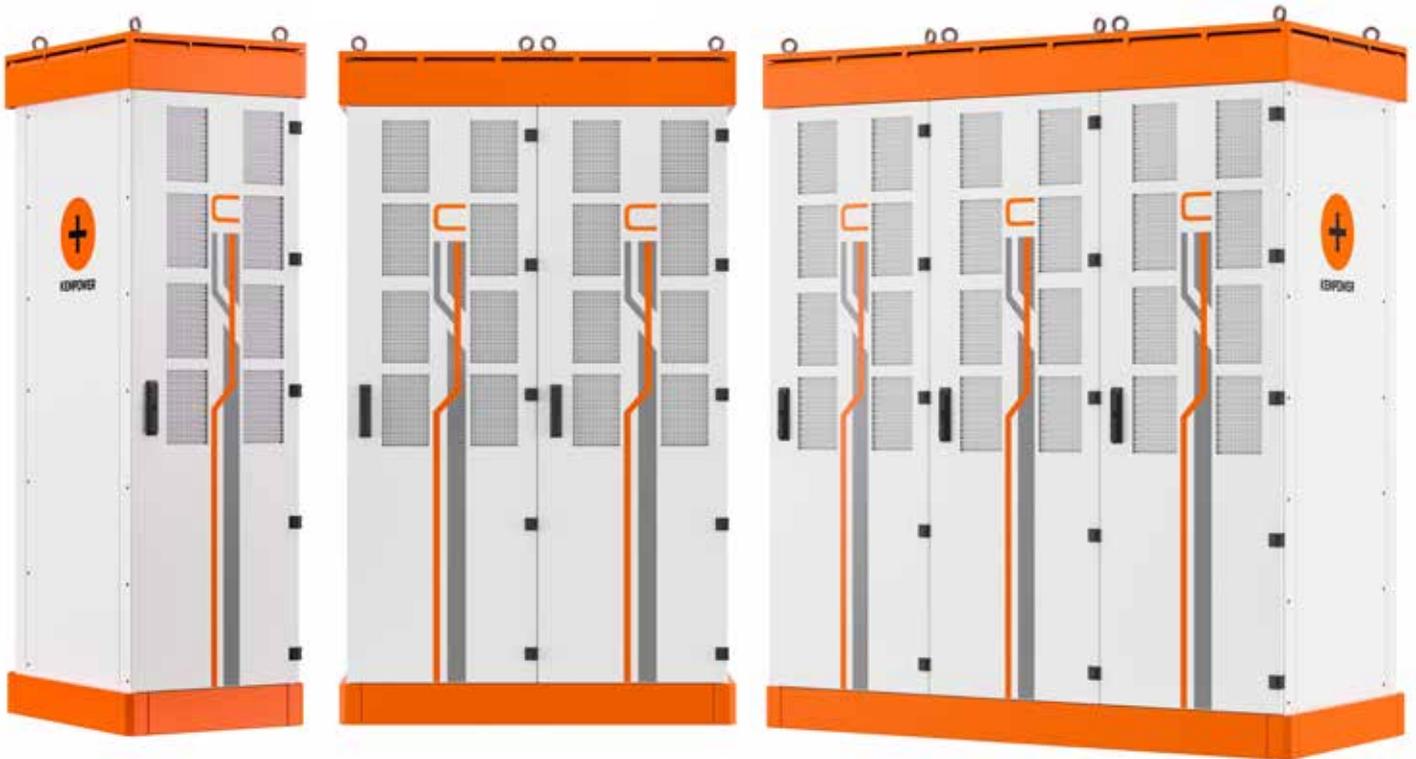


Charging Power Unit

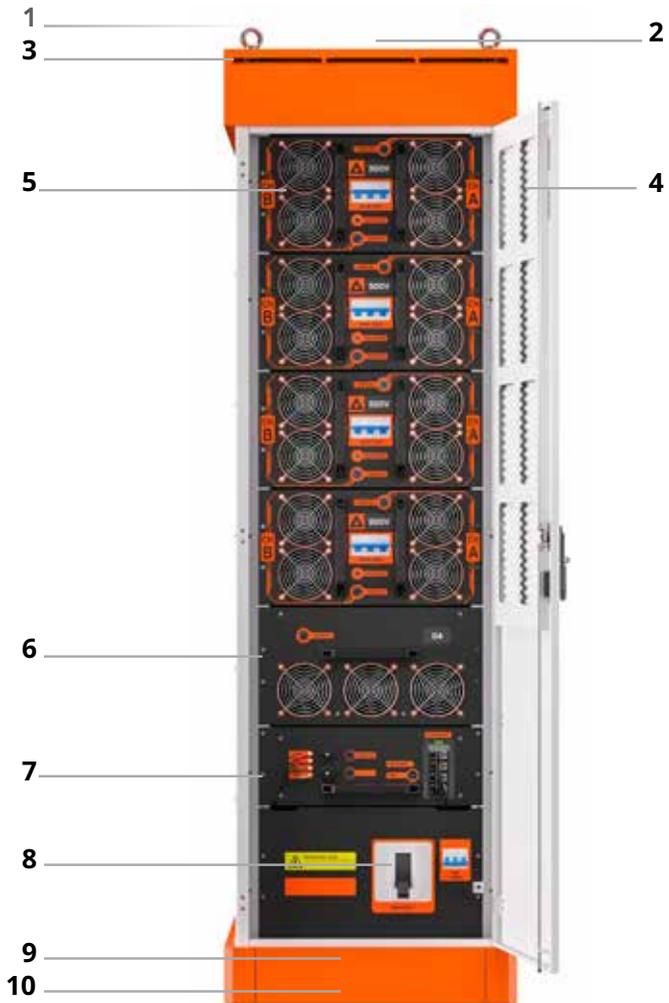
Kempower C-Series C500

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 |

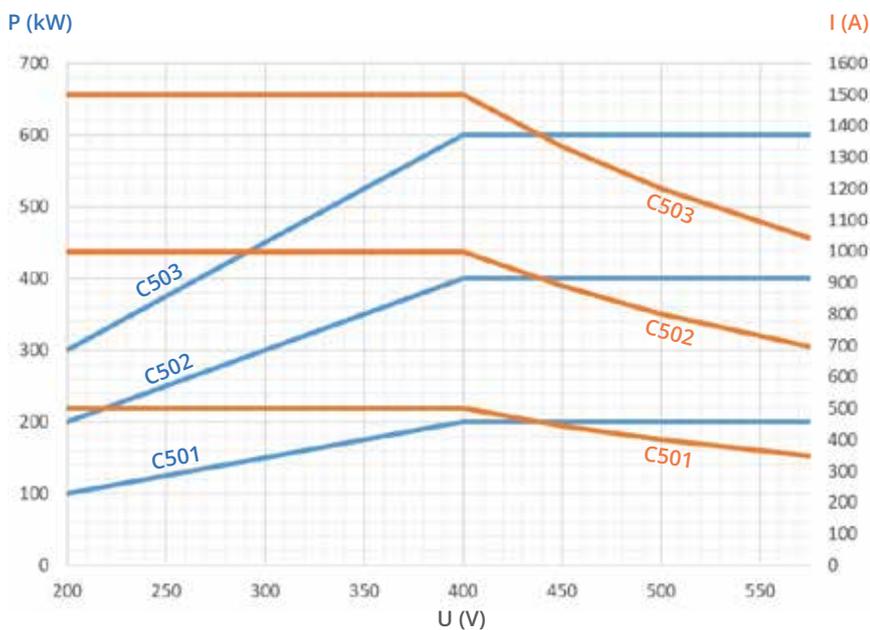
Electrical protections

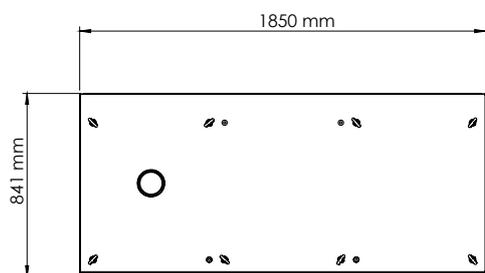
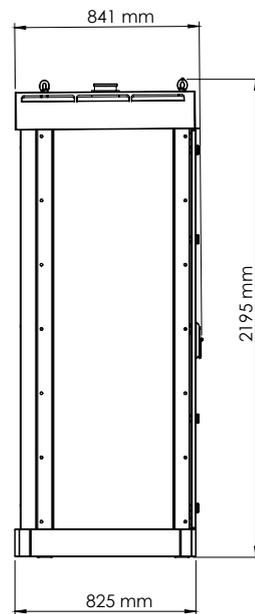
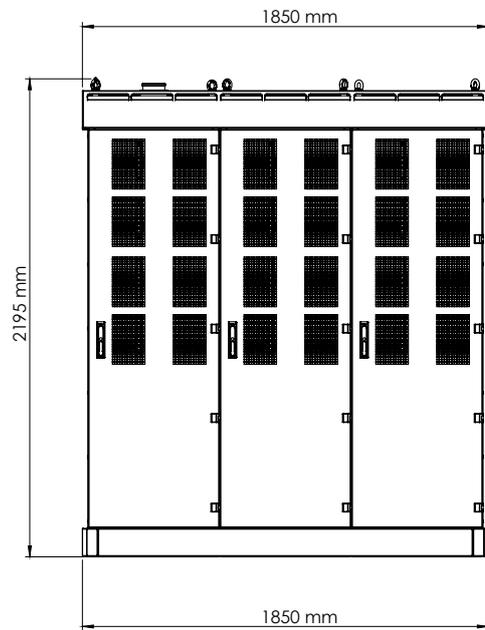
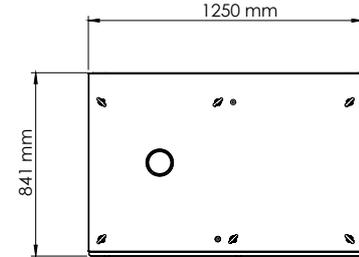
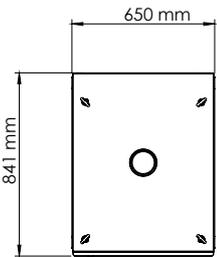
