
EV CHARGING INFRASTRUCTURE

Terra 54 / 54HV charger

Installation Manual

Rev 001 _ 22/11/2022



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Glossary

AC

Alternating Current.

CCS

Combined Charging System. This is the name of the charging protocol of European and North-American car makers.

CHAdeMO

DC fast charging method for electric vehicles.

Contractor

Entity hired by the owner / site operator to do engineering, civil and electrical installation work.

DC

Direct Current.

EV

Electric Vehicle.

Grid provider

Company responsible for the transportation and distribution of electricity.

HMI

Human Machine Interface; the display/screen on the charger.

LTO

Low Temperature Option.

NOC

ABB Network Operating Centre; remotely checks the correct functioning of the charger.

Owner

The legal owner of the charger.

OCPP

Open Charge Point Protocol. Open standard for communication with charge stations.

PE

Protective Earth.

PPE

Personal Protective Equipment.

Equipment such as safety shoes, helmet, glasses, gloves.

RCBO

Residual-current Circuit Breaker with Overload protection. Breaks the connection if a residual current or overload is detected.

RCD

Residual Current Device. Breaks the connection if a residual current is detected.

RFID

Radio-Frequency Identification. RFID is a communication technology by means of radio waves to transfer data over a very short distance between a reader and an electronic tag or card.

Site operator

This entity is responsible for the day to day control of the charger. The site operator can be the owner, but not necessarily.

User

The owner of an electric vehicle, who uses the Charge Station to charge that vehicle.

1 Introduction

1.1 Preface

This guide describes the planning and physical installation of the Terra 24 or Terra 54 at its location.

The Terra 24 and Terra 54 Charge Stations are easy to install DC fast chargers for electric vehicles. Fast chargers are electrical installations with high electric currents. Therefore the installation must be planned carefully, and must be done by certified personnel only (according to local standards).

The Terra 24 is physically the same charger as a Terra 54. The main difference is the output power it can deliver and therefore also the input power needed. The differences of the Terra 24 and Terra 54, and the consequences for the installation are described in a separate section 1.3.

As the physical installation of both types is equal, they will be referred to hereafter as Terra 54 only and this will account for both types, unless specifically stated otherwise. Both types come in different versions, depending on the outlet types. The different versions are described in a separate paragraph.

1.2 Intended document users

This document is intended to be used by:

- Customers who purchased a Terra 54, or are in the process of ordering and want to know in more detail how it has to be installed.
- Contractors who are responsible for site preparation and/or installation of a Terra 24 or Terra 54.

1.3 Similarities and differences between Terra 24 and Terra 54

The Terra 24 and Terra 54 chargers are identical in their outer appearance and physical dimensions. The physical installation of the Terra 24 and 54 can thus be handled the same way.

On the inside of the cabinet there are some differences. The Terra 24 has a total of 20 kW DC power converters where the Terra 54 has a total of 50 kW converters. The Terra 24 can be updated to a Terra 54 in a later stadium if desired. Because of the possibility to upgrade, we advise to dimension the grid connection cable already to the power needed for a Terra 54, to prevent high costs for groundwork if a new cable has to be laid.

It is only possible to upgrade the DC power output of a Terra 24. The AC connector on a T24CJG will remain 22 kW after an eventual upgrade.

1.4 Terra version description

The Terra 24 and 54 are available in different versions depending on the available outlets. The versions are:

Version	CCS	CCS HV	CHAdeMO	CHAdeMO HV	AC connector	AC socket
T24/T54 C	X					
T24/T54 CJ	X		X			
T24/T54 CJG	X		X		X	
T24/T54 CT	X					X
T24/T54 C HV		X				
T24/T54 CJ HV		X		X		
T24/T54 CJG HV		X		X	X	
T24/T54 CT HV		X				X

C CCS (Combo) standard
 J CHAdeMO standard
 G AC connector 22/43 kW
 T AC Socket 22 kW
 HV High Voltage

1.5 Signs

The following signs are used on the equipment and in this manual:



DANGER

Hazardous voltage

Identifies a hazard that could result in severe injury or death through electrocution.



WARNING

Various

Identifies a hazard that could result in severe injury or death.



WARNING

Rotating parts

Identifies a hazard that could result in injury due to the presence of rotating or moving parts.



WARNING

Pinch Hazard

Identifies a hazard that could result in injuries, in which some body parts are pinched or crushed.

**CAUTION****Various**

Identifies a hazard that could result in damage to the machine, other equipment, and/or environmental pollution

**NOTICE**

Contains remarks, suggestions or advice.

1.5.1 Owner responsibilities

The owner and site operator are required:

- To operate the charge station with the protective devices installed and to make sure all protective devices are correctly installed after carrying out installation or maintenance.
- To write an emergency plan that instructs people what to do in case of emergency.
- To prepare the site where the charge station will be installed, according to the requirements described in this guide.
- To make sure that there is enough space around the charger to carry out maintenance work.
- To appoint a person responsible for the safe operation of the charge station and for the coordination of all work.
- The owner is cautioned that changes or modifications not expressly approved by ABB could void the owner's authority to operate the equipment and ABB's warranty policy
- Neither ABB nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs or expenses incurred by purchaser or third parties as a result of: an accident, misuse or abuse of this product or unauthorized modifications, repairs or alterations to this product, or failure to strictly comply ABB operating and maintenance instructions.

1.5.2 Tilting and handling

**WARNING****Heavy equipment**

The Terra 54 weighs about 350 kg. Handling Instructions:

1. Use crane, forklift or pallet truck when lifting or moving the Terra 54.
2. Do not drop the Terra 54.
3. Do not exceed a tilting angle of 30°.

1.5.3 Sharp edges

**WARNING****Sharp metal edges**

There could be sharp metal edges inside the Terra 54. It is recommended to wear mesh protecting gloves when working inside the charger.

1.5.4 Electric hazards

**DANGER****Hazardous voltage**

The Terra 54 contains conductors under hazardous electrical voltages. The grid terminals on the internal DIN rail may carry hazardous voltages, even if all circuit breakers are switched off.

1.5.5 Installation safety

**DANGER****Hazardous voltage**

Instructions:

1. Always switch off the external group switch and the main switch in the cabinet, before performing any installation, disassembly, repair or replacement of components.
2. Do a voltage check and make sure that the electrical power is disconnected from the system.
3. Only ABB certified technicians are permitted to commission the Terra.
4. When the system is in an open or dangerous condition, do not allow unqualified persons to go near it. Instruct and warn people about the potential harmful high voltages.
5. The installation and maintenance personnel must supply their own lighting equipment, since the T54 has no lights inside the cabinet.
6. Always connect the Protective Earth (PE) first, before connecting the neutral (N) and Phase (P) wiring.
7. Correctly lock the door after installation or service operations.

1.6 Environment and disposal of waste

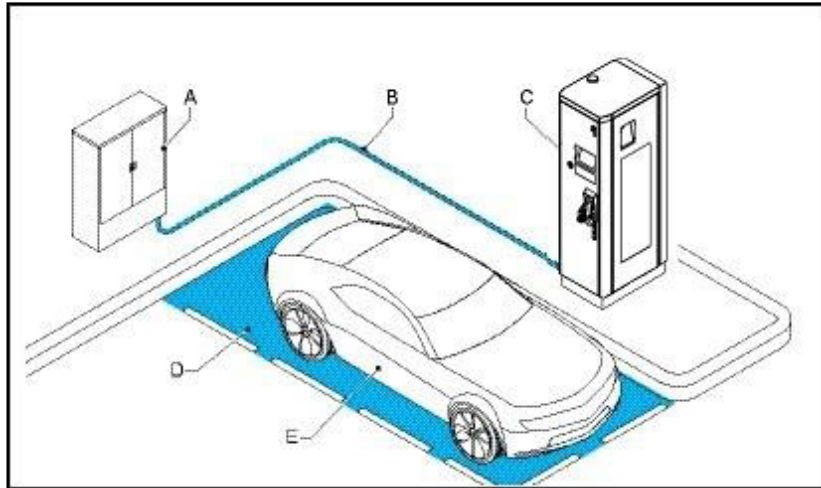
**NOTICE**

Always observe the local rules and regulations with respect to processing (non-reusable) parts of the Terra 54.

2 Description of the product

2.1 Overview of the system

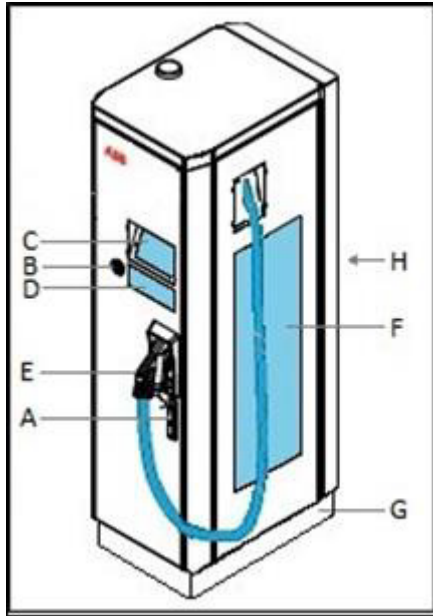
2.1.1 Complete overview



Example of a complete installation

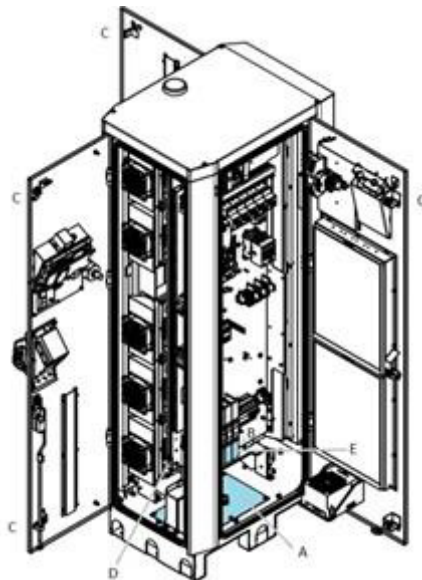
- A Power distribution board of the owner
- B Cables in cable conduit (if required)
- C Terra 54
- D Parking space for charging
- E Electric vehicle

2.1.2 Outside view



- | | | | |
|---|--------------------|---|--|
| A | Door handle / lock | E | Charge outlet: DC connector and DC cable |
| B | Emergency stop | F | Air inlet |
| C | Display / HMI | G | Border cover |
| D | RFID card reader | H | Air outlet (backside) |

2.1.3 Inside view



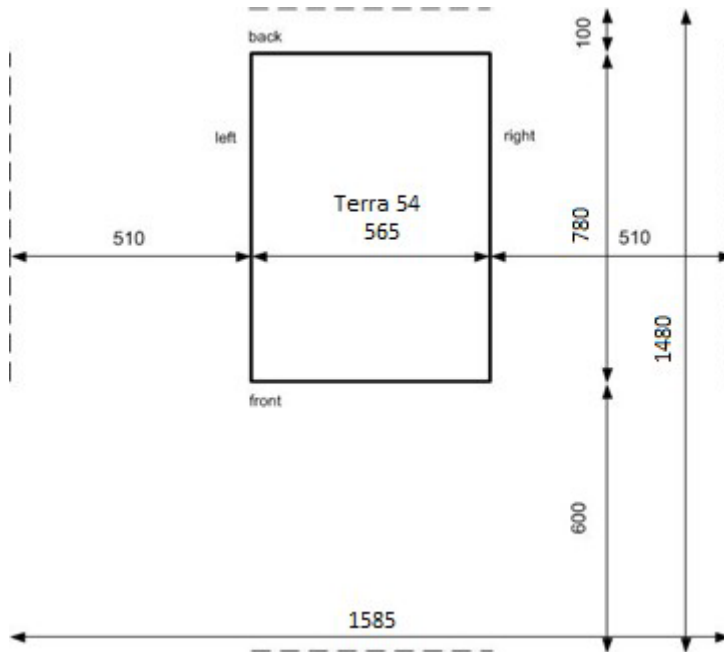
- | | | | |
|---|--|---|-------------------|
| A | Cable gland plate | D | Main switch |
| B | PE connection | E | Power connections |
| C | Door switch (2x on front door, 1x on each side door) | | |

2.2 Geometry of infrastructure

2.2.1 Required space for placing and maintaining the Terra 54

The Terra 54 requires a space of 1585 x 1480 mm. This space is calculated as follows:

- Size Charger W x D x H: 565 x 780 x 1900 mm.
- Front side 600 mm, in order to open the front door.
- Left and right side 510 mm, in order to open left and right door.
- Backside 100 mm, in order to guarantee an unimpeded airflow.



