



DS series

# 90kW / 120kW / 150kW / 180kW Free Standing DC Fast Charger

- Optional non-Liquid-cooled 500A charging connector\*
- Simultaneous 2 DC charging
- Multi-standard: CCS, CHAdeMO and GB/T
- Network or standalone operation
- User authentication
- Optional cable management accessories
- Supports smart charging and load balancing
- Efficiency > 94%;PF > 0.99(APFC)
- 7-inch LCD screen with user friendly interface
- OCPP 1.6 JSON
- IK10/NEMA 3R(Not including screen and RFID module), IP55
- Customization available
- Eichrecht compliant: Q3/ 2021 using LEM mater, Eichrecht certification TBD starting Q4/ 2021

\* 300A to 500A duty cycle is following charging connector's instruction

## Applications

- Parking garage
- Commercial fleet operators
- EV infrastructure operators and service providers
- EV dealer workshops





### Cable Management

Please refer to accessory section.



Model Name	CE, DS 90 Series	UL, DS 90 Series
Safety	CE/CB (Europe)	NRTL – cETLus (USA/Canada )
Picture		

### Power Specification

AC Input	Input Rating	3Φ_380~415Vac (±15%)	3Φ_480Vac (+10%, -15%)
	AC Input Connection	3P+N+PE (Wye configuration), TN/TT/IT	3P+N+PE (Wye configuration), TN/TT
	Max. Input Current	• DC System:3Φ175A	• DC System:3Φ139A
	Frequency	50Hz/60Hz	
	Power Factor	>0.99	
	Efficiency	>94%,at optimize V/I point	
DC Output	Output Voltage Range	<ul style="list-style-type: none"> <li>• CCS2:150~950Vdc</li> <li>• CHAdeMO:150~500Vdc</li> <li>• GBT: 150~750Vdc</li> </ul>	<ul style="list-style-type: none"> <li>• CCS1:150~950Vdc</li> <li>• CHAdeMO:150~500Vdc</li> </ul>
	Max. Output Current	<ul style="list-style-type: none"> <li>• CHAdeMO:120A@500V</li> <li>• CCS2:200A@450V</li> <li>• GBT:250A@360V</li> </ul>	<ul style="list-style-type: none"> <li>• CHAdeMO:120A@500V</li> <li>• CCS1:200A@450V</li> </ul>
	Max. Output Power	• DC System:90kW	• DC System:90kW
	Voltage Accuracy	±2%	
	Current Accuracy	±2%	

### User Interface & Control

Display	7" TFT-LCD
Push Buttons	Operation button/Emergency stop button
User Authentication	RFID: support ISO 14443A/B, ISO 15693, FeliCa Lite-S (RCS966) OCPP, 2D barcode, APP, Mobile payment

### Communication

External	Ethernet,Wi-Fi,and 4G
Internal	CAN bus/RS485

### Environmental

Operating Temperature	-30°C~50°C, will derating from 50°C and above	
Humidity	5%~95% RH, non-condensing	
Altitude	≤ 2000m	
IP/IK Level	<ul style="list-style-type: none"> <li>• IP55</li> <li>• IK10 (not including screen and RFID module)</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA 3R</li> <li>• IK10 (not including screen and RFID module)</li> </ul>
Cooling Method	Fan cooling	

### Mechanical

Cabinet Dimension(W x D x H)	800 x 650 x 1900mm ±1%	
Weight	≤ 390kg ±1%	
Cable Length	4m	4m

### Protection

Input Protection	OVP, OCP, OPP, OTP, UVP, RCD, SPD	OVP, OCP, OPP, OTP, UVP, SPD
Output Protection	OCP,SCP,OVP, LVP, OTP, IMD	

### Regulation

Certificate	IEC 61851-1, IEC 61851-23, IEC 61851-21-2	UL 2202, UL2231
Charging Interface	CHAdeMO V1.2, DIN 70121, ISO15118, GB/T 27930	

CE, DS 120 Series

UL, DS 120 Series

CE/CB (Europe)

NRTL – cETLus (USA/Canada)


 $3\Phi_{380\sim 415\text{Vac}} (\pm 15\%)$ 
 $3\Phi_{480\text{Vac}} (+10\%, -15\%)$ 

3P+N+PE (Wye configuration), TN/TT/IT

3P+N+PE (Wye configuration), TN/TT

- DC System:  $3\Phi 230\text{A}$

- DC System:  $3\Phi 170\text{A}$

50Hz/60Hz

 $>0.99$ 
 $>94\%$ , at optimize V/I point

- CCS2:  $150\sim 950\text{Vdc}$
- CHAdeMO:  $150\sim 500\text{Vdc}$
- GBT:  $150\sim 750\text{Vdc}$

- CCS1:  $150\sim 950\text{Vdc}$
- CHAdeMO:  $150\sim 500\text{Vdc}$

- CHAdeMO:  $120\text{A}@500\text{V}$
- CCS2:  $200\text{A}@600\text{V}$ , optional 300A
- GBT:  $250\text{A}@480\text{V}$

- CHAdeMO:  $120\text{A}@500\text{V}$
- CCS1:  $200\text{A}@600\text{V}$ , optional 300A

- DC System:  $120\text{kW}$

- DC System:  $120\text{kW}$

 $\pm 2\%$ 
 $\pm 2\%$ 

7" TFT-LCD

Operation button/Emergency stop button

 RFID: support ISO 14443A/B, ISO 15693, FeliCa Lite-S (RCS966)  
 OCPP, 2D barcode, APP, Mobile payment

