

Kempower Station Charger C500



The Kempower Station Charger is the all-in-one DC charging solution with dynamic power management.

The Station Charger is a powerful all-in-one solution for electric vehicle fast charging sites. Utilizing Kempower's user-friendly cable system, the Station Charger can have one or two DC charging outputs. With different combinations of 50 kW power modules, the Station Charger harnesses the full potential of on-demand power routing, saving both energy and costs.

A double cabinet Station Charger can have up to eight 50 kW power modules, providing a maximum charging power of up to 400 kW.

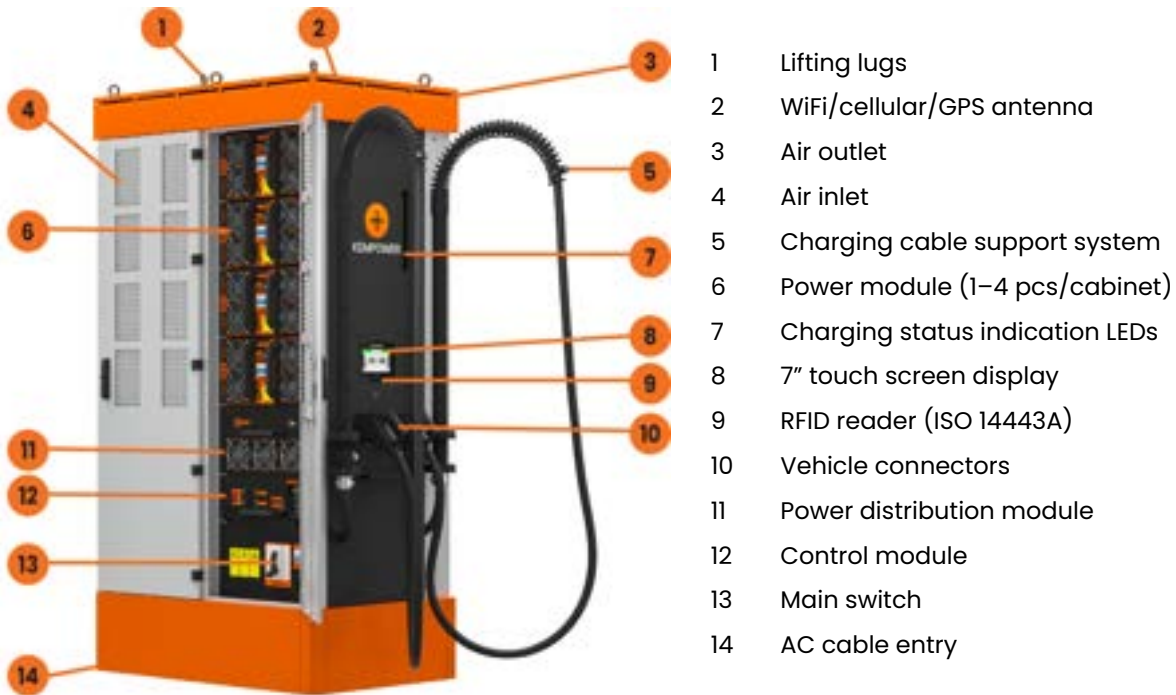
With dynamic power management, the available charging power of all power modules is automatically distributed to all connected charging outputs, depending on the charging cable used and the requirements of the electric vehicles.

Power range

Up to **400 kW**

Adaptive voltage range

150–1000 V



Advanced cable support system (pat. pend.) for premium user experience



Scalability with add-on power modules



Improved cost efficiency of the charging system



On-screen QR code for following the charging status on your mobile phone



Lockable door for safety and easy access



Advanced charging control and customization with Kempower ChargeEye

Product code interpretation

C501•P160•UU•7•C•P•D2•L•C0 Kempower Station Charger 500 V single cabinet • 200 kW charging power • 2 x CCS1 vehicle connector • charging cable length 7 m/23 ft. • nominal charging cable current 200 A • Payter P68 payment terminal • up to 2 dynamic outputs • ETL certification • unbranded

Item	Code	Description
Product type	C501	Kempower Station Charger 500 V single cabinet
	C502	Kempower Station Charger 500 V double cabinet
Charging power*	P160	200 kW (4 modules)
	P320	400 kW (8 modules)
	N	When in front of the vehicle connector type, indicates that there is only one connector
Vehicle connector type	D	CHAdEMO
	U	CCS1
	UU	2 x CCS1
	UD	CCS1 & CHAdEMO
Charging cable length	5	5 m/16.4 ft.
	7	7 m/23 ft.
Nominal charging cable current	B	125 A (CHAdEMO)
	C	200 A (CCS1)
	E	300 A/350 A** (CCS1)
User interface and payment	S	Standard user interface
	P	Payter P68 payment terminal with contactless, chip reader, and magnetic stripe (no PIN pad)
Power distribution modules	D2	Up to 2 dynamic outputs
Certification	L	ETL approved
Branding options	C0	Unbranded: roof and base in black color, no stickers
	Cn	Branded: number (n) indicates branding, e.g. C8

* Standard operation. See Power performance table for details.

** With 300 A charging cables:
350 A (rated) in +25°C/77°F. Requires at least 2 output terminals and a specific hardware configuration.

