

## Integrated Charging System

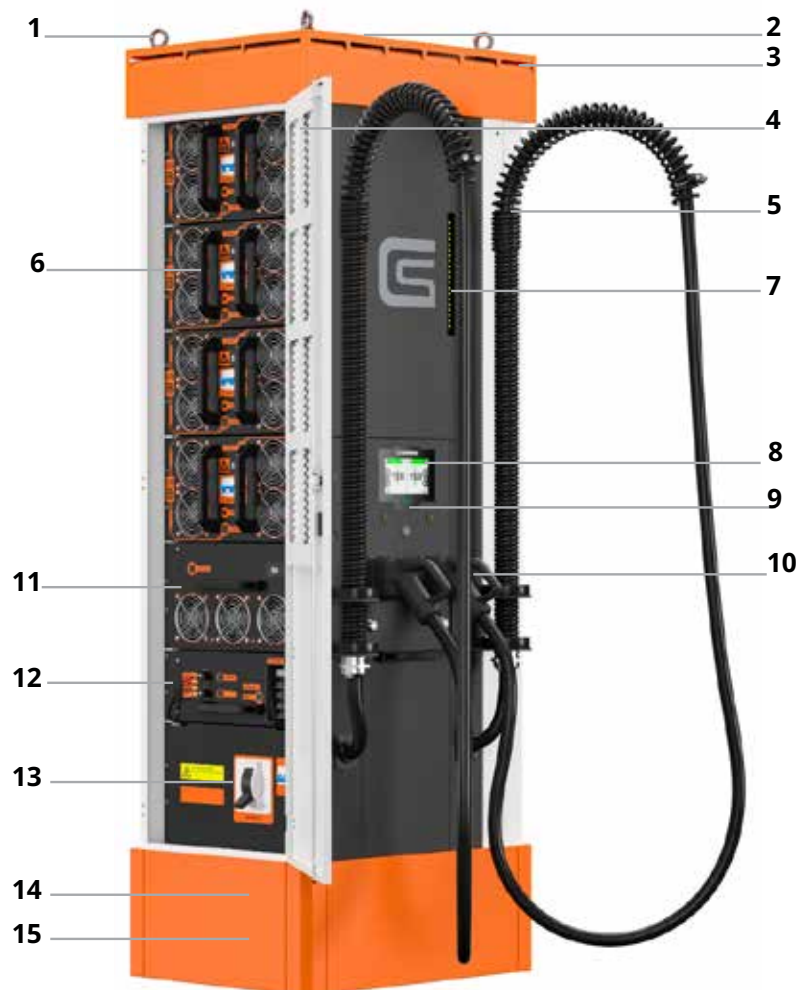
# Kempower C-Station C500

### Technical Datasheet



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:

**C501P160NC5CSD2**

**C501P160CC7CPD2C0**

|          |   |
|----------|---|
| C501     | C-Station 500 V single cabinet  |
| P160     | Charging power<br>P160 = 200 kW   |
| C<br>CC  | Charging method<br>C = CCS2<br>CC = 2 x CCS2  |
| 5C<br>7C | Charging cable length & current<br>5 = 5 m<br>7 = 7 m<br>C = 200 A nominal charging cable current |
| S<br>P   | S = standard user interface<br>P = EMV contactless payment terminal                               |
| D2       | Power distribution module   |
| C0       | Unbranded, no stickers, black roof & base   |

### Number of cabinets

|      |                |
|------|----------------|
| C501 | Single cabinet |
| C502 | Double cabinet |

### Charging method

|     |                           |
|-----|---------------------------|
| C   | CCS2                      |
| CC  | 2 x CCS2                  |
| CCA | 2 x CCS2 & Type 2 AC      |
| CD  | CCS2 & CHAdeMO            |
| CDA | CCS & CHAdeMO & Type 2 AC |

### Nominal charging cable current

|   |                 |
|---|-----------------|
| B | 125 A (CHAdeMO) |
| C | 200 A (CCS2)    |
| D | 250 A (CCS2)    |
| E | 300 A* (CCS2)   |

\*500 A (max. 10 min) in +25°C with single charging output  
\*375 A continuous in +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 <sub>AC</sub> +6%/-10% |
| Input frequency             | 50...60 Hz                         |
| Output voltage              | 150...500 V <sub>DC</sub>          |
| 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                                |
| I <sub>cc</sub>             | 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 ChargeEye solution  |