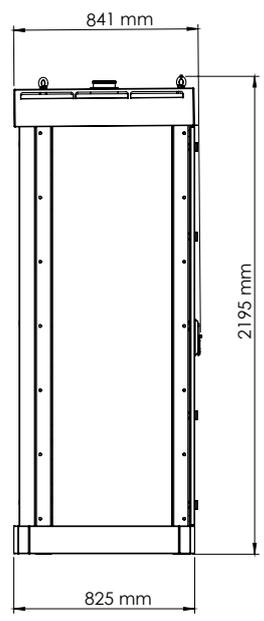
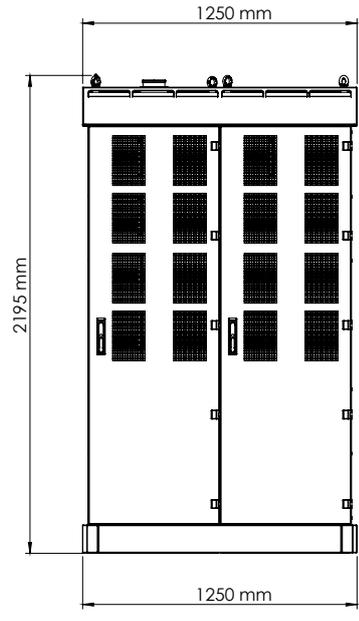
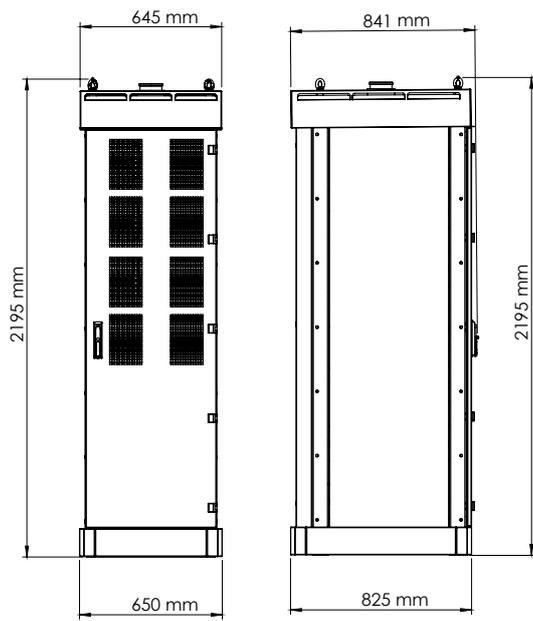
| | |
|-------------------------|--|
| Over/under voltage | |
| Surge | |
| Short circuit | |
| Overload | |
| Earth leakage current | |
| Device over temperature | |

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

C501P80... 320 kg

C501P120... 360 kg

C501P160... 400 kg

C502P200... 680 kg

C502P240... 720 kg

C502P280... 760 kg

C502P320... 800 kg

C503P360... 1080 kg

C503P400... 1120 kg

C503P440... 1160 kg

C503P480... 1200 kg

Compliance to standards

Electrical safety IEC 61851-1, IEC 61851-23

EMC, harmonics IEC 61851-21-2

Options (please consult Kempower for availability, pricing and MOQ)

C-Series steel base Installation kit for a single CPU cabinet,
for flat surface assembly

Customized branding (colors, stickers) Customer branding options (colors, stickers)