2.2.2 Ventilation and airflow of the Terra 54

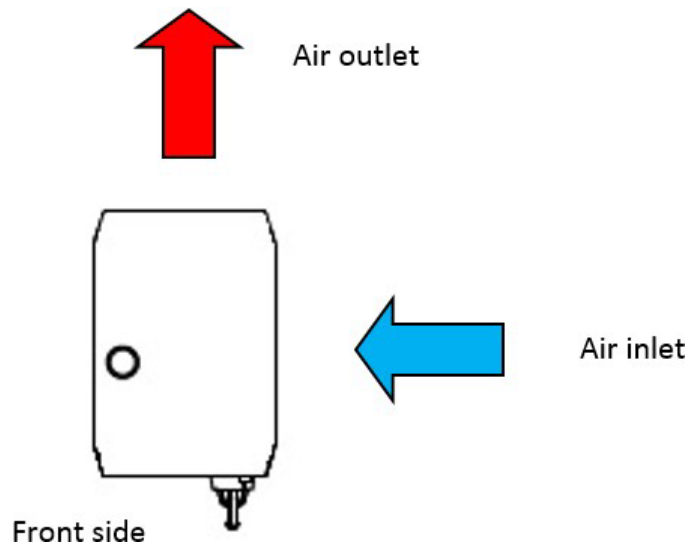
The Terra 54 has an air inlet on the right side and outlet on the back side.



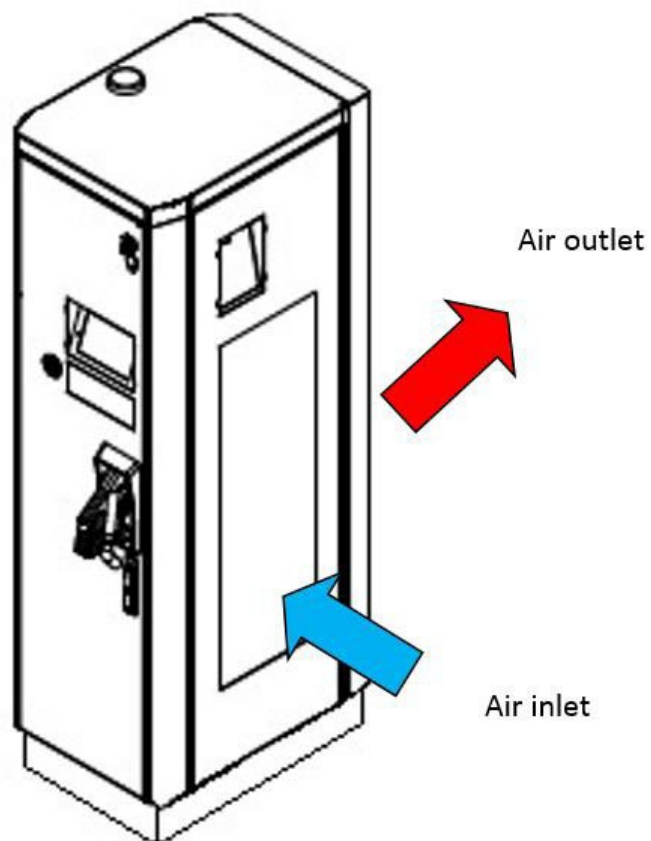
NOTICE

Free air flow

If necessary, take precautions to prevent snow or objects from blocking the in- and outlets.



Angled front view:



2.2.3 Bollards

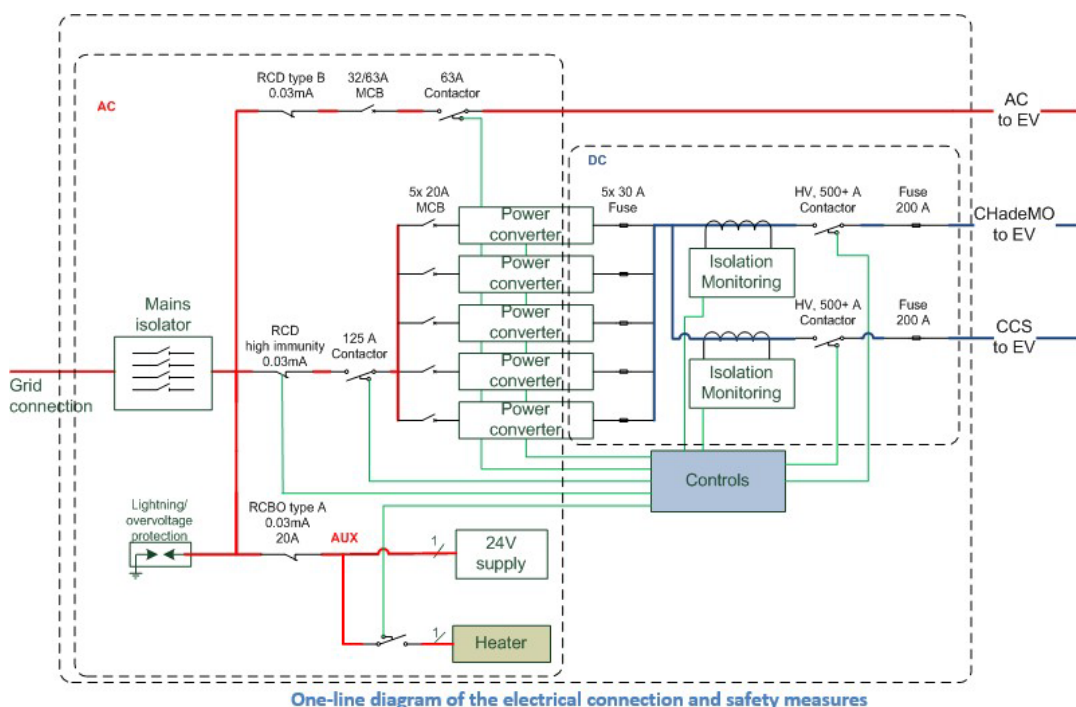
It is advised to place bollards around the charger to protect the charging station against cars hitting and damaging the cabinet.

**NOTICE****Bollards limiting the access**

When installing bollards around the charger make sure all doors can still be opened to be able to service the charger. In case bollard are installed that are blocking the doors, make sure they are the removable kind. The key must be available for service engineers.

2.3 Electrical engineering

The electrical installation must be completed according to the local safety and electrical regulations and laws. A one-line diagram for the electrical connections with the main safety components inside the charger is shown in the figure below.



2.3.1 Requirements External RCD

**NOTICE****External RCD not included in delivery scope**

Upstream RCD's are explicitly excluded from ABB's delivery scope and belong to the scope of the installation company. The locally certified installation company can base the RCD device type, amongst other external factors, on below charger characteristics.

In case the local authorities prescribe the installation of an upstream RCD there are the following factors to take into account in selecting an RCD device of your choice.

AC-charging side prescribes Type B RCD

In case your charger is equipped with an AC charging outlet indicated by the -T or -G in the type name, the following needs to be considered:

- The AC charging section of the charger has a RCD type B earth leakage protection. This protection is required to protect the person using the system from earth leakages, even while the onboard charger of the connected vehicle, independent from the charger functionality, is causing DC currents in the AC-path towards the main switch of the charger or site distribution panel.
- Because of this Type B protection on the AC-side of the cabinet, most local installation procedures also prescribes a Type B RCD upstream if an upstream RCD is required. Your installation company is required to verify this requirement.

DC-charging side requires immunity for short current peaks over PE

When the charger engages the DC charging (at the beginning of every charger session in the pre-charge phase) a relay switches and turns on the input to the power modules. Asynchronous engagement of the phases in the relay in combination with the electrical capacity in the input power part, can cause incidental very short (25 microseconds) current peaks of up to 60A over the Protective Earth. The amplitude of the Ampere peaks can vary with the location and is dependent on grid and earth impedance. Given the switching characteristics of the DC section of the charger we give you the advice to select an RCD that has proven to be able to withstand these short current peaks (high immunity). As a suggestion to the installation company ABB recommends the following RCD type which will work in most grid situations: (1) ABB make F204 B S-125/0,3 code: 2CSF204823R3950. It is the responsibility of your installation company to select the right device.

Local regulation could require a Type B upstream RCD independent of AC-charging functionality

The design of the power section is such that a DC current over 6mA does NOT occur on the AC-input side of the power section during normal operation. It is up to the local authorities to determine if whether these fault conditions qualify as independent single fault conditions and therefor require a Type B RCD.



CAUTION

Responsibility to comply with local regulations

The installation company is responsibly to design and install the electrical installation according the local regulations.

2.3.2 Conductor and cable diameter

The diameter of the electrical conductor of the ground cables depends on the length, method of installation, etc. This must be determined by your contractor.

The phases and neutral are to be mounted with cable lugs M8 (not included in delivery) on the mains isolator. The maximum conductor surface is 95 mm².

The maximum diameter of the (grid) cable entering the cabinet is 45 mm. The minimum diameter with the standard fitted cable gland insert is 34 mm.



Example of cable lug to be used

2.4 MID certified Charger identification

For the German market, charge post is equipped with energy metering for be compliance to 2014/32/EU MID directive. This is a field-installable upgrade.

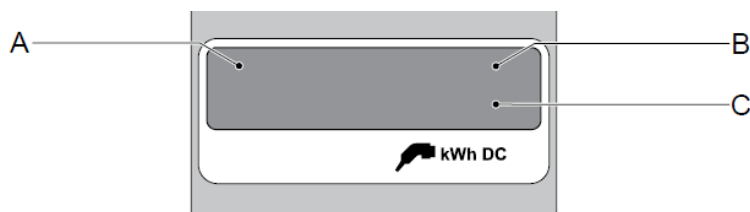
To recognize if a charger is compliance to MID Directive, Check the charger label. The product compliance is indicated by the info showed in the Highlighted box.

ABB		CE	
SN: XXXX-XXX-XXXX-XXX		XXXX-XXX-XXXX-XXX	
Part number XXXXXXXXXXXX			
Prod. date XX XXXX	XXXXXXXXXXXX	XXXXXXXXXX	
XX XXXXX XX	Weight XXX Kg		
FOR USE WITH ELECTRICAL VEHICLES			
Input	xxxV x+PE-	Max x.xkW/xxHz	
DC Input	xxx-xxxV Max xxxA	DC AUX xxV xA	
DC Output 1 CCS2	xxx-xxxV Max xxxA		
DC Output 2 CHAdeMO	xxx-xxxV Max xxxA		
Heertjeslaan 6, 2629 JG Delft, The Netherlands		IP54     	
XX-X XX-XXXX VDE - XXXXXXXX Class X,xxx,xx XX-XXXXXX XX-XXXXXX		    	
MADE IN ITALY		www.abb.com	

The Label reports all the necessary info to be compliance to 2014/32/EU MID directive.

2.5 Energy Meter Readout

- A. Time (hh:mm:ss)
- B. Date (YY-MM-DD)
- C. Delivered DC power (kWh)



- Charger registration to the Federal authority:
https://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/HandelundVertrieb/Ladesaeulen/Anzeige_Ladepunkte_node.html
- Section 31-33 MessEG :
MessEG is published on: <https://www.gesetze-im-internet.de/messeg/index.html>
(directly to standard [link](#))
- For German users, notes on the measurement accuracy according to the sample test certificate apply (see appendix paragraph 10.3).

