

Advanced Satellite Charging System

Technical Datasheet

C-station

Compact Charging Station



Charging Station

C-station inherits functionalities from both Satellites and CPU's. It's heavy duty electromechanical design comprises three type of modules for control, communication and power. Each cabinet utilizes 1 - 4 power modules that each has charging power up to 40 kW. Depending on the charging application, full CPU provides nominal power of 160 kW into one charging cable or selected level to multiple cables.

Charging power management can be selected from static or dynamic to meet application needs. On static power management, each power module is dedicated to specific charging cable or routed to external Satellite. On dynamic control charging power is routed optimatically up to full power respectively to cable sizing and number of charging outlets.

- ▶ Static power management for constant charging sessions or dynamic power management (pat. pend.) for intelligent power distribution
- ▶ Scalability with add-ons power modules
- ▶ DC charging satellites are furnished with advanced cable support to provide premium user experience (pat. pend.)

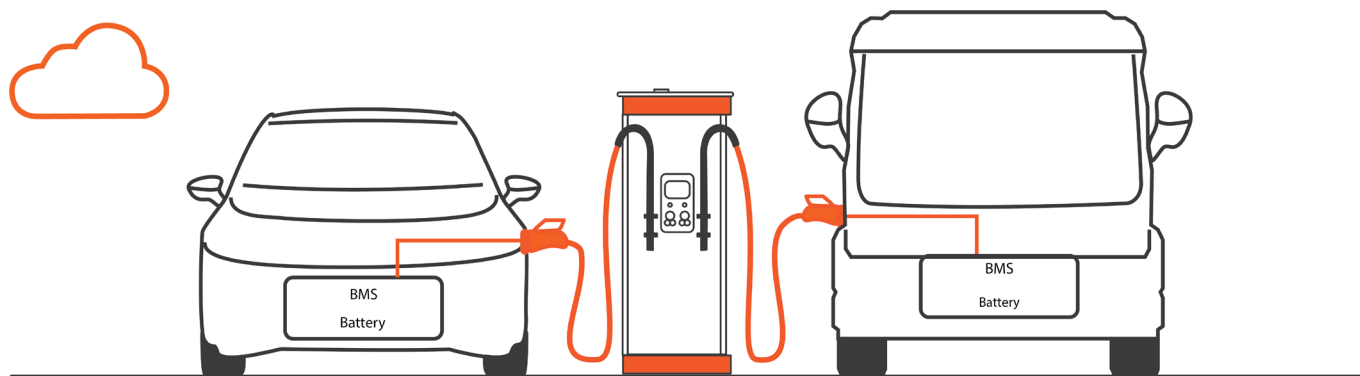


C-station adopts Kempower's advanced cable support solution.

