EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 18324

March 2026

ICS 43.120

English version

Accessibility requirements and recommendations for charging stations for electric road vehicles

Exigences et recommandations d'accessibilité pour les stations de recharge des véhicules routiers électriques

Anforderungen und Empfehlungen zur Barrierefreiheit von Ladestationen für Elektrofahrzeuge

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/CLC/JTC 11.

If this draft becomes a European Standard, CEN and CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN and CENELEC in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN and CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN and CENELEC members are the national standards bodies and national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

CEN-CENELEC Management Centre:
Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword

This document (prEN 18324:2026) has been prepared by Joint Technical Committee CEN/CLC/JTC 11 “Accessibility in the built environment”, the secretariat of which is held by UNE.

This document is currently submitted to the CEN Enquiry.

Introduction

The transition to electric mobility is reshaping transport systems. Ensuring that EVSEs are accessible is essential to enabling independent mobility, social inclusion and equal participation in daily life for all drivers, including persons with disabilities, older persons, and individuals with temporary or situational impairments.

This document provides requirements and recommendations for the accessible design, installation and operation of charging infrastructure for M1 and N1 electric vehicles. Building on the principles of Universal Design, it supports designers, manufacturers, operators, procurers and regulators in creating environments, products and services that can be used equitably, safely and independently.

The provisions given in this document recognize that charging infrastructure is a composite system in which physical, digital and environmental components interact. Accessibility considerations are integrated from the physical design of electric vehicle supply equipment (EVSE) to the layout of the charging space, and from digital user interfaces to wayfinding, information provision and payment systems.

This document complements existing European and international standards on accessibility, the built environment, electric vehicle charging systems and digital accessibility. It is intended to support harmonization across Europe and contribute to a charging network that is inclusive, user-centred and aligned with the principles of Universal Design.

1 Scope

This document specifies accessibility requirements and recommendations for accessible charging stations for electric road vehicles, following a “Design for All”/“Universal Design” approach.

This document applies to the charging infrastructure for M1 electric vehicles, which are used for the carriage of passengers and are equipped with at least four wheels and comprising not more than eight seats in addition to the driver's seat, and for N1 electric vehicles, which are used for the carriage of goods and having a maximum mass not exceeding 3,5 tonnes.

This document sets out requirements and recommendations designed to ensure that the charging infrastructure is accessible and usable for all drivers, including those with specific mobility needs. Autonomous driving vehicles are excluded from the scope of this document.

This document is applicable to charging infrastructures, whether public or private, intended for electric vehicle charging. While it primarily addresses requirements and recommendations for conductive charging, wireless/inductive charging is also considered where relevant.

This document covers:

— the built environment surrounding electric vehicle charging stations, including its location, identification, signage and information;

— the built environment close to the electric vehicle to enable the charging process;

— factors to be taken into account in the design and specification of electric vehicle supply equipment;

— the platform and applications to enable the type of charging and payment, when relevant;

— other possible basic services associated with the charging process: pedestrian connection, associated toilets, etc.

This document does not cover:

— electric vehicles categories other than M1 and N1, although its users could also benefit from the requirements given in this document;

— specific materials used within an electric vehicle supply equipment;

— definition of charging rates or charging prices;

— user personal safety and protection;

— grid connections for electric vehicle charging stations;

— parking policy and planning policy related to designated accessible parking spaces or electric vehicle charging.

NOTE Some of the requirements given in this document might not be applicable to private infrastructures (e.g. the ones related to the payment system).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 17210, *Accessibility and usability of the built environment - Functional requirements*

EN 301549, *Accessibility requirements for ICT products and services*

ISO 7000, *Graphical symbols for use on equipment — Registered symbols*

ISO 7001:2003, *Graphical symbols — Registered public information symbols*

ISO 21542, *Building construction — Accessibility and usability of the built environment*

EN IEC 62196-1:2022, *Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp/

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Terms and definitions

3.1.1 General terms

3.1.1.1
accessibility
extent to which products, systems, services, environments and facilities can be used by people from a population with the widest range of user needs, characteristics and capabilities to achieve identified goals in identified contexts of use

Note 1 to entry: Context of use includes direct use or use supported by assistive technologies.