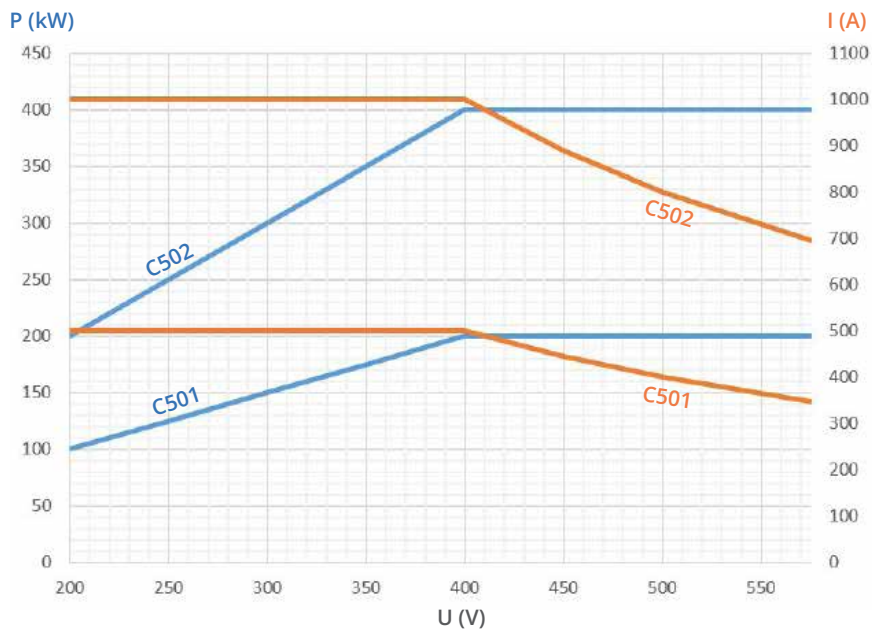
### Electrical protections

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

### Max. 50 kW output / power module

| Product code | Charging power (P <sub>DC</sub> ) [kW] | Max. charging current (400 V <sub>DC</sub> ) [A] | Input power [kVA] | Input current 400 V <sub>AC</sub> [A] | Input current 480 V <sub>AC</sub> [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 +25°C ambient temperature



| Product code                           | Charg. out-puts | Charging method            | Simult. charg. with 2 outputs | Max. cont. charging current [A] | Charging power [kW] at 400 Vdc | Charging power [kW] at 670 Vdc | Weight [kg] (full cabinet) |
|--|-----------------|----------------------------|-------------------------------|---------------------------------|--------------------------------|--------------------------------|----------------------------|
|  |                 |                            |                               |                                 |                                |                                | C501 / C502                |
| Product codes with 5 m charging cables |                 |                            |                               |                                 |                                |                                |                            |
| C50...C5C...                           | 1               | CCS2                       | no                            | 200 A                           | 80 kW                          | 130 kW                         | 430 kg / 830 kg            |
| C50...C5D...                           | 1               | CCS2                       | no                            | 250 A                           | 100 kW                         | 165 kW                         | 460 kg / 860 kg            |
| C50...C5E...                           | 1               | CCS2                       | no                            | 300 A                           | 120 kW                         | 200 kW                         | 465 kg / 865 kg            |
| C50...CC5C...                          | 2               | 2 x CCS2                   | yes                           | 2 x 200 A                       | 2 x 80 kW                      | 2 x 130 kW                     | 460 kg / 860 kg            |
| C50...CC5D...                          | 2               | 2 x CCS2                   | yes                           | 2 x 250 A                       | 2 x 100 kW                     | 2 x 165 kW                     | 515 kg / 915 kg            |
| C50...CC5E...                          | 2               | 2 x CCS2                   | yes                           | 2 x 300 A                       | 2 x 120 kW                     | 2 x 200 kW                     | 525 kg / 925 kg            |
| C50...CD5CB...                         | 2               | CCS2 & CHAdeMO             | yes                           | 200 A & 125 A                   | 80 kW & 50 kW                  | 130 kW & 80 kW                 | 460 kg / 860 kg            |
| C50...CD5DB...                         | 2               | CCS2 & CHAdeMO             | yes                           | 250 A & 125 A                   | 100 kW & 50 kW                 | 165 kW & 80 kW                 | 515 kg / 915 kg            |
| C50...CD5EB...                         | 2               | CCS2 & CHAdeMO             | yes                           | 300 A & 125 A                   | 120 kW & 50 kW                 | 200 kW & 80 kW                 | 525 kg / 925 kg            |
| C50...CCA5C...                         | 3               | 2 x CCS2 & Type 2 AC       | yes                           | 2 x 200 A & 32 A                | 2 x 80 kW & 22 kW              | 2 x 130 kW & 22 kW             | 460 kg / 860 kg            |
| C50...CCA5D...                         | 3               | 2 x CCS2 & Type 2 AC       | yes                           | 2 x 250 A & 32 A                | 2 x 100 kW & 22 kW             | 2 x 165 kW & 22 kW             | 515 kg / 915 kg            |
| C50...CCA5E...                         | 3               | 2 x CCS2 & Type 2 AC       | yes                           | 2 x 300 A & 32 A                | 2 x 120 kW & 22 kW             | 2 x 200 kW & 22 kW             | 525 kg / 925 kg            |
| C50...CDA5CB...                        | 3               | CCS2 & CHAdeMO & Type 2 AC | yes                           | 200 A & 125 A & 32 A            | 80 kW & 50 kW & 22 kW          | 130 kW & 80 kW & 22 kW         | 460 kg / 860 kg            |
| C50...CDA5DB...                        | 3               | CCS2 & CHAdeMO & Type 2 AC | yes                           | 250 A & 125 A & 32 A            | 100 kW & 50 kW & 22 kW         | 165 kW & 80 kW & 22 kW         | 515 kg / 915 kg            |
| C50...CDA5EB...                        | 3               | CCS2 & CHAdeMO & Type 2 AC | yes                           | 300 A & 125 A & 32 A            | 120 kW & 50 kW & 22 kW         | 200 kW & 80 kW & 22 kW         | 525 kg / 925 kg            |

