

9. UNIT FOOTPRINTS AND CLEARANCES

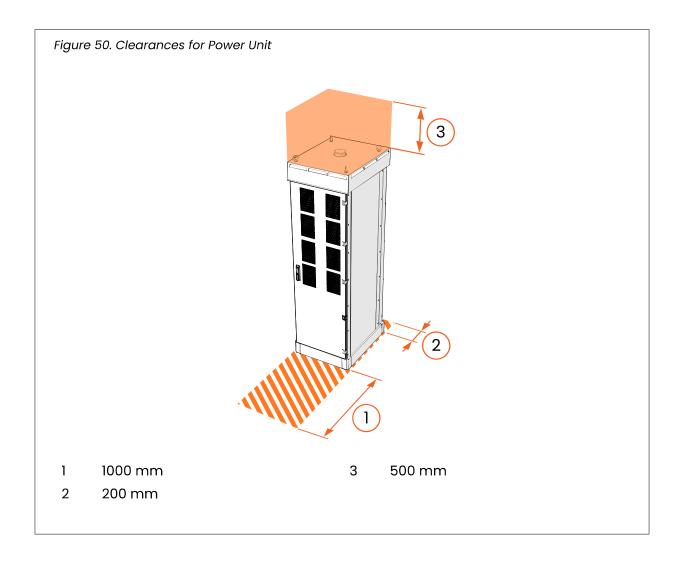


NOTICE

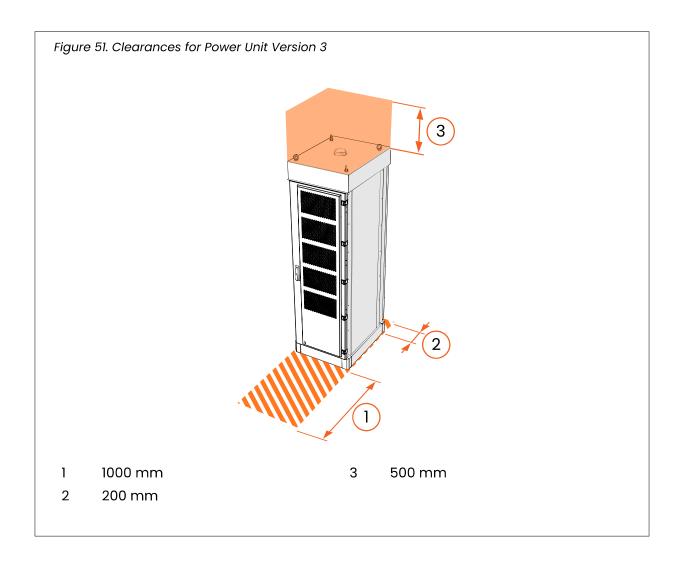
In addition to the given clearances, obey the cable bending radius if cables are surface-installed. Increase the clearance if necessary.

- The cables to all units are always routed from below the unit.
 - The AC mains power cables are routed to the charging power unit from the front or the left side of the unit.
 - The connection cables to the charging point(s) are routed from behind or the right side of the charging power unit.
- Leave at minimum 1000 mm free space in front of the installed cabinet.
 It must be possible to open the door of the unit fully and remove modules from the rack.
- Leave at minimum 200 mm free space between the back of the cabinet and a solid wall. If possible, we recommend leaving 800 mm accessible space behind the cabinet, for example by positioning the cabinet's side toward the wall. Otherwise, if it is necessary to remove the cabinet's back panel to gain access to the back of the cabinet, the cabinet must be moved.
- Leave at minimum 500 mm free space above the cabinet. If it is necessary to remove the cabinet's back panel to gain access to the back of the cabinet, the cabinet's roof element must first be removed.
- Leave at minimum approximately 20 mm free space between the charging power units. A double or triple cabinet is one unit.
- Leave at minimum 500 mm free working space in front of the installed Satellite. It must be possible to open the front panel of the unit fully.
- Leave at minimum 500 mm free space above the installed Satellite.