Note 2 to entry: The identified goals of an accessible built environment are for people to independently and safely gain access to, enter, use and exit this environment.

[SOURCE: EN ISO 9241-112:2025, 3.11, modified — Note 2 to entry added]

3.1.1.2
built environment
external and internal environments and any element, component or fitting that is commissioned, designed, constructed and managed for use by people

Note 1 to entry: Loose items are excluded because decisions with respect to their location within the built environment are more likely to be under the day-to-day control of facilities managers and not of those who commission, design or construct the built environment.

[SOURCE: ISO 21542:2021, 3.4]

3.1.1.3
Universal Design
UD
design of products, environments, programmes and services to be usable by all people, to the greatest extent possible, without the need for adaptation or specialised design

Note 1 to entry: "Universal Design" does not exclude the need of assistive devices for particular groups or persons with disabilities where relevant.

Note 2 to entry: Terms such as "Universal Design", "accessible design", "Design for All", "barrier-free design", "inclusive design" and "transgenerational design" are often used interchangeably with the same meaning.

[SOURCE: EN 17210:2021, 3.52]

3.1.1.4
system approach
methodology that considers the entire system and its interconnected parts, adopting an integrated perspective

3.1.1.5
charging infrastructure
integrated system of physical, digital, and spatial components required to enable the charging of the EV

Note 1 to entry: EV supply equipment is part of a charging infrastructure.

3.1.1.6
charging user
driver of the EV who interacts with the charging process and may also interact with the surrounding built environment associated with the charging infrastructure

3.1.1.7
ground level
surface of the ground where the vehicle's wheels rest, used as reference

Note 1 to entry: Where there is a slope, the reference is the point where the wheel closest to the EVSE rests.

3.1.2 Electric supply equipment

3.1.2.1
EV supply equipment
EVSE
equipment or a combination of equipment, providing dedicated functions to supply electric energy from a fixed electrical installation or supply network to an EV for the purpose of charging

EXAMPLE 1 For Mode 3 case B, the EV supply equipment consists of the Mode 3 charging station and the cable assembly.

EXAMPLE 2 For Mode 3 case C, the EV supply equipment consists of the Mode 3 charging station with its cable assembly.

Note 1 to entry: EV supply equipment is either permanently connected or connected by a cable and plug to the electrical installation.

Note 2 to entry: Terms such as "EVSE", "chargepoint" and "recharging point" are often used interchangeably with the same meaning.

[SOURCE: prEN IEC 61851-1:2025, 3.1.1, modified, — Note 2 to entry added. EXAMPLE 1 modified. EXAMPLE 2 modified]

3.1.2.2
charging station
part of EV supply equipment permanently connected to an electrical installation

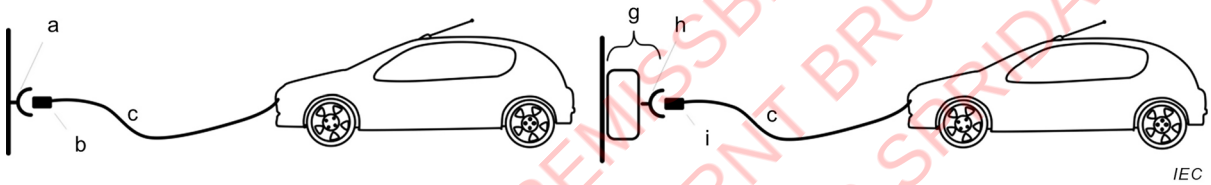
Note 1 to entry: For case C, the cable assembly is part of the charging station.

