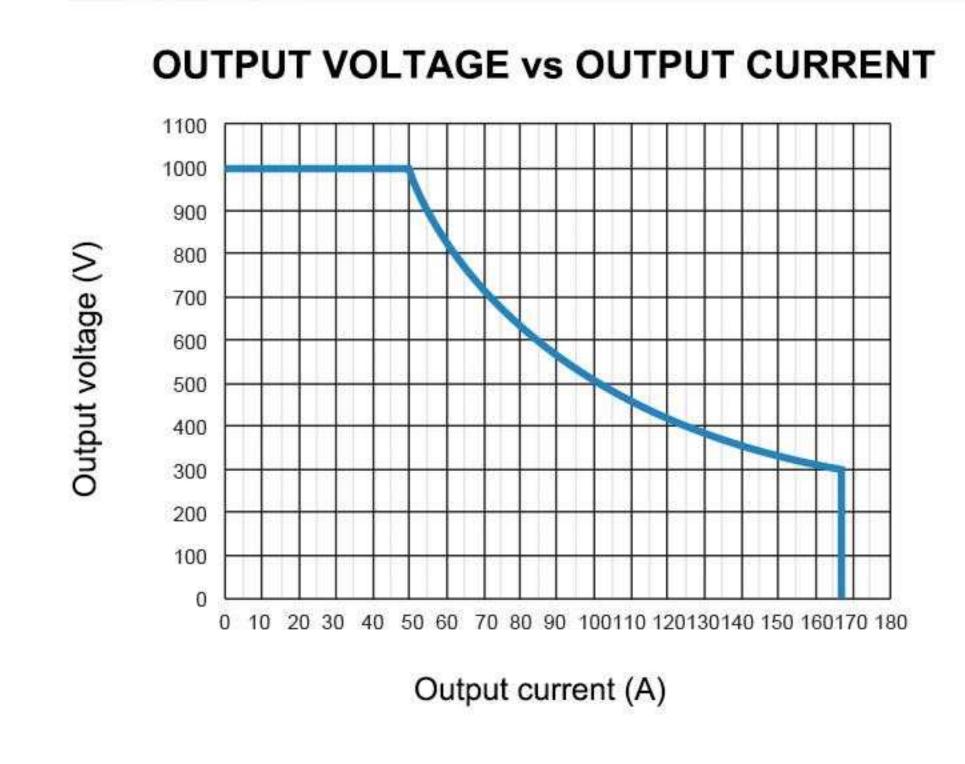
Ultra-wide

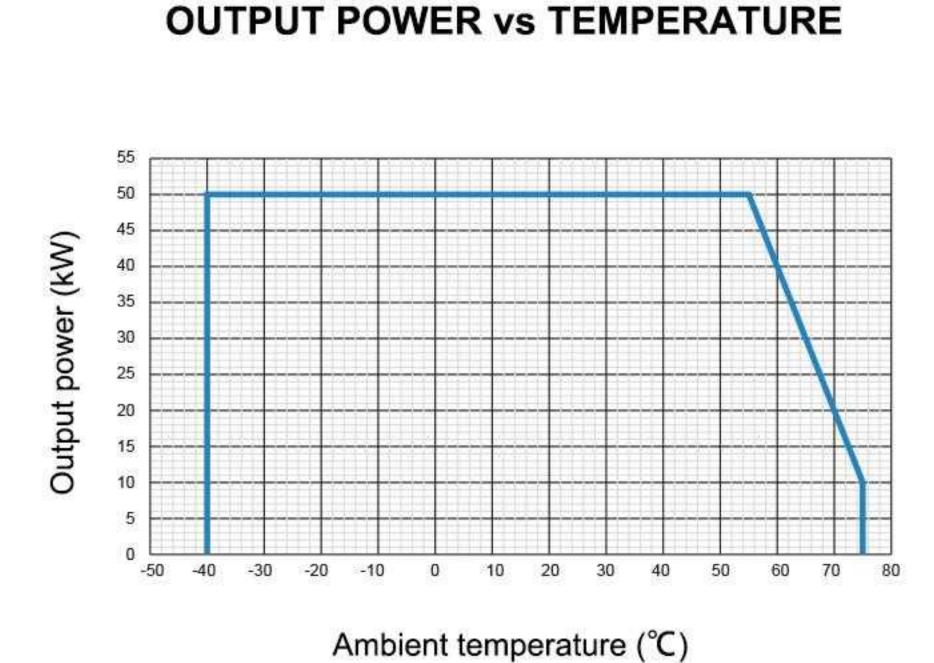
Output constant power range 300v-1000v

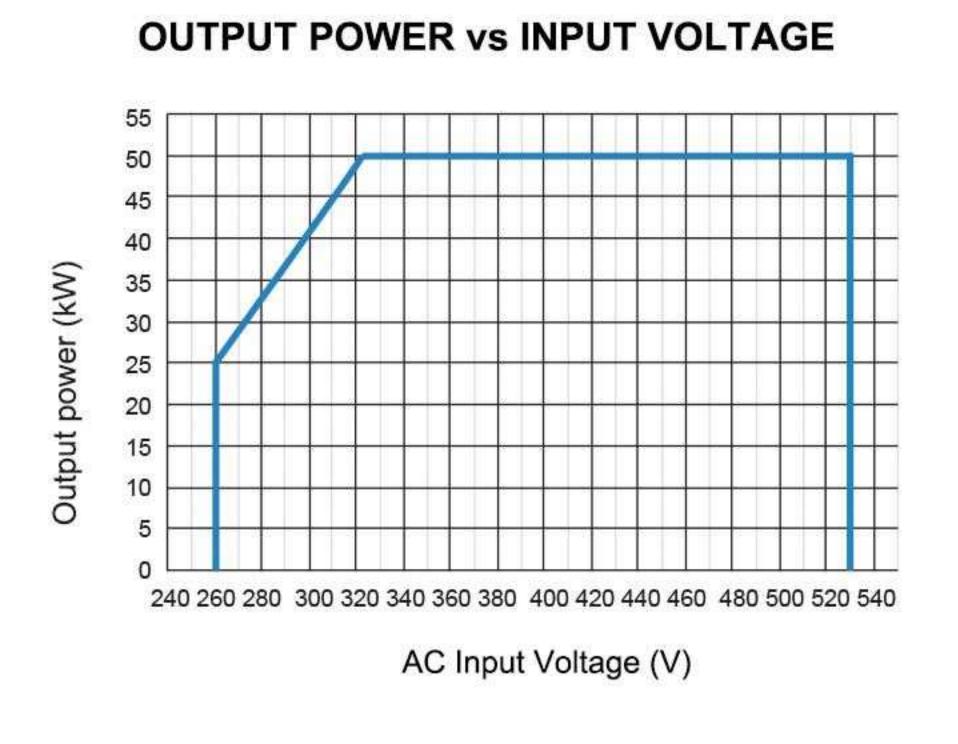
MXR100050B's ultra-wide output voltage range and Ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

#### MAIN FEATURES

- Ultra-wide output voltage range, 200-1000VDC, suitable for a wide range of EVs.
- Ultra-high output power, in 300V-1000V output voltage,
   50KW constant power output.
- ♦ Wide operating temperature range at -40°C~+80°C.
- Full load efficiency is higher than 96%, high efficiency in the whole the working range, and more power saving.
- ♦ Ultra-low noise, enhance user charging experience.
- The current in the low-voltage area does not shrink, and the charging speed is faster.
- The module is built with residual pressure relief loop to reduce system cost and improve system reliability.







MODEL	MXR100050B
Basic Indicators	
Size	125mm (height) x 440mm (width) x 380mm (depth)
Weight	<23kg
Cooling Method	Forced air cooling
Protection Level	IP20
Standby Power consumption	<10W
Communication	CAN bus
Parallel Quantity	≤60 pieces
Indicator Light	Green: Normal operation Yellow: Protection alarm Red: Fault alarm LED digital tube
Input Characteristics	
Input Voltage	260Vac~ 530Vac, three-phase + PE
Input Current	<100A
Grid frequency	45Hz~65Hz
Power Factor	>0.99 (Load ≥50%)
ITHD	<5% (Load ≥50%)
Output Characteristics	
Output Power	50kW
Voltage Range	200~1000Vdc;
Current Range	0~167A continuously adjustable;
Voltage Regulation accuracy	≤±0.5%
Stabilized Current accuracy	≤±1% (Output current ≥ 20% Max current)
Ripple Peak-to-Peak	<1%
Current Imbalance unbalance	<±5% (Output current ≥ 50% Max current)
Environmental Conditions	
Full load working temperature	−40°C~75°C(derating is required above 55°C)
Storage Temperature	-40°C~80°C
Relative Humidity	≤95%RH without condensation
Altitude	≤2000m (derating can be used above 2000m)
Safety regulations and EMC	
Safety	Meet CE Reference standard: IEC61851
EMC	Meet CE (EMI meet CLASSB) Reference standard: IEC61851
Product reliability	
MTBF	> 1000000 hours

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# MXR100040B

## 40KW@1000V EV DC Charging Power Module





> Ultra-high

Full-load operating temperature 50°C MXR100040B can output fullpower at 50°C, effectively Ensuring the charging speed in high temperature environment.

➤ Ultra-wide

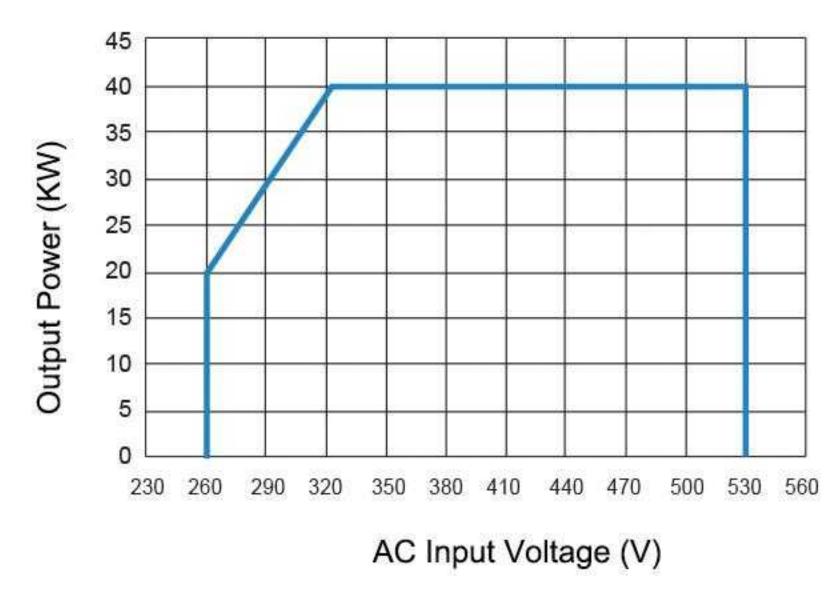
Output constant power range 300v-1000v

MXR100040B's ultra-wide output voltage range and Ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

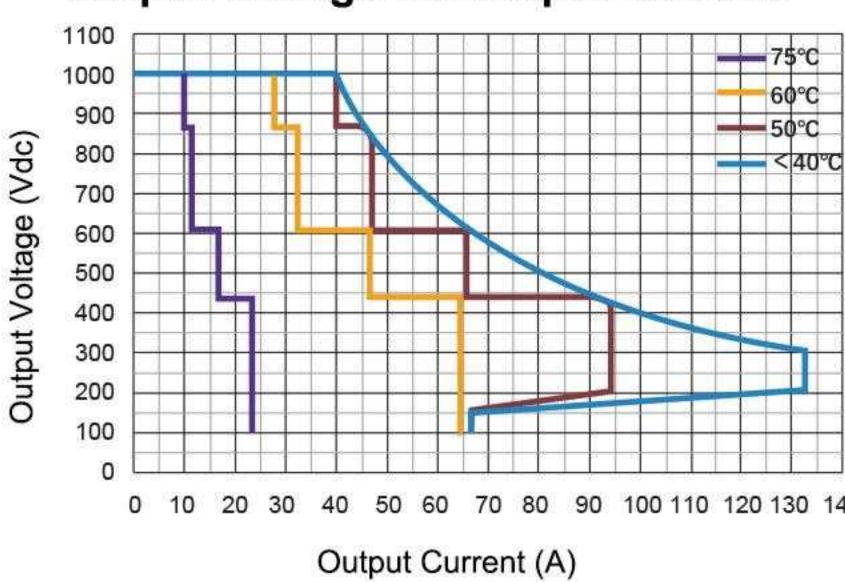
#### MAIN FEATURES

- Ultra-wide output voltage range, 100-1000VDC, suitable for a wide range of EVs.
- Ultra-high output power, in 300V-1000V output voltage, 40KW constant power output.
- ♦ Wide operating temperature range at -40°C~+80°C.
- ♦ Full load efficiency is higher than 96%, high efficiency in the whole the working range, and more power saving.
- ♦ Ultra-low noise, enhance user charging experience.
- ♦ The current in the low-voltage area does not shrink, and the charging speed is faster.
- ♦ The module is built with residual pressure relief loop to reduce system cost and improve system reliability.

