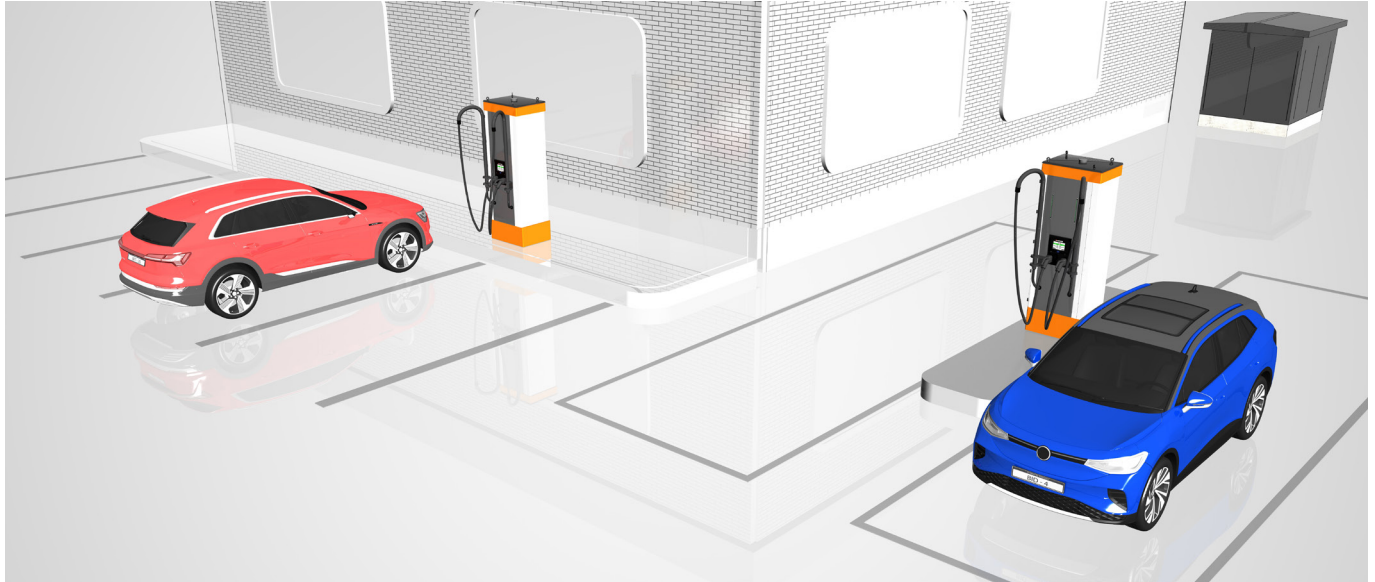


# Advanced Satellite Charging System

## 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, dynamic and power. Each cabinet utilizes 1 - 4 power modules that each has charging power up to 50 kW. Depending on the charging application, full CPU provides nominal power of 150 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 power management charging power is routed optimatically up to full power respectively to cable sizing and number of charging outlets.

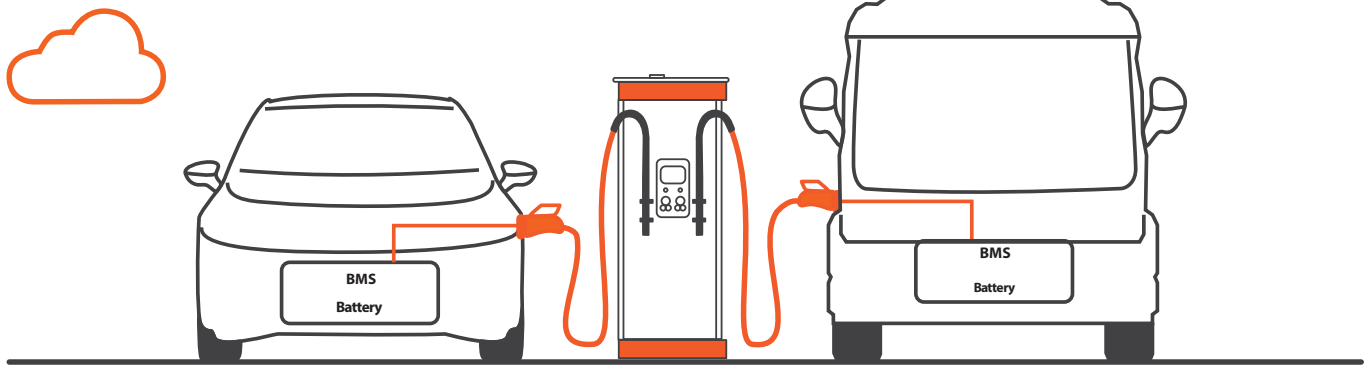
- ▶ Static power management for constant charging sessions or dynamic power management (pat. pend.) for intelligent power distribution
- ▶ Scalability with add-ons power modules
- ▶ C-stations are furnished with advanced cable support to provide premium user experience (pat. pend.)



