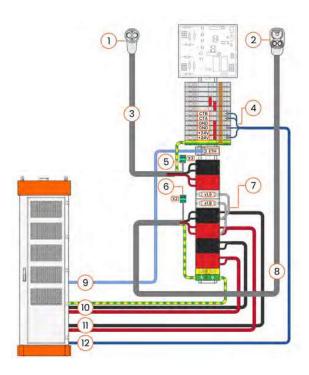


11.3. Satellite Version 1 with one CCS and one CHAdeMO vehicle connector

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NOTE

Figure 64. Satellite Version 1 with one combined charging system (CCS) and one CHAdeMO vehicle connector



- 1 Configuration tag (left vehicle connector)
- 2 Configuration tag (right vehicle connector)
- 3 Charging cable (left)
- 4 CT line signal wires
- 5 Vehicle connector signal wires (left)
- 6 Vehicle connector signal wires (right)

- 7 Voltage measurement wires
- 8 Charging cable (right)
- 9 Communication cable
- 10 DC output power cables + PE (left)
- 11 DC output power cables + PE (right)
- 12 Control cable (CT line)

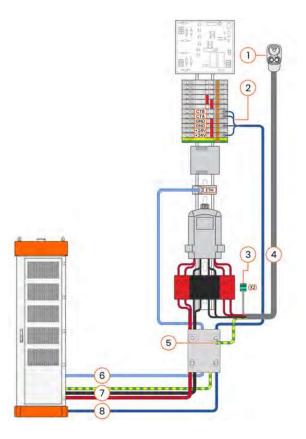


11.4. Satellite Version 2 with one CCS vehicle connector

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NOTE

Figure 65. Satellite Version 2 with one combined charging system (CCS) vehicle connector



- 1 Configuration tag (right vehicle connector)
- 2 CT A line signal wires (CT B not connected)
- 3 Vehicle connector signal wires
- 4 Charging cable

- 5 Connect PE wire to Satellite installation flange with wire clamp
- 6 Communication cable
- 7 DC output power cables + PE
- 8 Control cable (CT line)

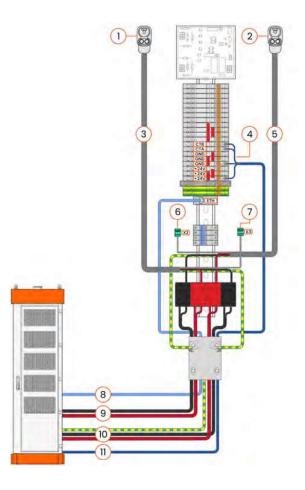


11.5. Satellite Version 2 with two CCS vehicle connectors



NOTE

Figure 66. Satellite Version 2 with two combined charging system (CCS) vehicle connectors



- 1 Configuration tag (left vehicle connector)
- 2 Configuration tag (right vehicle connector)
- 3 Charging cable (left)
- 4 CT line signal wires
- 5 Charging cable (right)
- 6 Vehicle connector signal wire (left)

- 7 Vehicle connector signal wire (right)
- 8 Communication cable
- 9 DC output power cables (left)
- 10 DC output power cables + PE (right)
- 11 Control cable (CT line)

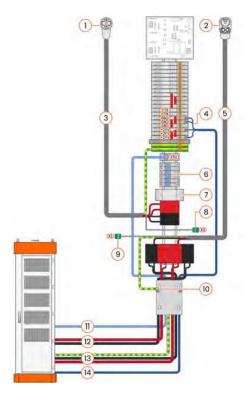


11.6. Satellite Version 2 with one CCS and one CHAdeMO vehicle connector



NOTE

Figure 67. Satellite Version 2 with one combined charging system (CCS) and one CHAdeMO vehicle connector



- 1 Configuration tag (left vehicle connector)
- 2 Configuration tag (right vehicle connector)
- 3 Charging cable (left)
- 4 CT line signal wires
- 5 Charging cable (right)
- 6 Voltage measurement fuses
- 7 Contactor for CHAdeMO

- 8 Vehicle connector signal wires (left)
- 9 Vehicle connector signal wire (right)
- 10 Connect PE wire to Satellite installation flange with wire clamp
- 11 Communication cable
- 12 DC output power cables (left)
- 13 DC output power cables + PE (right)
- 14 Control cable (CT line)