[SOURCE: prEN IEC 61851-1:2025, 3.1.5, modified — Prefix "EV" deleted from the term. Note 1 modified]

3.1.2.3
case A
connection of an EV to an electrical installation with a cable assembly permanently attached to the EV

Note 1 to entry: The cable assembly is part of the vehicle.

Note 2 to entry: See Figure 1.



Key
(a) socket-outlet
(b) plug
(c) cable assembly
(d) vehicle connector
(e) vehicle coupler
(f) vehicle inlet
(g) charging station
(h) EV socket-outlet
(i) EV plug

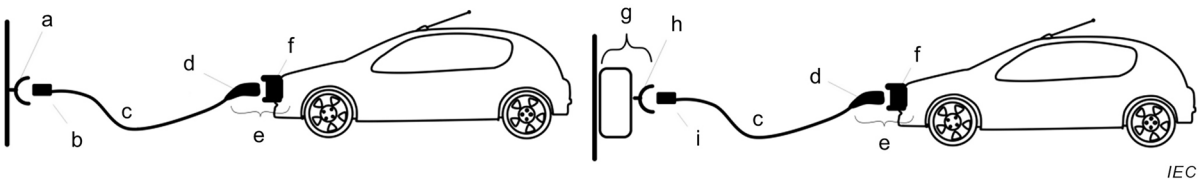
Figure 1 — Case A connection

[SOURCE: prEN IEC 61851-1:2025, 3.1.6, modified — Prefix "EV" deleted from key (g)]

3.1.2.4
case B
connection of an EV to an electrical installation with a cable assembly detachable at both ends

Note 1 to entry: The detachable cable assembly is not part of the vehicle or the charging station.

Note 2 to entry: See Figure 2.



Key

(a) socket-outlet
(b) plug
(c) cable assembly
(d) vehicle connector
(e) vehicle coupler
(f) vehicle inlet
(g) charging station
(h) EV socket-outlet
(i) EV plug

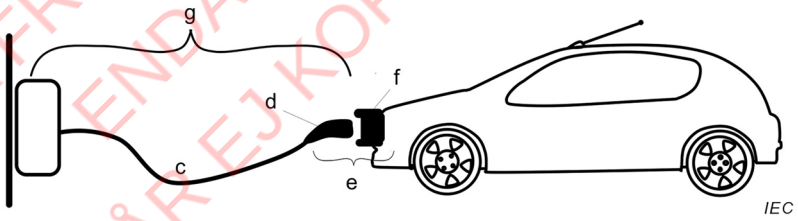
Figure 2 — Case B connection

[SOURCE: prEN IEC 61851-1:2025, 3.1.7, modified — Note 1 to entry modified]

3.1.2.5
case C
connection of an EV to an electrical installation utilizing a cable assembly permanently attached to the charging station

Note 1 to entry: The cable assembly is part of the charging station.

Note 2 to entry: See Figure 3.



Key

(a) socket-outlet
(b) plug
(c) cable assembly
(d) vehicle connector
(e) vehicle coupler
(f) vehicle inlet
(g) charging station
(h) EV socket-outlet
(i) EV plug

Figure 3 — Case C connection

[SOURCE: prEN IEC 61851-1:2025, 3.1.7, modified — Prefix “EV” deleted from definition. Note 1 to entry modified]

3.1.2.6
charging space
area that includes the EV supply equipment, the associated parking spot, and the built environment required to enable the charging of the EV

3.1.3 Modes and functions

3.1.3.1
charging
transfer of electric energy from the electrical installation to an EV

[SOURCE: prEN IEC 61851-1:2025, 3.3.6, modified — Terms “forward power transfer” and “FPT” deleted]

3.1.3.2
electric vehicle
EV
vehicle with one or more electric drive(s) for vehicle propulsion

Note 1 to entry: In this document, these terms refer only to those vehicles that can be charged from an external electrical source.

Note 2 to entry: Electric vehicle is called electrically propelled vehicle in ISO standards.