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

Subject to change without notice © Kempower 2021

# 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

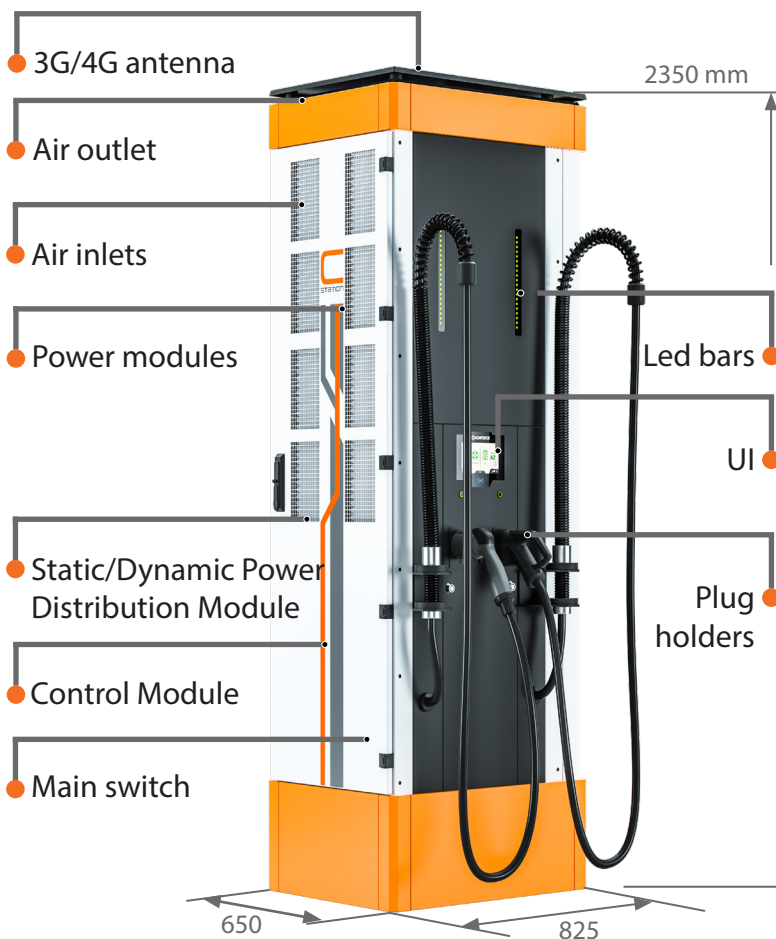
Charging method  
available model options in table below

Charging cable  
5=5 meters, E = 300A maximum current

User interface  
S = Standard interface

Power distribution module

## Features and Dimensions



| Type | Description    |
|------|----------------|
| 501  | single cabinet |
| 502  | dual cabinet   |

| Type | Description     |
|------|-----------------|
| C *  | CCS 2           |
| CC   | 2 x CCS 2       |
| CD * | CCS 2 & CHAdeMO |
| U *  | CCS 1           |
| UU * | 2 x CCS 1       |
| UD * | CCS 1 & CHAdeMO |

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

| Type | Description             |
|------|-------------------------|
| D2   | up to 2 dynamic outputs |
| D4   | up to 4 dynamic outputs |