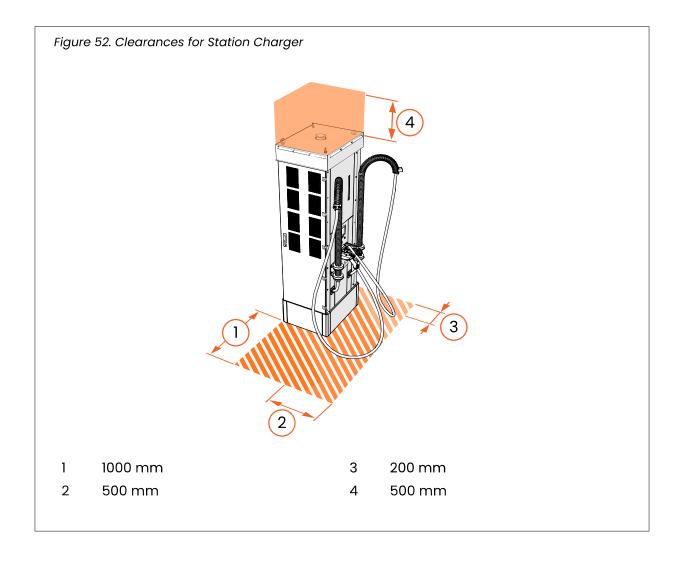




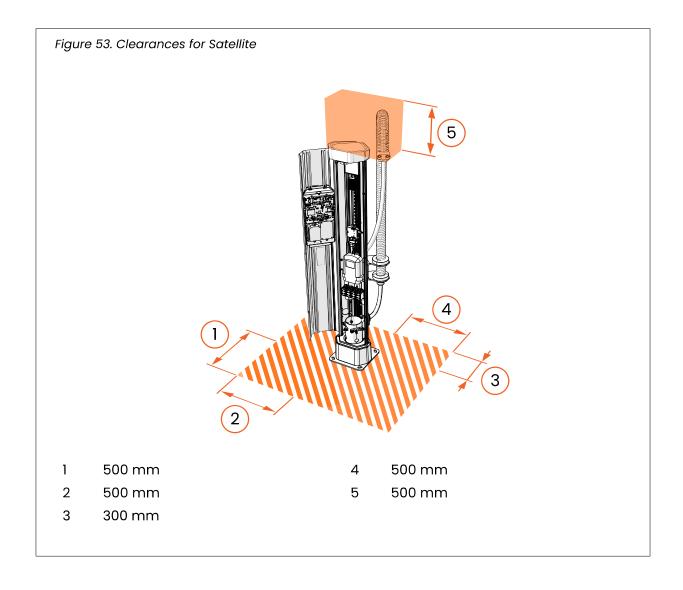








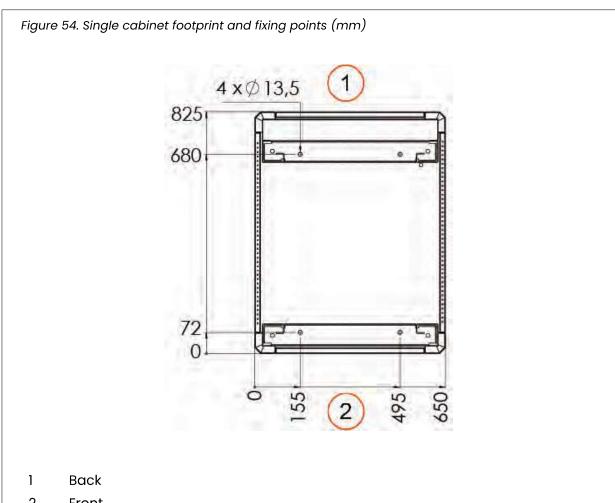






9.1. Single cabinet footprint and fixing points

Use four M12 anchor bolts or equivalent per cabinet.