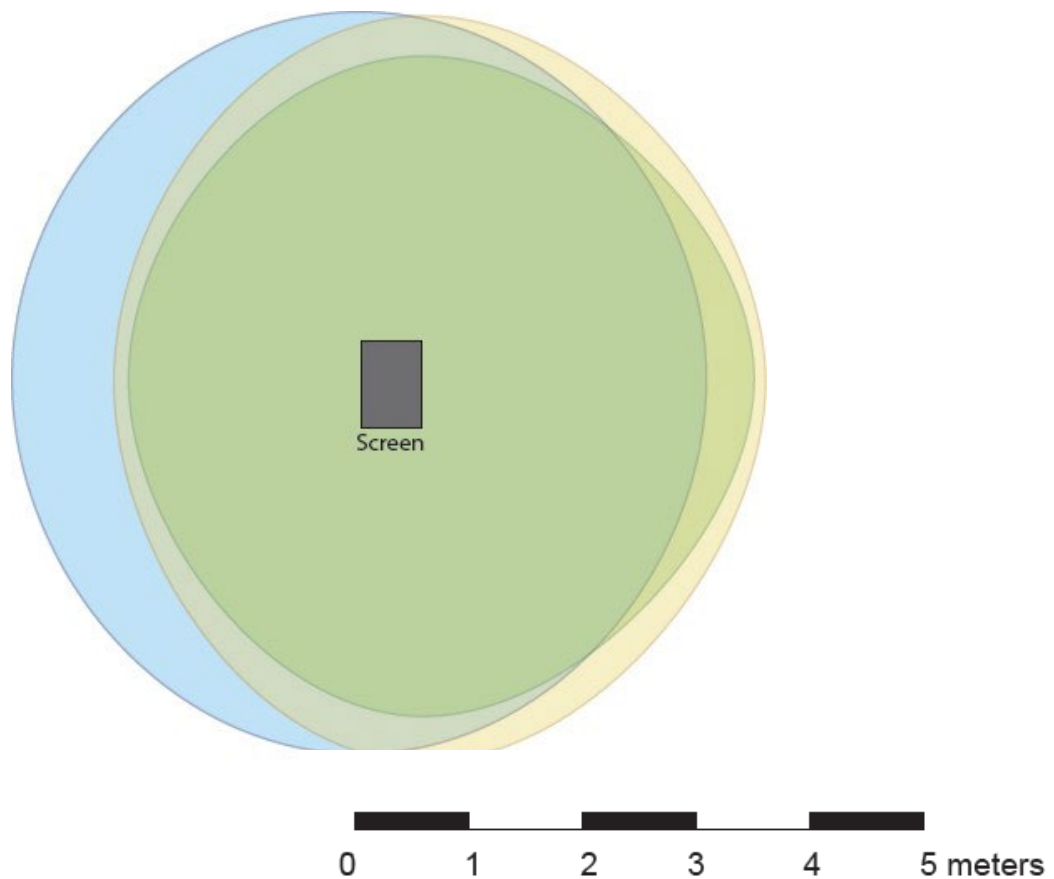
3 Site design

A site for EV charging can be designed in many different setups. This section is intended to give some useful information on the placement of a charger with respect to parking spaces and the vehicle inlets for the charging cable.

3.1 Cable reach

The charge cables of the T54 are about 3.9 meters long. The DC cables leave the charger on the right side, the AC cable leaves on the left side. The cables and the connectors mounted on the cables are different for each charging standard and make them more or less flexible to reach out.

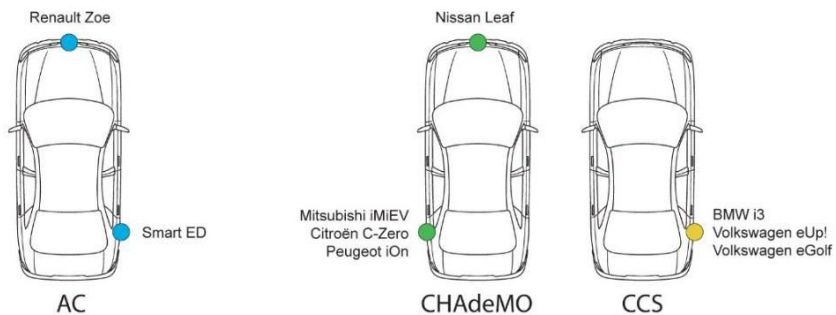
The figure below shows the charger in the center with each type of connector and how far it can reach out. The yellow circle describes the range of the Combo cable, green circle the CHAdeMO cable, blue circle the AC cable.



3.2 Different alignment possibilities

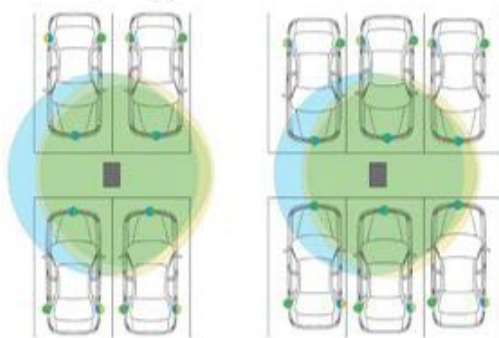
The charge inlets on a car can be located at different positions. The most common cars have their inlets located either on the front of the car, or on the left or right back side.

Charging inlet
locations of
important EVs

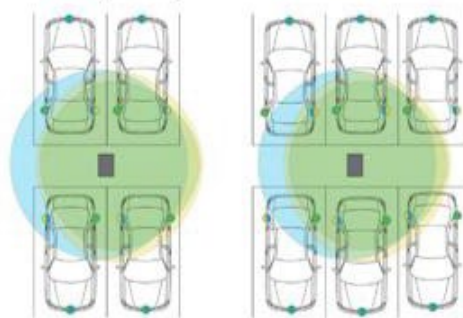


This makes some positions of the charger with respect to the parking space more favorable than others. Please keep this in mind when designing a site. Some possible situations are showed below:

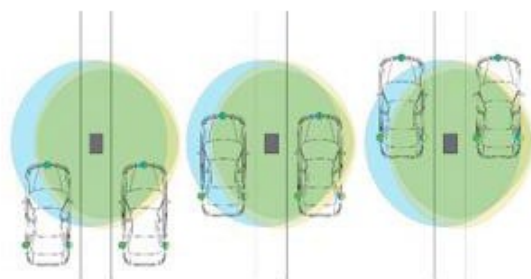
Forward parking



Backward parking



Drive through



4 Site construction

4.1 About construction

The construction phase includes all work required to prepare the location and make it ready for the placement and connection of the Terra 54. The construction phase can start when:

- All preparation engineering work is done.
- All necessary permits are granted.
- The grid connection is available.

4.2 Power feed

The power cable enters the charger from below. Use foam or proper cable lugs/glands to prevent the entrance of animals from the AC inlet/Ethernet cable.

4.3 Construct foundation

The correct foundation depends on the type of surface where the Terra 54 will be installed.

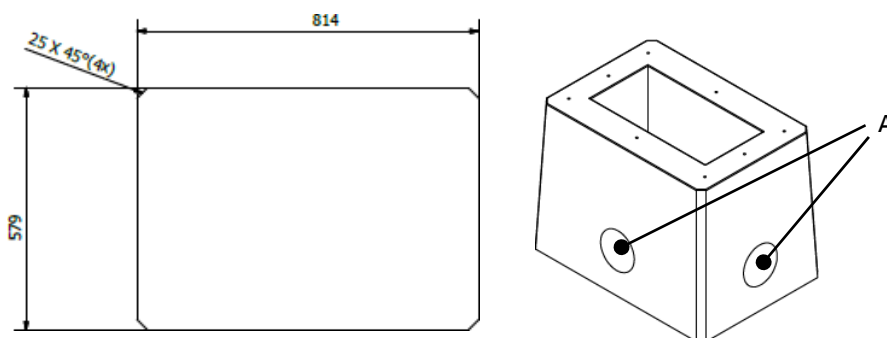
4.3.1 Placement on soil

There are 2 options when the charger is placed on soil:

1. Use a prefab concrete foundation to get a firm fixation on soil.
A prefab concrete foundation can be ordered separately, or produced locally according the specifications.
2. The construction of a custom built foundation.

Depending on the situation and cable type, the cables must be embedded in the ground with or without a cable duct. See section Cabling on Page 20.

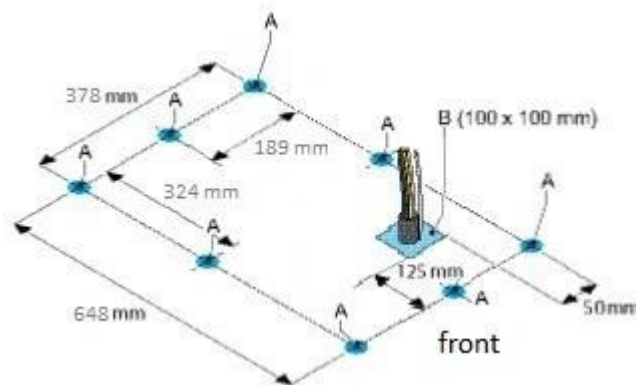
4.3.2 Placing the ABB Standard or locally manufactured prefab concrete foundation



1. Make a hole in the ground with a minimum of the dimensions shown.
2. Make sure the cable duct(s) are routed to one of the indicated positions (A).
3. Lower the foundation into the hole.
4. Route the cables through one of the holes (A).

5. Make sure the top surface of the foundation is at least 15 mm above ground level to prevent water from entering into the charger foundation.
6. Make sure a cable length of one meter is available above the foundation for internal routing in the cabinet.
7. Fill the foundation with gravel or shingles to prevent rodents from entering the equipment.

4.3.3 Instructions for a custom foundation (footprint)



1. Drill and tap 8 holes (M10) in the floor at the indicated positions (A), depth ± 60 mm.
2. Make sure that the cables come out of the floor within the marked area (B).
3. Make sure that a cable length of one meter is available above the floor for internal routing in the cabinet.

4.4 Power cable

- Cable type: 3P+N+PE, shielded cables are optional if required by local law.
- Optional cable shielding must be attached to the PE Rail at both ends of the cable.
- The diameter of the cable conductor must be determined by your contractor / electrician.
- The maximum diameter surface of the cable conductor is 95 mm².
- The PE conductor of the power cable must have the same diameter as the phase conductors.
- Recommended power cable: YMvKas mb 4 x 70 + 70 mm².

4.5 Internet connection

The preferred method of communication is to use the wireless 2/3G modem that is integrated into the Charger. A customer SIM card is not required, a subscription for the SIM card is provided by ABB for selected countries.

If there is no wireless signal available, a standard wired internet connection is required. This connection must meet the following requirements:

- Ethernet, RJ45.
Cable type: 8P+PE, shielded.
- Recommendations:
For distances of 75 meters or less; HELUKAT 600E.
Distances over 75 meters require a custom engineered project.
- Recommended minimum bandwidth:
upload: 128 kb/s
download: 4 Mmb/s.
- Recommended availability: 99,9%.
- The connection must be available for the ABB service engineer and the NOC.
- Please contact ABB for a specific configuration.

In case the separate internet connection is not used, please assure the cable entry hole is closed, to assure the IP54 grade of the cabinet, and prevent insects and small animals to enter the cabinet.

5 Receiving, Placing and connecting

5.1 Receiving the cabinet

The product is delivered by a transport company to a warehouse where it will be handed over.

Transporting the T54 to its final location (last mile service) is not standard included in the order.

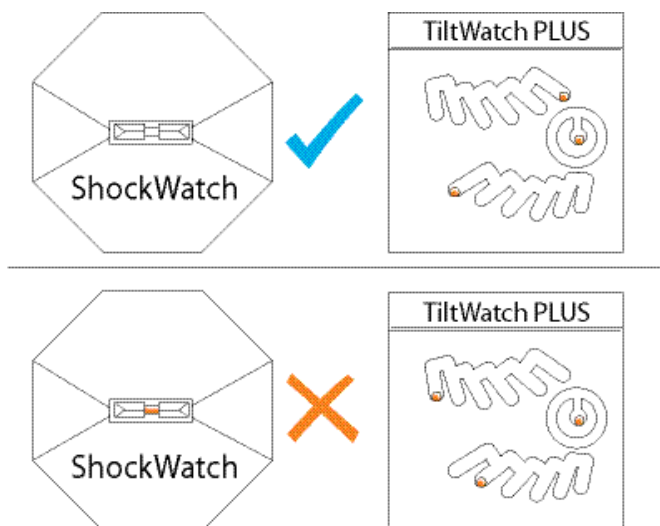


NOTICE

The delivery truck unloads the pallet carrying the Terra 54. The movement of the Terra 54 to its final location is the responsibility of the customer / contractor.