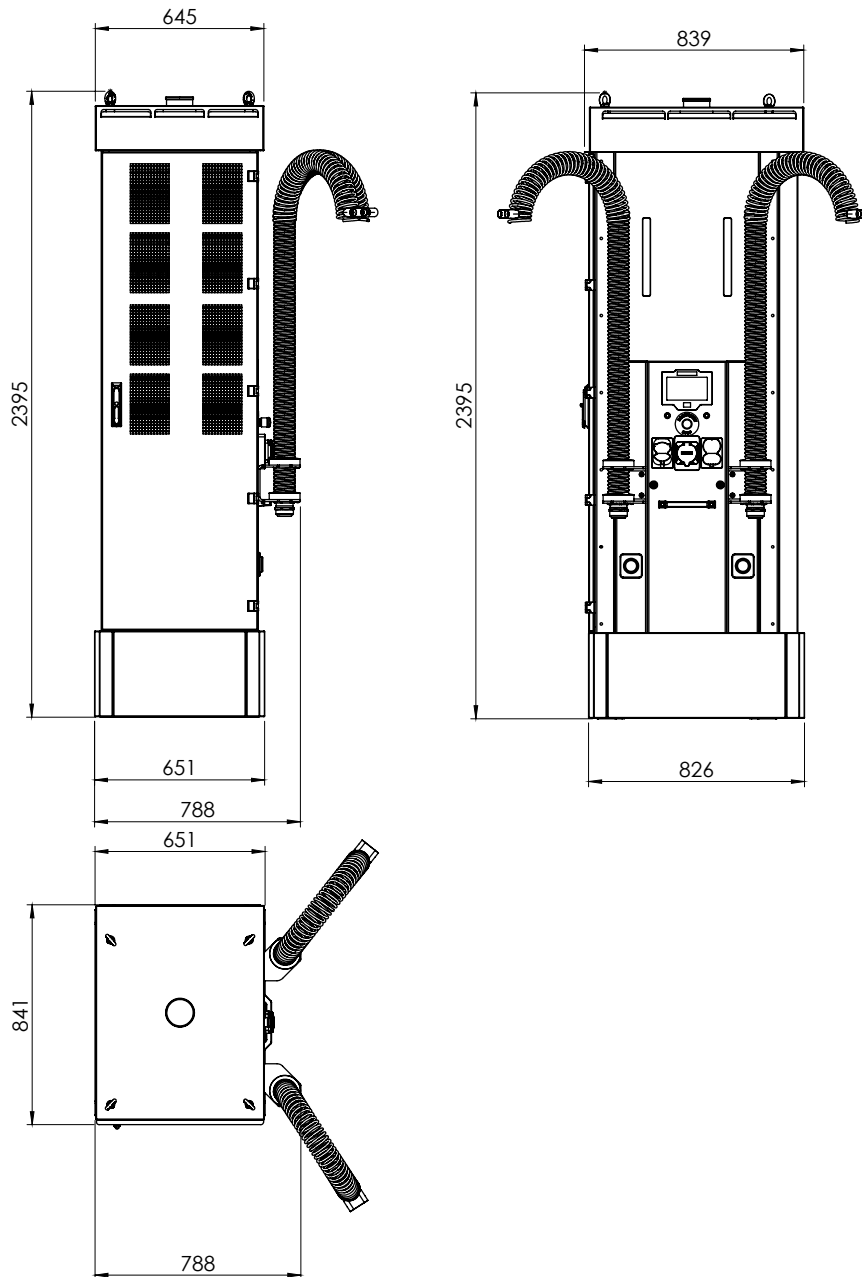
Note: For versions with a payment terminal, replace S with P in the product code e.g. C501P140C5CPD2