2 Front

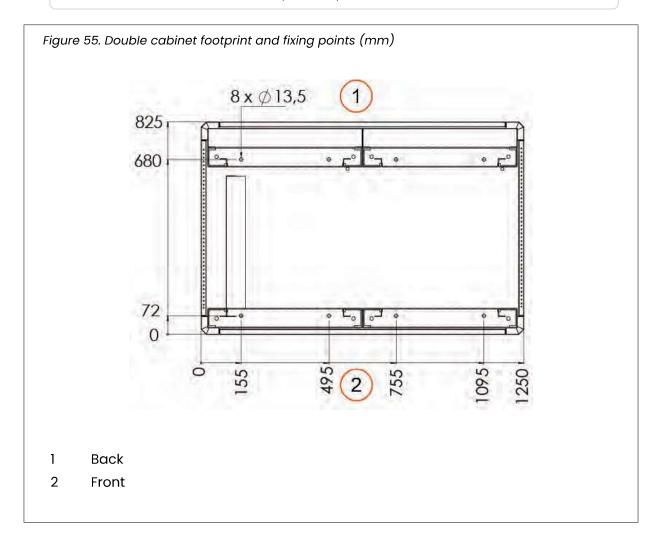


9.2. Double cabinet footprint and fixing points

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NOTE

Use four M12 anchor bolts or equivalent per cabinet.



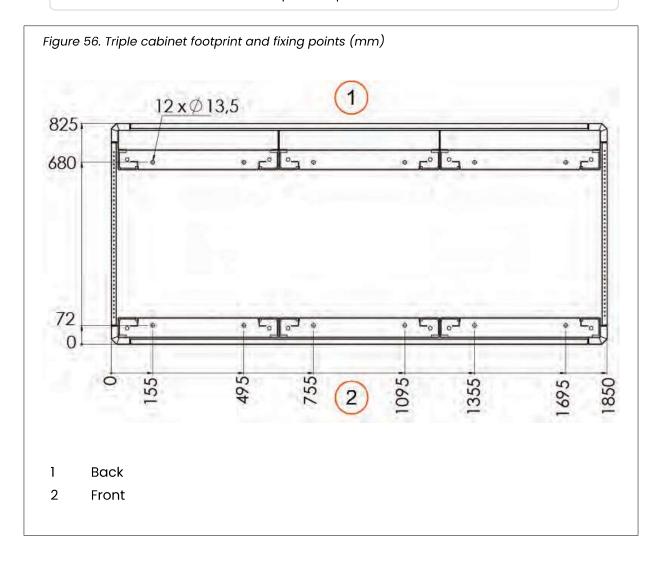


9.3. Triple cabinet footprint and fixing points

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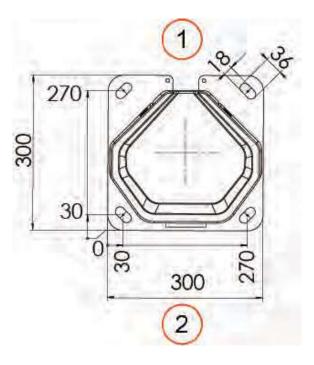
Use four M12 anchor bolts or equivalent per cabinet.





9.4. Satellite footprint and fixing points

Figure 57. Satellite footprint and fixing points (mm)