Check whether the Terra 54 has not been shaken or tilted.

- The cabinet is equipped with Shockwatch and Tiltwatch indicators.



Checking the Shockwatch and TiltWatch PLUS sensors:

If the ShockWatch indicator is red, or the TiltWatch PLUS indicator is tilted over 30°:

1. Do not refuse the delivery / receipt.
2. Make a notation on the delivery receipt and inspect cabinet for damage.
3. If damage is discovered, leave cabinet in original package and request immediate inspection from carrier within 3 days of delivery.
4. Contact ABB The Netherlands by mail (service.evci@nl.abb.com) or phone (+3170 3076 201) to notify us about your findings.

5.2 Unpacking cabinet, mounting preparations

5.2.1 Unpacking

The packaging of the Terra 54 can be removed without the use of tools.



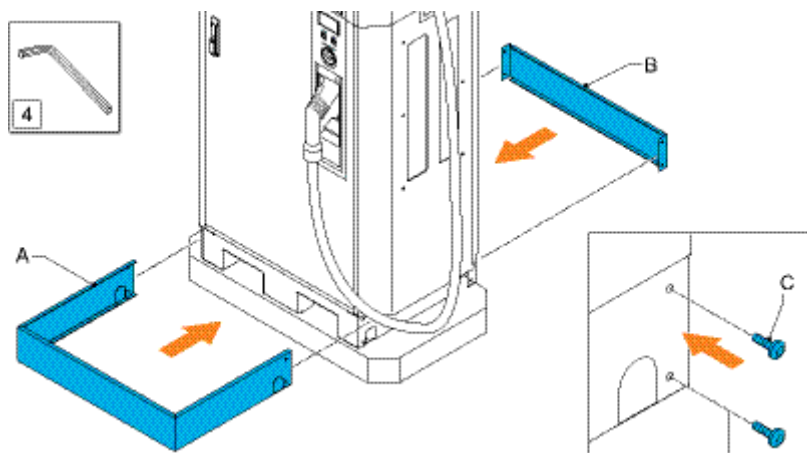
1. Remove the outside shrink wrap.
2. Remove the plastic protection profiles.
3. Remove the innerside shrink wrap.

5.2.2 Mounting preparations

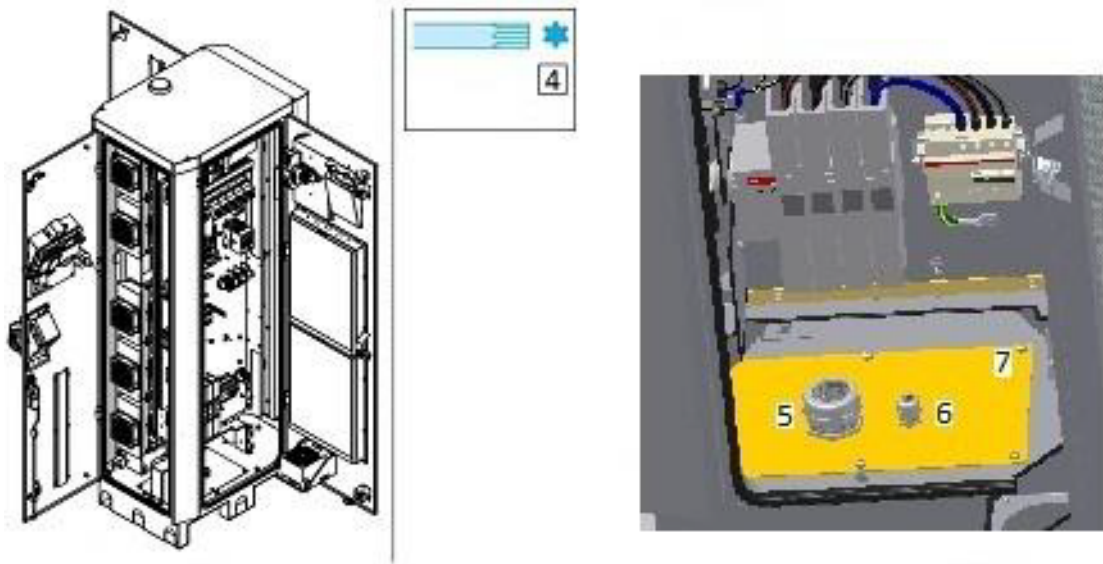
Remove border covers

Preconditions:

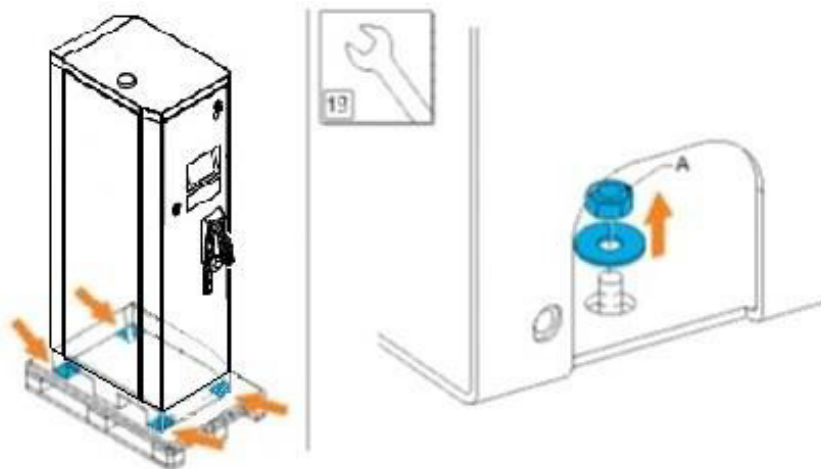
- Tools: Allen key size 4.



1. Remove the bolts (C) of the border covers.
2. Remove the U-shaped covers (A, B) off the base of the Terra 54.



3. Open the cabinet front door (D).
4. Open the side door (E) via the front door.
5. Loosen and remove the cable gland (F) for the power cable.
6. Loosen and remove the cable gland (G) for the Ethernet cable (if required).
7. Put the cable gland(s) in a safe location. It (they) will be re-installed later.
8. Close the doors, starting with the side door and subsequently the front door.



9. Remove the nuts (A) at the four corners.

5.3 Move cabinet to position

5.3.1 Options

There are two options to move the Terra 54 from the delivery truck to the location.

- Move cabinet with hoist on Page 25.
- Move cabinet with forklift truck on Page 26.



DANGER
Hazardous voltage

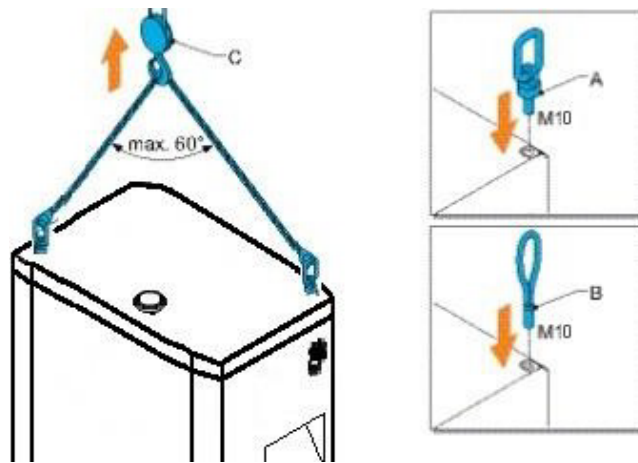
Make sure the main switch of the power supply group for the product is set to the OFF position. Do a voltage check to make sure there is no electrical power on the cables or on the system.



NOTICE
Warranty

Damage due to moving the cabinet to its position is not considered a warranty issue.

5.3.2 Move cabinet with hoist



- A Swivel eye bolts
- B Lifting loops
- C Hoisting equipment

Preconditions:

- Use swivel eye bolts (A) or bolts with lifting loops (B).
1. Insert and tighten the bolts (A) or (B) at opposite corners.
 2. Connect the hoisting equipment (C).
 3. Move the Terra 54 carefully to its location.



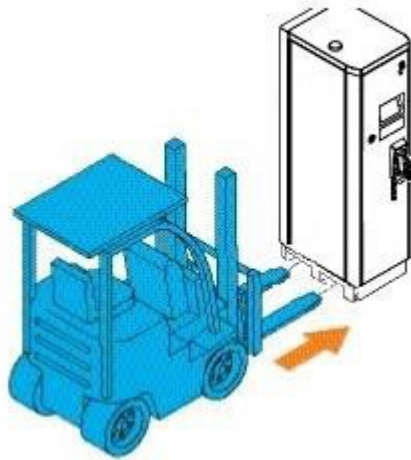
WARNING
Various

Keep the hoisting angle below 60°.

Swivel eye bolts, lifting loops and hoisting equipment are not part of the delivery.

5.3.3 Move cabinet forklift truck

Move cabinet with forklift truck



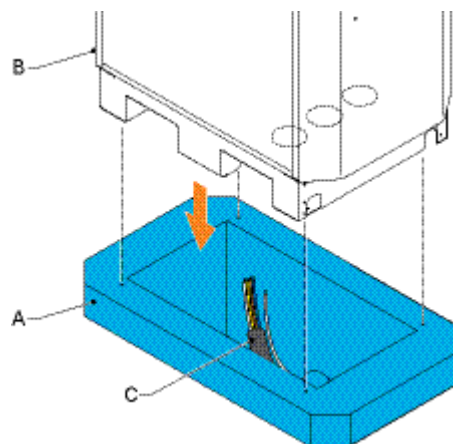
1. Move the forks of the forklift truck in the gaps at the side of the Terra 54.
2. Move the Terra 54 carefully to its location.

5.4 Mounting the cabinet

Preconditions:

- Tools: Spanners size 17.
- The Terra 54 is about 0.5 m above its location
- Open the front door and right side panel.
- Guide the power cable through the cable gland and if required the Ethernet cable through the smaller gland.

5.4.1 Mounting the cabinet to a foundation



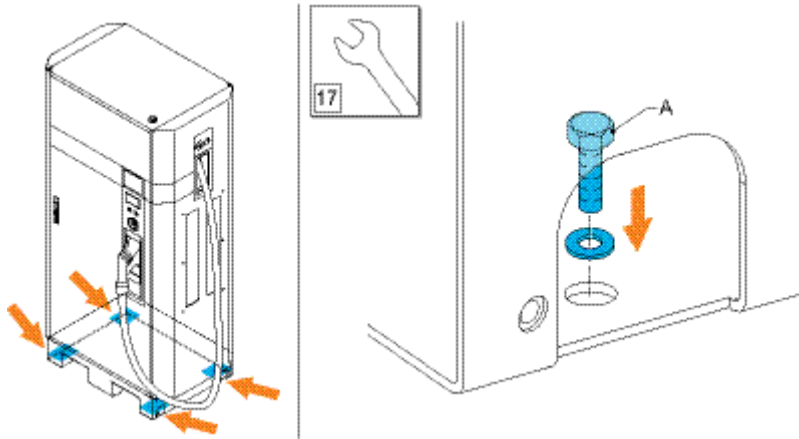
Placement on a concrete foundation

- A Foundation
- B Terra 54

C Cables

5.4.2 Mounting the cabinet

1. Carefully lower the Terra 54 onto its location.
2. Make sure not to entrap the cable(s).
3. Make sure that the cabinet is aligned to the tapped holes.



4. Insert bolts (A) and washers at the four corners and in the middle of the sides.
5. Tighten the bolts.

5.4.3 Install cable gland(s)

The maximum diameter of the grid cable is 45 mm.

The minimum diameter of the grid cable is 34 mm with the standard fitted cable gland insert.

