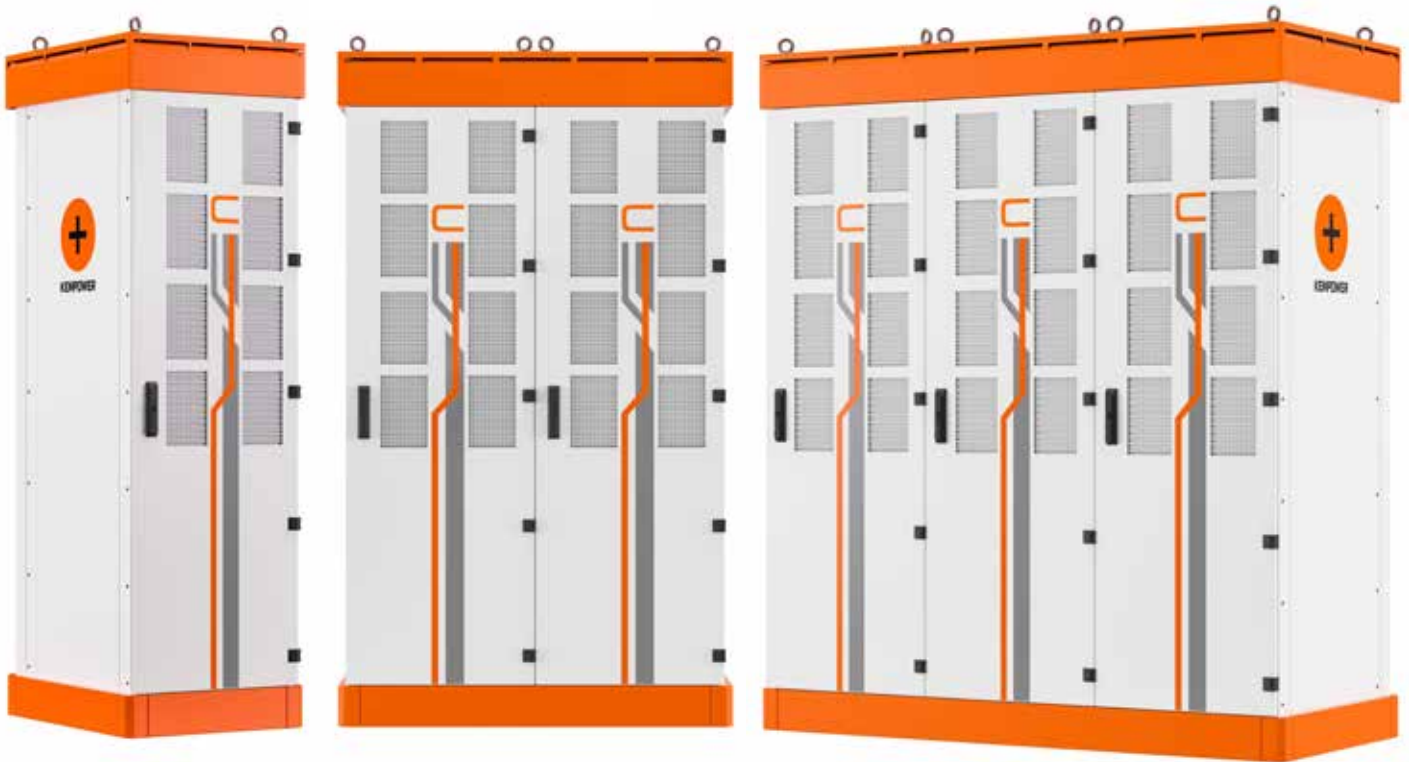


Charging Power Unit

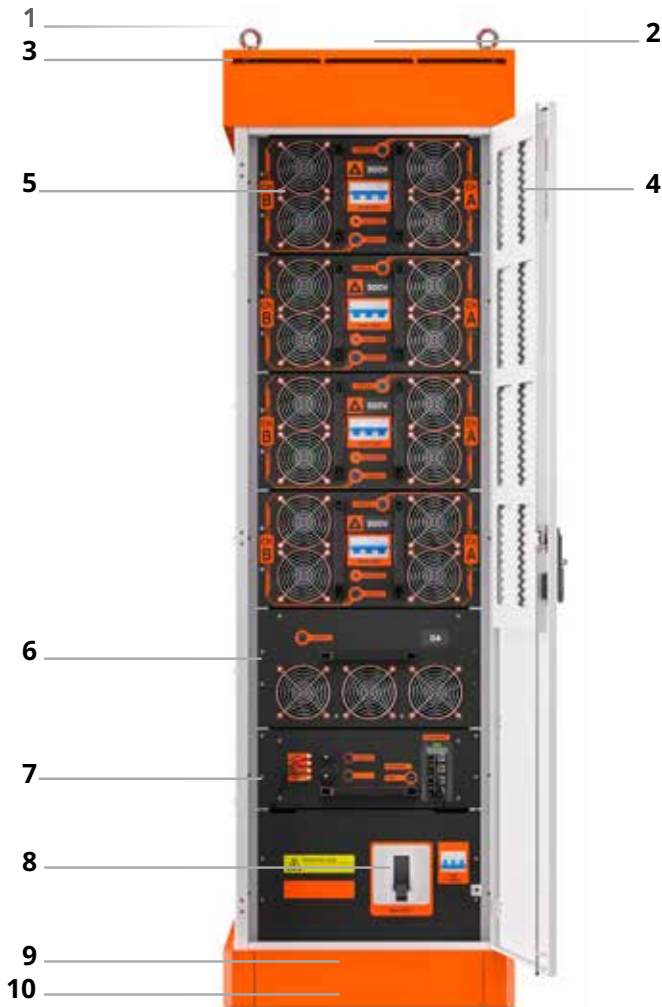
Kempower C-Series C500

Technical Datasheet



The Kempower C-Series charging power unit (CPU) provides charging power to 1–8 charging outputs, S-Series charging satellites or Pantographs. Its heavy-duty electro-mechanical design includes a selection of modules for charging power, charging power management, and system control. One cabinet can have 1–4 power modules, each providing charging power up to 50 kW, and maximum nominal power up to 200/400/600 kW depending on the CPU version. With static power management, each power module provides pre-set charging power to one dedicated charging output. With dynamic power management, the available charging power of all power modules is automatically distributed among 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
- Simultaneous charging power for up to 8 charging outputs (4 double/8 single S-Series charging satellites and/or pantographs)
- Recommended maximum cabling distance between the C-Series charging power unit and charging outputs is 80 meters
- 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. Power module (1 to 4 pcs per CPU)
6. Static/dynamic power distribution module
7. Control module
8. Main switch
9. AC cable entry
10. DC output

Product code interpretation examples: C501P160ND4, C501P160ND4C0

C501	C-Series 500 V single cabinet
P160N	Charging power (P160 = 200 kW)
D4	Power distribution module, D4 = 1 - 4 dynamic outputs in use
C0	Unbranded, black roof & base

Number of cabinets

C501	Single cabinet
C502	Double cabinet
C503	Triple cabinet

Power distribution modules

D4	Up to 4 dynamic outputs
D8	Up to 8 dynamic outputs
S4	Up to 4 static outputs
S8	Up to 8 static 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: 100 W, C503: 150 W
Over voltage class (OVC)	III
Icc	35 kA
Network type	TN-S, TN-C, TN-C-S, TT

Environmental specifications

Operating temperature	-30...+50°C
Current derating	-1.5% of max. charging current per 1°C (above +40°C)
Maximum altitude	2000 m (without altitude derating)
Altitude derating	-1.4% of max. charging current per 100 m (above 2000 m)
Storage temperature	-40...+60°C
Enclosure	IP54, IK10
Operational noise level	< 60 dB (at 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

