

Integrated Charging System

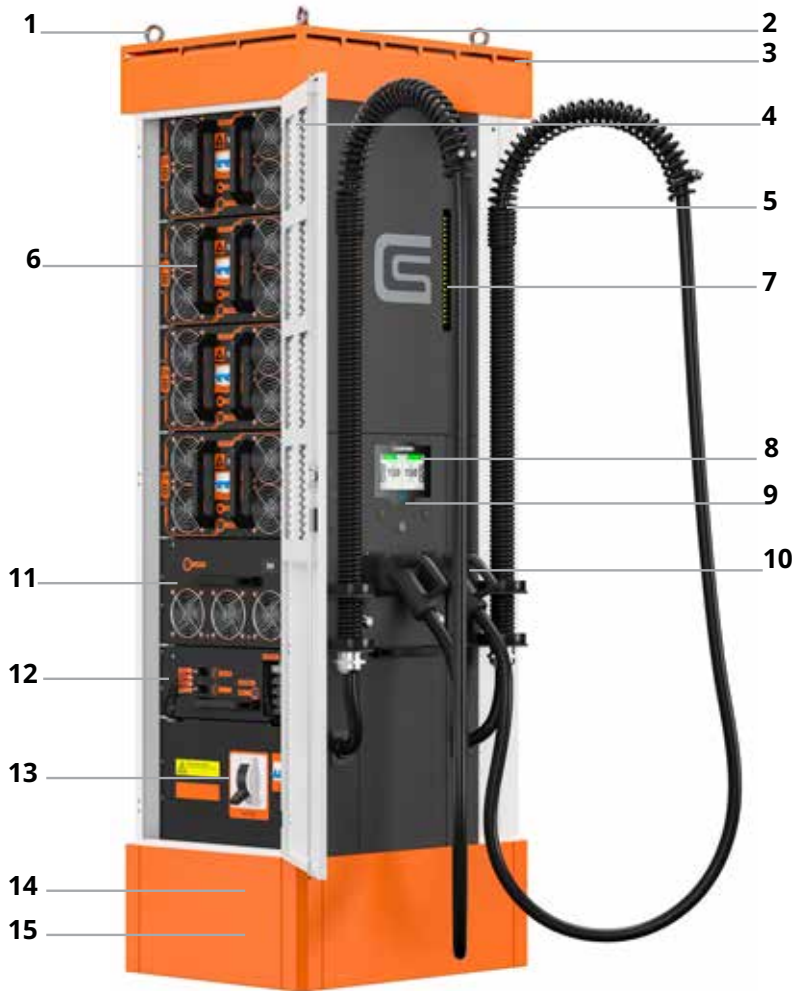
Kempower C-Station C500

Technical Datasheet, North America



The Kempower C-Station combines the functionalities of the C-Series charging power unit (CPU) and the S-Series charging satellite. The heavy-duty electro-mechanical design features a selection of modules for charging power, charging power management, and controlling the system. The charging power of C-Station can be distributed between 1–4 charging outputs. One cabinet can have 1–4 power modules, each providing charging power up to 50 kW, and maximum charging power of up to 200 kW. With static power management, each power module is dedicated to one charging output. With dynamic power management, the available charging power of all power modules is automatically divided between all connected charging outputs, depending on the size of the cable and the requirements of the vehicles being charged.

- Intelligent, adaptive, and automatic charging power distribution with Dynamic Charging Power Management (pat. pend.)
- Easy scalability with add-on power modules
- Charging power for up to 4 charging outputs
- Possibility to add up to 2 external Kempower S-Series charging satellites
- Advanced charging control and customization options with Kempower ChargeEye solution
- Safe but easily accessible enclosure guaranteed by the lockable door



1. Lifting lugs
2. WiFi / cellular / GPS antenna
3. Air outlet
4. Air inlets
5. Charging cable support spring system
6. Power module (1 to 4 pcs per CPU)
7. Charging status indication LEDs
8. 7" touch screen display
9. RFID reader (ISO14443A)
10. Charging cable holders
11. Static/dynamic power distribution module
12. Control module
13. Main switch
14. AC cable entry
15. DC output