General electrical specifications

Input voltage	380...480 VAC +6%/-10%
Input frequency	50...60 Hz
Output voltage	150...1000 VDC
Power factor at full load	0.92
Efficiency at full load	94%
Idle power	20 VA
Standby power	C501: 50 W C502: 180 W
Overvoltage category	III
Icc	35 kA
Network type	TN-S, TN-C, TN-C-S, TT

Environmental specifications

Operating temperature	-30...+50 °C/-22...122 °F
Current derating	Maximum charging current decreases 2% for every 1 °C/1.8 °F rise in temperature above +25 °C/77 °F
Maximum altitude without derating	2000 m/6562 ft.
Altitude derating	Maximum charging current decreases 1.4% for every 100 m/328 ft. rise above 2000 m/6562 ft.
Operational noise level	Wall side: < 57 dB at 1 m/3.3 ft. distance Door side: < 62 dB at 1 m/3.3 ft. distance
Storage temperature	-40...+60 °C/-40...140 °F
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use

Connections and protocols

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	1.6j/2.0.1
Connectivity	Kempower ChargeEye solution

Electrical protections

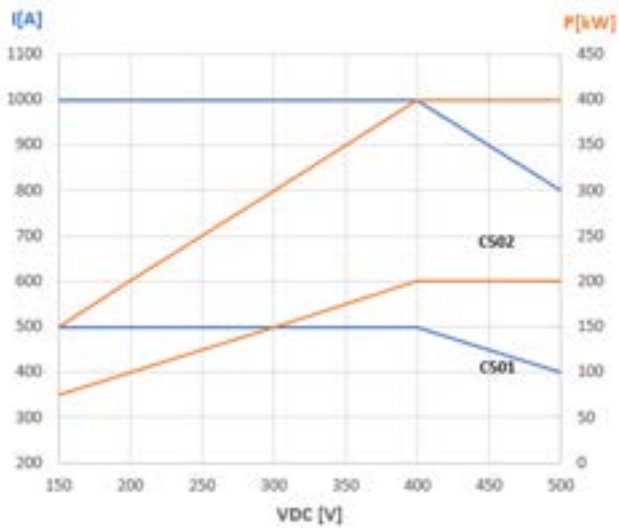
Over/undervoltage
Surge protection
Short circuit
Overload protection
Earth leakage current monitoring
Device overtemperature

Power performance

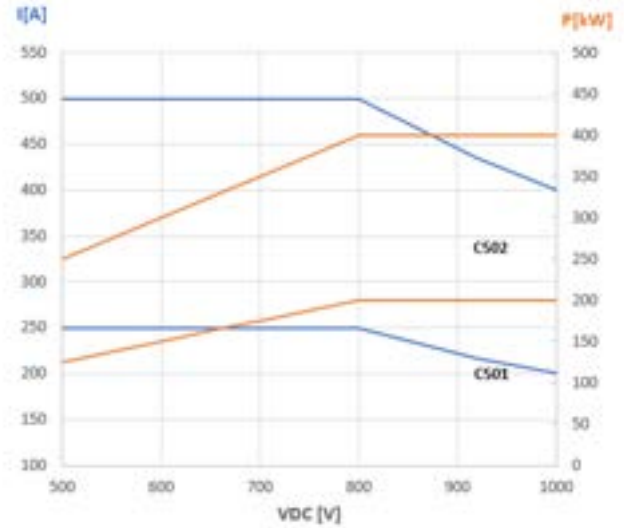
Product type	Number of power modules	Number of independent AC supply cables*	Standard operation			Continuous operation		
			Charging power	Input current per supply cable at 400 V	Input current per supply cable at 480 V	Charging power	Input current per supply cable at 400 V	Input current per supply cable at 480 V
C501	1	1	50 kW	91 A	76 A	40 kW	73 A	61 A
	2	1	100 kW	181 A	151 A	80 kW	145 A	121 A
	3	1	150 kW	272 A	227 A	120 kW	218 A	182 A
	4	1	200 kW	362 A	302 A	160 kW	290 A	242 A
C502	5	2	250 kW	91 A	76 A	200 kW	73 A	61 A
	6	2	300 kW	181 A	151 A	240 kW	145 A	121 A
	7	2	350 kW	272 A	227 A	280 kW	218 A	182 A
	8	2	400 kW	362 A	302 A	320 kW	290 A	242 A

* Each cabinet has a dedicated supply cable.

Figure 1. Power curve (standard operation)

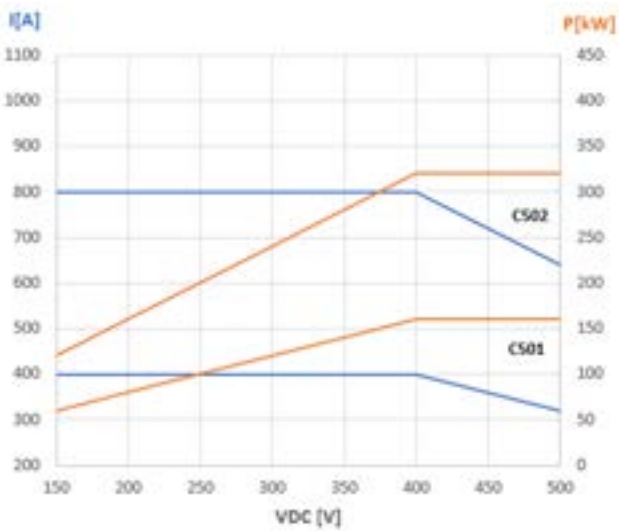


150-500 VDC

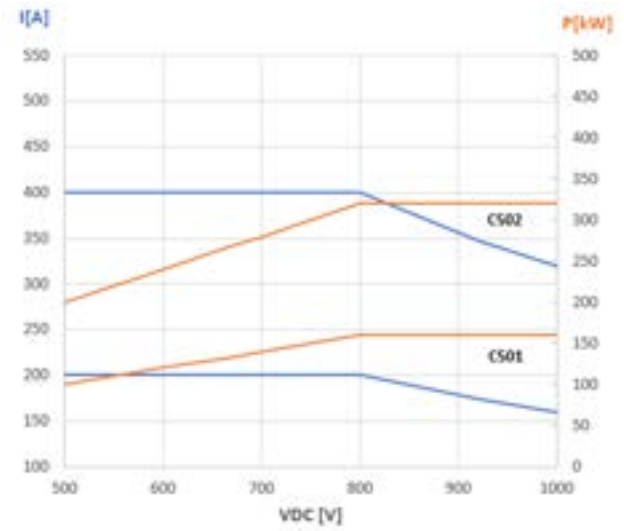


500-1000 VDC

Figure 2. Power curve (continuous operation)