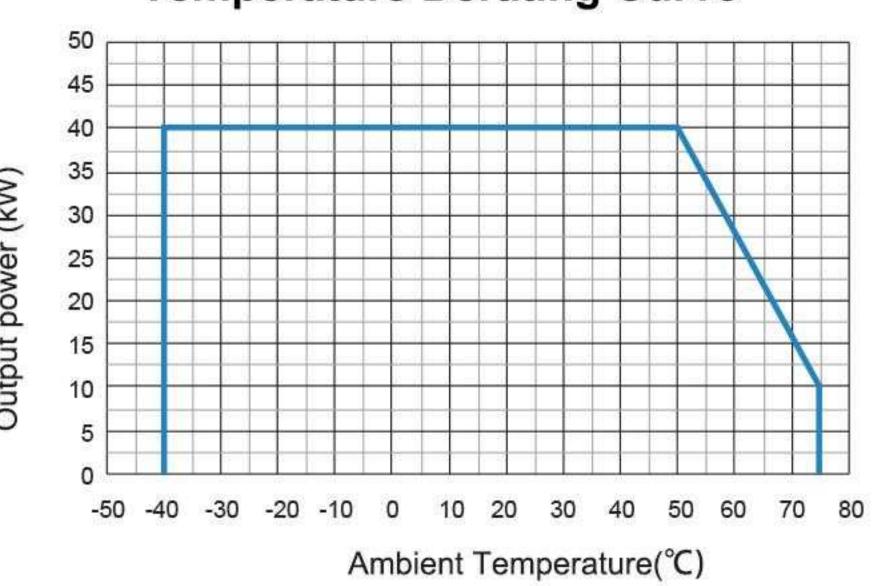
#### AC Input Power Limiting Curve(T≤50°C)







**Temperature Derating Curve** 





MXR100040B

MODEL	MXR100040B
Basic Indicators	
Dimensions	85mm(H)×360mm(W)×459mm(D)
Weight	≤20kg
Efficiency(full load)	>95.5%
Standby Power Consumption	13W+/-0.5W
Cooling Mode	Fan cooling
Communication Method	CAN bus
No. of Parallel Modules	≤60pcs
Indicator	Green: normal operation Yellow: alarm Red: fault LED digital tube
Input Characteristics	
Input Voltage	260Vac~ 530Vac, three-phase + PE
Input Current	< 80A
Grid frequency	45Hz~65Hz
Power Factor	≥0.95(8kw≤output power≤20kw); ≥0.98(20kw≤ output power≤40kw)
ITHD	≤5%(20kw≤ output power≤40kw)
Output Characteristics	
Voltage Range	100Vdc~1000Vdc
Current Range	0A~133.3 A (continuously regulated)
Rated Current	40A
Voltage stabilized accuracy	≤±0.5%(100V-1000V, 0~20MHz)
Current stabilized accuracy	≤±1% (output current 20% rated current ~ 100% rated current value
Current Sharing Imbalance	≤±3%
Ripple peak to peak	≤1%(voltage stabilization status, input voltage 323Vac~530Vac, output voltage 200Vdc~ 1000Vdc, output current 0~rated current)
Environmental Specifications	
Operating Temperatue	−40°C~75°C, output derating above 50°C
Storage Temperature	-40°C~+75°C
Relative Humidity	≤95%RH, Non-condensing
Altitude	No derating below 2000m, When the altitude is above 1000m, it needs to set the actual altitude value,the working temperature decreases by 1°C for each additional 100 m
MTBF	>500000 hours
EMC	
Emission	CLASS B Reference standard: IEC 61000-6-3
Immunity	CLASS B Reference standard: IEC 61000-6-1
Certification	
CE/TUV	IEC61851-1
TUVus	UL2202

## 40KW@1000V EV DC Charging Power Module







#### **EXCELLENT ADVANTAGES**

#### > Ultra-high

Full-load operating temperature 60°C MXR100040 can output full power at 60°C, effectively ensuring the charging speed in high temperature environment.

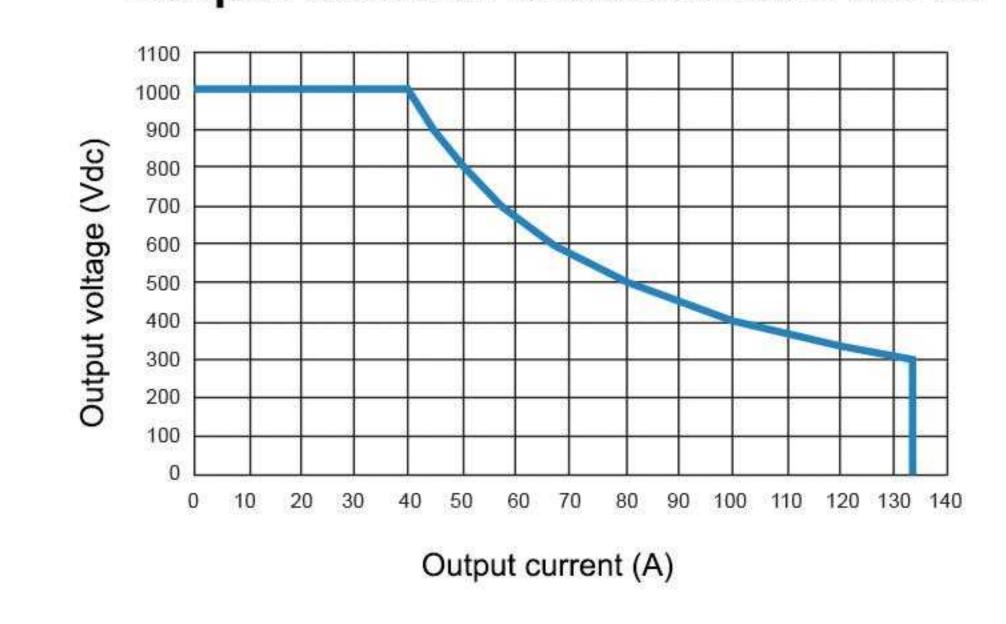
#### Ultra-wide

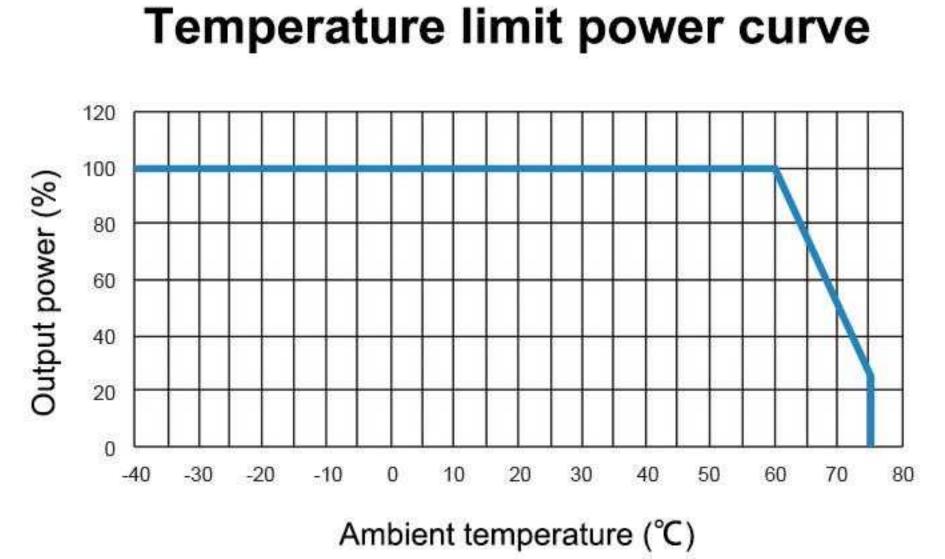
Output constant power range 300v-1000v MXR100040's ultra-wide output voltage range and ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

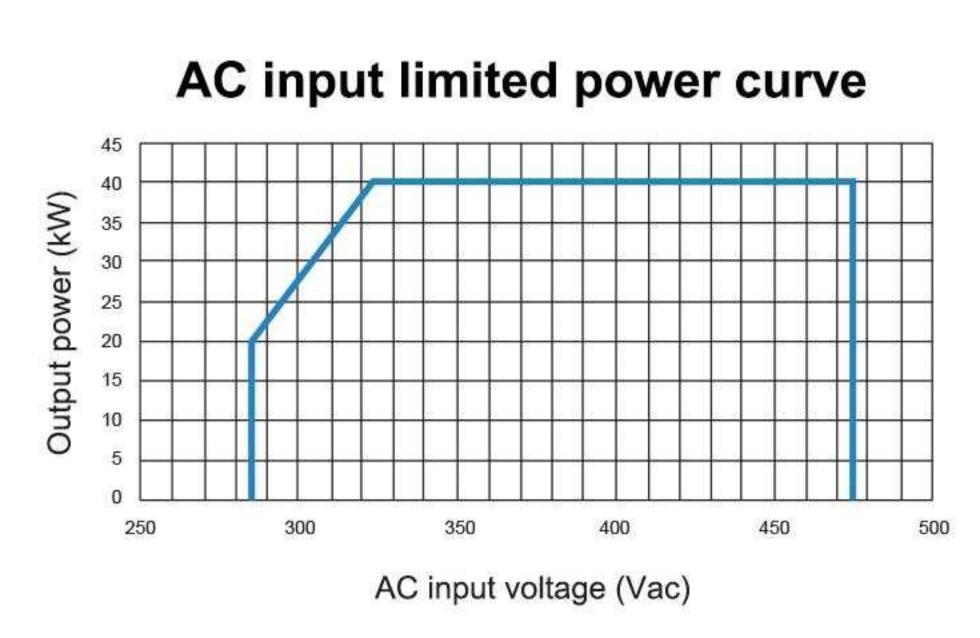
#### MAIN FEATURES

- Ultra-wide output voltage range, 100 ~ 1000VDC, suitable for a wide range of EVs.
- Ultra-high output power, in 300V~1000V output voltage,
   40kW constant power output;
- ♦ Wide operating temperature range at full power, -40°C~60°C;
- Full load efficiency is higher than 95.5%, high efficiency in the whole the working range, and more power saving;
- Ultra-low noise, enhance user charging experience;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- The module is built with residual pressure relief loop to reduce system cost and improve system reliability.

#### Output external characteristic curve







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MODEL  Docio Indicatore	MXR100040
Basic Indicators	OF to the (LLL) + 7 CO to the (NA/) + / FO to the (D)
Dimensions	85mm(H)×360mm(W)×459mm(D)
Weight	≤20kg
Efficiency (full load)	>95.5%
Standby power consumption	<13W
Cooling method	Fan cooling
Communication mode	CAN bus
Number of parallel machines	≤60
Indicator light	Green: normal operation Yellow: alarm Red: failure
AC Input Characteristics	
Input voltage	285Vac ~ 475Vac, three phase + PE
Input current	< 80A
Input frequency	45Hz ~65Hz
Power factor	≥ 0.99
ITHD	≤ 5%
DC Output Characteristics	
Output power	40kW@ output voltage ≥ 300Vdc
Voltage range	100Vdc ~ 1000Vdc, default value: 200Vdc
Current range	OA ~ 133.3A
Voltage stabilized accuracy	≤ ±0.5%
Current stabilized accuracy	≤±1%
Current sharing imbalance for modules in parallel	≤ ±3%
Ripple factor(peak to peak)	≤1%
Environmental Conditions	
Operating temperature	-40°C∼ + 75°C, Output derating above 60°C
Storage temperature	-40°C ~ + 75°C
Relative humidity	≤ 95% RH, Non-condensing
The altitude	No derating below 2000m, When the altitude is above 2000m, the operating temperature decreases by 1°C for each additional 100m
MTBF	>500,000 hours
Alarm and Protection	
Input overvoltage/undervoltage protection	Automatic recovery after shutdown
Output overvoltage protection	Manual recovery after shutdown
Over current and short circuit protection	Manual recovery after shutdown  Manual recovery after shutdown
Over temperature protection	Automatic recovery after shutdown
Certification	
CE/Dekra/EMC	Test specification: IEC61851-21-2:2018; EN61851-21-2:2017

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# MXR10030B

## 30KW@1000V EV DC Charging Power Module





#### ➤ Ultra-high

Full-load operating temperature 55°C MXR100030B can output full power at 55°C, effectively ensuring the charging speed in high temperature environment.