Use foam or shrinking glands to close the remaining holes to prevent insects and small animals to enter the cabinet.



1. Slide the cable gland(s) over the cable(s).
2. Push the cables back through the gland plate, until sufficient cable length is left to reach the cable terminals, make sure the PE cable is longer than the other cables.
3. Tighten the rings of the gland(s).

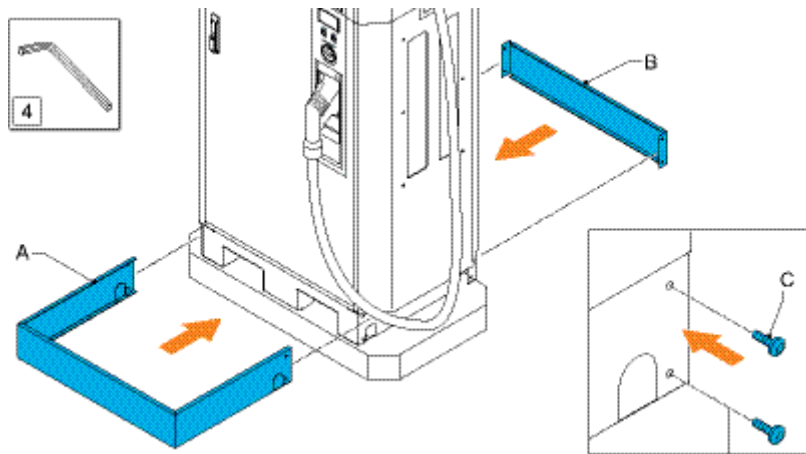
In case the separate internet connection is not used, please assure the cable entry hole is closed, to assure the IP54 grade of the cabinet, and prevent insects and small animals to enter the cabinet.

5.5 Install border covers

5.5.1 Install border covers of cabinet

Preconditions:

- Tools: Allen key size 4.



1. Put the small cover (B) against the back of the Terra 54.
2. Put the U-shaped cover (A) on the base of the Terra 54 from the front. The U-shaped cover overlaps the sides of the small cover.
3. Insert and tighten the bolts (C) at both sides.

5.6 Connect cables

5.6.1 Connect PE of power cable

Preconditions:

- Tools: Wire stripper pliers; wire-end lug pliers; wire-end lug.



DANGER

Hazardous voltage

Make sure that the main switch of the power supply group for the product is set to the OFF position. Perform a voltage check and make sure that the electrical power is disconnected from the system.



1. Cut the PE wire of the power cable to the correct length to reach the PE connector.



NOTICE

For safety, it is recommended to make the PE wire longer than the phase wires. This makes sure that the PE wire stays connected as longest, if the Terra 54 is moved by a collision.

2. Use wire stripper pliers to remove 20 mm of the insulation from the end of the PE wire.
3. Attach a cable lug to the end of the PE wire.
4. Loosen the bolt of the PE connector.
5. Attach the PE wire onto the PE connector.
6. Tighten the bolt.

5.6.2 Connect power cable

Preconditions:

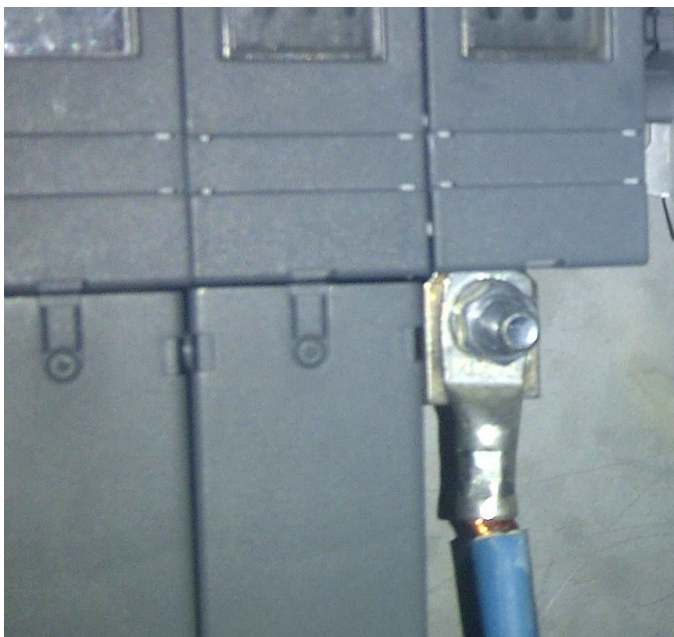
- Tools: Wire stripper pliers; wire-end lug pliers; wire-end lugs.



DANGER

Hazardous voltage

Make sure that the main switch of the power supply group for the product is set to the OFF position. Perform a voltage check and make sure that the electrical power is disconnected from the system.



1. Cut the 3 phase and neutral wires of the power cable to the correct lengths to reach the connectors.
2. Use wire stripper pliers to remove 20 mm of the insulation from the ends of the wires and attach the cable lugs.
3. Pull the covers away from the connectors and remove them.
4. Loosen the bolts of the connectors.
5. Attach the four wires onto their connectors.
 - From left to right:
 - L1 (brown) at position 2,
 - L2 (black) at position 4,
 - L3 (grey or black) at position 6,
 - 0 (blue) at position 8.
6. Tighten the bolts. The advised torque value ranges between 15 and 20 Nm.
7. Install the covers back onto the connector.

**WARNING**

Leave the main switch switched off. The Terra 54 is not ready for use yet. Please contact the ABB Service department at least one week in advance to make an appointment for commissioning.

**NOTICE**

Only connect the network cable if a wireless 2G/3G connection is not possible.

Preconditions:

- Tools: Network cable pliers, RJ45 connector; network cable straight,

1. Cut the network cable to the correct length to reach the Ethernet connector. The connector is located behind the right side door, near the bottom of the charger.

2. Use network cable pliers to install an RJ45 connector on to the network cable.

3. Insert the RJ45 connector into the Ethernet connector.

6 Commissioning

6.1 Commissioning preparation

Commissioning is the last phase necessary to get the Terra 54 operational. The purpose is to check the safe functioning of the charger for its operational purpose.

A certified service engineer from the ABB Service department or a trained engineer by ABB is required to perform the commissioning. During this commissioning the safety and the functioning of the charger will be tested.

Before the service engineer can start, the following conditions must be met:

- All work described in Preparation (starting page TBD), Construction (starting page TBD) and Placement and connection (Starting page TBD) is done.
- Power is available.
- A local technician is present for assistance and to switch on the power.
- Internet access must be available in case 2/3G is not functional.
- A Combo compliant electric vehicle must be available for testing CCS charging.
- A CHAdeMO compliant electric vehicle must be available for testing the CHAdeMO charging.
- An AC compliant electric vehicle must be available for testing AC charging.
- Any electric vehicle for instructing the site operator.



NOTICE Warranty

It is not allowed to move the Terra 54, after it is commissioned.

In case the Terra 54 is moved without approval from ABB, the warranty will be considered void. In case of relocation please contact the local ABB Service department.

Commissioning is executed according to the Check list, this checklist can be found in the Helios Suite Service tool that is available to the certified commissioning engineers or their supervising ABB organisation. Also the following data is required for input:

- End-user Contact person (Create a contact if it doesn't exist).
- Charger address (Check the mentioned address, it will be the address the charger was shipped to).
- Coordinates longitude and latitude for plots on the maps. If there are more chargers on 1 location, make sure the coordinates are slightly different (at least 0,0001 degrees) to prevent being displayed on the same location.
- Site name if this is useful for better recognition (eg Shell petrol station Amsterdam).
- External fuse of the charger.
- SAT (Site Acceptance Test) date.
- Location remarks (any special remarks about the site, eg behind a gate, no photo cameras allowed etc.)

- Add a picture of the surrounding of the charger, upload the local CAF document A4 on the page of the charger in PDF
- Change Deliver status to <SAT>.

After completing the Site Acceptance Test, ABB's Network Operation Center will be triggered to perform a final check on the connection and configuration of the charger.

Upon approval the charger will be operational and initialized for use.

7 Cleaning of the cabinet

7.1 Cleaning of the cabinet

The Terra 54 Charge Station is powder coated. This coating must be kept in good condition.

Clean the Terra 54 Charge Station three times a year in the following way:

- Remove rough dirt by spraying with low-pressure tap water.
- Remove spider nets if present
- Apply a neutral or weak alkaline cleaning solution and let it soak.
- Remove dirt by hand with a non-woven nylon hand pad.
- Rinse thoroughly with tap water.
- Optionally, apply wax on the front for extra protection and gloss.
- Do a check on the coating for damage.



NOTICE

When the Terra 54 Charge Station is exposed to rain, it is sufficient to clean it twice a year.



CAUTION

Do not apply high-pressure water jets. Water may leak into the Terra 54 Charge Station. If a high-pressure water jet has been used, make sure that the inside of the Terra 54 Charge Station is dry.

- Only use cleaning agents with a pH value between 6 and 8.
- Do not use cleaning agents with abrasive components.
- Do not use abrasive tools.

8 Technical Data

8.1 Electrical data

Input	
Supply voltage	3 phase, 400 V AC: PE, N, L1, L2, L3
Input voltage range	400 V AC +/- 10% (50 Hz or 60 Hz)
Maximum rated input current & power	125 A, 86 kVA
Power factor	> 96%
Efficiency	95% at nominal output power
DC output (C)	
Maximum output power	50 kW
Output voltage range	200-500 V DC (CCS 2)
Maximum output current	125 A DC +/- 5% (CCS 2)
DC output (C HV)	
Maximum output power	50 kW
Output voltage range	200-950 V DC (CCS 2)
Maximum output current	125 A DC +/- 5% (CCS 2)
DC output (J)	
Maximum output power	50 kW
Output voltage range	200-500 V DC (CHAdeMO)
Maximum output current	120 A DC (CHAdeMO)
DC output (J HV)	
Maximum output power	50 kW
Output voltage range	200-950 V DC (CHAdeMO)
Maximum output current	120 A DC (CHAdeMO)
Option: AC output socket (T)	
Maximum output power	22 kW
Max AC output current	3 x 32 A
Output Voltage Range	400 V +/- 10%
Option: AC output Cable (G)	
Maximum output power	22 kW / 43 kW
Max AC output current	3 x 32 A / 3 x 63 A
Output Voltage Range	400 V +/- 10%

General	
DC connection standard	EN61851-23 / DIN 70121 CCS 2 CHAdeMO 1.0
DC cable length	3.9 meters +/- 10%
DC plug type	CCS 2 / JEVS G105 CHAdeMO
AC connection standard	EN61851-1:2010 (Renault / Daimler compatible)
Option: connector type	IEC62196 mode-3 type-2
RFID data	
RFID system	FeliCa™ 1, NFC reader mode
Network connection	GSM / CDMA modem 10/100 Base-T Ethernet

8.2 Mechanical data

Mechanical data	
Dimensions (H x W x D)	1900 mm x 565 mm x 780 mm
Weight	325 kg
Volume	0,76 m³
Dimensions including packaging (H X W x D)	2100 mm x 1200 mm x 800 mm
Weight including packaging	350 kg
Weight concrete foundation	400 kg
Mechanical impact protection	IK08
Housing	Stainless steel 430

8.3 Environment

Environmental data	
Ingression protection	IP54
Temperature range – Operation	-10 °C to +50 °C (without LTO) -35 °C to +50 °C (with LTO)
Temperature range - Storage	-40 °C to +70 °C
Humidity	20% - 95% RH - non-condensing
Operational noise level	65 dBA
Altitude	2000 m max.

8.4 Certifications

CE Certification

EMC: EN 61000-6-3 Class B emission; EN 61000-6-2 immunity (see certificate)

LVD: IEC 61851-1, IEC 62196, IEC 60950, EN 61010, EN 60335 (see certificate)

RFID: ISO/IEC 14443 A/B, ISO/IEC15693, ISO 18902 NFC

9 Contact information



NOTICE

In case of problems

Please contact your local ABB Service organization or Service partner for first line problem analysis and solving. In case they cannot solve the problem, they will contact the second line Service organization.