150-500 VDC



500-1000 VDC

Product codes

Product code	Vehicle connector	Max. charging current	Max. DC charging power at 400 VDC*	Max. DC charging power at 800 VDC*
C501•UU•x•C•L	2 x CCS1	2 x 200 A	2 x 80 kW	2 x 160 kW
C501•UU•x•D•L	2 x CCS1	2 x 250 A	2 x 100 kW	2 x 200 kW
C501•UU•x•E•L	2 x CCS1	2 x 300 A/350 A**	2 x 120 kW/140 kW	2 x 200 kW
C501•UD•x•CB•L	CCS1 & CHAdeMO	200 A & 125 A	80 kW & 50 kW	160 kW & 100 kW
C501•UD•x•DB•L	CCS1 & CHAdeMO	250 A & 125 A	100 kW & 50 kW	200 kW & 100 kW
C501•UD•x•EB•L	CCS1 & CHAdeMO	300 A/350 A** & 125 A	120 kW/140 kW & 50 kW	200 kW & 100 kW

Product code	Vehicle connector	Max. charging current	Max. DC charging power at 400 VDC*	Max. DC charging power at 800 VDC*
C502•UU•x•C•L	2 x CCS1	2 x 200 A	2 x 80 kW	2 x 160 kW
C502•UU•x•D•L	2 x CCS1	2 x 250 A	2 x 100 kW	2 x 240 kW/280 kW
C502•UU•x•E•L	2 x CCS1	2 x 300 A/350 A**	2 x 120 kW/140 kW	2 x 240 kW/280 kW
C502•UD•x•CB•L	CCS1 & CHAdeMO	200 A & 125 A	80 kW & 50 kW	160 kW & 100 kW
C502•UD•x•DB•L	CCS1 & CHAdeMO	250 A & 125 A	100 kW & 50 kW	200 kW & 100 kW
C502•UD•x•EB•L	CCS1 & CHAdeMO	300 A/350 A** & 125 A	120 kW/140 kW & 50 kW	240 kW/280 kW & 100 kW

* Depends on the number of installed power modules

** With 300 A charging cables:
350 A (rated) in +25°C/+77°F. Requires at least 2 output terminals and a specific hardware configuration.

Note: Depending on the required cable length, replace x in the product code with 5 or 7, e.g. C502•UD•5•CB•L for a 5 m/16.4 ft. cable.

Compliance to standards

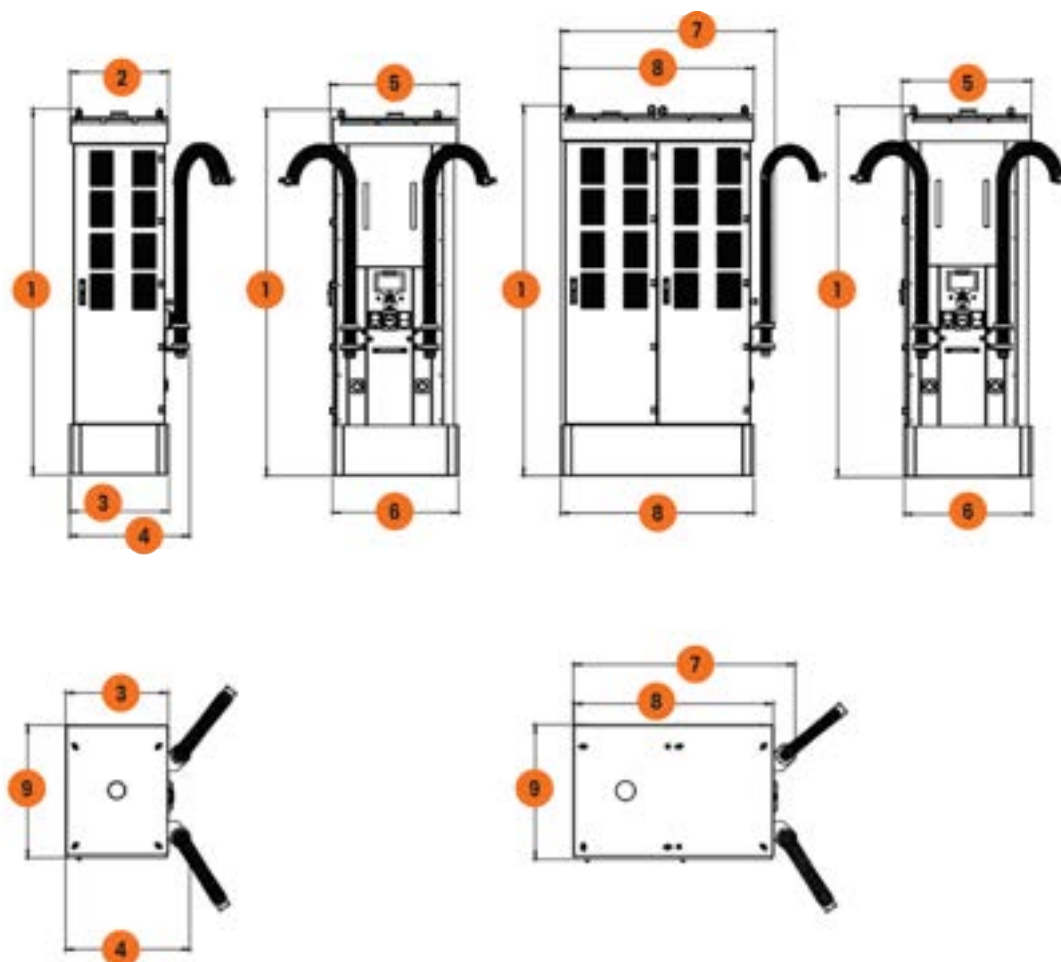
IEC 61851-1, IEC 61851-23, IEC 61851-21-2, IEC 62196-3
UL 2202, UL 2231-1, UL 2231-2
CSA Std. c22.2 No. 281.2, CSA Std. c22.2 No. 107.1
EMC Class A FCC Part 15

Options

Customized branding	Branding options, such as custom colors and stickers Contact Kempower for availability, pricing, and minimum order quantity
---------------------	--

Mechanical dimensions

Size (W x H x D)	Weight
C501: 651 x 2395 x 841 mm/25.6 x 94.3 x 33.1 in.	Maximum 525 kg/1157 lb.
C502: 1250 x 2395 x 841 mm/49.2 x 94.3 x 33.1 in.	Maximum 925 kg/2039 lb.