- 1 Back
- 2 Front

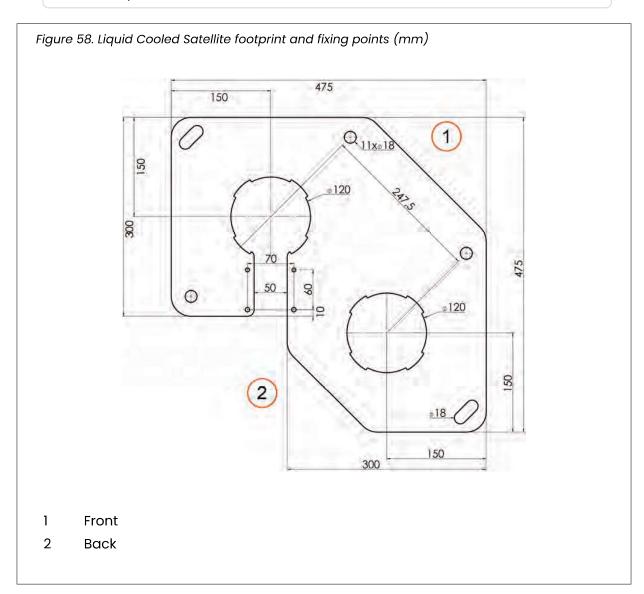


9.5. Liquid Cooled Satellite footprint and fixing points

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NOTE

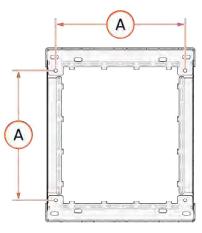
Use five M16 anchor bolts or equivalent per Liquid Cooled Satellite installation flange. The tube of the installation flange with the opening for cable routing is for the Liquid Cooled Satellite frame that has the user interface.





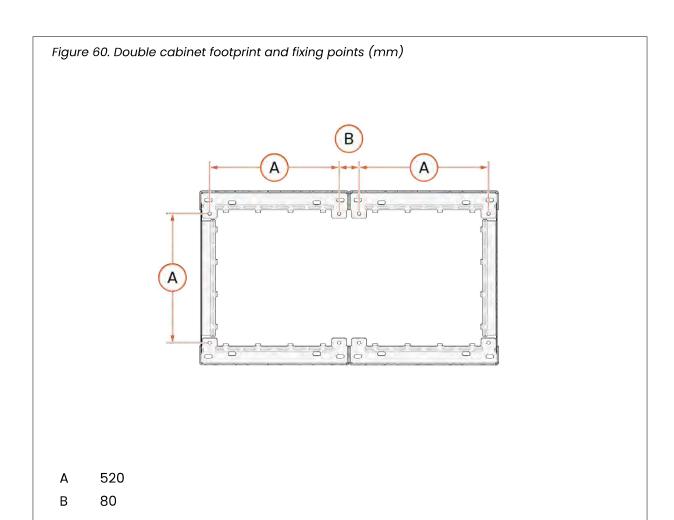
9.6. Steel base footprints and fixing points

Figure 59. Single cabinet footprint and fixing points (mm)

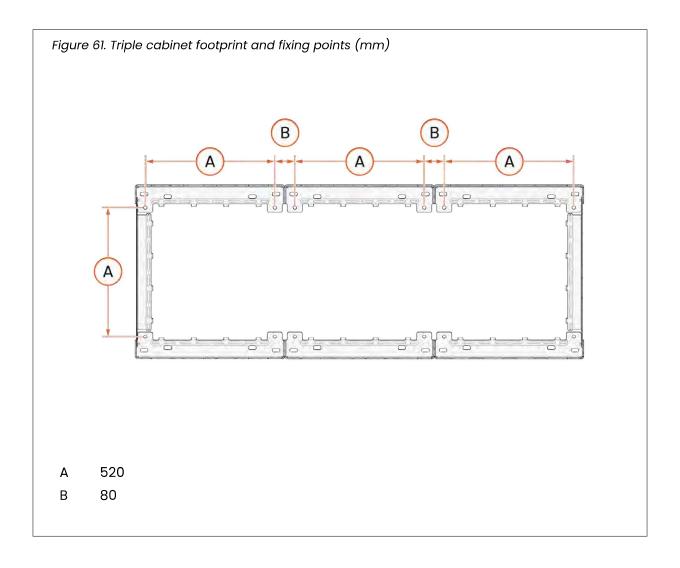


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10. EXAMPLES OF CONNECTING OUTPUT AND CONTROL CABLES TO CHARGING POINTS

In the cabinet, the DC output (OUT n) and control cable (CT n) terminals are numbered.

In the double Satellite, the DC input terminals are marked CAB 1 (right-hand side) and CAB 2 (left-hand side), and the control cable terminals CT A (right-hand side) and CT B (left-hand side). In the single Satellite, the vehicle connector is always on the right-hand side.