Product code interpretation examples:

C501P160NU5CSD2L
C501P16UU7CPD2LC0

C501	C-Station 500 V single cabinet
P160	Charging power P160 = 200 kW
U UU	Charging method U = CCS1 UU = 2 x CCS1
5C 7C	Charging cable length & current 5 = 16.4 ft / 5 m 7 = 23 ft / 7 m C = 200 A nominal charging cable current
S P	S = standard user interface P = EMV contactless payment terminal
D2	Power distribution module
L	ETL approved
C0	Unbranded, no stickers, black roof & base

Number of cabinets

C501	Single cabinet
C502	Double cabinet

Charging method

U	CCS1
UU	2 x CCS1
UD	CCS1 & CHAdeMO

Nominal charging cable current

B	125 A (CHAdeMO)
C	200 A (CCS1)
E	300 A* (CCS1)

*500 A (max. 10 min) in +77 °F / +25°C with single charging output
 *375 A continuous in 77 °F / +25°C with double charging outputs

Power distribution modules

S2	Up to 2 static outputs
S4	Up to 4 static outputs
D2	Up to 2 dynamic outputs
D4	Up to 4 dynamic outputs

General electric specifications

Input voltage (AC)	380...480 V _{AC} +6%/-10%
Input frequency	50...60 Hz
Output voltage	150...500 V _{DC}
Power factor (at full load)	0.92
Efficiency (at full load)	94%
Idle power	20 VA
Standby power	C501: 50 W, C502: 180 W
Over voltage class	III
Icc	35 kA
Network type	TN-S, TN-C, TN-C-S, TT

Environmental specifications

Operating temperature	-22...+122°F / -30...+50°C (with CHAdeMO up to +104°F / +40°C)
Current derating	-1.5% of max. charging current per 1.8°F / 1°C (above +104°F / +40°C)
Maximum altitude	6562 ft / 2000 m (without altitude derating)
Altitude derating	-1.4% of max. charging current per 328 ft / 100 m (above 6562 ft / 2000 m)
Storage temperature	-40...+140°F / -40...+60°C
Enclosure	Suitable for outdoor use
Operational noise level	< 60 dB (at 3.28 ft / 1 m distance)
Ambient air humidity	< 95% relative humidity

Connections

WiFi	802.11 b/g/n (2.4/5 GHz)
Cellular / GPS	LTE-FDD, LTE-TDD, WCDMA, GSM
Ethernet	RJ45, IEEE 802.3 / 802.3u
OCPP	1.6 J / 2.0
Connectivity	Kempower ChargEye solution

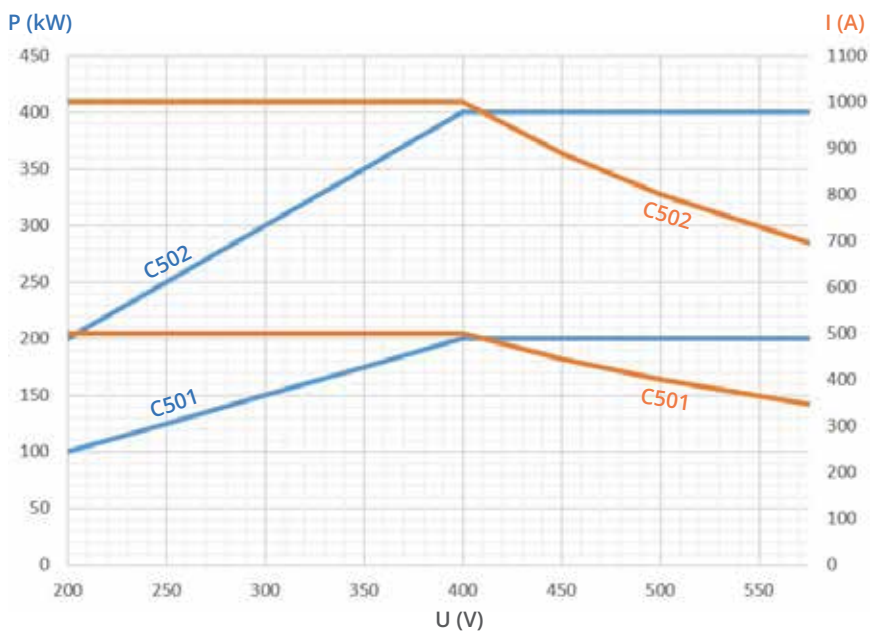
Electrical protections

Over/under voltage	
Surge	
Short circuit	
Overload	
Earth leakage current	
Device over temperature	