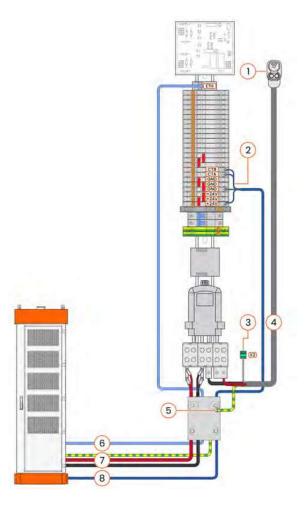


11.7. Liquid Cooled Satellite with one CCS vehicle connector



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Figure 68. Liquid Cooled Satellite with one combined charging system (CCS) vehicle connector



- 1 Configuration tag (right vehicle connector)
- 2 CT A line signal wires (CT B not connected)
- 3 Vehicle connector signal wires
- 4 Charging cable

- 5 PE wire connected to installation flange with wire clamp
- 6 Communication cable
- 7 DC output power cables + PE
- 8 Configuration tag (right vehicle connector)

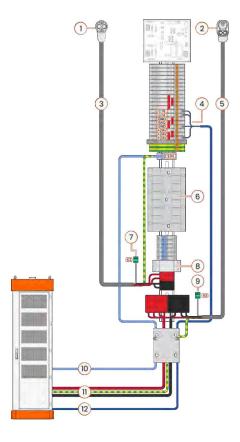


11.8. X-Satellite with one CCS and one CHAdeMO vehicle connector



NOTE

Figure 69. X-Satellite with one combined charging system (CCS) and one CHAdeMO vehicle connector



- 1 Configuration tag (left vehicle connector)
- 2 Configuration tag (right vehicle connector)
- 3 Charging cable (left)
- 4 CT line signal wires
- 5 Charging cable (right)
- 6 Relay board

- 7 Vehicle connector signal wires (right)
- 8 Contactor for CHAdeMO
- 9 Vehicle connector signal wires (left)
- 10 Communication cable
- 11 DC output power cables + PE
- 12 Control cable (CT line)

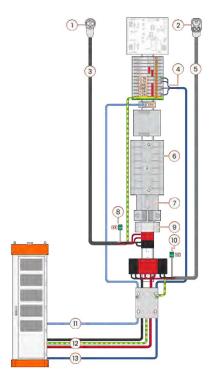


11.9. X-Satellite with one CCS, one CHAdeMO vehicle connector and a kWh meter

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NOTE

Figure 70. X-Satellite with one combined charging system (CCS), one CHAdeMO vehicle connector and a kWh meter



- 1 Configuration tag (left vehicle connector)
- 2 Configuration tag (right vehicle connector)
- 3 Charging cable (left)
- 4 CT line signal wires
- 5 Charging cable (right)
- 6 Relay board
- 7 kWh meter

- 8 Vehicle connector signal wires (right)
- 9 Contactor for CHAdeMO
- 10 Vehicle connector signal wires (left)
- 11 Communication cable
- 12 DC output power cables + PE
- 13 Control cable (CT line)

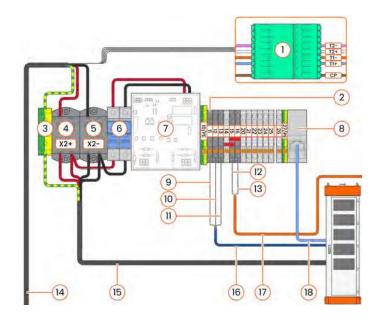


11.10. Control Unit 200 A with one CCS vehicle connector

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NOTE

Figure 71. Control Unit 200 A with one combined charging system (CCS) vehicle connector



- 1 Terminal block for power cable PE
- 2 Fuse terminal block (24 VDC, 2 A)
- 3 Charging cable Phoenix Connector
- 4 DC+ terminal (X2+)
- 5 DC- terminal (X2-)
- 6 DC Voltage measurement fuses (1000 VDC)
- 7 Voltage and insulation monitor (A019)
- 8 Ethernet terminal
- 9 Control cable auxiliary power wires (+24 V)

- 10 Control cable ground wire
- 11 Control cable (CT A)
- 12 Equipment stop button
- 13 Equipment stop button communication cable
- 14 DC power charging cable (vehicle connector)
- 15 DC power cable from cabinet
- 16 Control cable
- 17 Equipment stop button cable
- 18 Communication cable



11.11. AC Satellite Version 2 with two vehicle connectors



NOTICE

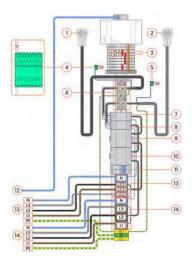
The AC Satellite is not connected to the charging power unit. It requires only AC supply cables that are connected to the main AC supply.



NOTE

If the optional communication cable is used, ground the Ethernet shield at one end only: AC Satellite or network connection switch.