#### ➤ Ultra-wide

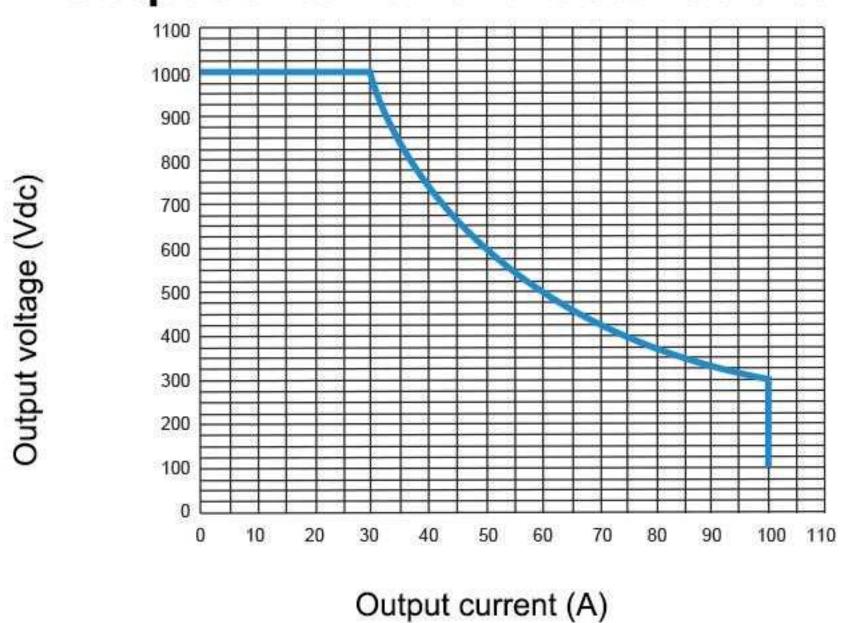
Output constant power range 300v-1000v

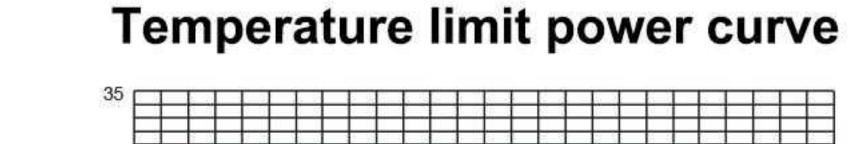
MXR100030B's ultra-wide output voltage range and ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

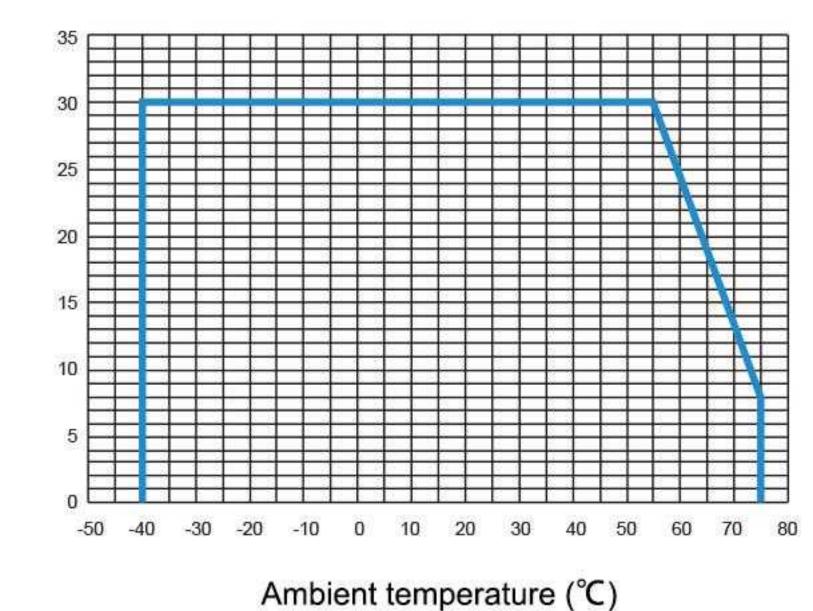
#### MAIN FEATURES

- ♦ Ultra-wide output voltage range, 100 ~ 1000VDC, suitable for a wide range of EVs.
- ♦ Ultra-high output power, in 300V~1000V output voltage, 30kW constant power output;
- ♦ Wide operating temperature range at full power, -40°C~55°C;
- ♦ Full load efficiency is higher than 95.5%, high efficiency in the whole the working range, and more power saving;
- ♦ Ultra-low noise, enhance user charging experience;
- ♦ The current in the low-voltage area does not shrink, and the charging speed is faster;
- ♦ The module is built with residual pressure relief loop to reduce system cost and improve system reliability.

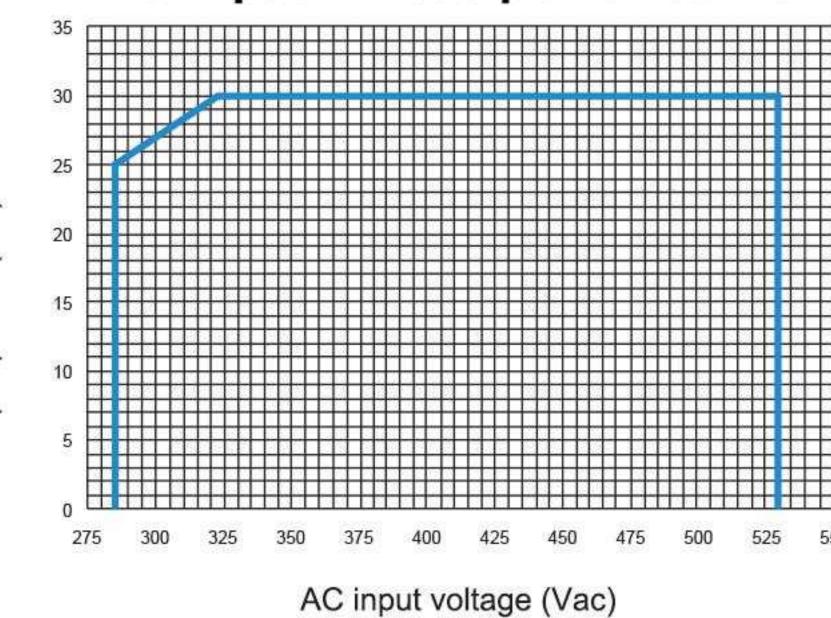
#### Output external characteristic curve







AC input limited power curve





MXR100030B

MODEL	MXR100030B
Basic Indicators	
Dimensions	85mm(H)×360mm(W)×459mm(D)
<i>N</i> eight	≤20kg
Efficiency (full load)	>95.5%
Standby power consumption	13W+/-0.5W
Cooling Mode	Fan cooling
Communication Method	CAN bus
No. of Parallel Modules	≤60pcs
ndicator	Green: normal operation Yellow: alarm Red: failure
AC Input Characteristics	
nput voltage	260Vac~530Vac , three phase + PE
nput current	<60A
Grid Frequency	45Hz~65Hz
Power factor	≥0.95(6kw≤output power≤15kw); ≥0.98(15kw≤ output power≤30kw)
THD	≤5%(15kw≤ output power≤30kw)
DC Output Characteristics	
Voltage Range	100Vdc~ 1000Vdc
Current Range	0A~100A (continuously regulated)
Rated Current	30A
Voltage stabilized accuracy	≤±0.5%(100V-1000V, 0~20MHz)
Current stabilized accuracy	≤±1% (output current 20% rated current ~ 100% rated current value
Current Sharing Imbalance	≤±3%
Ripple Voltage Peak Value Coefficient	≤1%(voltage stabilization status, input voltage 323Vac~456Vac, output voltage 200Vdc~ 1000Vdc, output current 0~rated current)
Environmental Specifications	
Operating Temperature	-40°C~ + 75°C Output derating above 55°C
Storage Temperature	-40°C ~ + 75°C
Relative Humidity	≤ 95% RH, non-condensing
Altitude	No derating below 2000m, When the altitude is above 2000m, the operating temperature decreases by 1°C for each additional 100m
MTBF	>500,000 hours
Alarm and protection	
nput overvoltage/undervoltage protection	Automatic recovery after shutdown
Output overvoltage protection	Manual recovery after shutdown
Over current and short circuit protection	Manual recovery after shutdown
Over temperature protection	Automatic recovery after shutdown
Certification	
CE/TUV/EMC	EN IEC 61000-6-1:2019; EN IEC 61000-6-2:2019;  Test specification: EN IEC 61000-6-3:2021; EN IEC 61000-6-4:2019;  EN IEC 61851-21-2:2021
cTUVus	Test specification: UL 2202:2009 R2.18; CSA C22.2 No.107.1-16

## 30KW@1000V EV DC Charging Power Module



#### **EXCELLENT ADVANTAGES**

> Ultra-high

Full-load operating temperature 60°C MXR100030 can output full power at 60°C, effectively ensuring the charging speed in high temperature environment.

> Ultra-wide

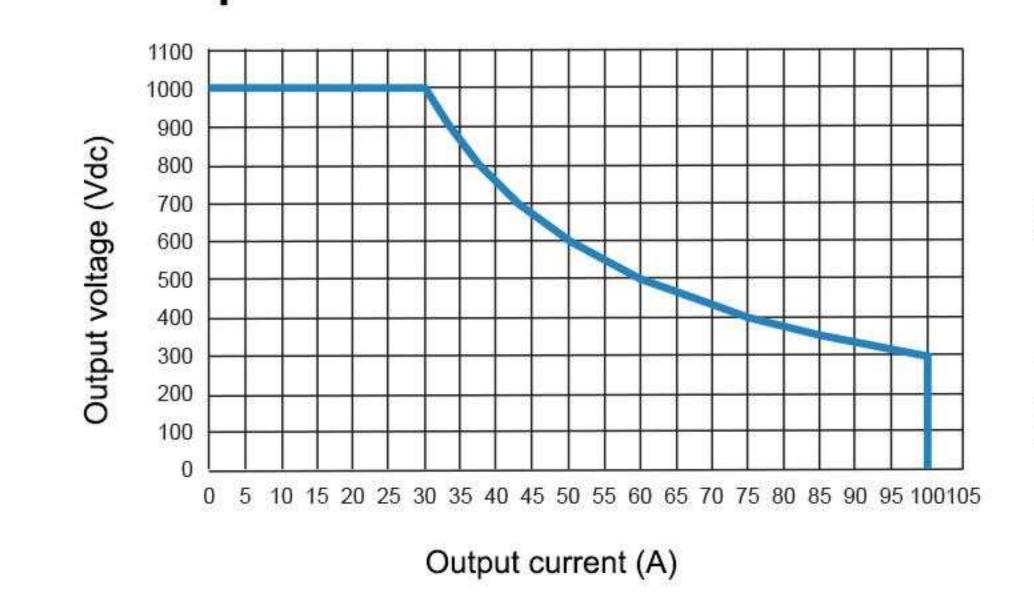
Output constant power range 300v-1000v

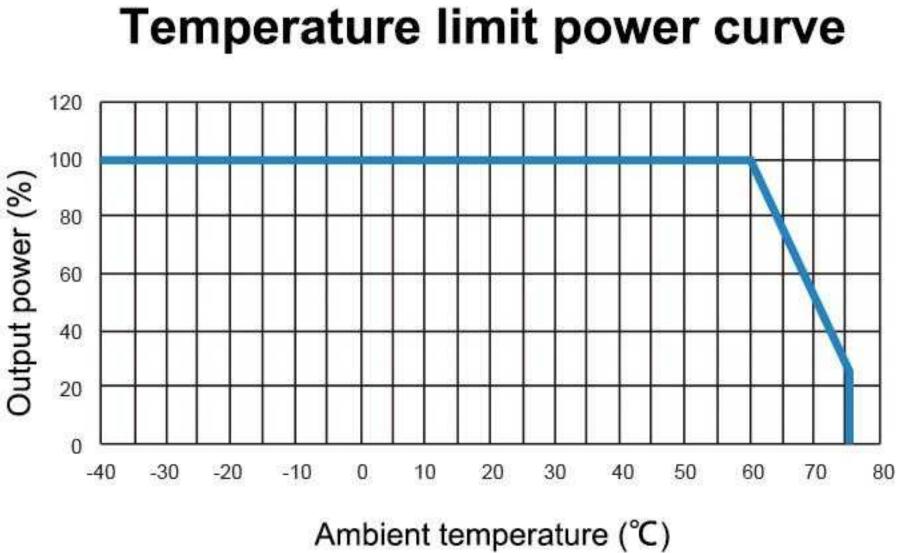
MXR100030's ultra-wide output voltage range and ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

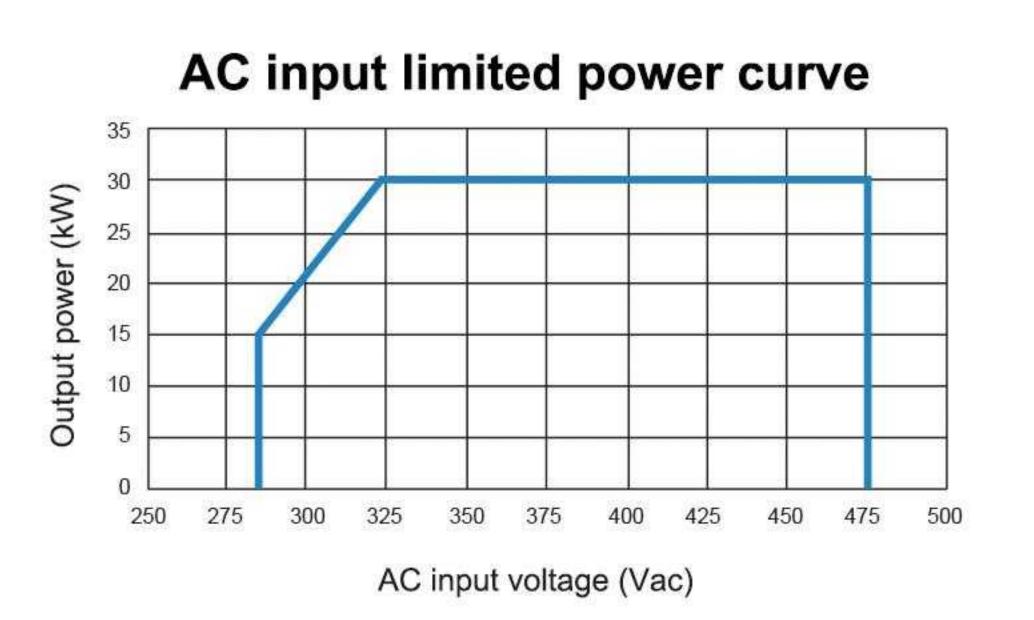
#### MAIN FEATURES

- Ultra-wide output voltage range, 100 ~ 1000VDC, suitable for a wide range of EVs.
- Ultra-high output power, in 300V~1000V output voltage,
   30kW constant power output;
- ♦ Wide operating temperature range at full power, -40°C~60°C;
- Full load efficiency is higher than 95.5%, high efficiency in the whole the working range, and more power saving;
- ♦ Ultra-low noise, enhance user charging experience;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- The module is built with residual pressure relief loop to reduce system cost and improve system reliability.