[SOURCE: prEN IEC 61851-1:2025, 3.3.19]

3.1.3.3
charging Mode 1
Mode 1
method for the connection of an EV to a standard socket-outlet of an AC electrical installation, utilizing a cable and plug, both of which are not fitted with any supplementary pilot or auxiliary contacts

[SOURCE: prEN IEC 61851-1:2025, 3.3.2]

3.1.3.4
charging Mode 2
Mode 2
method for the connection of an EV to a standard socket-outlet of an AC electrical installation utilizing an AC EV supply equipment with a cable and plug, with a control pilot function and system for personal protection against electric shock placed between the standard plug and the EV

[SOURCE: prEN IEC 61851-1:2025, 3.3.3]

3.1.3.5
charging Mode 3
Mode 3
method for the connection of an EV to an AC EV supply equipment permanently connected to an AC electrical installation, with a control pilot function that extends from the AC EV supply equipment to the EV

[SOURCE: prEN IEC 61851-1:2025, 3.3.4]

3.1.3.6
charging Mode 4
Mode 4
method for the connection of an EV to an AC or DC electrical installation utilizing a DC EV supply equipment, with a control pilot function that extends from the DC EV supply equipment to the EV

[SOURCE: prEN IEC 61851-1:2025, 3.3.5]

3.1.4 Cords, cables and connection means

3.1.4.1
socket-outlet
accessory having socket-contacts designed to engage with the contacts of a plug and having terminals for the connection of cables or cords

[SOURCE: prEN IEC 61851-1:2025, 3.4.1]

3.1.4.2
EV socket-outlet
specific socket-outlet intended to be used as part of EV supply equipment

Note 1 to entry: EV socket-outlets are defined in the IEC 62196 series.

Note 2 to entry: An EV socket-outlet is not intended to be installed as a standard socket-outlet in building installations and is not intended to connect to standard plugs.

[SOURCE: prEN IEC 61851-1:2025, 3.4.1, modified – reference to the IEC 62196 series was moved to a note to entry]

3.1.4.3
plug
accessory having contacts designed to engage with the contacts of a socket-outlet, also incorporating means for the electrical connection and mechanical retention of flexible cables or cords

[SOURCE: prEN IEC 61851-1:2025, 3.4.4]

3.1.4.4
EV plug
specific socket-outlet intended to be used as part of EV supply equipment

Note 1 to entry: EV plugs are defined in the IEC 62196 series.

Note 2 to entry: An EV plug is not intended to connect directly to standard socket-outlets provided in the building installation.

[SOURCE: prEN IEC 61851-1:2025, 3.4.5, modified – reference to the IEC 62196 series was moved to a note to entry]

3.1.4.5
vehicle connector
part of a vehicle coupler integral with, or intended to be attached to the cable assembly

[SOURCE: prEN IEC 61851-1:2025, 3.4.7]

3.1.4.6
vehicle inlet
part of a vehicle coupler incorporated in, or fixed to, the electric vehicle

[SOURCE: prEN IEC 61851-1:2025, 3.4.8]

3.1.4.7
vehicle coupler
means of enabling the connection at will of a flexible cable to an electric vehicle

Note 1 to entry: It consists of two parts: a vehicle connector and a vehicle inlet.

[SOURCE: prEN IEC 61851-1:2025, 3.4.9]

3.1.4.8
connecting point
terminating point in an electrical installation where energy is transferred between that electrical installation and one electric vehicle

EXAMPLE a socket-outlet, a vehicle connector or a supply device of a wireless power transfer device

Note 1 to entry: The connecting point can be part of the charging station.

Note 2 to entry: The connecting point for Mode 1, Mode 2 and Mode 4, connected by a cable and plug is the point where one electric vehicle is connected to the electrical installation, means the standard socket-outlet.

Note 3 to entry: The connecting point for Mode 3 and permanently connected Mode 4 is the EV socket-outlet (case A and case B) or the vehicle connector (case C).