Connect the corresponding output and control cable pairs from the cabinet to the same Satellite. If the site has several Satellites, connect them in ascending order starting from cabinet terminal 1 to Satellite 1. If the cabinet has more DC output terminals than you need, leave the last terminals empty.



Depending on the needed charging capacity, you can connect DC outputs in parallel in the cabinet to form one configuration output. Connect the corresponding configuration output and control cable pair to the same Satellite.

The ChargEye connector is configured in ChargEye during commissioning. The first number notates the sequence number of the Satellite, and the second number notates the vehicle connector. Number 2 is the right-hand side vehicle connector, and number 1 the left-hand side vehicle connector. The CHAdeMO vehicle connector is the exception and it is always number 2 regardless of which side it is on.

10.1. Dynamic (Ds2) – 1 double Satellite

Table 5. Ds2 connected to 1 double Satellites (2 x 375 A configuration output)

Config.	ChargEye	Max. cur-	Terminals			
output	utput connector	rent	DC output	Control cable	DC input	Control cable
1	12 (right)	375 A	Power Unit 1	1	Satellite 1	
			OUT 1	CT1	CAB1	CT A
		OUT 5				
			OUT 3			
2	11 (left)	375 A	Power Unit 1	1	Satellite 1	
			OUT 2	CT 2	CAB 2	СТВ
			OUT 6			
			OUT 4			

10.2. Dynamic (Ds2) – 2 single Satellites

Table 6. Ds2 connected to 2 single Satellites (2 x 500 A configuration output)

Config.	ChargEye	Max. cur-	Terminals				
output	connector	rent	DC output	Control cable	DC input	Control cable	
1	12 (right)	500 A	Power Unit 1	Power Unit 1			
			OUT 1	CT 1	CAB1	CT A	
			OUT 5				
			OUT 3				
2	22 (right)	500 A	Power Unit 1		Satellite 2		
			OUT 2	CT 2	CAB 1	CT A	
			OUT 6				
			OUT 4				



10.3. Dynamic (Ds4) – 2 double Satellites

Table 7. Ds4 connected to 2 double Satellites (4 x 2 x 200 A configuration output)

Config.	ChargEye	Max. current	Terminals			
output	connector	Max. current	DC output	Control cable	DC input	Control cable
1	12 (right)	2 x 200 A	Power Unit 1		Satellite 1	
			OUT 1	CT 1	CAB1	CT A
			OUT 5			
2	11 (left)	2 x 200 A	2 x 200 A Power Unit Satellite			
			OUT 2	CT 2	CAB 2	СТВ
			OUT 6			
3	22 (right)	2 x 200 A	Power Unit 1	Satellite 2		
			OUT 3	CT 3	CAB1	CT A
			OUT 7			
4	21 (left)	2 x 200 A	Power Unit 1	Power Unit 1		
			OUT 4	CT 4	CAB 2	СТВ
			OUT 8			

10.4. Dynamic (Ds4) - 4 single Satellites

Table 8. Ds4 connected to 4 single Satellites (4 x 200 A configuration output)

Config.	ChargEye	Max. cur-	Terminals				
output	connector	rent	DC output	Control cable	DC input	Control cable	
1	12 (right)	200 A	Power Unit 1		Satellite 1	Satellite 1	
1		200 A	OUT 1	CT1	CAB1	CT A	
2	2 22 (right)	200 A	Power Unit 1		Satellite 2		
2	22 (fight)		OUT 2	CT 2	CAB1	CT A	
3	32 (right)	200 A	Power Unit 1	l	Satellite 3		
3	32 (light)	200 A	OUT 3	CT 3	CAB1	CT A	
4	42 (right)	200 A	Power Unit		Satellite 4		
4 42 (42 (rigrit)	200 A	OUT 4	CT 4	CAB1	CT A	



10.5. Dynamic (Ds6) – 3 double Satellites

Table 9. Ds6 connected to 3 double Satellites (6 x 200 A configuration output)