#### Output external characteristic curve









MXR100030

MODEL	MXR100030
Basic Indicators	
Dimensions	85mm(H)×360mm(W)×459mm(D)
Weight	≤20kg
Efficiency (full load)	>95.5%
Standby power consumption	<13W
Cooling method	Fan cooling
Communication mode	CAN bus
Number of parallel machines	≤60
Indicator light	Green: normal operation Yellow: alarm Red: failure
4C Input Characteristics	
Input voltage	285Vac ~ 475Vac, three phase + PE
Input current	< 60A
Input frequency	45Hz ~65Hz
Power factor	≥ 0.99
ITHD	≤ 5%
DC Output Characteristics	
Output power	30kW@ output voltage ≥ 300Vdc
Voltage range	100Vdc ~ 1000Vdc, default value: 200Vdc
Current range	OA ~ 100A
Voltage stabilized accuracy	≤±0.5%
Current stabilized accuracy	≤±1%
Current sharing imbalance for modules in parallel	≤ ±3%
Ripple factor(peak to peak)	≤1%
Environmental Conditions	
Operating temperature	-40°C~ + 75°C, Output derating above 60°C
Storage temperature	-40°C ~ + 75°C
Relative humidity	≤ 95% RH, Non-condensing
The altitude	No derating below 2000m, When the altitude is above 2000m, the operating temperature decreases by 1°C for each additional 100m
MTBF	>500,000 hours
Alarm and Protection	
Input overvoltage/undervoltage protection	Automatic recovery after shutdown
Output overvoltage protection	Manual recovery after shutdown
Over current and short circuit protection	Manual recovery after shutdown
Over temperature protection	Automatic recovery after shutdown
Certification	
CE/Dekra/EMC	<i>Test specification:</i> IEC61851-21-2:2018; EN61851-21-2:2017

## 20KW@1000V EV DC Charging Power Module



MXR100020



#### **EXCELLENT ADVANTAGES**

#### > Ultra-high

Full-load operating temperature 60°C MXR100020 can output full power at 60°C, effectively ensuring the charging speed in high temperature environment.

#### Ultra-wide

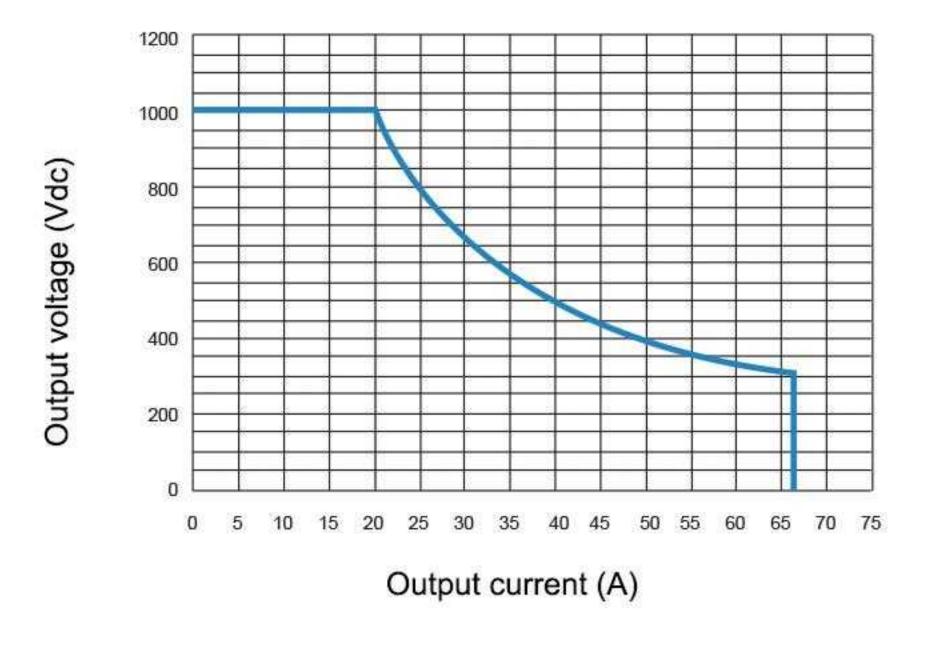
#### Constant power range 300v-1000v

MXR100020 is a 20kW charging module that fully meets the wide-range constant power requirements of the State Grid.

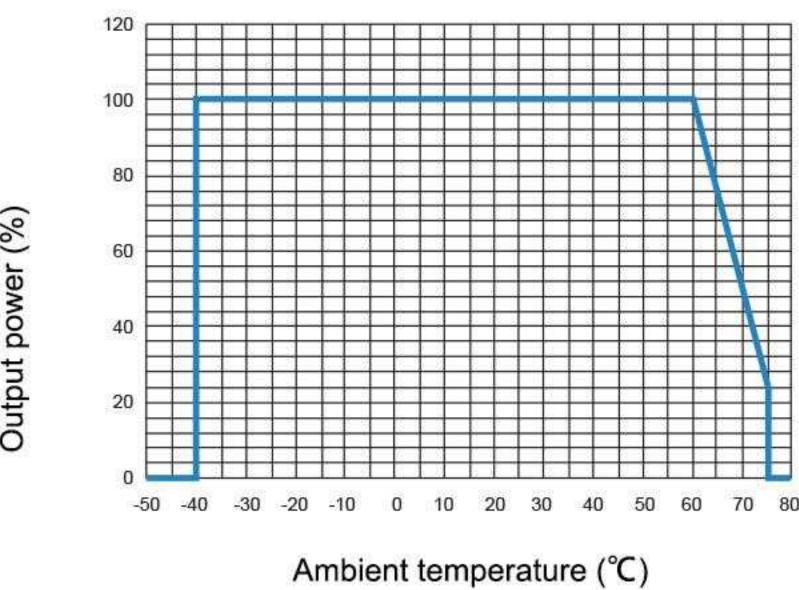
#### MAIN FEATURES

- Wide output voltage range, 50 ~ 1000VDC, suitable for a wide range of EVs.
- ♦ Wide operating temperature range at full power, -40°C~60°C;
- Full load efficiency is higher than 95.5%, high efficiency in the whole working range, and more energy saving;
- Ultra-low standby power consumption, the whole series of products are controlled within 8W;
- Ultra-low noise, improve user charging experience;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- The module is built with residual pressure relief loop to reduce system cost and improve system reliability;

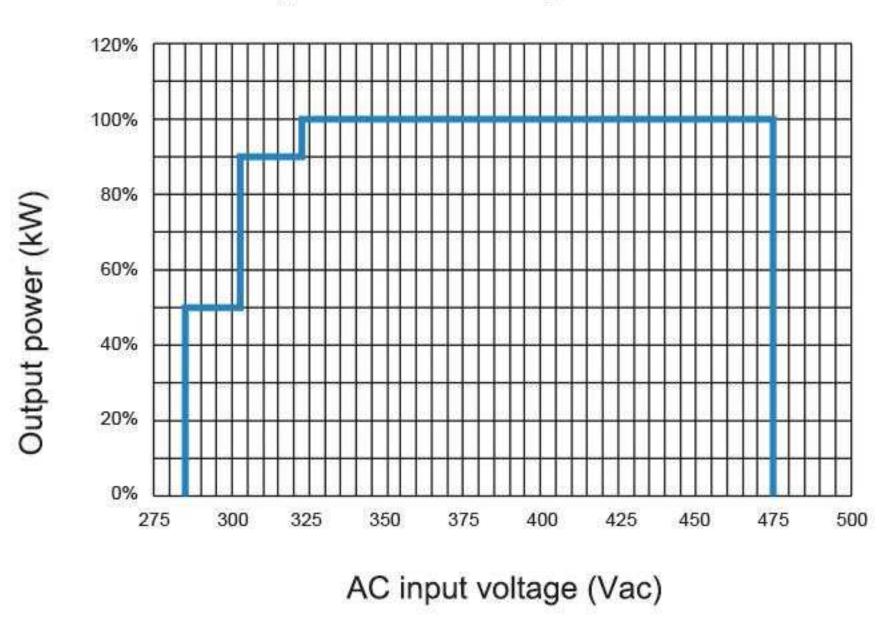
#### Output external characteristic curve



## Temperature limit power curve



AC input limited power curve



MODEL	MXR100020
Basic Indicators	
Size	84mm (H) ×218mm (W) ×459mm (D)
Weight	≤12kg
Efficiency (Full Load)	>95.5%
Standby Consumption	8.5W+/-0.5W
Cooling Method	Fan cooling
Communication	CAN bus
Number of Parallel	≤60
Indicator light	Green: normal operation Yellow: alarm Red: failure
AC Input Characteristics	
Input Voltage	$285$ Vac $\sim$ 475Vac,three-phase + PE
Input Current	<40A
Grid Frequency	45Hz~65Hz
Power Factor	≥0.95(4KW≤Output Power≤10KW); ≥0.98(10KW≤Output Power≤20KW)
ITHD	≤5%(10KW≤Output Power≤20KW)
DC Output Characteristics	
Voltage Range	50Vdc~1000Vdc
Current Range	$0$ A $\sim$ 67A Continuous adjustable
Rated Current	20A
Voltage Accuracy	≤±0.5 %(regulated state,input voltage 323Vac~456Vac,output voltage 200Vdc~1000Vdc, Ouput current 0~Rated Current value)
Current accuracy	≤±1% (steady current state,input voltage 323Vac~456Vac,output voltage 200Vdc~1000Vdc,output current 20% rated current~100% rated current value)
Current unbalance	≤±5 %
Ripple Factor (Peak to Peak)	≤1%(regulated state,input voltage 323~456Vac,output voltage 200Vdc~1000Vdc,output current 0~rated current)
Environment Conditions	
Operating Temperature	$-40~\degree C \sim +75~\degree C$ , derating should be used above 60 $\degree C$
Storage Temperature	-40°C ~+75°C
Relative humidity	≤95%RH, no condensation
Altitude	≤2000m without derating, >2000m, the working temperature decrease by 1°C for every 100 meters
MTBF	>500,000 hours
Alarm and Protection	
Input overvoltage/undervoltage protection	Automatic recovery after shutdown
Output overvoltage protection	Manual recovery after shutdown
Over current and short circuit protection	Manual recovery after shutdown
Over temperature protection	Automatic recovery after shutdown
Certification	

# MXR100200B

20KW@120V Low Voltage & High Current Charging Module



MXR100200B



#### **EXCELLENT ADVANTAGES**

Ultra-wide

Output voltage range 20v-120v

The ultra-wide output voltage range of MXR100200B can meet the charging requirements of low voltage.

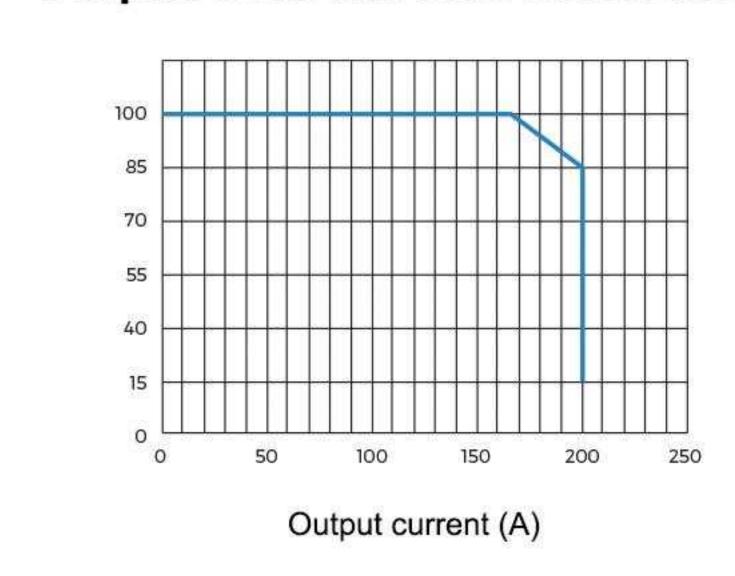
> Super charging current 200 A

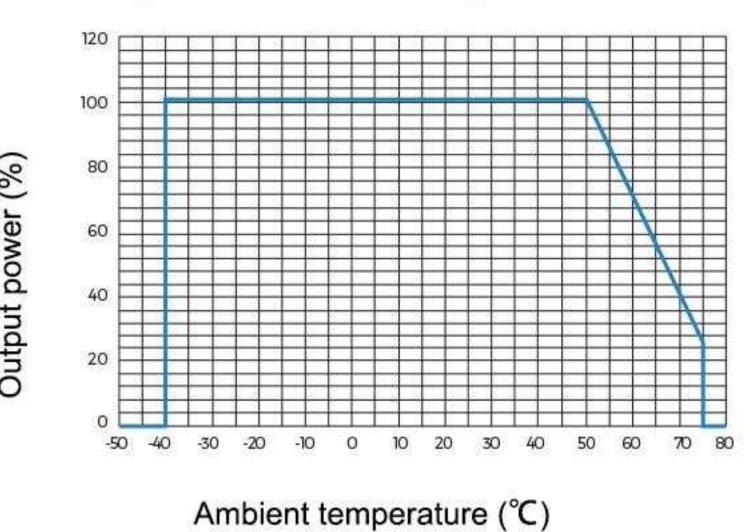
The super charging current of MXR100200B can greatly reduce the charging time.