Figure 72. AC Satellite Version 2 with two vehicle connectors



- 1 Configuration tag (left vehicle connector)
- 2 Configuration tag (right vehicle connector)
- 3 Connection for equipment stop (option)
- 4 Socket signal wires (left)
- 5 Socket signal wires (right)
- 6 Residual current monitoring sensors
- 7 Contactor (left)

- 8 Contactor (right)
- 9 kWh meter (left)
- 10 kWh meter (right)
- 11 Operating power circuit breaker
- 12 Ethernet (public LAN) communication cable (option)
- 13 AC input 2a
- 14 AC input 1

^aIf the site has multiple AC Satellites, we recommend shifting the phase order L1→L2.2 | L2→L3.2 | L3→1.2 to balance the power consumption in the grid.



11.12. AC Satellite Version 2 with two sockets



NOTICE

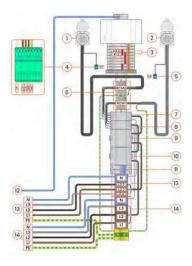
The AC Satellite is not connected to the charging power unit. It requires only AC supply cables that are connected to the main AC supply.



NOTE

If the optional communication cable is used, ground the Ethernet shield at one end only: AC Satellite or network connection switch.

Figure 73. AC Satellite Version 2 with two sockets or vehicle connectors



- 1 Configuration tag (left socket)
- 2 Configuration tag (right socket)
- 3 Connection for equipment stop (option)
- 4 Socket signal wires (left)
- 5 Socket signal wires (right)
- 6 Residual current monitoring sensors
- 7 Contactor (left)

- 8 Contactor (right)
- 9 kWh meter (left)
- 10 kWh meter (right)
- 11 Operating power circuit breaker
- 12 Ethernet (public LAN)
 communication cable (option)
- 13 AC input 2^a
- 14 AC input 1

^aIf the site has multiple AC Satellites, we recommend shifting the phase order L1→L2.2 | L2→L3.2 | L3→L1.2 to balance the power consumption in the grid.



11.13. AC Satellite Version 2 with two sockets or vehicle connectors



NOTICE

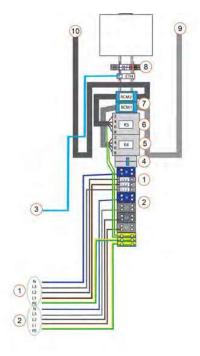
The AC Satellite Version 2 is not connected to the charging power unit. It requires only AC supply cables that are connected to the main AC supply.



NOTE

If the optional communication cable is used, ground the Ethernet shield at one end only: AC Satellite Version 2 or network connection switch.

Figure 74. AC Satellite Version 2 with two sockets or vehicle connectors



- 1 AC input 2^a
- 2 AC input 1
- 3 Ethernet (public LAN) communication cable (option)
- 4 Operating power circuit breaker
- 5 kWh meter (right)

- 6 kWh meter (left)
- 7 Residual current monitoring sensors
- 8 Connection for equipment stop (optional)
- 9 Configuration tag (right)
- 10 Configuration tag (left)

^aIf the site has multiple AC Satellites, we recommend shifting the phase order L1→L2.2 | L2→L3.2 | L3→L1.2 to balance the power consumption in the grid.



12. CONTROL SIGNAL WIRES OF THE CHARGING CABLE

The units have pre-installed wiring harnesses with mating connectors for the control signal wires of the charging cable. Before you connect the signal wires to the mating connector, terminate the signal wires with ferrules to protect the wires from corrosion.

12.1. CCS charging cables



NOTICE

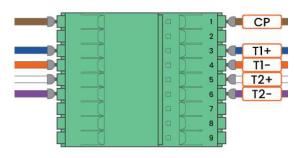
Before you connect the signal wires to the mating connector, terminate the signal wires with ferrules to protect the wires from corrosion.



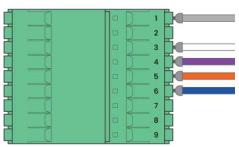
Connect the five control signal wires of the CCS charging cable to the mating connector:

- X2 for the charging cable on the right hand side
- X3 for the charging cable on the left hand side