1	2395 mm/94.3 in.	3	651 mm/25.6 in.	5	839 mm/33 in.	7	1388 mm/54.6 in.	9	841 mm/33.1 in.
2	645 mm/25.4 in.	4	788 mm/31 in.	6	826 mm/32.5 in.	8	1250 mm/49.2 in.		

Kempower Power Unit C500

Power Cabinet Version 3 | Power Module Version 1



The Kempower Power Unit is the heart of Kempower's flexible, modular and scalable DC charging system with dynamic power management.

One Power Unit can simultaneously provide energy for up to 8 DC charging outputs: Satellites or Pantographs. By utilizing individual 25 kW power channels in the installed Power Modules, the Power Unit's unique dynamic power management harnesses the full potential of on-demand power routing. This enables significant cost savings in the installed charging hardware and grid connection while optimizing the charging experience.

A triple cabinet Power Unit can have up to twelve 50 kW Power Modules, providing a maximum nominal power of up to 600 kW.

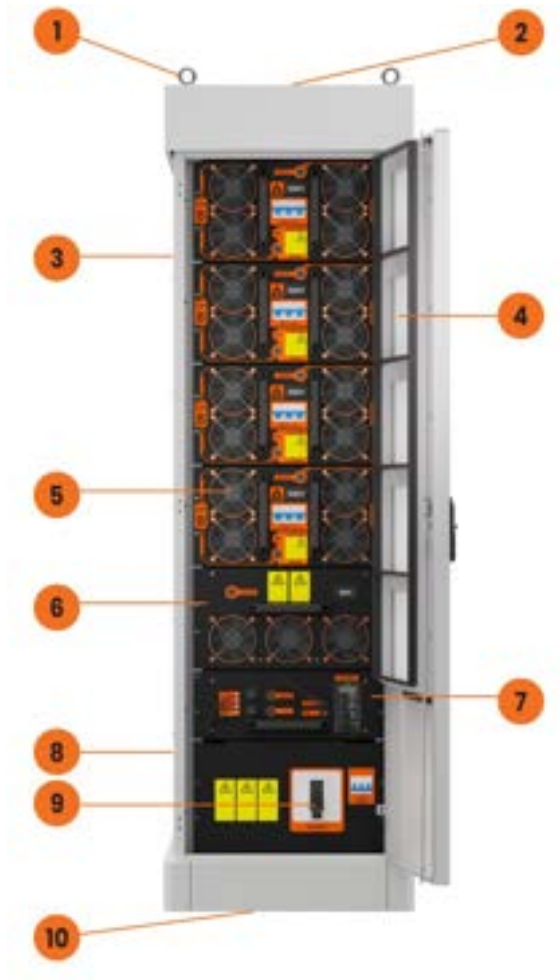
With dynamic power management, the available charging power of all Power Modules is automatically distributed to all connected charging outputs according to the requests of the electric vehicles.

Power range

Up to **600 kW**

Adaptive voltage range

150–1000 V



- 1 Lifting lugs
- 2 WiFi/cellular/GPS antenna
- 3 Air outlet (behind cabinet)
- 4 Air inlet
- 5 Power Module (1–4 pcs/cabinet)
- 6 Power distribution module
- 7 Control module
- 8 DC output (DIN rail inside cabinet)
- 9 Main switch
- 10 AC supply cable entry



Charging power for up to 8 charging outputs, 8 single Satellites or 4 double Satellites



1–4 50 kW Power Modules per cabinet



Scalability with add-on Power Modules



Improved cost efficiency of the charging system



Lockable door for safety and easy access



Advanced charging control and customization with Kempower ChargeEye

Product code interpretation

Kempower Power Unit consists of Power Cabinet and Power Modules.

C502•D6•L•V3•C0

Kempower Power Cabinet C500 double • up to 6 dynamic outputs • ETL certification • Version 3 • unbranded

Item	Code	Description
Product type	C501	Kempower Power Cabinet C500 single ^[1] (four Power Module slots)
	C502	Kempower Power Cabinet C500 double ^[1] (eight Power Module slots)
	C503	Kempower Power Cabinet C500 triple ^[1] (twelve Power Module slots)
Power distribution modules ^[2]	D4	Up to 4 adaptive dynamic outputs 150–1000 VDC
	D6	Up to 6 adaptive dynamic outputs 150–1000 VDC
	D8	Up to 8 non-adaptive dynamic outputs 150–500 VDC ^[3]
	R	Static power distribution
Certification	L	ETL-approved product
Product version	V3	Version 3
Branding options ^[4]	C0	Unbranded: Solid color RAL7047
	Cn	Branded: Stickers in predefined areas of the unit. Number (n) indicates branding, e.g. C8.

[1] The rated current of a single charging output terminal using a power distribution module is limited to 200 A.

[2] With 300 A charging cables:

350 A (rated) in 77 °F. Requires at least 2 output terminals and a specific hardware configuration.

[3] Power curve according to Figure 1.

[4] Branding according to Kempower Customer Branding Guidelines.

PM550V1

Power Module Version 1 for Kempower Power Cabinet C500

Item	Code	Description
Product type	PM550V1	Power Module Version 1 for Kempower Power Unit C500 (50 kW in standard operation)

General electrical specifications

Input voltage	380...480 VAC +6%/-10%
Network type	TN-S, TN-C, TN-C-S, TT
Input frequency	50...60 Hz
Overvoltage category	III
Icc	35 kA
Power factor at full load	0.92
Output voltage	150...1000 VDC
Efficiency at full load	94%
Idle power	20 VA
Standby power	C501: 50 W C502: 100 W C503: 150 W

Environmental specifications

Operating temperature	-22...131 °F
Current derating ^[1]	Charging current decreases 1.5% for every 1.8 °F rise in temperature above 104 °F
Maximum altitude without derating	6562 ft.
Altitude derating	Charging current decreases 1.4% for every 328 ft. rise above 6562 ft.
Operational noise level	< 60 dB at 3.3 ft. distance
Storage temperature	-40...140 °F
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use

^[1] Thermal performance applies only to a standard, unbranded Kempower Power Unit.