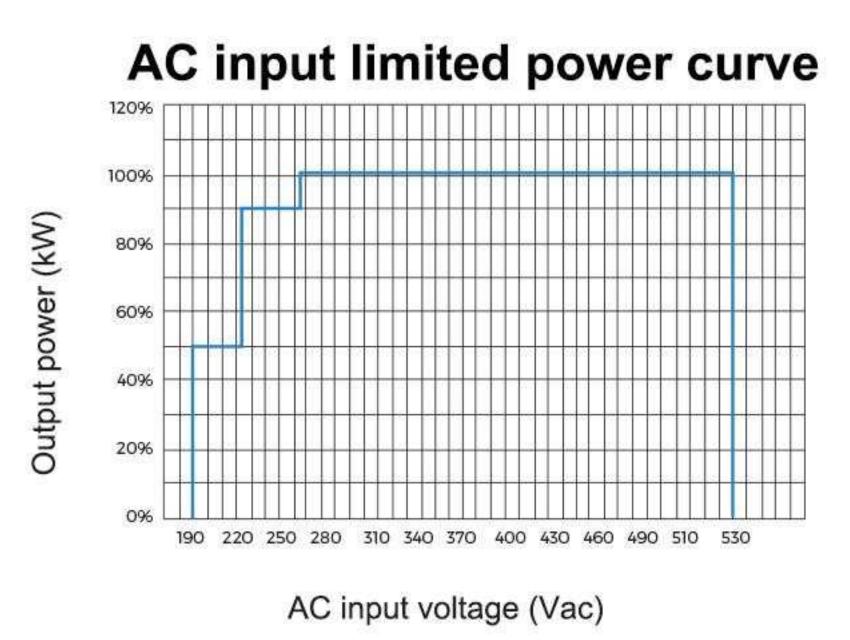
#### MAIN FEATURES

- ♦ Wide output voltage range, 20 ~ 120VDC, suitable for low-speed EVs.
- ♦ Wide operating temperature range at full power, -40°C~50°C;
- ♦ Full load efficiency is higher than 95%, high efficiency in the whole working range, and more energy saving;
- Ultra-low standby power consumption, the whole series of products are controlled within 8W;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- ♦ The module is built with residual pressure relief loop to reduce system cost and improve system reliability;

#### Output external characteristic curve Temperature limit power curve







MODEL	MXR100200B
Basic Indicators	
Dimensions	84mm(H)x218(W)x459(D)
Weight	≤12kg
Efficiency (full load)	>93.5%
Standby power consumption	8.5W ±0.5W
Cooling method	Fan cooling
Communication mode	CAN bus
Number of parallel machines	≤ 60
Indicator light	Green: normal operation Yellow: alarm Red: failure
AC Input Characteristics	
Input voltage	190Vac ~530Vac, three phase + PE
Input current	< 40A
Input frequency	45Hz ~65Hz
Power factor	≥ 0.99 @50% ~100% full load output power
ITHD	≤ 5% @50%~100% full load output power
DC Output Characteristics	
Voltage range	20Vdc - 120Vdc
Current range	0A ~200A(continuously adjustable)
Rated current	200A
Voltage stabilized accuracy	≤ ±0.5%
Current stabilized accuracy	≤±1% (Output load 20%~100% rated range)
Current sharing imbalance for modules in parallel	≤ ±5%
Ripple factor(peak to peak)	≤1%
Environmental Conditions	
Operating temperature	-40°C~ + 75°C, Output derating above 50°C
Storage temperature	-40°C ~ + 75°C
Relative humidity	≤ 95% RH, Non-condensing
The altitude	No derating below 1000m, When the altitude is above 1000m, the operating temperature decreases by 1°C for each additional 100m
MTBF	>500,000 hours
Alarm and Protection	
Input overvoltage/undervoltage protection	Automatic recovery after shutdown
Output overvoltage protection	Manual recovery after shutdown
Over current and short circuit protection	Manual recovery after shutdown
Over temperature protection	Automatic recovery after shutdown
Certification	
cTUVus	<i>Test specification:</i> UL 1564: 2015 R8.17; CSA C22.2 No. 107.2

20KW@100V Low Voltage & High Current Charging Power Module



MXR100200



#### **EXCELLENT ADVANTAGES**

Ultra-wide
Output voltage range 40v-100v

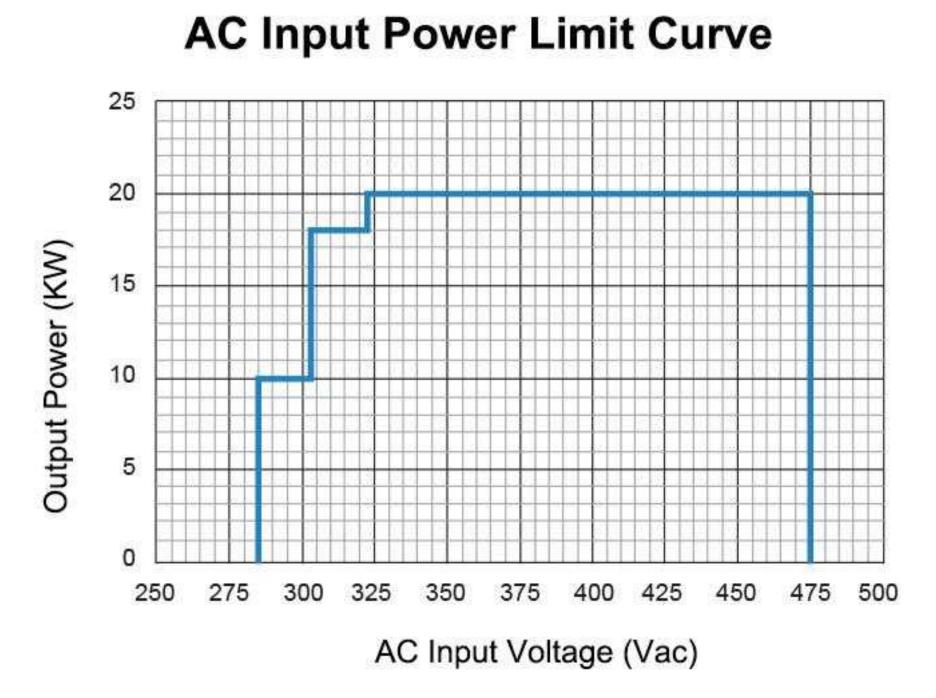
The ultra-wide output voltage range of MXR100200 can meet the charging requirements of low voltage.

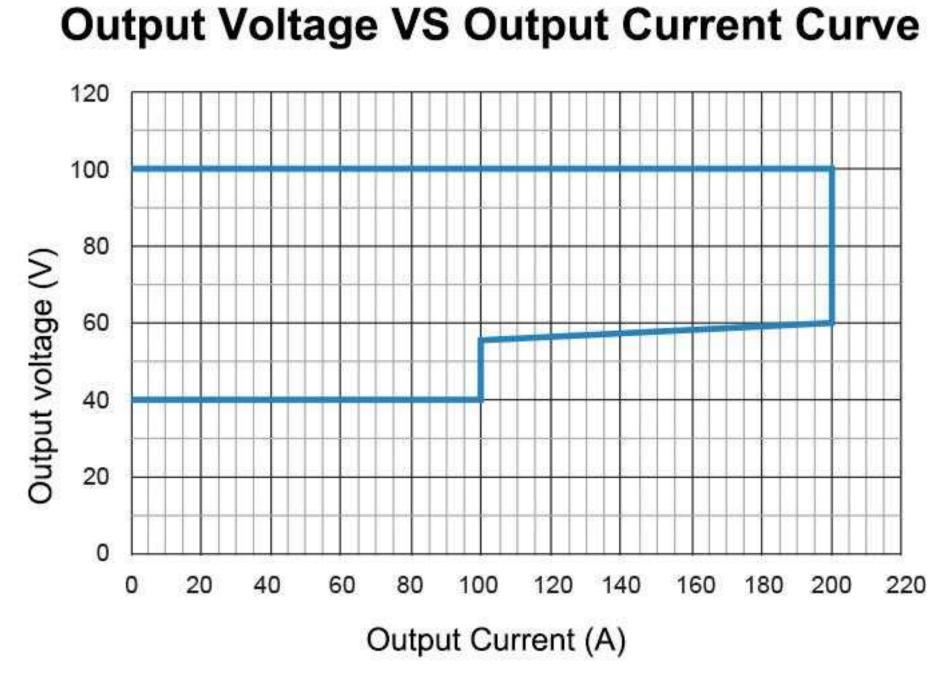
Super charging current 200 A

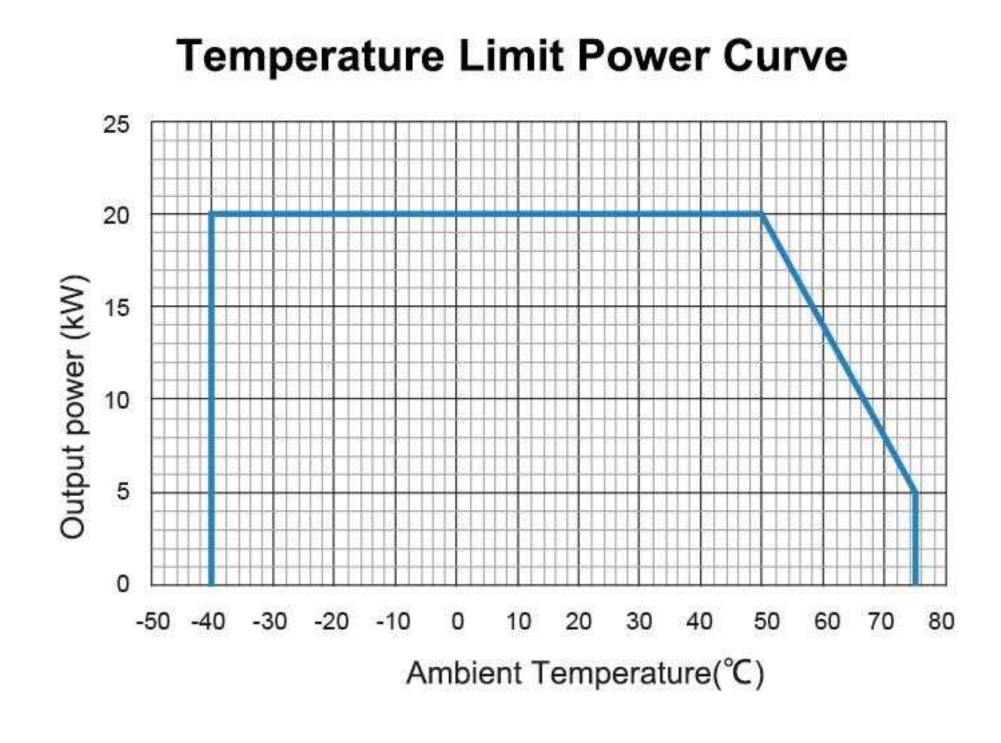
The super charging current of MXR100200 can
greatly reduce the charging time.

#### MAIN FEATURES

- Wide output voltage range, 40 ~ 100VDC, suitable for low-speed EVs.
- ♦ Wide operating temperature range at full power, -40°C~50°C;
- Full load efficiency is higher than 95%, high efficiency in the whole working range, and more energy saving;
- Ultra-low standby power consumption, the whole series of products are controlled within 8W;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- The module is built with residual pressure relief loop to reduce system cost and improve system reliability;







MODEL	MXR100200
Basic Indicators	
Size	84mm(H)×226mm(W)×395mm(D)
Weight	≤11kg
Efficiency	>95%
Standby Consumption	8.5W+/-0.5W
Cooling Method	Forced air cooling
Communication	CAN bus
Number of Parallel	≤60
Indicator Light	Green: Normal operation Yellow: Protection alarm Red: Fault alarm
Input Characteristics	
Input Voltage	285Vac~475Vac,three-phase + PE
Input Current	<40A
Grid Frequency	45Hz~65Hz
Power Factor	≥0.99 @50%~100% full load output power
ITHD	≤5 % @50%~100% full load output power
Output Characteristics	
Voltage Range	40Vdc~100Vdc
Current Range	0A~200A
Rated Current	200A
Voltage Accuracy	≤±0.5 %
Current Accuracy	≤±1% (Output load 20%~100% rated range)
Current Unbalance	≤±5%
Ripple Factor (Peak to Peak)	≤1%
Environmental Conditions	
Full Load Working Temperature	-40°C ~+75 °C, derating should be used above 50 °C
Storage Temperature	-40°C~+75°C
Relative Humidity	≤95%RH, no condensation
Altitude	≤ 1000m without derating, >1000m , the working temperature decrease by 1°C for every 100 meters
MTBF	>500,000 hours
Other	
Safety Requirements	Meet the general technical specifications for off-board DC chargers for electric vehicles, NB/T 33001-2018, NB/T 33008.1-201

# MXF100200

20KW@100V Low Voltage & High Current Charging Power Module



MXF100200



#### **EXCELLENT ADVANTAGES**

> Ultra-wide

Output voltage range 50v-100v

The ultra-wide output voltage range of MXF100200 can meet the charging requirements of low voltage.