\* preliminary data, confirmed Q4/2021

Subject to change without notice © Kempower 2021

### General electric specifications C500-Series

|                 |                                               |
|-----------------|-----------------------------------------------|
| Input Voltage   | 380 - 480 V <sub>AC</sub> + - 10%, 50 - 60 Hz |
| Input current   | See table below                               |
| Output Power    | 50 - 400 kW                                   |
| Output current  | See table below                               |
| Output Voltage  | 150 - 500 V <sub>DC</sub>                     |
| Power factor    | 0.94 at P <sub>N</sub>                        |
| Efficiency      | 94% @ output P <sub>N</sub>                   |
| 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 | < 55 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, Options: additional set of outputs (total of 4 outputs), additional Satellite posts

### 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,<br>IEC 61851-23              |
| EMC               | IEC 61851-21-2,<br>EN 61000-1, -2, -3, -4 |

### Mechanical dimensions (WxHxD)

C501: 650x2350x825 mm  
 C502: 1300x2350x825 mm  
 Weight: See table below  
 Dynamic module adds +45 kg/ cabinet

### Model specific values

## C-station

150 - 500 V<sub>DC</sub>

| Product code   | Light Duty Rating                              |                                                              |                                                      |                                                      | Heavy Duty Rating                              |                                                              |                                                      |                                                      | Weight [kg] | Notes: |
|----------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|-------------|--------|
|                | P <sub>LD</sub> Charging power at 400 Vdc [kW] | Charging current I <sub>LD</sub> at +40 C [A <sub>DC</sub> ] | Input power P <sub>IN</sub> at P <sub>LD</sub> [kVA] | Input current I <sub>IN</sub> at P <sub>LD</sub> [A] | P <sub>HD</sub> Charging power at 400 Vdc [kW] | Charging current I <sub>HD</sub> at +40 C [A <sub>DC</sub> ] | Input power P <sub>IN</sub> at P <sub>HD</sub> [kVA] | Input current I <sub>IN</sub> at P <sub>HD</sub> [A] |             |        |
| 1. C501 P40 _  | 50                                             | 125                                                          | 57                                                   | 82                                                   | 40                                             | 100                                                          | 46                                                   | 66                                                   | 340         |        |
| 2. C501 P80 _  | 100                                            | 250                                                          | 114                                                  | 164                                                  | 80                                             | 200                                                          | 91                                                   | 131                                                  | 380         |        |
| 3. C501 P120 _ | 150                                            | 375                                                          | 171                                                  | 246                                                  | 120                                            | 300                                                          | 137                                                  | 197                                                  | 420         |        |
| 4. C501 P160 _ | 200                                            | 500                                                          | 228                                                  | 328                                                  | 160                                            | 400                                                          | 182                                                  | 263                                                  | 460         |        |
| 5. C502 P200 _ | 250                                            | 625                                                          | 284                                                  | 411                                                  | 200                                            | 500                                                          | 228                                                  | 328                                                  | 740         |        |
| 6. C502 P240 _ | 300                                            | 750                                                          | 341                                                  | 493                                                  | 240                                            | 600                                                          | 273                                                  | 394                                                  | 780         |        |
| 7. C502 P280 _ | 350                                            | 875                                                          | 398                                                  | 575                                                  | 280                                            | 700                                                          | 319                                                  | 460                                                  | 820         |        |
| 8. C502 P320 _ | 400                                            | 1000                                                         | 455                                                  | 657                                                  | 320                                            | 800                                                          | 364                                                  | 526                                                  | 860         |        |

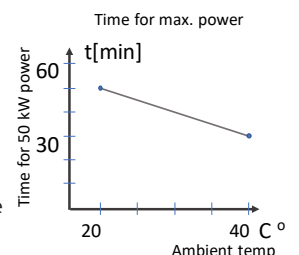
**Notice:** Over 500 A requires more than two charging outputs

#### Light duty rating:

- P<sub>LD</sub> 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<sub>HD</sub> 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<sub>LD</sub> is longer as shown in the graph on the right.

#### Heavy duty rating:

- P<sub>HD</sub> charging power is available continuously in any condition within the specified ambient conditions for unlimited time



Subject to change without notice © Kempower 2021

## C-station options

| Pos. | Item              | Definition                                              |
|------|-------------------|---------------------------------------------------------|
| 1.   | Dynamic module D2 | Managing power between two charging outputs             |
| 2.   | Dynamic module D4 | Managing power between four charging outputs            |
| 3.   | Satellite posts   | According to S-series datasheet, depending on CPU build |