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Compact Charging Station

Technical datasheet



C-station product codes

C501 - P160 - CC - 5C - S - S4

Voltage class and mechanical size indicator

DC charging power

Based on heavy duty rating.
See table on page 3

Charging method
available model options in table below

Charging cable

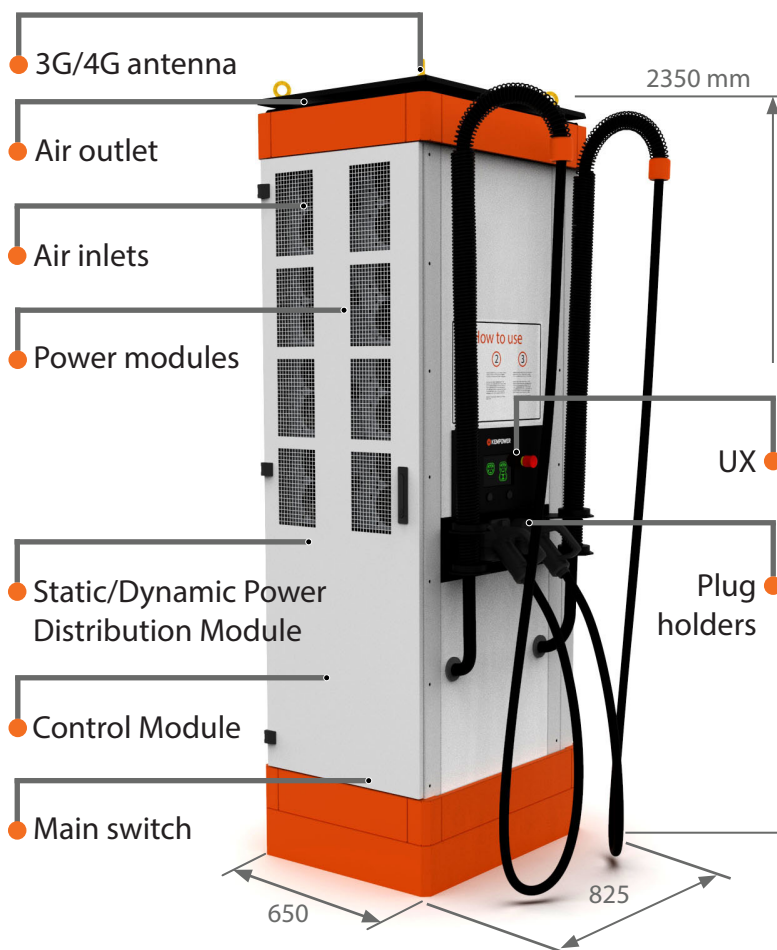
5=5 meters, E = 300A maximum current

User interface

S = Standard interface

Power distribution module

Features and Dimensions



Type	Description
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501	single cabinet
502	dual cabinet

Type	Description
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C	CCS 2
CC	2 x CCS 2
CCA	2 x CCS 2 & Type 2 AC
CD	CCS 2 & CHAdeMO
CDA	CCS 2, CHAdeMO & Type 2 AC
X	CCS2 & CHAdeMO (flex)
XX	2 x CCS2 & CHAdeMO (flex)

Current	Description
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B	125 - 150 A
C	200 A
D	250 A
E	300 A

Type	Description
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S4	up to 4 static outputs (std.)
S8	up to 8 static outputs

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Specification

General electric specifications C800-Series

Input Voltage	380 - 480 V _{AC} + - 10%, 50 - 60 Hz
Input current	See table below
Output Power	40 - 400 kW
Output current	See table below
Output Voltage	200 - 500 V _{DC}
Power factor	0.94 at P _N
Efficiency	95% @ output P _N
Output delivery	Cable + plug

Environmental Specifications

Operating Temperature	-40 to +40 °C
Derating high ambients	1,5%/1°C up to +55°C max
Maximum altitude	4000 m
Altitude derating	1%/100m above 2000 m
Storage Temperature	-40 to +60 °C
Enclosure class	IP54, IK10
Humidity	< 95% relative humidity
Operational noise level	< 60 dB



Features

3G/4G/LTE, WiFi, OCPP 1.6/2.0, cloud based back-end, service and management dashboard, easy power up of power modules, touch screen UX, welcome light, LED-status lights, advanced cable support system, RFID-reader

Electrical Protections

Over/under voltage, Surge protection, Short circuit, Earth leakage current, Over temperature

Protections

Device and charging cable over temperature

Compliant to Standards

Electrical safety	IEC 61851-1, IEC 61851-23
EMC	IEC 61851-21-2, EN 61000-1, -2, -3, -4
Harmonics	61000-3-12

Mechanical dimensions (WxHxD)

C501: 650x2350x825 mm
 C502: 1300x2350x825 mm
 Weight: See table below

Model specific values

C-station

200 - 500 V_{DC}

Product code	Light Duty Rating				Heavy Duty Rating				Weight [kg]	Notes:
	P _{LD} Charging power at 400 Vdc [kW]	Charging current I _{LD} at +40 C [A _{DC}]	Input power P _{IN} at P _{LD} [kVA]	Input current I _{IN} at P _{LD} [A]	P _{HD} Charging power at 400 Vdc [kW]	Charging current I _{HD} at +40 C [A _{DC}]	Input power P _{IN} at P _{HD} [kVA]	Input current I _{IN} at P _{HD} [A]		
1. C501 P40 _	50	125	57	92	40	100	44	63	340	
2. C501 P80 _	100	250	113	164	80	200	86	125	380	
3. C501 P120 _	150	375	170	245	120	300	132	190	420	
4. C501 P160 _	200	500	226	327	160	400	174	250	460	
5. C502 P200 _	250	625	283	408	200	500	219	315	740	
6. C502 P240 _	300	750	340	490	240	600	263	380	780	
7. C502 P280 _	350	875	396	572	280	700	305	440	820	
8. C502 P320 _	400	1000	452	654	320	800	347	500	860	

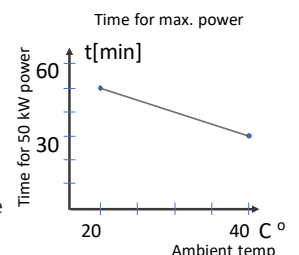
Notice: Over 500 A requires more than two charging outputs

Light duty rating:

- P_{LD} charging power is available continuously for 30 minutes in highest rated ambient temperature (+40C).
- After this the automatic power derating will slowly decrease the power limit until P_{HD} power is reached.
- 5 min break in loading of the power unit is enough for cooling the unit down so that a new full loading cycle can begin.
- In lower ambient temperatures the time for maximum P_{LD} is longer as shown in the graph on the right.

Heavy duty rating:

- P_{HD} charging power is available continuously in any condition within the specified ambient conditions for unlimited time



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