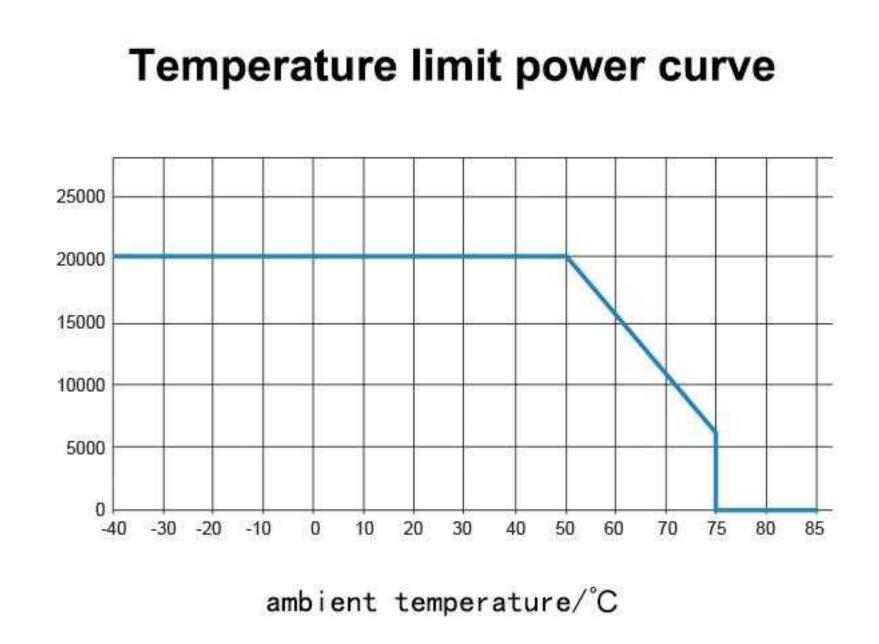
Super charging current 200A

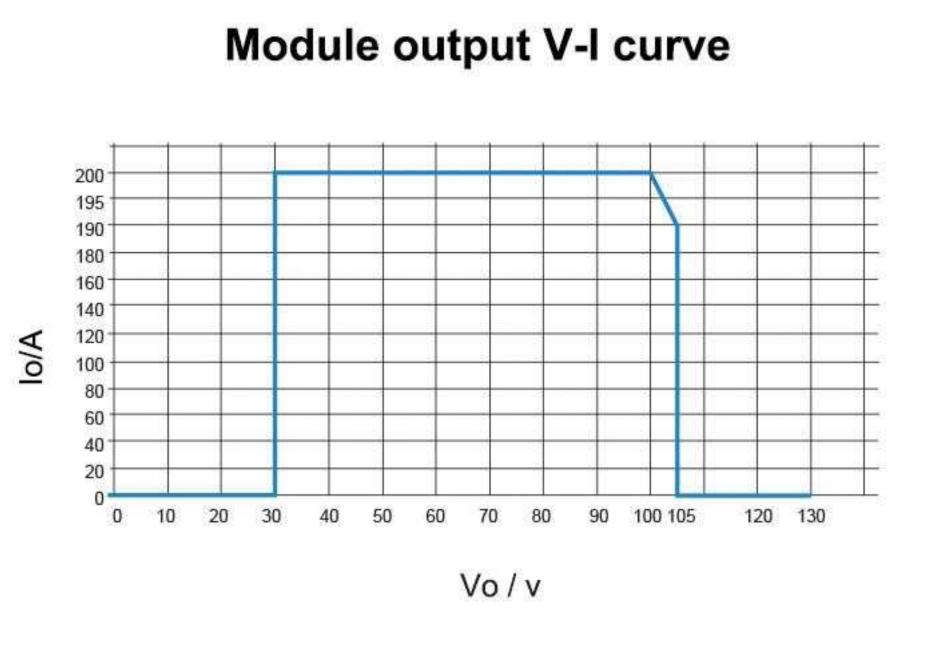
The super charging current of MXF100200 can greatly reduce the charing time.

#### MAIN FEATURES

- Wide output voltage range, 50-100VDC, suitable for low-voltage of EVs.
- ♦ Wide operating temperature range at full power, -40°C~50°C.
- Full load efficiency is higher than 92%, high efficiency in the whole the working range, and more power saving.
- ♦ Ultra-low noise, enhance user charging experience.
- The current in the low-voltage area does not shrink, and the charging speed is faster.
- The module is built with residual pressure relief loop to reduce system cost and improve system reliability.

# 25000 20000 15000 323Vac 10000 5000 520 540 Vin/Vac





MODEL	MXF100200
Basic Indicators	
Size	248mm(W) × 85mm(H) × 395mm(D)
Weight	≤9.0 kg
AC Input	
Rated input voltage	380Vac/50Hz (three-phase four-wire system, without neutral wire)
Input voltage range	Full load rated working voltage range: 323Vac~437Vac Working voltage range: 285~530Vac 285~322Vac half-load output 323Vac~530Vac full load output
Input current	< 35A
Input protection	Safety protection; lightning protection circuit
DC output	
Rated output power	20kw
Rated output voltage	100Vdc
Rated output current	200 A
DC output voltage range	50-100Vdc
Current limit adjustable range	10-105% stepless adjustable
Peak to peak noise	≤1.05V
Voltage stabilized accuracy	≤±0.5%
Current stabilized accuracy	≤±1%
Efficiency (full load)	≥92%
Environment Conditions	
Working temperature	-40°C~+45°C, derating output at 50°C~75°C
Storage temperature	-40°C~+75°C
Relative humidity	≤95%RH, non condensing
Altitude	Full load output below 2000m
Product safety and realiability	
	The input can withstand 3535 VDC withstand voltage for 1 minute to the shel
Dielectric strength	Input to output can withstand 4242VDC withstand voltage for 1 minute
MTBF	>100000 hours
Communication and alarm	
Communication interface	CAN
Output reverse connection fuse failure isolation p	protection
Alarms and status are monitored via the CAN co	mmunication port, and three panel LED indications

20KW@200V Low Voltage & High Current Charging Module



MXR200150



#### **EXCELLENT ADVANTAGES**

➤ Ultra-wide Output voltage range 20v-200v

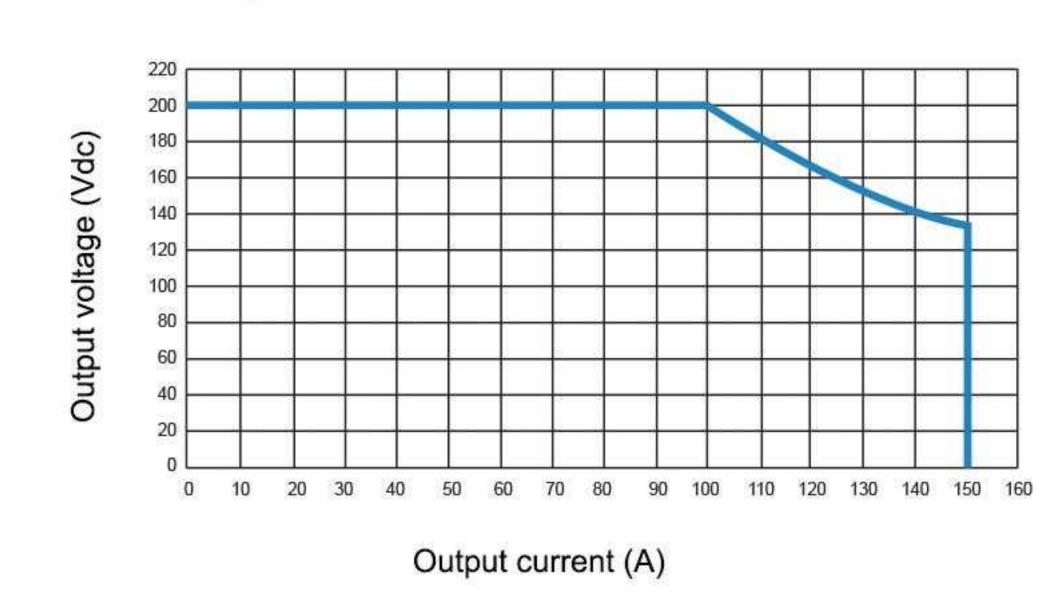
The ultra-wide output voltage range of MXR200150 can meet the charging requirements of low voltage.

> Super charging current 150 A The super charging current of MXR200150 can greatly reduce the charging time.

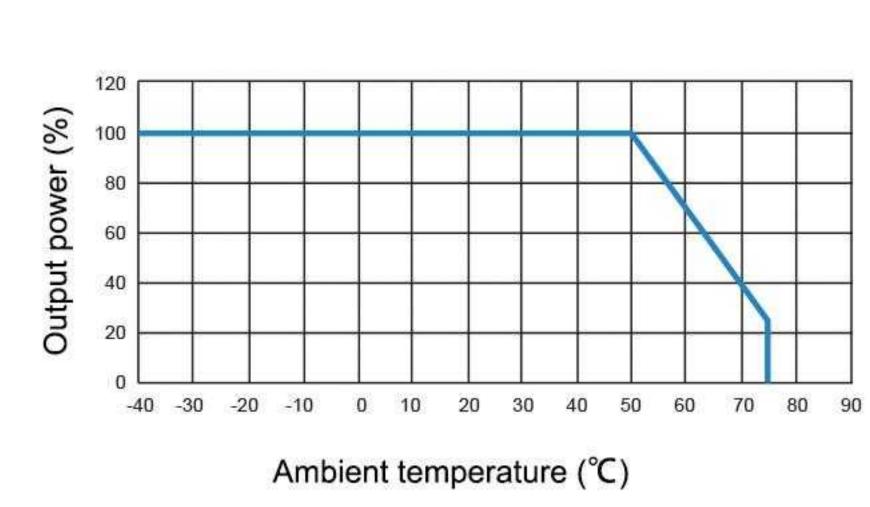
#### MAIN FEATURES

- ♦ Wide output voltage range, 20 ~ 200VDC, suitable for low-speed EVs.
- ♦ Wide operating temperature range at full power, -40°C~50°C;
- ♦ Full load efficiency is higher than 95%, high efficiency in the whole working range, and more energy saving;
- Ultra-low standby power consumption, the whole series of products are controlled within 8W;
- ♦ The current in the low-voltage area does not shrink, and the charging speed is faster;
- ♦ The module is built with residual pressure relief loop to reduce system cost and improve system reliability;

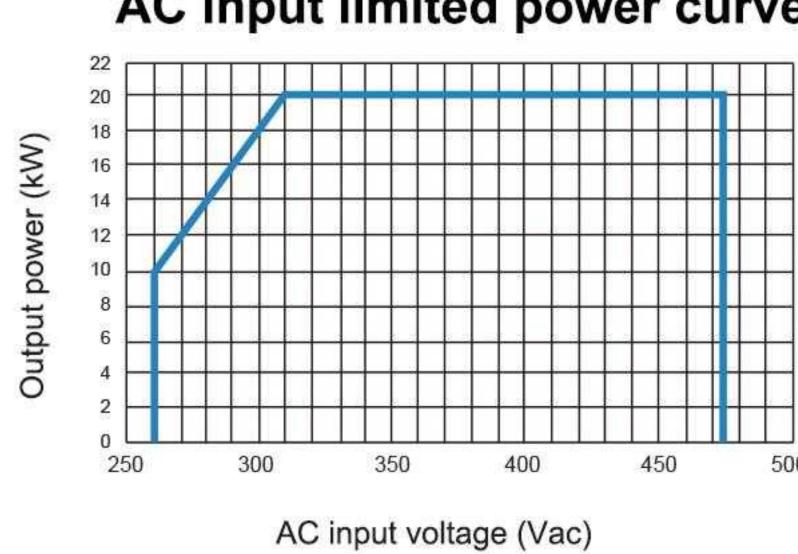
#### Output external characteristic curve



### Temperature limit power curve



AC input limited power curve



MODEL	MXR200150
Basic Indicators	
Dimensions	84mm(H)×226mm(W)×395mm(D)
Weight	≤11kg
Efficiency (full load)	>95%
Standby power consumption	< 8W
Cooling method	Fan cooling
Communication mode	CAN bus
Number of parallel machines	≤ 60
Indicator light	Green: normal operation Yellow: alarm Red: failure
AC Input Characteristics	
Input voltage	260Vac ~ 475Vac, three phase + PE
Input current	< 40A
Input frequency	45Hz ~65Hz
Power factor	≥ 0.99
ITHD	≤ 5%
DC Output Characteristics	
Output power	20kW@ output voltage ≥ 134Vdc
Voltage range	20Vdc ~ 200Vdc, default value: 100Vdc
Current range	OA ~150A
Voltage stabilized accuracy	≤ ±0.5%
Current stabilized accuracy	≤±1%
Current sharing imbalance for modules in parallel	≤ ±5%
Ripple factor(peak to peak)	≤1%
Environmental Conditions	
Operating temperature	-40°C~ + 75°C, Output derating above 50°C
Storage temperature	-40°C ~ + 75°C
Relative humidity	≤ 95% RH, Non-condensing
The altitude	No derating below 2000m, When the altitude is above 2000m, the operating temperature decreases by 1°C for each additional 100m
MTBF	>500,000 hours
Alarm and Protection	
Input overvoltage/undervoltage protection	Automatic recovery after shutdown
Output overvoltage protection	Manual recovery after shutdown
Over current and short circuit protection	Manual recovery after shutdown
Over temperature protection	Automatic recovery after shutdown
Certification	160
Reliability and safety	Compliant with CE
AND AND CONTRACT OF A STANDARD AND AND AND AND AND AND AND AND AND AN	

# MXR100040-DC

40KW@1000V DC-DC Charging Module



MXR100040-DC



#### **EXCELLENT ADVANTAGES**

#### > Ultra-high

Full-load operating temperature 50°C MXR100040-DC can output full power at 50°C, Effectively ensuring the charging speed in high temperature environment.