Connections and protocols

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	1.6j/2.0.1
Connectivity	Kempower ChargEye solution

Electrical connections (between Power Unit and vehicle connectors)

DC power cable per vehicle connector (terminals 2 x 300 MCM per pole)
Control cable 24 VDC
Control bus cable

Electrical protections

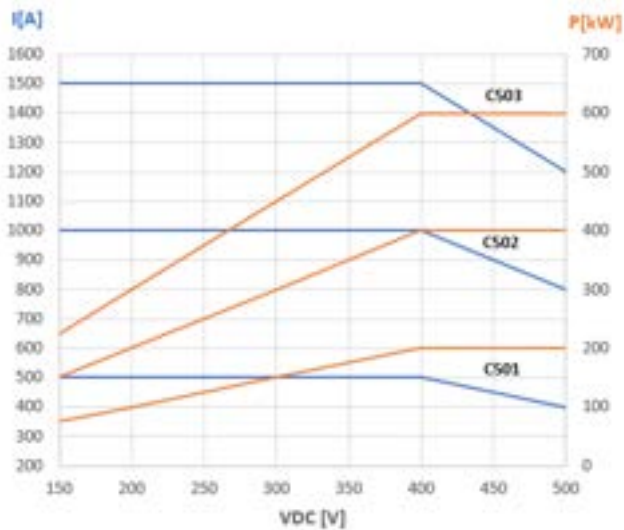
Over/undervoltage
Surge protection
Short circuit
Overload protection
Earth leakage current monitoring
Device overtemperature

Power performance

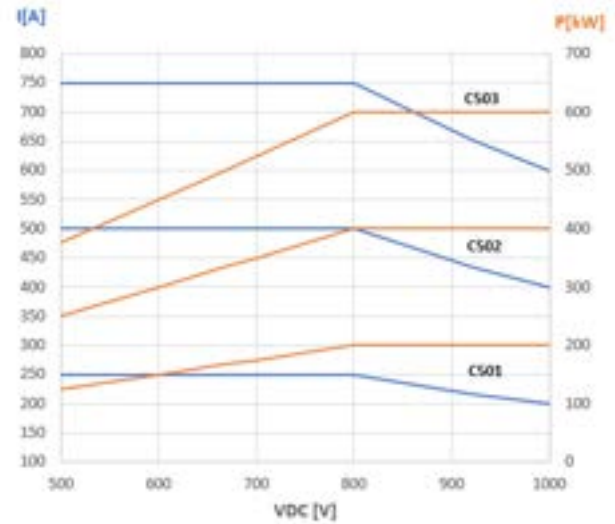
Product type	Number of Power Modules	Number of independent AC supply cables ^[1]	Standard operation			Continuous operation		
			Charging power	Input current per supply cable at 400 V	Input current per supply cable at 480 V	Charging power	Input current per supply cable at 400 V	Input current per supply cable at 480 V
C501	1	1	50 kW	91 A	76 A	40 kW	73 A	61 A
	2	1	100 kW	181 A	151 A	80 kW	145 A	121 A
	3	1	150 kW	272 A	227 A	120 kW	218 A	182 A
	4	1	200 kW	362 A	302 A	160 kW	290 A	242 A
C502	5	2	250 kW	91 A	76 A	200 kW	73 A	61 A
	6	2	300 kW	181 A	151 A	240 kW	145 A	121 A
	7	2	350 kW	272 A	227 A	280 kW	218 A	182 A
	8	2	400 kW	362 A	302 A	320 kW	290 A	242 A
C503	9	3	450 kW	91 A	76 A	360 kW	73 A	61 A
	10	3	500kW	181 A	151 A	400 kW	145 A	121 A
	11	3	550 kW	272 A	227 A	440 kW	218 A	182 A
	12	3	600 kW	362 A	302 A	480 kW	290 A	242 A

[1] Each cabinet has a dedicated supply cable.