Max. 50 kW output / power module

Product code	Charging power (P _{DC}) [kW]	Max. charging current (400 V _{DC}) [A]	Input power [kVA]	Input current 400 V _{AC} [A]	Input current 480 V _{AC} [A]	Required grid fuse [A]
C501P40...	50	125	58	83	70	100
C501P80...	100	250	116	167	139	200
C501P120...	150	375	173	250	209	315
C501P160...	200	500	231	334	278	400
C502P200...	250	625	289	417	348	500
C502P240...	300	750	347	501	417	2 x 315
C502P280...	350	875	405	584	487	2 x 315
C502P320...	400	1000	463	668	556	2 x 400

- Notice: Over 500 A requires at least two charging outputs
- Charging power defined at +77 °F / +25°C ambient temperature



Product code	Charg. out-puts	Charging method	Simult. charg. with 2 outputs	Max. cont. charging current [A] at +104°F / +40°C	Charging power [kW] at 400 Vdc	Charging power [kW] at 670 Vdc	Weight [lbs / kg] (full cabinet) C501 / C502
Product codes with 16.4 ft / 5 m charging cables							
C50...U5C...	1	CCS1	no	200 A	80 kW	130 kW	948 / 1830 lbs 430 / 830 kg
C50...U5E...	1	CCS1	no	300 A	120 kW	200 kW	1025 / 1907 lbs 465 / 865 kg
C50...UU5C...	2	2 x CCS1	yes	2 x 200 A	2 x 80 kW	2 x 130 kW	1014 / 1896 lbs 460 / 860 kg
C50...UU5E...	2	2 x CCS1	yes	2 x 300 A	2 x 120 kW	2 x 200 kW	1157 / 2039 lbs 525 / 925 kg
C50...UD5CB...	2	CCS1 & CHAdeMO	yes	200 A & 125 A	80 kW & 50 kW	130 kW & 80 kW	1014 / 1896 lbs 460 / 860 kg
C50...UD5EB...	2	CCS1 & CHAdeMO	yes	300 A & 125 A	120 kW & 50 kW	200 kW & 80 kW	1157 / 2039 lbs 525 / 925 kg