Manufacturer

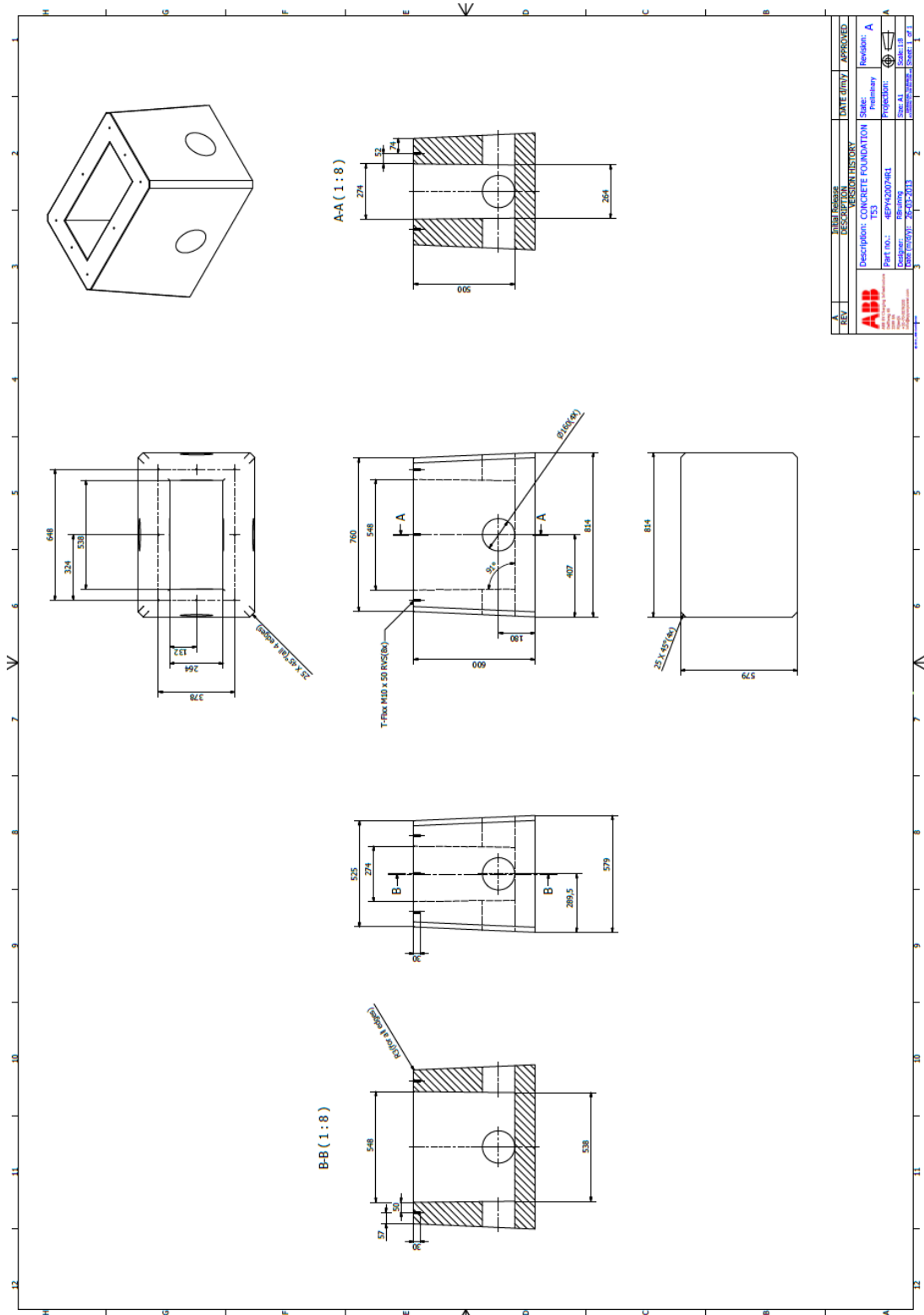
ABB E-mobility B.V.
Heertjeslaan 6
2629 JG Delft

Contact data

ABB E-mobility B.V. in your country can give you support on the EVSE. You can find the contact data here: <https://new.abb.com/ev-charging>

10 Appendix

10.1 Terra 53/54 drawing – Concrete foundation



10.2 Directive on Waste Electrical and Electronic Equipment (WEEE – 2012/19/EU)

ABB

ENGLISH

Electrical and electronic equipment to be separately collected in compliance with the Directive on waste electrical and electronic equipment (WEEE - 2012/19/EU)

The symbol (crossed out wheeled-bin) on your product indicates that the product shall not be mixed or disposed with your household waste, at their end of use.

This product shall be handed over to your local community waste collection point for the recycling of the product.

For more information, please contact your Government Waste-Disposal department in your country.

Inappropriate waste handling could possibly have a negative effect on the environment and human health due to potentially hazardous substances. With your co-operation in the correct disposal of this product, you contribute to reuse, recycle and recover the product and our environment will be protected.



FRANÇAIS

Équipements électriques et électroniques collectés séparément conformément à la Directive relative aux déchets d'équipements électriques et électroniques (WEEE - 2012/19/EU)

Ce symbole (poubelle interdite) apposé sur le produit indique qu'en fin de vie ce produit ne doit pas être traité avec les déchets ménagers.

Il doit être remis à un point de collecte approprié pour le recyclage des appareils électriques et électroniques. Pour de plus amples informations, veuillez contacter le service de collecte des déchets ménagers local.

Ce produit contient des substances potentiellement dangereuses qui peuvent avoir des effets néfastes sur l'environnement et la santé humaine. En veillant à la mise au rebut correcte de ce produit, vous contribuez à assurer le traitement, la récupération et le recyclage de ce produit et à protéger l'environnement.



ESPAÑOL

Aparatos eléctricos y electrónicos recopilados de modo separado en conformidad con la Directiva sobre residuos de aparatos eléctricos y electrónicos (WEEE - 2012/19/EU)

Los productos identificados con este símbolo (papera tachada) no deben eliminarse como residuos domésticos una vez finalizada su vida útil.

Este producto debe entregarse a un punto de recogida de la comunidad local para su recuperación y reciclado.

Para mayor información, sírvase ponerse en contacto con el Departamento de Disposición de Desechos de su Ayuntamiento.

El manejo inadecuado de los residuos supone riesgos para la salud humana o el medio ambiente. Con la reutilización, el reciclado de los materiales u otras formas de valorización de tales productos usted contribuye de manera importante a la protección de nuestro medio ambiente.



NEDERLANDS

Elektrische en elektronische apparatuur worden afzonderlijk ingezameld in naleving van de verorden van de Richtlijn betreffende afgedankte elektrische en elektronische apparatuur (WEEE - 2012/19/EU)

Het symbool (doorgestreepte afvalbak op wielen) op het product geeft aan dat het product aan het einde van haar levensduur niet samen met of in de vorm van huishoudafval mag worden weggegooid.

Het product moet naar een verzamelplaats (milieudepot) worden gebracht waar dergelijke producten worden gerecycled.

Neem voor meer informatie contact op met de relevante overheidsafdeling voor afvalvuins in uw land/leestad.

Het kan nadelige gevolgen hebben op voor mens en milieu als afval op een verkeerde manier wordt behandeld waardoor potentieel schadelijke stoffen vrij komen. Door uw medewerking te verlenen en dit product op de juiste wijze weggevoert, kunt u een bijdrage leveren aan het herstellen, hergebruiken en recycleren van dit product om zo ons milieu te beschermen.



DANSK

Elektrisk og elektronisk udstyr indsamles særskilt i overensstemmelse med direktiv om affald af elektrisk og elektronisk udstyr (WEEE - 2012/19/EU)

Symbolet (en overstregt affaldsspand med hjul) på produktet angiver, at produktet ikke må blandes med eller bortskaffes sammen med almindeligt husholdningsaffald, når det er udtjent.

Produktet skal afleveres til det lokale affaldsindsamlingssted til genbrug.

Kontakt venligst afdelingen for bortskaffelse af affald i din kommune angående yderligere information.

Uensigtsmæssig bortskaffelse af affald kan have en negativ virkning på miljøet og folks helbred, da det kan indeholde potentielle, farlige stoffer. Med din medvirken i hensende til forsvarlig bortskaffelse af dette produkt, kan du bidrage til genbrug, recirkulere og genvinde produkterne og samtidig medvirke til, at vores miljø vil blive beskyttet.



DEUTSCH

Elektronische und Elektrongeräte sind getrennt zu sammeln in Einklang mit der Richtlinie über Elektro- und Elektronik-Altgeräte (WEEE - 2012/19/EU)

Dieses Symbol (ausgekreuzte Mülleimer) auf dem Produkt bezeichnet, dass Altgeräte usw.

nicht wie normale Haushaltsabfälle in den Müll gegeben werden dürfen, sondern zum Recycling an einer hierfür vorgesehenen Ansammlungsstelle abzugeben ist.

Für nähere Informationen wenden Sie sich bitte an die für Müllentsorgung zuständigen örtlichen Behörden.

Bei unsachgemäßer Entsorgung besteht das Risiko nachteiliger Auswirkungen auf Umwelt und Gesundheit durch potentiell gefährliche Substanzen. Durch Ihre Kooperation zur ordnungsgemäßen Entsorgung fördern Sie die Wiederverwendung, das Recycling und die Rückgewinnung von Stoffen und tragen zum Umweltschutz bei.



ITALIANO

Apparecchiatura Elettrica ed Elettronica oggetto di raccolta differenziata in conformità alla Direttiva sui Rifiuti di apparecchiatura Elettriche ed Elettroniche (WEEE - 2012/19/EU)

Il simbolo (un bidone sbarrato da una croce) indica che il prodotto non deve essere smaltito con i rifiuti domestici, alla fine della sua vita.

Questo prodotto deve essere consegnato al punto di raccolta rifiuti della propria comunità locale per il suo riciclaggio.

Per ulteriori informazioni, rivolgersi all'organo statale preposto allo smaltimento dei rifiuti nel proprio paese.

Uno smaltimento dei rifiuti inappropriato può avere effetti negativi sull'ambiente e sulla salute umana a causa di sostanze potenzialmente pericolose. Collaborando allo smaltimento corretto di questo prodotto, si contribuisce al riutilizzo, al riciclaggio e al recupero del prodotto, e alla protezione del nostro ambiente.



PORTUGUÊS

Equipamentos Eléctricos e Electrónicos recolhidos seletivamente de acordo com a Diretiva relativa aos resíduos de equipamentos eléctricos e electrónicos (WEEE - 2012/19/EU)

O símbolo (canele de lixo de rodas com uma linha cruzada) em seu produto indica que o produto, no fim da sua vida útil, não deve ser misturado ou eliminado com o lixo doméstico comum.

Este produto deverá ser entregue a uma estação de recolha de lixo da comunidade local para a reciclagem do produto.

Para mais informações, entre em contacto com o Departamento de Tratamento de Lixo do Governo do seu país.

O tratamento de lixo incorreto poderia provocar um efeito negativo no meio ambiente e saúde humana devido a substâncias potencialmente perigosas. Com a sua cooperação para a eliminação correcta deste produto, contribuirá para a reutilização, reciclagem e recuperação do produto, e nosso meio ambiente será protegido.



SVENSKA

Elektriska och elektroniska produkter ska samlas in separat i enlighet med direktivet om avfall som utgörs av eller innehåller elektrisk eller elektronisk utrustning (WEEE - 2012/19/EU)

Denna symbol (en överkorsad sopptunna) på produkten innebär att produkten ej ska blandas eller slängas med ditt hushållsavfall när den är förbrukad.

Produkten ska lämnas till en lokal insamlingsplats för denna slags produkter för återvinning. Kontakta kommunkontoret för närmare detaljer om var du finner sådana insamlingsplatser.

O olämplig avfallshandtering kan få negativa effekter på miljön och på människors hälsa då en produkt kan innehålla farliga ämnen.

Vi ber om ditt samarbete i bortskaffningen av denna produkt för att bidra till återvinning, återanvändning och en hållsammare miljö.