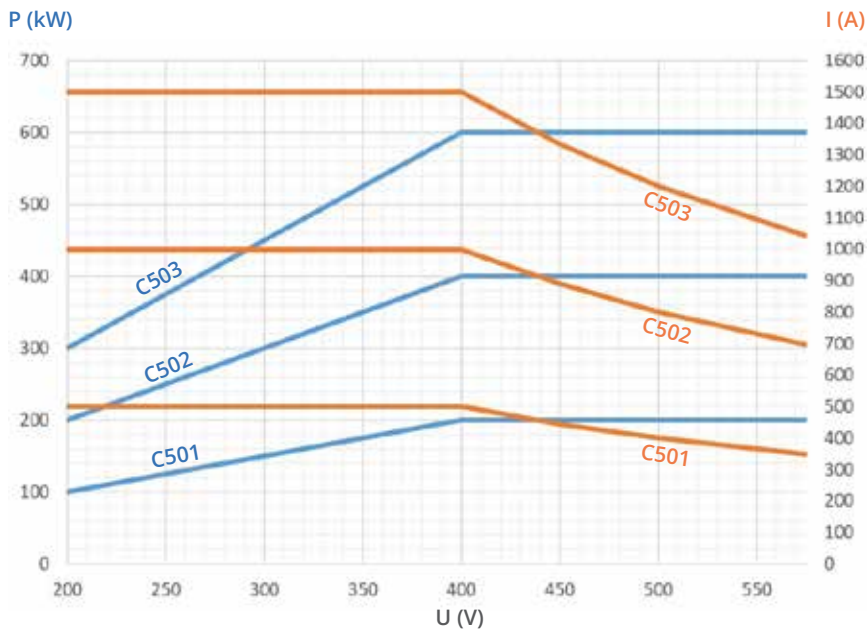
Electrical protections

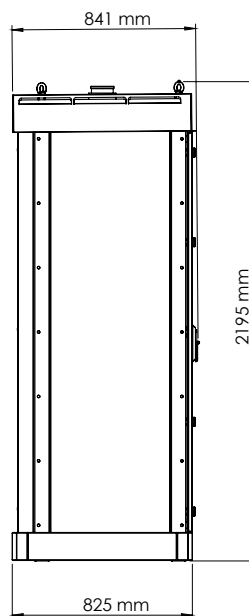
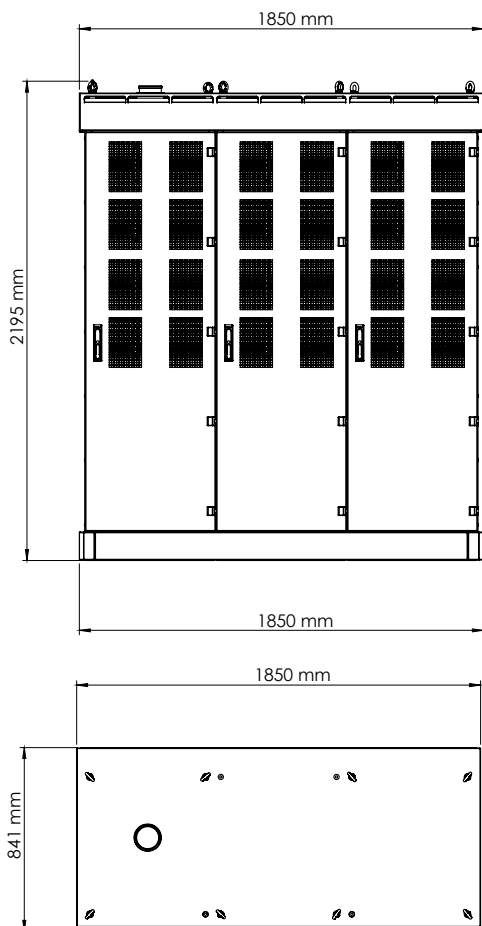
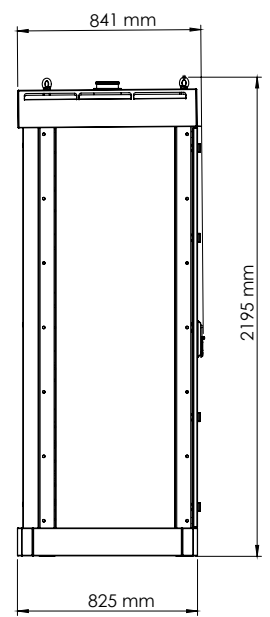
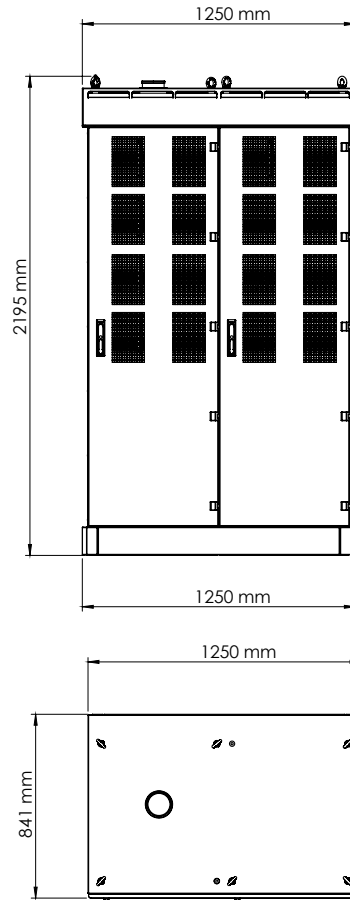
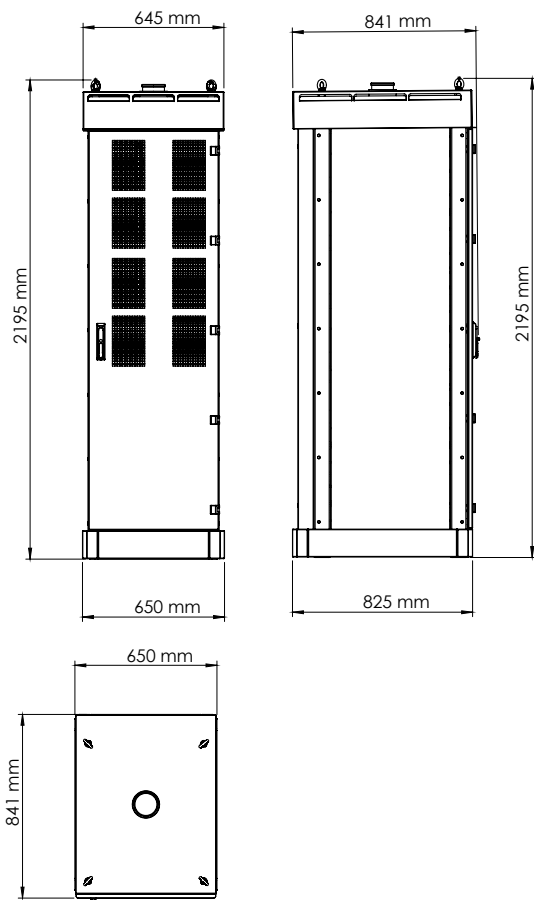
Over/under voltage	
Surge	
Short circuit	
Overload	
Earth leakage current	
Device over temperature	

Max. 50 kW output / power module

Product code	Charging power (P _{DC}) [kW]	Max. charging current (150-920 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
C503P360...	450	1125	520	751	626	2 x 400
C503P400...	500	1250	578	835	695	2 x 500
C503P440...	550	1375	636	918	765	2 x 500
C503P480...	600	1500	694	1001	835	2 x 630

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





Mechanical dimensions (WxHxD, footprint)

C501: 650 x 2195 x 841 mm

C502: 1250 x 2195 x 841 mm

C503: 1850 x 2195 x 841 mm

Weight

C501P40...	280 kg
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C501P80...	320 kg
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C501P120...	360 kg
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C501P160...	400 kg
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C502P200...	680 kg
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C502P240...	720 kg
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C502P280...	760 kg
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C502P320...	800 kg
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C503P360...	1080 kg
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C503P400...	1120 kg
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C503P440...	1160 kg
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C503P480...	1200 kg
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Compliance to standards

Electrical safety	IEC 61851-1, IEC 61851-23
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EMC, harmonics	IEC 61851-21-2
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Options (please consult Kempower for availability, pricing and MOQ)

C-Series steel base	Installation kit for a single CPU cabinet, for flat surface assembly
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Customized branding (colors, stickers)	Customer branding options (colors, stickers)
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