Figure 1. Power curve – standard operation

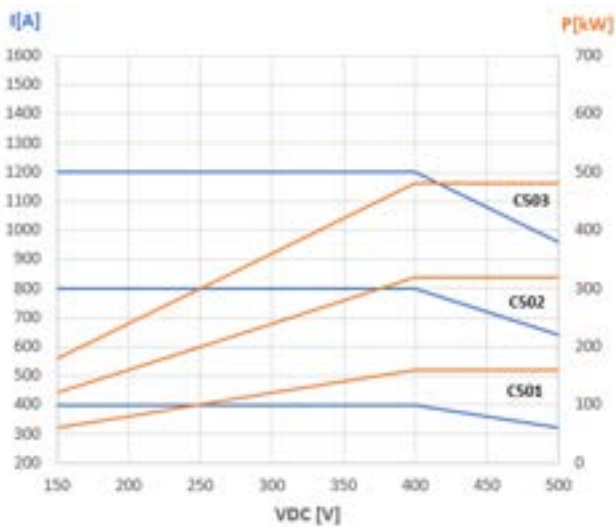


150-500 VDC

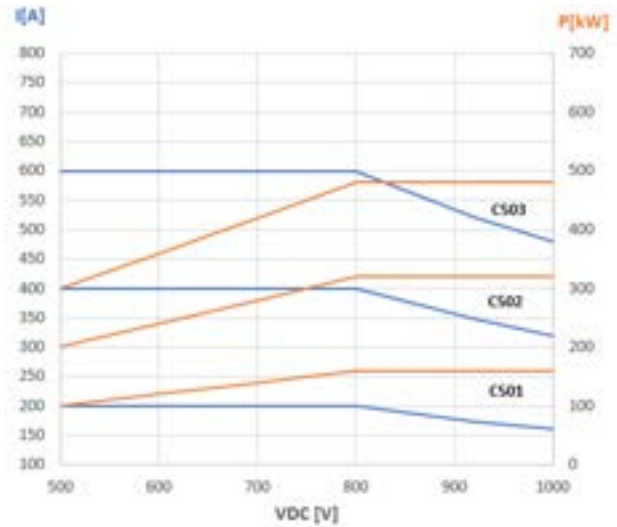


500-1000 VDC

Figure 2. Power curve – continuous operation



150-500 VDC



500-1000 VDC

Compliance to standards

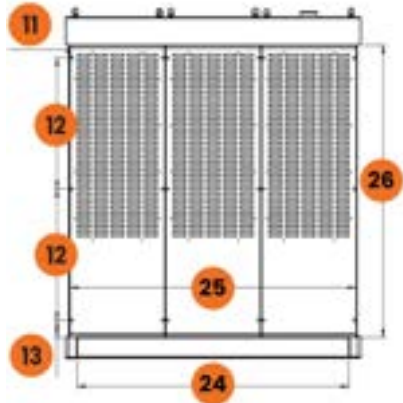
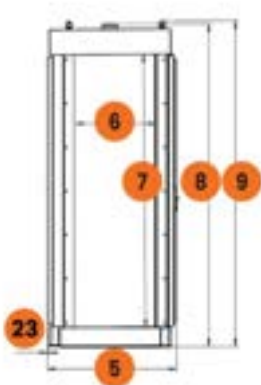
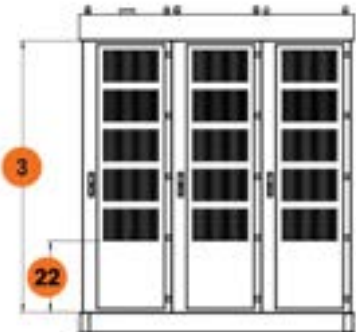
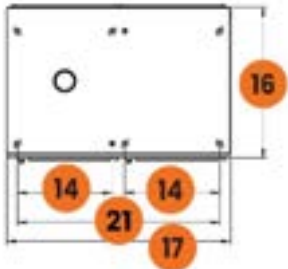
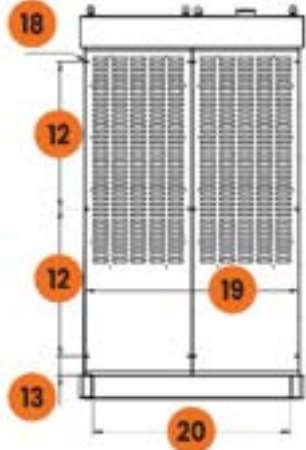
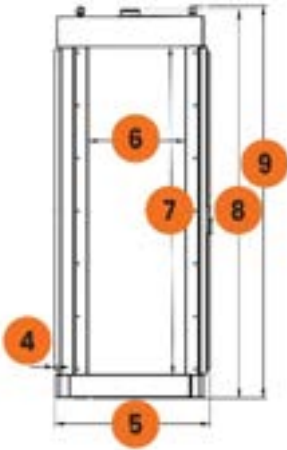
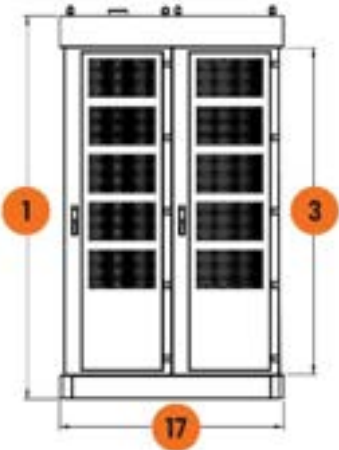
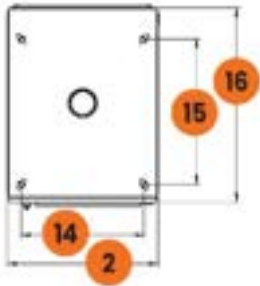
IEC 61851-1, IEC 61851-23, IEC 61851-21-2

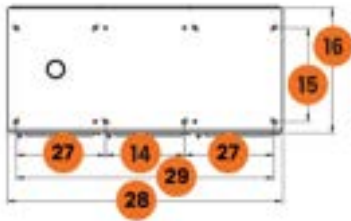
UL 2202, UL 2231-1, UL 2231-2

CSA Std. c22.2 No. 281.2, CSA Std. c22.2 No. 107.1

EMC Class A FCC Part 15

Customized branding	Branding with stickers in predefined areas of the unit Contact Kempower for availability, pricing, and minimum order quantity
Steel base	Installation kit for a single cabinet, for flat surface assembly





1	84.3 in.	9	86.4 in.	17	49.2 in.	25	70.6 in.
2	25.6 in.	10	21.7 in.	18	0.7 in.	26	72.1 in.
3	71.9 in.	11	0.6 in.	19	47.2 in.	27	23.6 in.
4	0.4 in.	12	32.4 in.	20	43.4 in.	28	72.8 in.
5	34.3 in.	13	4.3 in.	21	44.5 in.	29	68.1 in.
6	21.4 in.	14	20.9 in.	22	18.9 in.		
7	72.4 in.	15	24.8 in.	23	0.4 in.		
8	85.6 in.	16	33.1 in.	24	67.0 in.		

Note: Only Kempower approved partners who have completed the Kempower certification training are permitted to install the charging units. Installation done by an unapproved partner voids the warranty. For more information, contact Kempower Sales Support.



Kempower Satellite

Version 2

The Kempower Satellite DC charging system is the optimal solution for public charging and other sites that need multiple fast charging outputs.

The Satellites are connected to the Power Unit. One Power Unit can simultaneously provide energy for up to 8 DC charging outputs with 800 VDC systems and up to 6 outputs with Adaptive Voltage systems covering both 400 VDC and 800 VDC charging.

The maximum available charging power of the system is 600 kW, depending on the Power Unit version. Each output can deliver up to 320 kW to the charging Satellite when using the optional 400 A charging cable.