Config.	ChargEye	Max. cur-	Terminals			
output	connector	rent	DC output	Control cable	DC input	Control cable
1	12 (right)	200 A	Power Unit 1	l	Satellite 1	
			OUT 1	CT1	CAB1	CT A
2	11 (left)	200 A	Power Unit 1	l	Satellite 1	
			OUT 2	CT 2	CAB 2	СТВ
3	22 (right)	200 A	Power Unit 1		Satellite 2	
			OUT 3	CT 3	CAB1	CT A
4	21 (left)	200 A	Power Unit 1	l	Satellite 2	
			OUT 4	CT 4	CAB 2	СТВ
5	32 (right)	200 A	Power Unit 1		Satellite 3	
			OUT 5	CT 5	CAB 1	CT A
6	31 (left)	200 A	Power Unit 1		Satellite 3	
			OUT 6	CT 6	CAB 2	СТВ

10.6. Dynamic (Ds6) – 6 single Satellites

Table 10. Ds6 connected to 6 single Satellites (6 x 200 A configuration output)

Config.	ChargEye con-	Max. cur-	Terminals			
output	nector	rent	DC output	Control cable	DC input	Control cable
1	12 (right)	200 A	Power Unit 1	l	Satellite 1	
			OUT 1	CT1	CAB1	CT A
2	22 (right)	200 A	Power Unit 1	I	Satellite 2	
			OUT 2	CT 2	CAB1	CT A
3	32 (right) 200 A		Power Unit 1		Satellite 3	
			OUT 3	CT 3	CAB1	CT A
4	42 (right)	200 A	Power Unit 1		Satellite 4	
			OUT 4	CT 4	CAB1	CT A
5	52 (right)	200 A	Power Unit 1	l	Satellite 5	
			OUT 5	CT 5	CAB1	CT A
6	62 (right)	200 A	Power Unit 1	l	Satellite 6	
			OUT 6	CT 6	CAB 1	CT A



10.7. Dynamic (Ds4) – 4 Liquid Cooled Satellites

Table 11. Triple cabinet Ds4 connected to 4 Liquid Cooled Satellites

Config.	ChargEye	Max. cur-	Terminals	Terminals				
output	connector	rent	DC output	Control cable	DC input	Control cable		
			Power Unit	l, 2, 3	Satellite 1			
1	1 12 (right)	500 A	OUT 1	CT 1	0.10.1	CT A		
			OUT 5	CT1	CAB1	CIA		
		Power Unit	l, 2, 3	Satellite 2				
2	2 22 (right)	500 A	OUT 2	CT 2	CAB1	CT A		
			OUT 6					
			Power Unit	l, 2, 3	Satellite 3			
3	32 (right)	500 A	OUT 3	07.0	0.4.0.1	07.4		
			OUT 7	CT 3	CAB 1	CT A		
	, ,		Power Unit	l, 2, 3	Satellite 4			
4	42 (right)	500 A	OUT 4	CT 4	CARI	СТА		
			OUT 8		CAB 1			

10.8. Static (S4) – 1 single Satellite

Table 12. S4 connected to 1 single Satellite (1 x 500 A/300 A configuration output)

Config.	ChargEye	Max. current	Terminals			
output connector		DC output	Control ca- ble	DC input	Control ca- ble	
1	12 (right)	500 A/300 A Power Unit 1 Satellite 1		Power Unit 1		
			OUT 1	CT1	CAB 1	CT A
			OUT 2			
			OUT 3			
			OUT 4			



10.9. Static (S4) – 4 single Satellites

Table 13. S4 connected to 4 single Satellites (4 x 125 A/75 A configuration output)

Config.	ChargEye con-	Max. current	Terminals			
output	nector		DC output	Control cable	DC input	Control cable
1	12 (right)	125 A/75 A	Power Unit 1		Satellite 1	
			OUT 1	CT 1	CAB1	CT A
2	22 (right)	125 A/75 A	Power Unit 1		Satellite 2	
			OUT 2	CT 2	CAB 1	CT A
3	32 (right)	nt) 125 A/75 A Power Unit 1 Satellite 3				
			OUT 3	CT 3	CAB 1	CT A
4	42 (right) 125 A/75 A		Power Unit		Satellite 4	
			OUT 4	CT 4	CAB 1	CT A