#### ➤ Ultra-wide

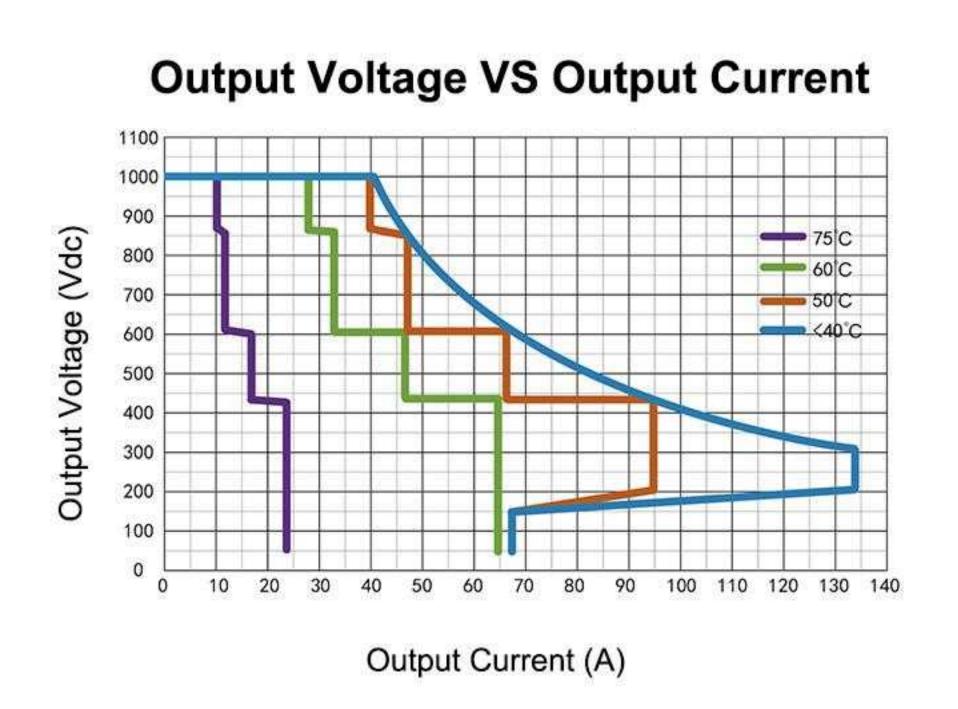
Output constant power range 500Vdc-850Vdc

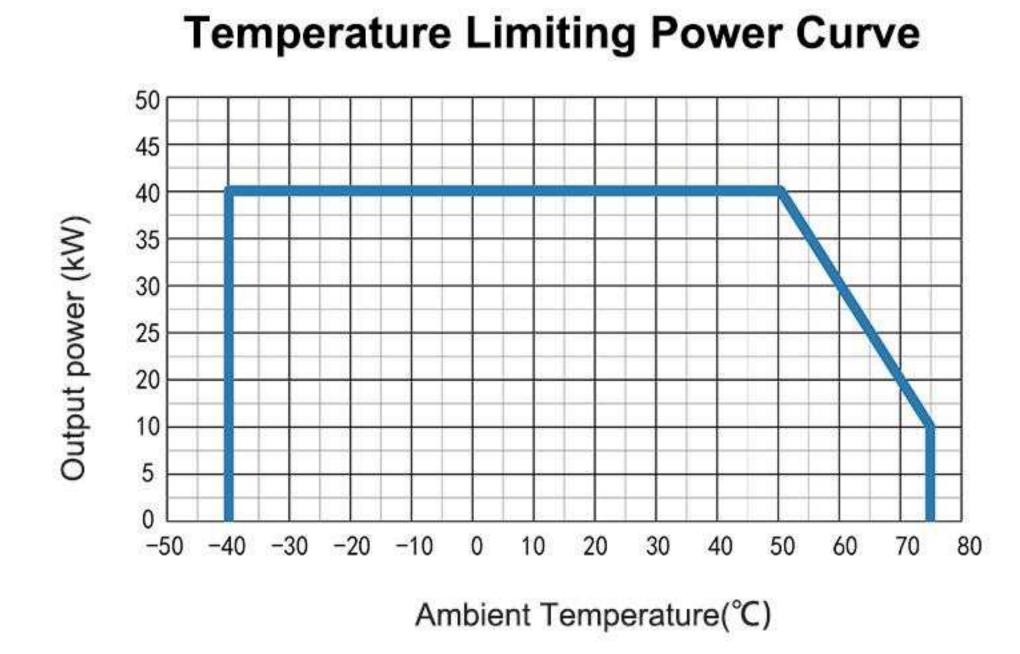
MXR100040-DC's ultra-wide output voltage range and Ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

#### MAIN FEATURES

- Ultra-wide output voltage range, 50-1000VDC, suitable for a wide range of EVs;
- ♦ Wide operating temperature range at -40°C~+75°C;
- Full load efficiency is higher than 97.5%, high efficiency in the whole working range, and more power saving;
- Ultra-low noise, enhance user charging experience;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- The module is built with residual voltage relief circuit to reduce system cost and improve system reliability.

# Input Voltage Limit Power Curve





MODEL	MXR100040-DC
Basic Indicators	
Dimensions	85mm(H)×360mm(W)×459mm(D)
Weight	≤20kg
Efficiency(full load)	>97.5%
Cooling Mode	Fan cooling
Communication Method	CAN bus
Parallel Module Quantity	≤60pcs
Indicator	Green: normal operation Yellow: alarm Red: fault LED digital tube
Input Characteristics	
Input Voltage	400Vdc~850Vdc, DC + PE
Input Current	<90A
Constant Power Input Voltage	500Vdc-850Vdc
Output Characteristic	
Voltage Range	50Vdc~1000Vdc
Current Range	0A~133.3 A (continuously regulated)
Rated Current	40A
Voltage stabilized accuracy	≤±0.5%(100V-1000V, 0~20MHz)
Current stabilized accuracy	≤±1% (output current 20% rated current~100% rated current value)
Current Sharing Imbalance	≤±3%
Ripple Peak to Peak	≤1%
Environmental Specifications	
Operating Temperatue	-40°C ~+75°C , output derating above 50°C
Storage Temperature	-40°C ~+75°C
Relative Humidity	≤95%RH, Non-condensing
Altitude	No derating below 2000m, When the altitude is above 1000m, it needs to set the actual altitude value,the working temperature decreases by 1°C for each additional 100 m
MTBF	>500,000 hours
ROHS	R6

# MXR100030-DC

30KW@1000V DC-DC Charging Module





#### **EXCELLENT ADVANTAGES**

Ultra-high

Full-load operating temperature 55°C MXR100030-DC can output fullpower at 55°C, effectively ensuring the charging speed in high temperature environment.

➤ Ultra-wide

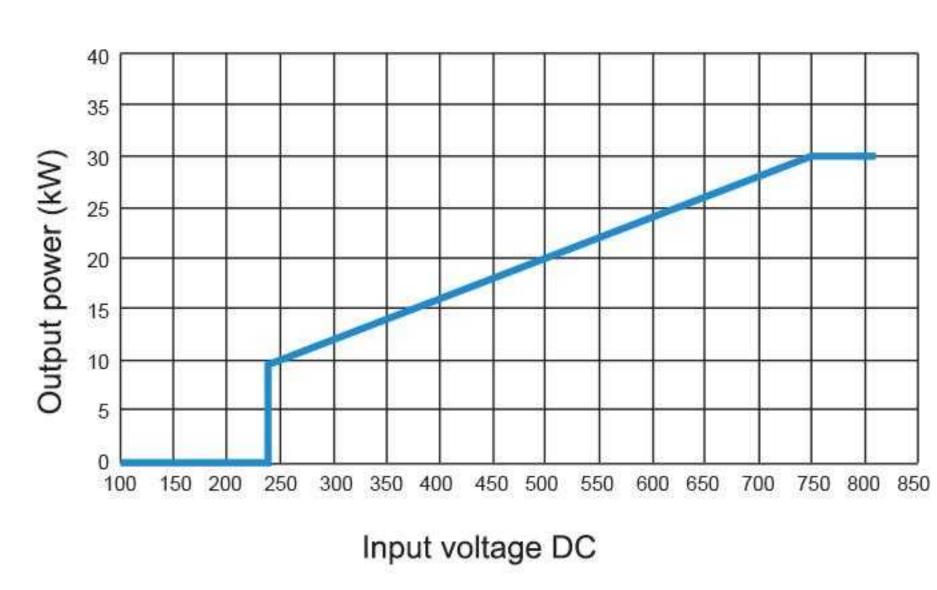
Output constant power range 100v-1000v

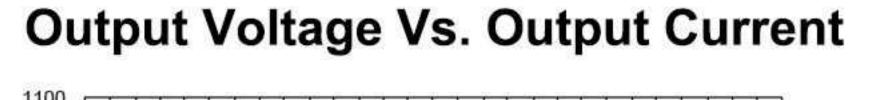
MXR100030-DC's ultra-wide output voltage range and Ultra-high output power are suitable for charging various electric vehicles and greatly improve the charging speed.

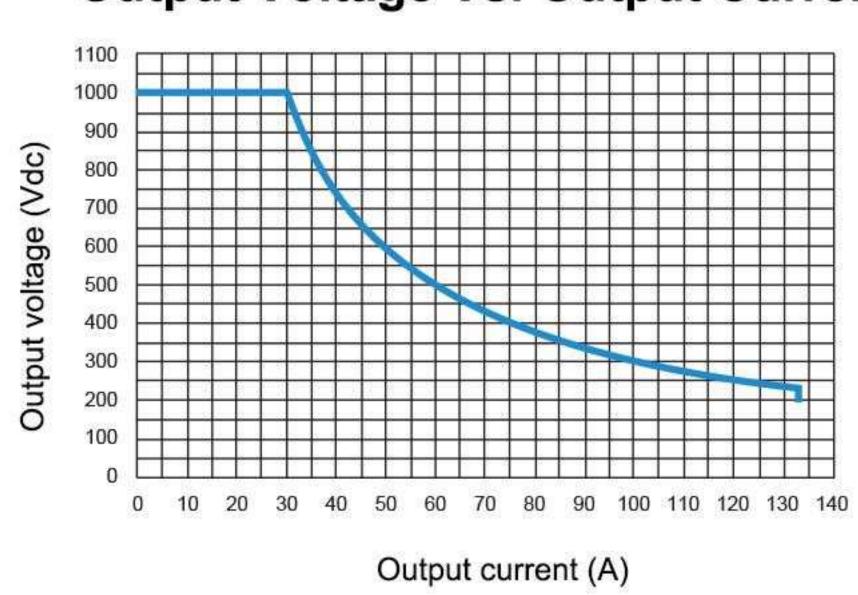
#### MAIN FEATURES

- ♦ Ultra-wide output voltage range, 100 ~ 1000VDC, suitable for a wide range of EVs.
- ♦ Ultra-high output power, in 300V~1000V output voltage, 30kW constant power output;
- ♦ Wide operating temperature range at full power, -40°C~75°C;
- ♦ Full load efficiency is higher than 95.5%, high efficiency in the whole the working range, and more power saving;
- Ultra-low noise, enhance user charging experience;
- The current in the low-voltage area does not shrink, and the charging speed is faster;
- ♦ The module is built with residual pressure relief loop to reduce system cost and improve system reliability.

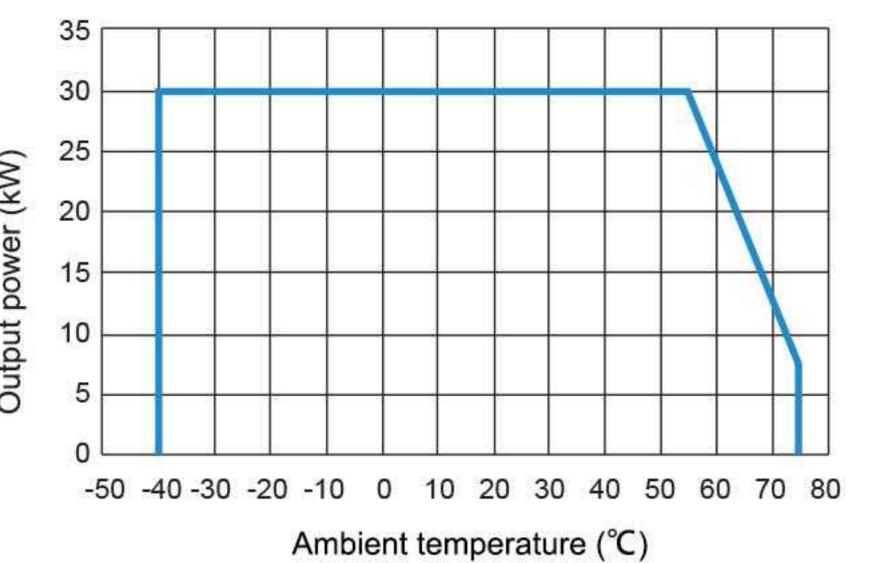
## DC Input Power Limiting Curve







**Temperature Derating Curve** 



MODEL	MXR100030-DC	
Basic Indicators		
Dimensions	85mm(H) ×360mm(W) ×459mm(D)	
Weight	≤20kg	
Efficiency(full load)	>95.5%	
Standby Power Consumption	13W+/-0.5W	
Cooling Mode	Forced air cooling	
Communications Bus Protocol	CAN bus	
No.of Parallel modules	≤60pcs	
Indicator Light	Green: normal operation Yellow: alarm Red: fault	
DC Input Characteristics		
Input Voltage	240Vdc~810Vdc, DC + PE	
Input Current	<80A	
ITHD	≤5% (20KW≤ Output power≤30KW)	
DC Output Characteristic		
Voltage Range	100Vdc~1000Vdc	
Current Range	0 A~13 3 . 3 A ( continuously adjustable)	
Rated Current	40A	
Steady voltage	≤±0.5%(voltage stabilization status, input voltage 323Vac~456Vac, output voltage 200Vdc~ 1000Vdc, output current 0~rated current).	
Current precision	≤±1%(voltage stabilization status, input voltage 323Vac~456Vac, output voltage 200Vdc~1000Vdc, output current 20% rated current).	
Current Sharing Imbalance	≤±3%	
Ripple Voltage Peak Value Coefficient	≤ 1% (voltage stabilization status, input voltage 323Vac~456Vac, output voltage 200Vdc~ 1000Vdc, output current 0~rated current).	
Environmental Conditions		
Operating Temperature	-40°C∼+75°C, output derating above 55°C	
Storage Temperature	-40°C~+75°C	
Relative Humidity	≤ 95% RH, non-condensing	
Altitude	No derating below 2000m, When the altitude is above 2000 m, the operating temperature decreases by 1°C for each additional 100 m.	
MTBF	>500,000 hours	

# MXC95050B

20 KW Bidirectional DC-DC Power Module



MXC95050B



#### **EXCELLENT ADVANTAGES**

#### > Ultra-high

Full-load operating temperature 55°C

MXC95050B can output fullpower at 55°C, effectively Ensuring the charging speed in high temperature environment.