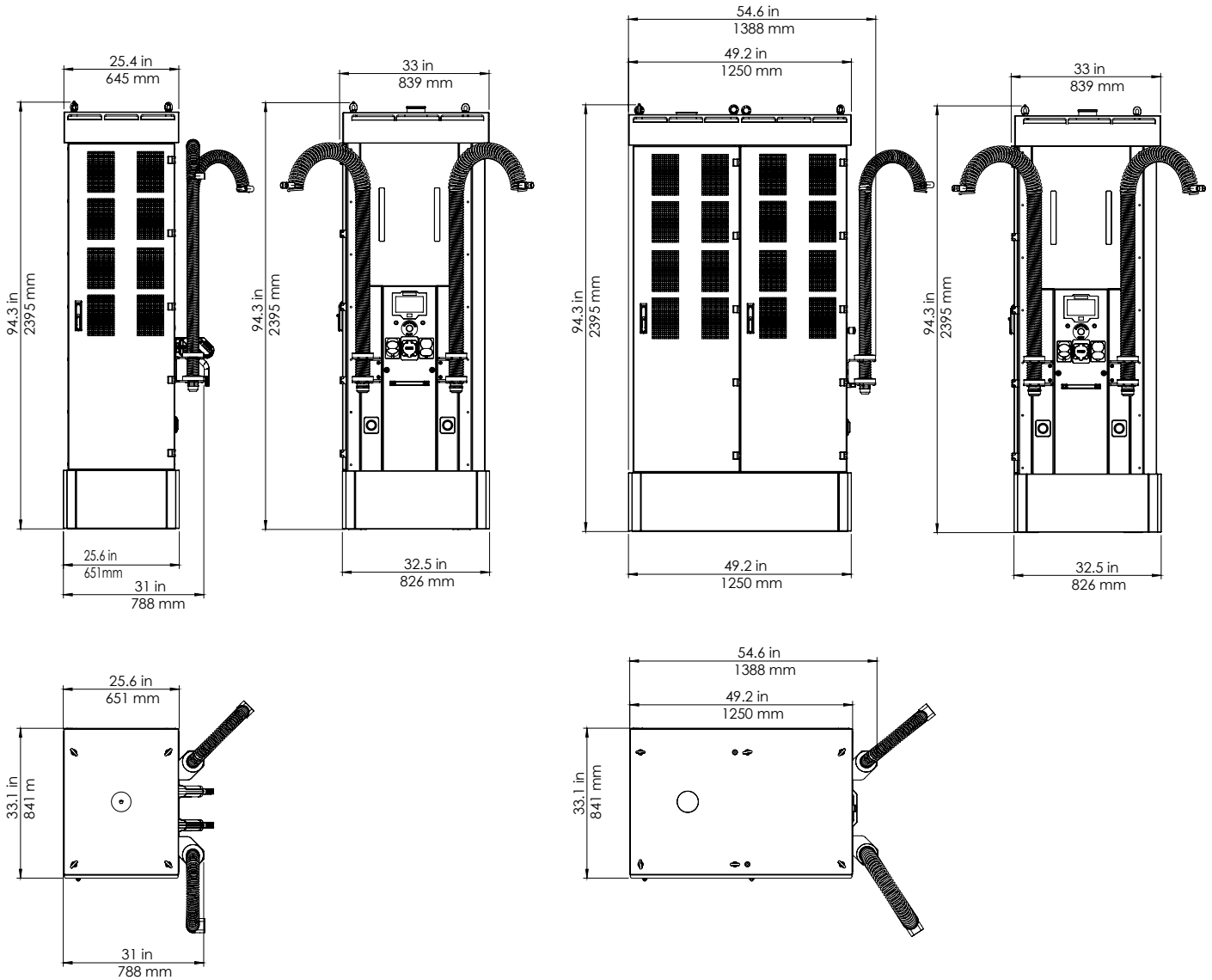
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Product codes with 23 ft / 7 m charging cables							
C50...U7C...	1	CCS1	no	200 A	80 kW	130 kW	959 / 1841 lbs 435 / 835 kg
C50...U7E...	1	CCS1	no	300 A	120 kW	200 kW	1036 / 1918 lbs 470 / 870 kg
C50...UU7C...	2	2 x CCS1	yes	2 x 200 A	2 x 80 kW	2 x 130 kW	1025 / 1907 lbs 465 / 865 kg
C50...UU7E...	2	2 x CCS1	yes	2 x 300 A	2 x 120 kW	2 x 200 kW	1168 / 2050 lbs 530 / 930 kg
C50...UD7CB...	2	CCS1 & CHAdeMO	yes	200 A & 125 A	80 kW & 50 kW	130 kW & 80 kW	1025 / 1907 lbs 465 / 865 kg
C50...UD7EB...	2	CCS1 & CHAdeMO	yes	300 A & 125 A	120 kW & 50 kW	200 kW & 80 kW	1168 / 2050 lbs 530 / 930 kg

Note: For versions with a payment terminal, replace S with P in the product code e.g. C501P140C5CPD2L

Mechanical dimensions (WxHxD, footprint)

Single cabinet 25.6 x 94.3 x 33.1 in / 651 x 2395 x 841 mm

Double cabinet 49.2 x 94.3 x 33.1 in / 1250 x 94.3 x 841 mm



Options

Customized branding (colors, stickers)

Consult your sales representative at Kempower for customer branding options (colors, stickers), pricing and MOQ

Compliance to standards

Electrical safety IEC 61851-1, IEC 61851-23

EMC, harmonics IEC 61851-21-2

Conforms to UL Std. 2202, 2231-2

Certified to CSA Std. C22.2 No. 281.2, C107.1