The Kempower Satellite is available with CCS1, NACS and CHAdeMO vehicle connectors.



Maximum charging power

Up to 320 kW

Number of Satellites in the system

1–8



- 1 Charging cable support system
- 2 7" touch screen display
- 3 RFID reader
- 4 Vehicle connector
- 5 Mounting flange



Advanced cable support system for premium user experience



Easy-to-use, intuitive user menu on a 7" touch screen display



On-screen QR code for following the charging status on your mobile phone



Kempower advanced charging Satellite system with up to 8 simultaneous charging outputs



Cabling distance between the Power Unit and Satellites up to 262 feet/80 meters



Advanced charging control and customization with Kempower ChargeEye

Product code interpretation

ST•N•7•L•P•L•C0

Kempower Satellite Version 2 • 1 x NACS connector • 23 ft./7 m charging cable • 350 A cable current • Payter P68 payment terminal • North American version • unbranded

Item	Code	Description
Product type	ST	Kempower Satellite Version 2
Vehicle connector type	U	CCS1
	N	NACS
	UU	2 x CCS1
	UN	CCS1 & NACS
	UD	CCS1 & CHAdeMO
	NN	2 x NACS
Charging cable length	5	16.4 ft./5 m
	7	23 ft./7 m
Nominal charging cable current	B	125 A (CHAdeMO)
	C	200 A (CCS1)
	D	250 A (NACS)
	E	300 A (CCS1)
	G	380 A (NACS) ^[1]
	H	400 A (CCS1) ^[2]
	L	350 A (NACS) ^[1]
User interface and payment	S	Standard user interface
	O	Payter Apollo: Contactless payment with online PIN entry and verification ^[3]
	P	Payter P68 payment terminal with contactless, chip reader, and magnetic stripe (no PIN pad) ^[4]
Equipment stop	E	Equipment stop button
Certification	L	North American version (ETL-approved product meeting UL and CSA requirements)
Branding options	C0	Unbranded: roof and base in black color, no stickers
	Cn	Branded: number (n) indicates branding, e.g. C8

[1] Single output only.

[2] 400 A for a period of time that depends on environmental conditions (only single-cable Satellites). Dual 400 A CCS1 cable configuration not available.

[3] When a credit card reader is needed in Washington State, use Payter P68 due to local regulations.

[4] Available in the US only.

Product codes

Product code	Charging outputs	Vehicle connector	Max. charging current	Charging power at 400 VDC	Charging power at 800 VDC	Weight
Product codes with 16.4 ft./5 m charging cables						
ST•U•5C•S•L	1	CCSI	200 A	80 kW	160 kW	179 lb./81 kg
ST•U•5H•S•L	1	CCSI	400 A	160 kW	320 kW	193 lb./87 kg
ST•N•5D•S•L	1	NACS	250 A	100 kW	200 kW	176 lb./80 kg
ST•N•5G•S•L	1	NACS	380 A	152 kW	304 kW	188 lb./85 kg
ST•N•5L•S•L	1	NACS	350 A	140 kW	280 kW	188 lb./85 kg
ST•UU•5C•S•L	2	2 x CCSI	2 x 200 A	2 x 80 kW	2 x 160 kW	269 lb./122 kg
ST•UU•5E•S•L	2	2 x CCSI	2 x 300 A	2 x 120 kW	2 x 240 kW	295 lb./134 kg
ST•UD•5CB•S•L	2	CCSI & CHAdEMO	200 A & 125 A	80 kW & 50 kW	160 kW & 100 kW	256 lb./116 kg
ST•UD•5EB•S•L	2	CCSI & CHAdEMO	300 A & 125 A	120 kW & 50 kW	240 kW & 100 kW	270 lb./122 kg
ST•UN•5CD•S•L	2	CCSI & NACS	200 A & 250 A	80 kW & 100 kW	160 kW & 200 kW	274 lb./124 kg
ST•UN•5ED•S•L	2	CCSI & NACS	300 A & 250 A	120 kW & 100 kW	240 kW & 200 kW	304 lb./138 kg
ST•NN•5D•S•L	2	2 x NACS	2 x 250 A	2 x 100 kW	2 x 200 kW	267 lb./121 kg

Note: Versions with 23 ft./7 m charging cables: Change 5 to 7 in the product code, e.g. from STU5CSL to STU7CSL. Add 8.8 lb./4 kg to the weight.

Note: Versions with a payment terminal: Change S to O or P in the product code, e.g. STU5CSL to STU5COL or STU5CPL.

General electrical specifications

DC charging connector options	CCSI, CHAdEMO, NACS
Voltage	Max. 1000 VDC
Standby power	25 W

Environmental specifications

Operating temperature	-22...122 °F/-30...+50 °C
Derating	Charging cable pin temperature limits charging current. For other limiting variables, see the applicable Power Unit datasheet.
Storage temperature	-40...140 °F/-40...+60 °C
Ambient air humidity	< 95% relative humidity
Enclosure rating	Suitable for outdoor use

Connections and protocols

Ethernet	RJ45, IEEE 802.3/802.3u
OCPP	1.6j/2.0.1
Connectivity	Kempower ChargeEye solution
CCSI	SAE J1772/CCS, DIN 70121:2012, ISO 15118-1:2013, ISO 15118-2:2014
CHAdeMO	0.9/1.0
NACS	
Authentication methods	RFID: ISO 14443A, ISO 15693, ISO 14443B (STM SRI512) Customer backend via OCPP Payment terminal AutoCharge ISO 15118-2 Plug & Charge

Electrical connections (between Satellite and Power Unit)

DC power cable per vehicle connector (terminals 2 x 300 MCM/2 x 150 mm ² per pole)
Control power cable (24 VDC)
Communications cable (RJ45)

Electrical protections

Vehicle connector pin temperature monitoring
--

Compliance to standards

IEC 61851-1, IEC 61851-23, IEC 61851-21-2
UL 2202, UL 2231-2
CSA Std. c22.2 No. 281.2, CSA Std. c22.2 No. 107.1
FCC 47 CFR Part 15 Subpart B, Class A
CTEP Certified to Accuracy Class 2.0 (< 1.0% error):
<ul style="list-style-type: none"> COA No. 5982-24 for Kempower standard devices without a 3rd party DC meter COA No. 5981-24 for Kempower devices with an integrated 3rd party DC meter

Options

Payment terminal	Payter Apollo: Contactless payment with online PIN entry and verification ^[1] Payter P68 payment terminal with contactless, chip reader, and magnetic stripe (no PIN pad) ^[2]
Equipment stop button	
Customized branding	Branding options, such as custom colors and stickers Contact Kempower for availability, pricing, and minimum order quantity

[1]

When a credit card reader is needed in Washington State, use Payter P68 due to local regulations.