10.10. Static (S4) – 2 double Satellites

Table 14. S4 connected to 2 double Satellites (4 x 125 A/75 A configuration output)

Config.	ChargEye	Max. current	Terminals			
output	output connector		DC output	Control cable	DC input	Control cable
1	12 (right)	125 A/75 A	Power Unit 1		Satellite 1	
			OUT 1	CT1	CAB1	CT A
2	11 (left)	125 A/75 A	25 A/75 A Power Unit 1		Satellite 1	
			OUT 2	CT 2	CAB 2	СТВ
3	22 (right)	125 A/75 A	Power Unit 1		Satellite 2	
			OUT 3	CT 3	CAB1	CT A
4	21 (left)	125 A/75 A	Power Unit		Satellite	
			OUT 4	CT 4	CAB 2	СТВ



10.11. Static (S8) – 8 single Satellites

Table 15. S8 connected to 8 single Satellites (8 x 62.5/37.5 A configuration output)

Config.	ChargEye con-	Max. current	Terminals			
output	nector		DC output	Control cable	DC input	Control cable
1	12 (right)	62.5 A/37.5 A	Power Unit 1		Satellite 1	
			OUT 1	CT 1	CAB1	CT A
2	22 (right)	62.5 A/37.5 A	Power Unit 1		Satellite 2	
			OUT 2	CT 2	CAB1	CT A
3	32 (right)	62.5 A/37.5 A	Power Unit 1		Satellite 3	
			OUT 3	CT 3	CAB1	CT A
4	42 (right)	62.5 A/37.5 A	Power Unit 1		Satellite 4	
			OUT 4	CT 4	CAB1	CT A
5	52 (right)	62.5 A/37.5 A	62.5 A/37.5 A Power Unit 1 Satellite 5			
			OUT 5	CT 5	CAB1	CT A
6	62 (right)	62.5 A/37.5 A	Power Unit 1		Satellite 6	
			OUT 6	CT 6	CAB1	CT A
7	72 (right)	62.5 A/37.5 A	Power Unit 1		Satellite 7	
			OUT 7	CT 7	CAB1	CT A
8	82 (right)	62.5 A/37.5 A	Power Unit 1	Power Unit 1		
			OUT 8	CT 8	CAB1	CT A



11. EXAMPLES OF CONNECTING CABLES TO THE SATELLITES

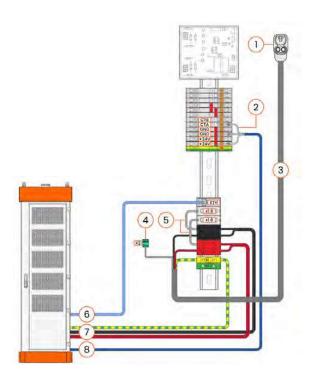
11.1. Satellite Version 1 with one CCS vehicle connector

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NOTE

Grounding of the Ethernet shield at one end only, charging power unit or Satellite.

Figure 62. Satellite Version 1 with one combined charging system (CCS) vehicle connector



- 1 Configuration tag (right vehicle connector)
- 2 CT line signal wires
- 3 Charging cable
- 4 Vehicle connector signal wires
- 5 Voltage measurement wires
- 6 Communication cable
- 7 DC output power cables + PE
- 8 Control cable (CT line)



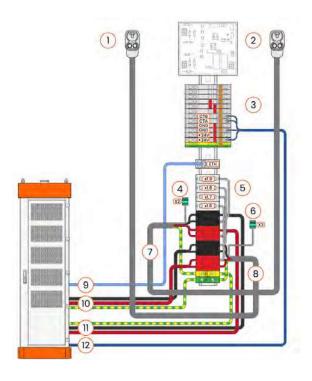
11.2. Satellite Version 1 with two CCS vehicle connectors

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NOTE

Grounding of the Ethernet shield at one end only, charging power unit or Satellite.

Figure 63. Satellite Version 1 with two combined charging system (CCS) vehicle connectors



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

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