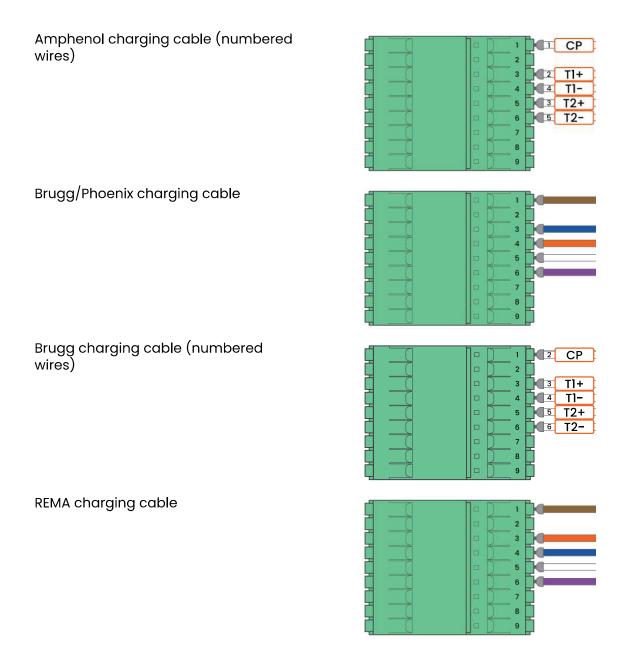
Unit wiring



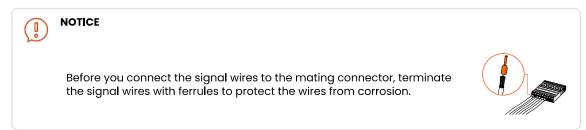
Amphenol charging cable







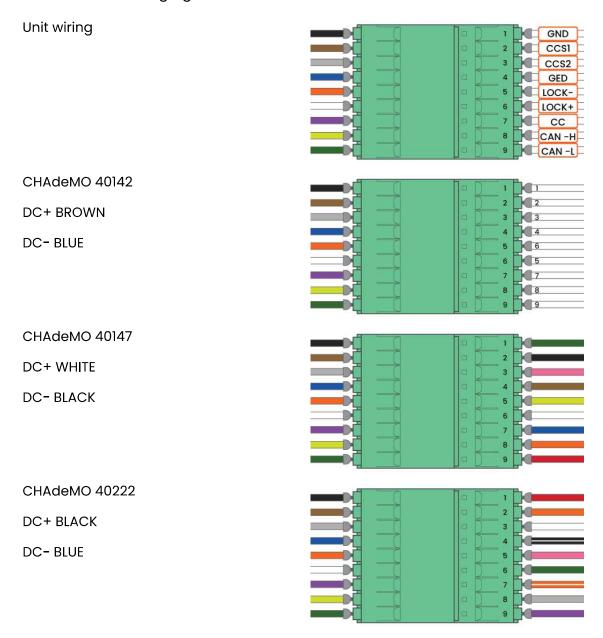
12.2. CHAdeMO charging cables



Connect the nine control signal wires of the CHAdeMO charging cable to the mating connector:



- X2 for the charging cable on the right hand side
- X3 for the charging cable on the left hand side



12.3. AC charging cables



NOTICE

Before you connect the signal wires to the mating connector, terminate the signal wires with ferrules to protect the wires from corrosion.





Connect only the CP signal wire of the AC charging cable to the mating connector:

- X4 for the charging cable on the right hand side
- X5 for the charging cable on the left hand side

L1 BROWN

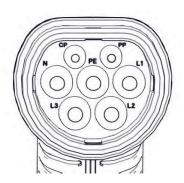
L2 BLACK

L3 GRAY

N BLUE

PE GREEN-YELLOW

CP BLACK-WHITE or WHITE





13. EXAMPLES OF CONCRETE FOUNDATIONS

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NOTE

Concrete foundations are not supplied by Kempower.

Figure 75. Example of single, double, and triple cabinets on concrete foundations



Figure 76. Example of concrete foundation (triple cabinet)