Ethernet, Wi-Fi, and 4G

CAN bus/RS485

 $-30^{\circ}\text{C}\sim 50^{\circ}\text{C}$ , will derating from  $50^{\circ}\text{C}$  and above

 $5\%\sim 95\%$  RH, non-condensing

 $\leq 2000\text{m}$ 

- IP55
- IK10 (not including screen and RFID module)

- NEMA 3R/IK10
- (not including screen and RFID module)

Fan cooling

 $800 \times 650 \times 1900\text{mm} \pm 1\%$ 
 $\leq 420\text{kg} \pm 1\%$ 

4m

4m

OVP, OCP, OPP, OTP, UVP, RCD, SPD

OVP, OCP, OPP, OTP, UVP, SPD

OCP, SCP, OVP, LVP, OTP, IMD

IEC 61851-1, IEC 61851-23, IEC 61851-21-2

UL 2202, UL2231

CHAdeMO V1.2, DIN 70121, ISO15118, GB/T 27930

Model Name	CE, DS 150 Series	UL, DS 150 Series
Safety	CE/CB (Europe)	NRTL – cETLus (USA/Canada )
Picture		

### Power Specification

AC Input	Input Rating	3Φ_380~415Vac (±15%)	3Φ_480Vac (+10%, -15%)
	AC Input Connection	3P+N+PE (Wye configuration), TN/TT/IT	3P+N+PE (Wye configuration), TN/TT
	Max. Input Current	• DC System:3Φ288A	• DC System:3Φ215A
	Frequency	50Hz/60Hz	
	Power Factor	>0.99	
	Efficiency	>94%,at optimize V/I point	
DC Output	Output Voltage Range	<ul style="list-style-type: none"> <li>• CCS2:150~950Vdc</li> <li>• CHAdeMO:150~500Vdc</li> <li>• GBT:150~750Vdc</li> </ul>	<ul style="list-style-type: none"> <li>• CCS1:150~950Vdc</li> <li>• CHAdeMO:150~500Vdc</li> </ul>
	Max. Output Current	<ul style="list-style-type: none"> <li>• CHAdeMO:120A@500V</li> <li>• CCS2:200A@750V, optional 300A</li> <li>• GBT:250A@600V</li> </ul>	<ul style="list-style-type: none"> <li>• CHAdeMO:120A@500V</li> <li>• CCS1:200A@750V, optional 300A</li> </ul>
	Max. Output Power	• DC System:150kW	• DC System:150kW
	Voltage Accuracy	±2%	
	Current Accuracy	±2%	

### User Interface & Control

Display	7" TFT-LCD
Push Buttons	Operation button/Emergency stop button
User Authentication	RFID: support ISO 14443A/B, ISO 15693, FeliCa Lite-S (RCS966) OCPP, 2D barcode, APP, Mobile payment

### Communication

External	Ethernet,Wi-Fi,and 4G
Internal	CAN bus/RS485

### Environmental

Operating Temperature	-30°C~50°C, will derating from 50°C and above	
Humidity	5%~95% RH, non-condensing	
Altitude	≤ 2000m	
IP/IK Level	<ul style="list-style-type: none"> <li>• IP55</li> <li>• IK10 (not including screen and RFID module)</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA 3R</li> <li>• IK10 (not including screen and RFID module)</li> </ul>
Cooling Method	Fan cooling	

### Mechanical

Cabinet Dimension(W x D x H)	800 x 650 x 1900mm ±1%	
Weight	≤ 460kg ±1%	
Cable Length	4m	4m

### Protection

Input Protection	OVP, OCP, OPP, OTP, UVP, RCD, SPD	OVP, OCP, OPP, OTP, UVP, SPD
Output Protection	OCP, SCP, OVP, LVP, OTP, IMD	

### Regulation

Certificate	IEC 61851-1, IEC 61851-23, IEC 61851-21-2	UL 2202, UL2231
Charging Interface	CHAdeMO V1.2, DIN 70121, ISO15118, GB/T 27930	

CE, DS 180 Series

UL, DS 180 Series

CE/CB (Europe)

NRTL – cETLus (USA/Canada)



3Φ\_380~415Vac (±15%)

3Φ\_480Vac (+10%, -15%)

3P+N+PE (Wye configuration), TN/TT/IT

3P+N+PE (Wye configuration), TN/TT

• DC System:3Φ350A

• DC System:3Φ260A

50Hz/60Hz

>0.99

>94%,at optimize V/I point

• CCS2:150~950Vdc  
• CHAdeMO:150~500Vdc  
• GBT: 150~750Vdc

• CCS1:150~950Vdc  
• CHAdeMO:150~500Vdc

• CHAdeMO:120A@500V  
• CCS2:200A@900V, optional 300A  
• GBT:250A@720V

• CHAdeMO:120A@500V  
• CCS1:200A@900V, optional 300A

• DC System:180kW

• DC System:180kW

±2%

±2%

7" TFT-LCD

Operation button/Emergency stop button

RFID: support ISO 14443A/B, ISO 15693, FeliCa Lite-S (RCS966)  
OCPP, 2D barcode, APP, Mobile payment

Ethernet,Wi-Fi,and 4G

CAN bus/RS485

-30°C~50°C, will derating from 50°C and above

5%~95% RH, non-condensing

≤ 2000m

• IP55  
• IK10 (not including screen and RFID module)

• NEMA 3R  
• IK10 (not including screen and RFID module)

Fan cooling

800 x 650 x 1900mm ±1%

≤ 500kg ±1%

4m

4m

OVP, OCP, OPP, OTP, UVP, RCD, SPD

OVP, OCP, OPP, OTP, UVP, SPD

OCP, SCP, OVP, LVP, OTP, IMD

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