| Product code                           | Charg. out-puts | Charging method            | Simult. charg. with 2 outputs | Max. cont. charging current [A] at +40 °C | Charging power [kW] at 400 VDC | Charging power [kW] at 670 VDC | Weight [kg] (full cabinet) |
|--|-----------------|----------------------------|-------------------------------|---|--------------------------------|--------------------------------|----------------------------|
|  |                 |                            |                               |   |                                |                                | C501/ C502                 |
| Product codes with 7 m charging cables |                 |                            |                               |   |                                |                                |                            |
| C50...C7C...                           | 1               | CCS2                       | no                            | 200 A                                     | 80 kW                          | 130 kW                         | 435 kg / 835 kg            |
| C50...C7D...                           | 1               | CCS2                       | no                            | 250 A                                     | 100 kW                         | 165 kW                         | 460 kg / 860 kg            |
| C50...C7E...                           | 1               | CCS2                       | no                            | 300 A                                     | 120 kW                         | 200 kW                         | 470 kg / 870 kg            |
| C50...CC7C...                          | 2               | 2 x CCS2                   | yes                           | 2 x 200 A                                 | 2 x 80 kW                      | 2 x 130 kW                     | 465 kg / 865 kg            |
| C50...CC7D...                          | 2               | 2 x CCS2                   | yes                           | 2 x 250 A                                 | 2 x 100 kW                     | 2 x 165 kW                     | 520 kg / 920 kg            |
| C50...CC7E...                          | 2               | 2 x CCS2                   | yes                           | 2 x 300 A                                 | 2 x 120 kW                     | 2 x 200 kW                     | 530 kg / 930 kg            |
| C50...CD7CB...                         | 2               | CCS2 & CHAdeMO             | yes                           | 200 A & 125 A                             | 80 kW & 50 kW                  | 130 kW & 80 kW                 | 465 kg / 865 kg            |
| C50...CD7DB...                         | 2               | CCS2 & CHAdeMO             | yes                           | 250 A & 125 A                             | 100 kW & 50 kW                 | 165 kW & 80 kW                 | 520 kg / 920 kg            |
| C50...CD7EB...                         | 2               | CCS2 & CHAdeMO             | yes                           | 300 A & 125 A                             | 120 kW & 50 kW                 | 200 kW & 80 kW                 | 530 kg / 930 kg            |
| C50...CCA7C...                         | 3               | 2 x CCS2 & Type 2 AC       | yes                           | 2 x 200 A & 32 A                          | 2 x 80 kW & 22 kW              | 2 x 130 kW & 22 kW             | 465 kg / 865 kg            |
| C50...CCA7D...                         | 3               | 2 x CCS2 & Type 2 AC       | yes                           | 2 x 250 A & 32 A                          | 2 x 100 kW & 22 kW             | 2 x 165 kW & 22 kW             | 520 kg / 920 kg            |
| C50...CCA7E...                         | 3               | 2 x CCS2 & Type 2 AC       | yes                           | 2 x 300 A & 32 A                          | 2 x 120 kW & 22 kW             | 2 x 200 kW & 22 kW             | 530 kg / 930 kg            |
| C50...CDA7CB...                        | 3               | CCS2 & CHAdeMO & Type 2 AC | yes                           | 200 A & 125 A & 32 A                      | 80 kW & 50 kW & 22 kW          | 130 kW & 80 kW & 22 kW         | 465 kg / 865 kg            |
| C50...CDA7DB...                        | 3               | CCS2 & CHAdeMO & Type 2 AC | yes                           | 250 A & 125 A & 32 A                      | 100 kW & 50 kW & 22 kW         | 165 kW & 80 kW & 22 kW         | 520 kg / 920 kg            |
| C50...CDA7EB...                        | 3               | CCS2 & CHAdeMO & Type 2 AC | yes                           | 300 A & 125 A & 32 A                      | 120 kW & 50 kW & 22 kW         | 200 kW & 80 kW & 22 kW         | 530 kg / 930 kg            |

Note: versions with payment terminal, replace S with P in the product code, e.g. C501P140C5CPD2

### Mechanical dimensions (WxHxD, footprint)

651 x 2395 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