SUOMI

Sähkö- ja elektroniikkalaitteet on kierrätettävä erikseen sähkö- ja elektroniikkalaiteromasta annetun direktiivin (WEEE - 2012/19/EU) mukaisesti

Tuotteeseen merkitty symboli (ylitse rukoitettu jätessäiliö) osoittaa, että tuotetta ei saa sekoittaa eikä hävittää talousjätteen kanssa.

Tuote on luovutettava sopivaan tällaisen laitteiden kierrätyksestä huolehtivan keräyspisteeseen.

Pyynnä kierrätystä jätteenasiasta vastaavilta paikallisilta viranomaisilta.

Tämän tuotteen asennuksen hävittämisen valmistamiseksi autetaan estämään sen mahdolliset ympäristöön ja terveyteen kohduttavat haittavaikutukset, joita voi aiheutua muussa tapauksessa tämän tuotteen epäasianmukaisesta kierrätyksestä. Hävittämällä tuotteen asennuksen autat valmistamaan, että tuote uudelleenkäytetään, kierrätetään ja kerätään ja ympäristö suojataan.



ČESKY

Elektrická a elektronická zařízení, která se shromažďují odděleně v souladu se Směrnicí o elektrickém a elektronickém odpadu (WEEE - 2012/19/EU)

Symbol (překřížnutá popelnice na kolečkách) na vašem výrobku označuje, že výrobek se po ukončení jeho používání nesmí míchat a vyvážovat společně s běžným odpadem z domácnosti.

Tento výrobek je třeba odložit na určené shromažďovací místo ve vaší obci pro provedení recyklace tohoto výrobku.

Pro další informace se obraťte na místní orgány stálé správy zabezpečující sběr a likvidaci odpadu.

Nesprávné nakládání s odpady by mohlo mít za následek negativní vlivy na životní prostředí a lidské zdraví z důvodu možného vzniku škodlivých látek. Pomocí vaší spolupráce při správném způsobu zneškodnění tohoto výrobku přispějete ke znovu využití, recyklaci a obnově výrobku přičemž naše životní prostředí bude ochráněno.



POLSKI

Sprzet Elektryczny i Elektroniczny podlegający selektywnej zbiórce zgodnie z Dyrektywą (WEEE - 2012/19/EU)

Symbol (przekreślony kosz) na Twoim produkcie oznacza, że produkt nie powinien być mieszany lub ustawiany z Twoimi odpadami pochodzącymi z gospodarstwa domowego, po jego zużyciu.

Produkt ten powinien zostać dostarczony do lokalnego komunalnego punktu zbiórki odpadów, w celu recyklingu produktu.

W celu uzyskania większej ilości informacji, prosimy o skontaktowanie się z Krajowym Wydziałem Zarządzania Gospodarką Odpadami w Twoim kraju.

Niewłaściwe manipulowanie odpadami może negatywnie oddziaływać na środowisko i zdrowie ludzi, wskutek potencjalnych substancji niebezpiecznych. Współpracując przy prawidłowym usunięciu tego produktu, przyczyniasz się do ponownego użycia, recyklingu i oczyszczenia produktu i w ten sposób nasze środowisko będzie chronione.



SLOVENŠČINA

Elektrčna in elektronska oprema se zbira ločeno v skladu z Direktivo o odpadni elektrčni in elektronski opremi (WEEE - 2012/19/EU)

Oznaka (prekrižan smetljak na kolesih) na vašem izdelku označuje, da se tega izdelka po končani uporabi ne sme mešati ali odvreči z ostalimi gospodinjstskimi odpadki.

Ta izdelek je potrebno oddati vaši lokalni depoziti za odpadki za predelavo takšnih izdelkov.

Za podrobnejše podatke se obrnite na državni urad za odstranjevanje odpadkov v vaši državi.

Zaradi nevarnih snovi ima lahko neupoštevno ravnanje z odpadki negativne posledice na okolje in zdravje ljudi. Z vašim sodelovanjem pri pravilnem odstranjevanju tega izdelka, prispevanje k ponovni uporabi, recikliranju in nadomestitvi izdelka. Naše okolje bo tako zaščiteno.



EESTI

Elektri- ja elektroniikaseadmed tuleb koguda eraldi kiirguskäite elektril- ja elektroniikaseadmete kiirguskäite (WEEE - 2012/19/EU)

Sümbol (ristiga maha lõmmutatud vagn) tootel osutab, et käesolevat toodet ei tohi peale selle kasutuskõlbmatuks muutumise visata ära koos muu majapidamises tekkinu prügi.

Käesolev toode on ümberloeteldav ning tuleb viia kohaliku prügihoolduse- või ümberlootemisekeskusesse.

Täpsemat informatsiooni saate paludes pöörduda selle riigiasutusse, millele Teie riigis, mis tegeleb prügianduse puutuvate regulatsioonidega.

Käesoleva toote vale käsitlemine selle käivitamisel võib põhjustada võimalikult riskantseid tulemusi negatiivset mõju nii keskkonnale kui ka Teie tervisele. Teie koostöö kiirguskäite ka peale selle kasutuskõlbmatuks muutumist ja Teie kaasaabi käesoleva toote korrektsusse või ümberlootumisse saamisel aitab Teie liisvõimaluse kiiresti ühist looduskeskkonda.



SRPSKI

Elektrčna i elektronska oprema koju treba sakupiti zasebno u skladu sa Direktivom o odabacnoj električnoj i elektronskoj opremi (WEEE - 2012/19/EU)

Na vašem proizvodu označava da se proizvod po isteku svog radnog veka ne sme pomешati, niti baciti zajedno sa otpadom iz domaćinstva.

Ovaj proizvod se mora predati na mestu za prikupljanje otpada za reciklažu u vašoj lokalnoj zajednici.

Za dodatne informacije molimo kontaktirati nadležni organ za odaganje otpada u vašoj zemlji.

Neppravilno rukovanje otpadom može negativno da utiče na životnu sredinu i zdravlje ljudi, zbog potencijalno opasnih supstanci. Vašom saradnjom na pravilnom odaganju ovog proizvoda, Vi doprinosite ponovnom korišćenju, recikliranju i sakupljanju proizvoda što će zaštititi vašu životnu sredinu.



MAGYAR

A leselejtezett elektromos és elektronikus berendezések az elektronikus és elektronikus berendezések hulladékaként szőz (WEEE - 2012/19/EU) irányelv értelmében külön kell gyűjteni

A kiélezikelt jelző szimbólum (keresztben áthított kuka) azt jelzi, hogy a termék használat után ne keverje, illetve ne helyezze el háztartási hulladékkal.

A terméket üpöli hasznosításra le kell adnia a kijelölt hulladékgyűjtő helyen.

További információért kérjük, forduljon az országának levő illetékes állami hulladékkezelési szervhez. Nem megfelelő hulladékkezelésnek potenciálisan veszélyes anyagok miatt negatív hatása lehet a környezetre és az emberi egészségre.

A termék helyes elhelyezéseben való közreműködésével Ön hozzájárul annak újrafelhasználásához, újrafeldolgozásához és visszanyeréséhez, és véd a környezetről.



SLOVENČINA

Elektrická a elektronická zariadenia, ktoré sa zbierajú separovane v súlade so smernicou o odpade z elektrických a elektronických zariadení (WEEE - 2012/19/EU)

Symbol (prekrižnutý odpadkový kôš) na výrobku znamená, že daný výrobok nie je možné po skončení používania zmiešať a vyhodit spolu s bežným domácným odpadom.

Výrobok je nutné odovzdať do zbierne odpadu vo vašej lokalite, kde dôjde k jeho recyklácii.

Presné informácie Vám poskytne Úrad štátnej správy zodpovedný za zber a likvidáciu odpadu.

Nesprávna likvidácia odpadu môže mať negatívny dopad na životné prostredie a ohroziť ľudské zdravie nebezpečnými látkami. Napokon správny postup pri likvidácii odpadu umožní jeho

opätovné použitie, recykláciu a obnovenie výrobku, čím prispieje k ochrane životného prostredia.



LIETUVIŲ

Laikantis Direktivos (WEEE - 2012/19/EU) dėl elektrinio ir elektroninio įrangos atliekų, elektros ir elektroninio įrangos turi būti surenkama atskirai

Simbolis (perbrauktas šiukšlių dėžė su ratais), esantis ant jūsų įsigyto įrangos, reiškia, kad įrangą, pasibaigus jos naudojimui, negali būti maišoma ar šalinama kartu su buitinėmis atliekomis.

Tokia įrangą turi būti perkelta į jūsų vietos bendruomenės atliekų surinkimo centrą, kad būtų naudota kaip atnaujinti žaliava.

Daugiau informacijos galite gauti iš savo šalies vyriausybės atliekų tvarkymo departamentu.

Netinkamas atliekų šalinimas gali neigiamai veikti aplinką ir žmonių sveikatą, nes atliekose gali būti pavojingų medžiagų. Taisindami šalinami šią įrangą jūs prisidedate prie pakartotinio įrangos panaudojimo, perdavimo ir regeneracijos ir taip apsaugote aplinką.



LATVIEŠU

Elektriskās un elektroniskās iekārtas ir jāsavāc atsevišķi saskaņā ar Direktīvu par elektrisko un elektronisko iekārtu atkritumiem (WEEE - 2012/19/EU)

Simbolis (pārsvītrota atkritumu tvertne) uz jūsu produkta, nozīmē, ka produktu nedrīkst izmest pēc derīguma termiņa beigām, kopā ar parastajiem mājās atkritumiem.

Šis produkts tiks nodots vietējā katrīgo atkritumu savākšanas punktā tā pārstrādāšanai.

Lai iegūtu plašāku informāciju, lūdzam sazināties ar jūsu valsts atkritumu pārvaldes nodaļu.

Nepareiza atbrīvošana no šī produkta var atstāt negatīvu ietekmi uz apkārtni vidi un cilvēku veselību potenciāli kaitīgi sadedzot oļi. Ar jūsu sadarbību šī produkta pareizā pārstrādē, jūs palīdzat aizsargāt apkārtni vidi un atbilstat produktu variācijām izmantošanai.



ΕΛΛΗΝΙΚΑ

Ο ηλεκτρικός και ηλεκτρονικός εξοπλισμός πρέπει να συλλέγεται ξεχωριστά σύμφωνα με την Οδηγία για το αποβλήτων ηλεκτρικού και ηλεκτρονικού εξοπλισμού (WEEE - 2012/19/EU)

Το σύμβολο (διαγραφόμενο τροχήλατος κάδος απορριμμάτων) πάνω στο προϊόν σας υποδεικνύει ότι αυτό το προϊόν, με τη λήξη της χρήσης του, δεν πρέπει να αναμειγνύεται ή να απορρίπτεται μαζί με οικιακά απορρίμματα.

Αυτό το προϊόν πρέπει να παραδοθεί στο σημείο συλλογής αποβλήτων της περιοχής σας για την ανακύκλωση του.

Για περισσότερες πληροφορίες, παραπομπές σε επικοινωνήστε με τη Διεύθυνση Υπουργείου Διαχείρισης Αποβλήτων της χώρας σας.

Η μη ορθή διαχείριση των αποβλήτων μπορεί να έχει αρνητικές επιπτώσεις στο περιβάλλον και στην ανθρώπινη υγεία λόγω της οδοντολογίας απόρριψης επικινδύνων ουσιών. Με τη συνεργασία σας στη σωστή διάθεση αυτού του προϊόντος, συμβάλλετε στην επανορθολογιστική, ανακύκλωση και απόδοση του προϊόντος να προστατεύεται το περιβάλλον.



10.3 Hinweise zur Messgenauigkeit entsprechend der Baumusterprüfbescheinigung

I - Anforderungen an den Betreiber des Ladegeräts, die er als Voraussetzung für den ordnungsgemäßen Betrieb des Ladegeräts erfüllen muss. Betreiber der Ladeeinrichtung ist der Benutzer des Messgerätes im Sinne von § 31 des Mess- und Eichgesetzes

1. Die Ladeeinrichtung gilt nur dann als bestimmungsgemäß und eichrechtskonform verwendet, wenn die darin eingebauten Zähler keinen anderen Umgebungsbedingungen ausgesetzt werden als denen, für die ihre Baumusterprüfbescheinigung ausgestellt wurde.
2. Der Nutzer dieses Produktes muss bei der Anmeldung der Ladepunkte bei der Bundesnetzagentur auch die auf dem Ladegerät angegebene PK für die Ladepunkte in dessen Anmeldeformular eintragen! Ohne diese Registrierung ist ein eichrechtskonformer Betrieb des Ladegerätes nicht möglich.