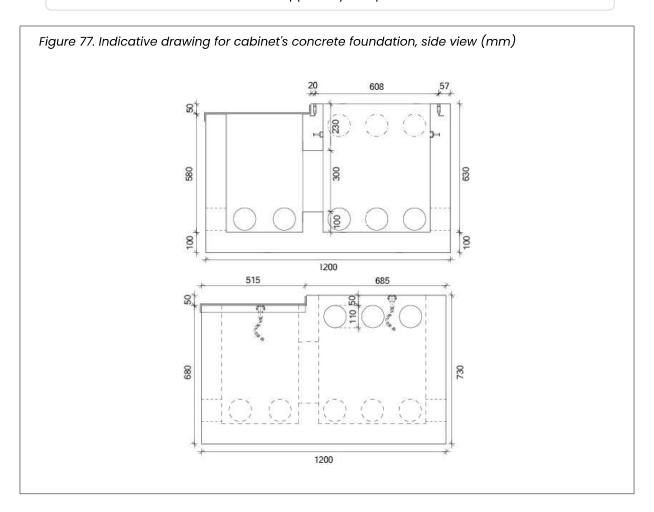


14. INDICATIVE DIMENSIONS FOR CONCRETE FOUNDATIONS

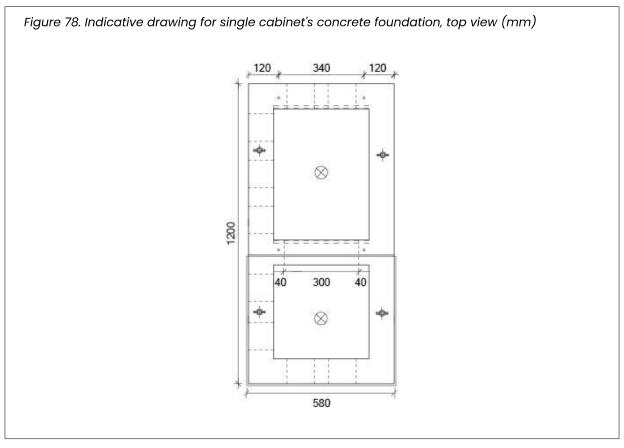
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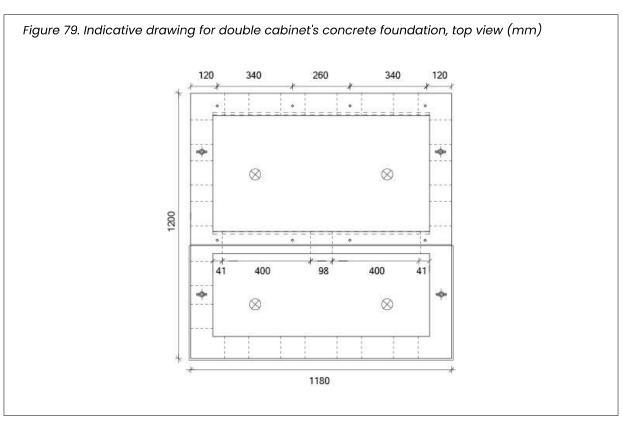
NOTE

Concrete foundations are not supplied by Kempower.











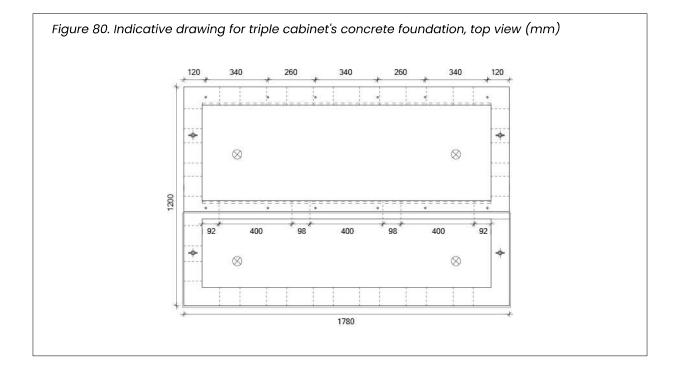
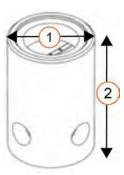


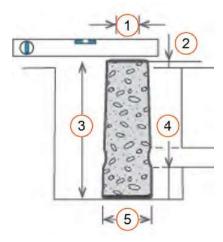
Figure 81. Indicative drawing for Satellite concrete foundation (standard installation flange)



- 1 Outer diameter 400 mm
- Height 600 mm
 Top of foundation above ground 25–55 mm
 Cable channel diameter approximately 150 mm
 Weight approximately 100 kg



Figure 82. Indicative drawing for Satellite concrete foundation, typically used for e.g. lamp posts (requires optional mounting tube)



- 1 Inner diameter 127 mm
- 2 Top of foundation above ground 25–55 mm
- 3 Height 600 mm
- 4 Cable channel diameter 150 mm
- 5 Outer diameter 264 mm

Weight approximately 80 kg



15. CHANGE LOG

Charging equipment for electric vehicles Installation manual REV 2.40 04-2024	Changes
3: Kempower charging equipment for electric vehicles	Added Power Unit Version 3 Corrected AC Satellite description
3.3.3: Station Charger	Corrected Station Charger description
4.2.1: AC mains power cables to the charging power unit	Updated PE wire recommendation
4.2.2: Cabling between the charging power unit and DC charging points	Updates wire recommendation
5: Installing the charging equipment	Added Power Unit Version 3
5.2.8: Installing the AC mains power cables to the charging power unit	Updated PE wire recommendation
7: Finishing the installation	Added Power Unit Version 3
8: Commissioning	Added Power Unit Version 3
9: Unit footprints and clearances	Added clearance illustrations Converted measurements to mm