#### > Ultra-wide

### Input power range 200-950Vdc

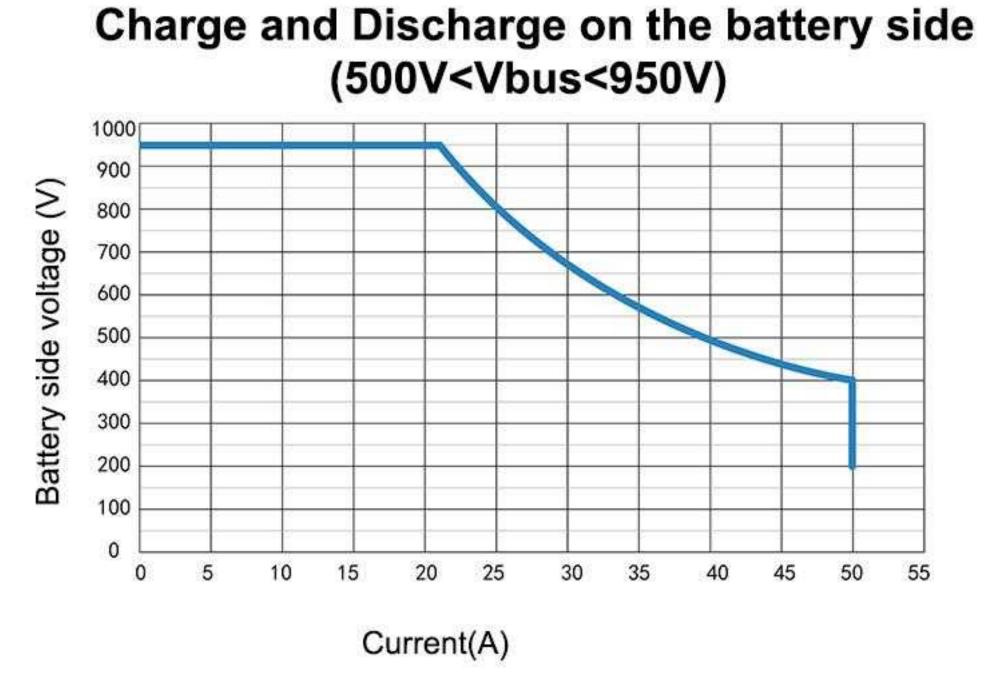
Ultra-wide DC input voltage range of MXC95050B Can be applied to different voltage levels of battery packs to charge electric vehicles.

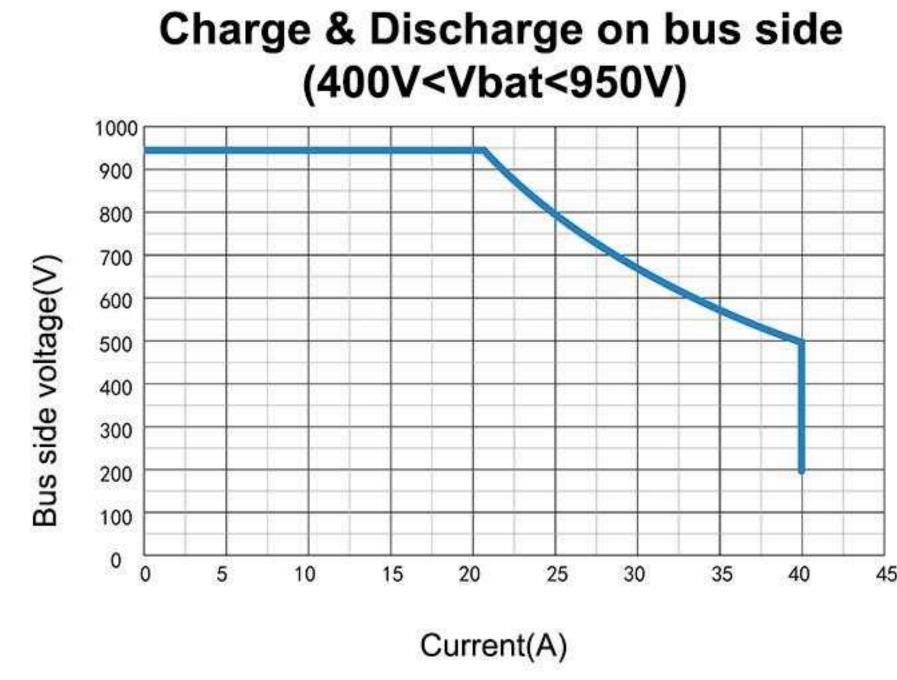
#### Output voltage range 200Vdc-950Vdc

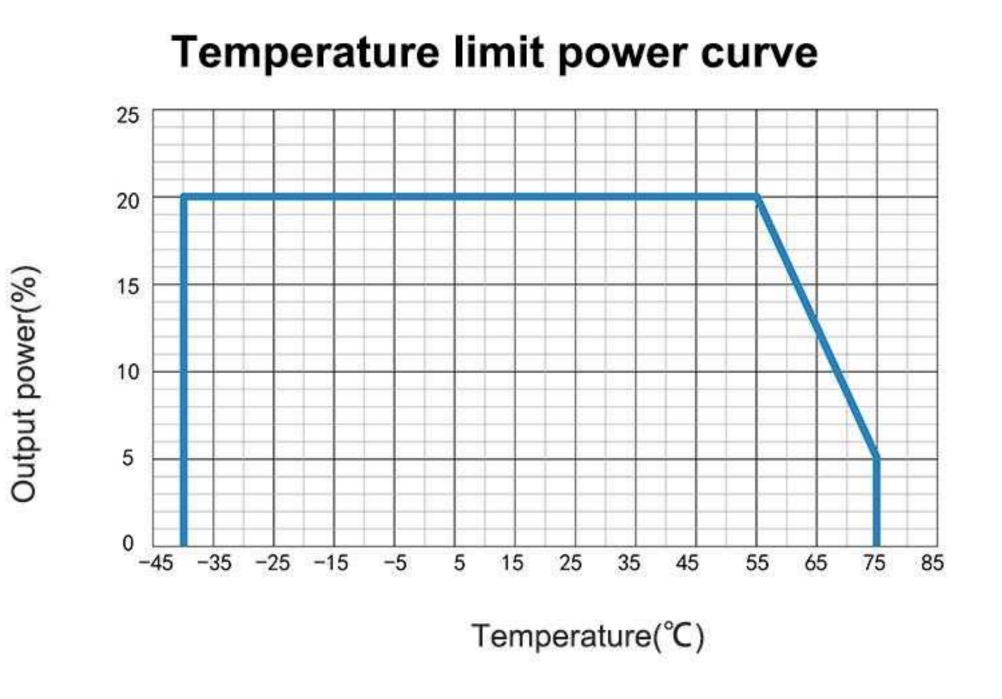
The ultra-wide output voltage range of MXC95050B can be applied to various electric vehicle charging.

#### MAIN FEATURES

- Suitable for new integrated solutions for optical stroage and charging.
- Wide intput voltage range, 200-950VDC.
- Wide output voltage range, 200-950Vdc, suitable for a wide range of EVs.
- ♦ Wide operating temperature range at -40°C~+75°C.
- ♦ Full load efficiency is higher than 98.5%, high efficiency
- ♦ Throughout the working range, and more power saving.
- ♦ Ultra-low noise, enhance user charging experience.
- The current in the low-voltage area does not shrink, and the charging speed is faster.
- The module is built with residual voltage relief circuit to reduce system cost and improve system reliability.







MODEL	MXC95050B	
Basic Indicators		
Dimensions	85mm(H)×226mm(W)×376mm(D)	
Weight	≤9.5kg	
Efficiency(full load)	>98.5%	
Cooling Mode	Forced air cooling	
Communication Bus Protocol	CAN Bus	
No. of Parallel Modules	≤60 pcs	
Indicator	Green: normal operation Yellow: protection alarm Red: fault	
DC Bus Side		
Voltage Range	200Vdc~950Vdc	
Current Range	0A~40A	
Stabilized Voltage Precision	≤±0.5%	
Stabilized Current Precision	≤±1%(output current 20%~100% rated current)	
Ripple Voltage Peak Value	≤1%	
Current Sharing Imbalance	≤±5%	
Battery Side		
Voltage Range	200Vdc~950Vdc	
Current Range	0A~50A	
Stabilized voltage Precision	≤±0.5%	
Stabilized Current Precision	≤±1%(output current 20%~100% rated current)	
Ripple Voltage Peak Value	≤1%	
Current Sharing Imbalance	≤±5%	
Environmental Specifications		
Operating Temperature	-40°C ~75°C , output derating at above 55°C	
Storage Temperature	-40°C ~75°C	
Relative Humidity	≤95% RH, non-condensing	
Altitude	No derating below 2000m. When the altitude is above1000m, the operating temperature decreases by 1°C for each additional 100 m.	
MTBF	>500,000 hours	
ROHS	R6	

# MXR10030L

30 KW@1000V High Protective DC Charging Module



MXR100030L



#### **EXCELLENT ADVANTAGES**

- Wide input & output voltage range Suitable for most occasions with different input and output voltages.
- Wide operating temperature range Wide operating temperature range meets most harsh working environments

#### MAIN FEATURES

#### ♦ High efficiency

Reduce energy consumption, meet the requirements of energy saving and emission reduction, save electricity for customers.

High power density

Save customer space and reduce system costs.

#### ♦ DSP digital control

Fewer devices, higher environmental stability, higher reliability, and easier expansion.

#### Low input harmonics

Reduce the pollution to the power grid and improve the adaptability of the power grid.

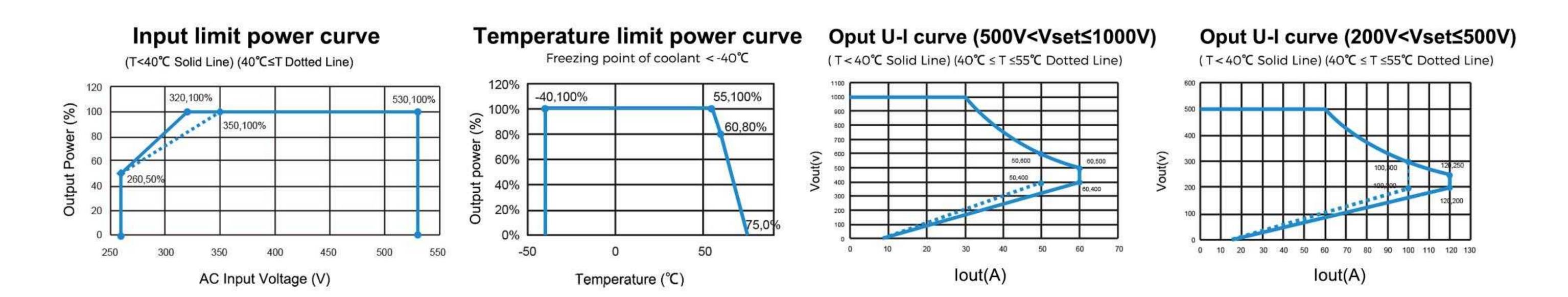
#### ♦ Hot swap

Easy to use and reduce maintenance costs.

Built-in anti-reverse protection, with failure self-isolation function

Greatly improve system reliability.

Perfect fault self-detection prompt Abundant fault detection, convenient for customer maintenance.



TEM	Parameter index	
AODEL CONTRACTOR CONTR	MXR100030L	MXR75040L
Dimensions and module type		
imensions	370mm (Width) × 73mm (Height) × 520mm (Depth)	
rotection level	IP50	
1odule net weight	≤27kg	
ated output power	30kW	
onstant power voltage range	250~1000V@30KW	300V~750V@30KW
ooling method	Liquid cooling	Liquid cooling
ated output current	110A	91A
1ax output current	120A	100A
output voltage range	200~1000VDC	200~750VDC
urrent limit adjustable range	10~110% stepless	s adjustable
C output		
eak-to-peak noise	≤±0.5%	
oltage stabilized accuracy	≤±0.5%	
urrent stabilized accuracy	≤±1%	
urrent sharing	≤±5%	
ffectiveness	≥94.5%	
C input		
ated input voltage	Three-phase 380Vac/480Vac	
nput voltage range	530Vac~320Vac (full load); 320Vac~260Vac (linearly reduced to half load)	
nput current	<63A	
requency	45Hz~65Hz	
ower factor PF	≥0.99	
urrent distortion THD	≤5%	
nput protection	Insurance; lightning p	protection circuit
Vorking environment conditions		
Vorking temperature	-40°C~55°C normal operation;	
torago tomporaturo	Derating output at 55°C~75°C; shutdown above 75°C	
torage temperature elative humidity	-40°C~75°C	
	0~95% ≤2000m	
Ititude Product safety and reliability	≥2000	
Dielectric strength	Input to shell, output to shell, input to output, input to communication: DC 3500V, 1min	
	Communication to the shell: DC 1400V, 1min	
1TBF	>120000 hours	
Communication and alarm		
ommunication interface	CAN	
1aximum number of parallel modules	60 pcs	
Vaterway requirements		
coolant	Recommended use: Ethylene glycol + water (Ethylene glycol accounts for 52.7% by volume, freezing point ≤ -40°C)	
low	9-12L/min	
he flow channel bears the maximum pressure	0.5Mpa	