[2]

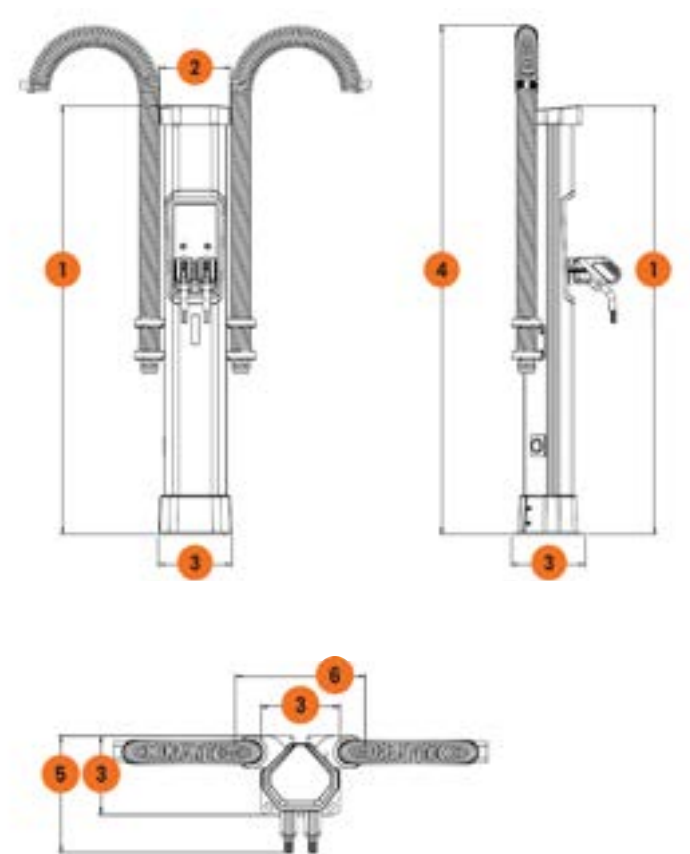
Available in the US only.

Mechanical dimensions

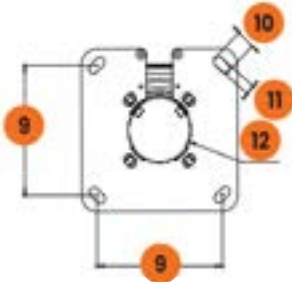
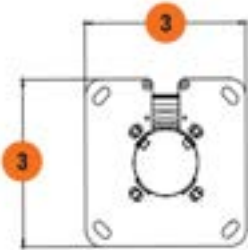
Size (W x H x D)

11.8 x 68.4 x 11.8 in./300 x 1738 x 300 mm

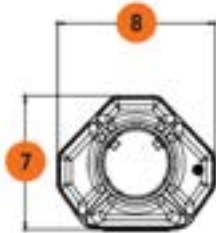
Satellite with two DC charging outputs



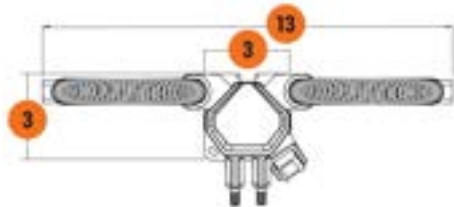
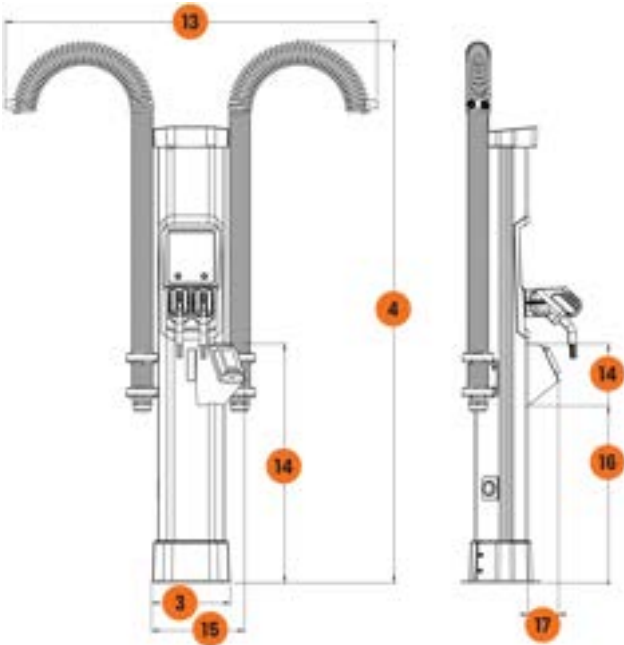
Footprint of standard
installation flange



Footprint with
mounting tube



Satellite with two DC charging outputs and payment terminal



1	68.4 in./1738 mm	6	19.4 in./493 mm	11	0.7 in./18 mm	16	26.6 in./675 mm
2	11.4 in./289 mm	7	9.4 in./239 mm	12	4.7 in./120 mm	17	4.5 in./115 mm
3	11.8 in./300 mm	8	11.6 in./294 mm	13	55.9 in./1420 mm		
4	82.7...94.5 in./2100...2400 mm	9	9.4 in./240 mm	14	35.9 in./911 mm		
5	17.5 in./444 mm	10	1.4 in./36 mm	15	13.9 in./354 mm		