Bitte beachten Sie hierzu folgenden Weblink:

[Bundesnetzagentur - Meldung von Ladepunkten](https://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/HandelundVertrieb/Ladesaulen/Anzeige_Ladepunkte_node.html)

https://www.bundesnetzagentur.de/DE/Sachgebiete/ElektrizitaetundGas/Unternehmen_Institutionen/HandelundVertrieb/Ladesaulen/Anzeige_Ladepunkte_node.html

3. Der Benutzer dieses Produkts muss sicherstellen, dass die Kalibrierungsgültigkeitszeiträume für die Komponenten im Ladegerät und für das Ladegerät selbst nicht überschritten werden.
4. Der Benutzer muss die vom Ladegerät gelesenen signierten Datenpakete - entsprechend der Paginierung - dauerhaft (auch) auf Hardware speichern, die für diesen Zweck in seinem Besitz ist ("dedizierter Speicher") - und sie verfügbar halten für autorisierte Dritte (betriebliche Verpflichtung des Speichers.). Permanent bedeutet, dass die Daten nicht nur bis zum Abschluss des Geschäftsvorfalles gespeichert werden müssen, sondern zumindest bis zum Ablauf der gesetzlichen Fristen für den Rechtsbehelf für den Geschäftsvorgang. Für nicht vorhandene Daten dürfen zu Abrechnungszwecken keine Ersatzwerte erstellt werden.
5. Der Benutzer dieses Produkts muss den Benutzern von Messwerten, die von ihm Messwerte aus diesem Produkt erhalten, diese zur Verfügung stellen und sie in Geschäftsvorgängen mit einer elektronischen Form von Betriebsanweisungen verwenden, die von der Konformitätsbewertungsstelle genehmigt wurde. Der Benutzer dieses Produkts muss insbesondere auf Nr. II "Anforderungen an den Benutzer an die Messwerte vom Ladegerät" hinweisen.
6. Der Benutzer dieses Produktes ist verpflichtet, gemäß § 32 MessEG (Auszug) zu benachrichtigen: § 32 Meldepflicht (1) Wer neue oder erneuerte Messgeräte einsetzt, muss die zuständige Behörde nach staatlichem Recht spätestens sechs Wochen nach Inbetriebnahme benachrichtigen.
7. Soweit es von den autorisierten Stellen für erforderlich gehalten wird, muss der Messgerätebenutzer den kompletten Inhalt des dedizierten lokalen Speichers oder des Speichers am CPO mit allen Datenpaketen des Abrechnungszeitraums zur Verfügung stellen.

II - Anforderungen an den Verwender der Messwerte aus dem Ladegerät (EMSP) Der Verwender der Messwerte muss § 33 MessEG beachten

§ 33 MessEG (Zitat)

**Gesetz über das Inverkehrbringen und die Bereitstellung von Messgeräten auf dem Markt, ihre Verwendung und Eichung sowie über Fertigpackungen
(Mess- und Eichgesetz - MessEG)
§ 33 Anforderungen an das Verwenden von Messwerten**

- (1) *Werte für Messgrößen dürfen im geschäftlichen oder amtlichen Verkehr oder bei Messungen im öffentlichen Interesse nur dann angegeben oder verwendet werden, wenn zu ihrer Bestimmung ein Messgerät bestimmungsgemäß verwendet wurde und die Werte auf das jeweilige Messergebnis zurückzuführen sind, soweit in der Rechtsverordnung nach § 41 Nummer 2 nichts anderes bestimmt ist. Andere bundesrechtliche Regelungen, die vergleichbaren Schutzzwecken dienen, sind weiterhin anzuwenden.*
- (2) *Wer Messwerte verwendet, hat sich im Rahmen seiner Möglichkeiten zu vergewissern, dass das Messgerät die gesetzlichen Anforderungen erfüllt und hat sich von der Person, die das Messgerät verwendet, bestätigen zu lassen, dass sie ihre Verpflichtungen erfüllt.*
- (3) *Wer Messwerte verwendet, hat*
- 1. dafür zu sorgen, dass Rechnungen, soweit sie auf Messwerten beruhen, von demjenigen, für den die Rechnungen bestimmt sind, in einfacher Weise zur Überprüfung angegebener Messwerte nachvollzogen werden können und*
 - 2. für die in Nummer 1 genannten Zwecke erforderlichenfalls geeignete Hilfsmittel bereitzustellen.*

Für den Verwender der Messwerte ergeben sich aus dieser Vorschrift folgende spezifische Verpflichtungen für die eichrechtliche Verwendung von Messwerten:

1. Aus dem Vertrag zwischen EMSP und dem Kunden muss eindeutig hervorgehen, dass nur die Lieferung von elektrischer Energie und nicht die Dauer der Ladedienstleistung Gegenstand des Vertrages ist.
2. Die Zeitstempel auf den Messwerten stammen von einer Uhr im Ladegerät, die nicht nach dem Mess- und Eichrecht zertifiziert ist. Sie dürfen daher nicht zur Bewertung der Messwerte herangezogen werden
3. EMSP muss sicherstellen, dass der Vertrieb der E-Mobilitätsdienstleistung über Ladegeräte erfolgt, die eine Überwachung des laufenden Ladevorgangs ermöglichen, wenn keine entsprechende lokale Anzeige am Ladegerät vorhanden ist. Zumindest zu Beginn und am Ende eines Ladevorgangs müssen die Messwerte in eichrechtlich vertrauenswürdiger Weise für den Kunden verfügbar sein.
4. Der EMSP muss dem Kunden die abrechnungsrelevanten Datenpakete inklusive Signatur als Datei zum Zeitpunkt der Rechnungsstellung so zur Verfügung stellen, dass sie mit der Transparenz- und Anzeigesoftware auf ihre Echtheit überprüft werden können. Sie können über nicht eichrechtlich geprüfte Kanäle zur Verfügung gestellt werden.
5. Der EMSP muss dem Kunden die zum Ladegerät gehörende Transparenz- und Anzeigesoftware zur Überprüfung der Datenpakete auf Integrität zur Verfügung stellen.
6. Der EMSP muss in der Lage sein, nachvollziehbar darzustellen, mit welchem Identifikationsmittel der zu einem bestimmten Messwert gehörende Abrechnungsvorgang eingeleitet wurde. Das heißt, er muss für jeden Geschäftsvorfall und jeden abgerechneten Messwert nachweisen können, dass er die persönlichen Identifikationsdaten korrekt zugeordnet hat. Der EMSP hat seine Kunden über diese Verpflichtung in geeigneter Form zu informieren.
7. Das EMSP darf für Abrechnungszwecke nur Werte verwenden, die in einem beliebigen dedizierten Speicher im Ladegerät und / oder im Speicher des Betreibers des Ladegeräts vorhanden sind. Es dürfen keine Ersatzwerte für Abrechnungszwecke gebildet werden.

8. Der EMSP muss durch entsprechende Vereinbarungen mit dem Betreiber der Abrechnungseinrichtung sicherstellen, dass die zur Abrechnung verwendeten Datenpakete ausreichend lange gespeichert werden, um die zugehörigen Geschäftsvorfälle abwickeln zu können.
9. Der EMSP hat im Falle eines berechtigten Verlangens die Authentifizierung der zu dieser Betriebsanleitung gehörenden Exemplare des Produkts durch Bereitstellung geeigneter Identifikationsmittel zum Zwecke der Durchführung von Kalibrierungen, Diagnoseprüfungen und Maßnahmen der Einsatzüberwachung zu ermöglichen.
10. Alle vorgenannten Verpflichtungen gelten für den EMSP als Messwertnutzer im Sinne des § 33 Messeg auch dann, wenn er die Messwerte über einen Roaming-Dienstleister von den Ladeeinrichtungen bezieht.

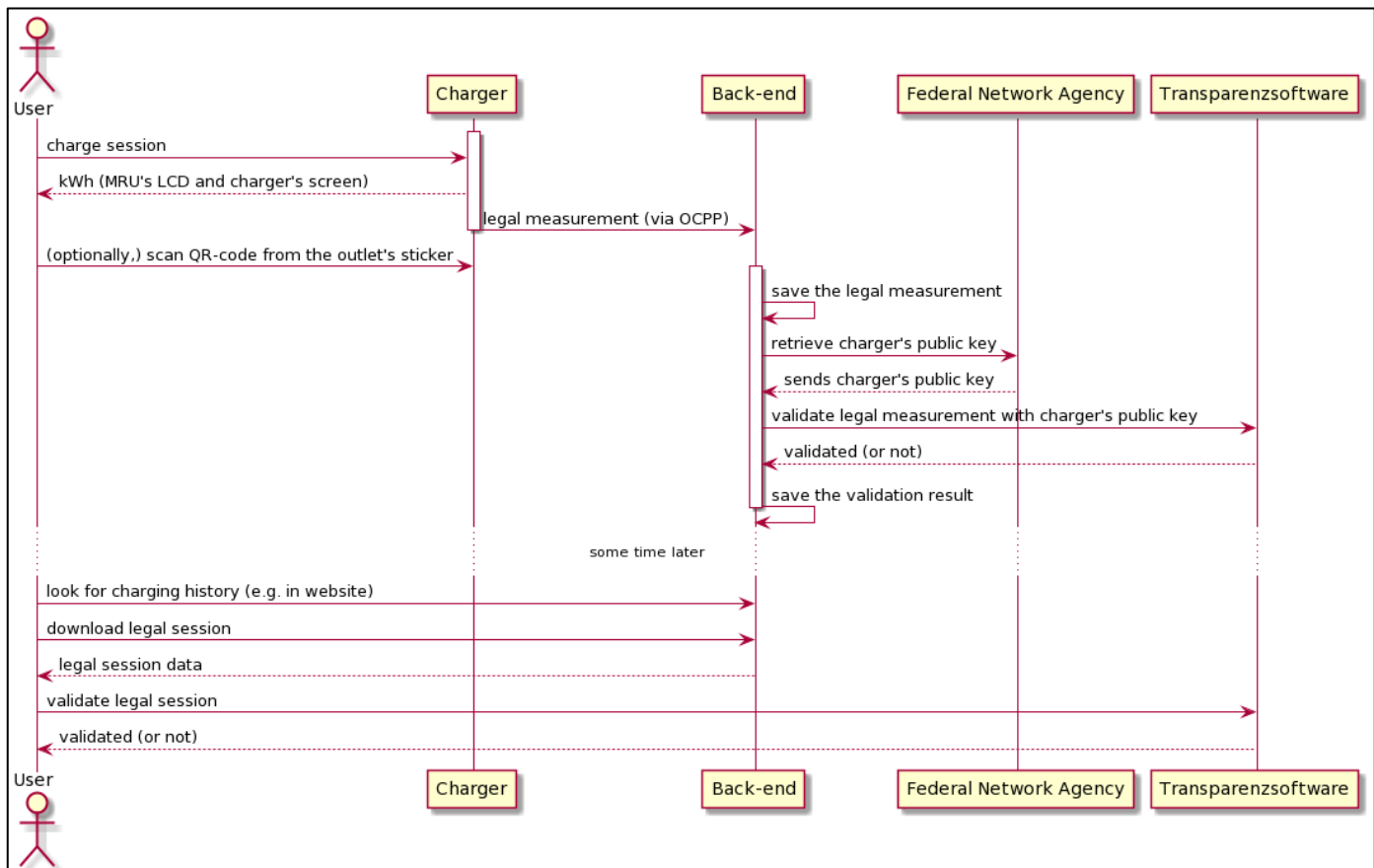


Abbildung 1 – Darstellung der Datensequenz zur Validierung