Note 4 to entry: EV supply equipment can have one or more connecting points to supply energy to EVs.

[SOURCE: prEN IEC 61851-1:2025, 3.4.10, modified — Note 1 to entry modified]

3.1.4.9
cable assembly
assembly which consists of flexible cable or cord fitted with a standard plug or EV plug on the one end and/or a vehicle connector on the other end, and which is used to establish the connection between the EV and the electrical installation

Note 1 to entry: A cable assembly can be detachable (case B: EV plug on the one end, and vehicle connector on the other end), or be a part of the EV (case A Mode 1: standard plug on the one end, and open conductors on the other end), or be a part of the charging station (case C: open conductors on one end, and vehicle connector on the other end).

[SOURCE: prEN IEC 61851-1:2025, 3.4.11, modified — definition grammatically corrected; Note 1 to entry modified; Note 2 to entry, Note 3 to entry deleted]

3.1.4.10
cable management system
one or more devices that are intended to protect a cable assembly from mechanical damage and/or to facilitate its handling

EXAMPLE Cable suspension device.

[SOURCE: prEN IEC 61851-1:2025, 3.4.12]

3.2 Abbreviations

For the purposes of this document, the following abbreviations apply:

AC alternating current

CPO charging point operator

DC direct current

EN European standard

EV electric vehicle

EVSE electric vehicle supply equipment

ISA International Symbol of Access

UD Universal Design

4 General principles

4.1 General

Accessibility is essential for the widest range of users, including persons with disabilities, older persons and others with specific access requirements, to be able to live independently, to exercise their rights and fully participate in society and in all aspects of life.

To achieve an accessible EV charging infrastructure, accessibility needs should be considered starting from the first stages of the design process throughout its service life.

The principles of Universal Design shall guide EV charging infrastructure design. Universal Design supports the designer in creating solutions that are suitable for the widest range of users, by focusing on seven design principles that shall be considered in the project solution: simple and intuitive use, flexibility in use, size and space for approach and use, perceptible information, low physical effort, tolerance for error, and equitable use.

A System Approach shall also guide EV charging infrastructure design. A System Approach helps in understanding how the single components interact with each other and with the surrounding environment. Adopting a System Approach in the design process means defining the system and its purpose, scope, and boundaries, identifying system elements and their relationships, describing the system's behaviour and outcomes. Following this process means that system interventions and changes can be analysed and improved (e.g. system accessibility).

Universal Design, guided by a System Approach, benefits everyone, not just people with disabilities, making a system easier to use for all users.

4.2 "Design for All" strategy

An effective way of ensuring the integration of accessibility from the outset is to produce a "Design for All" strategy, that:

— identifies user accessibility and usability needs with regards to charging infrastructure;

— explains to all parties involved in the charging infrastructure design process (stakeholders), how the Universal Design approach will be implemented throughout each stage of the project;

— gives main guidelines to be followed in the development of the project.

4.3 User needs identification

Understanding the experiences, accessibility and usability requirements of the widest range of users with regards to charging infrastructure is the starting point of the development of the design process.

This document considers the main user accessibility needs that apply for charging users, with special reference to those with specific mobility needs, in setting out requirements and recommendations to ensure that charging infrastructure is accessible.

EN 17210 and CEN ISO/TR 22411:2021 provide an expansion on the various human abilities, characteristics and design considerations taken into account in this document. It also provides ergonomic data that can be used in developing specific requirements and recommendations.

NOTE National or local government regulations might need to be considered by charging infrastructure designers during the design process.

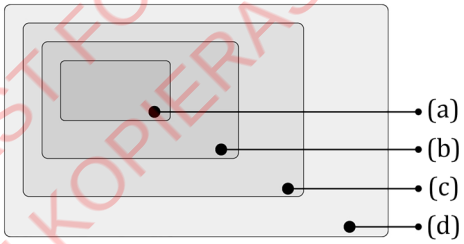
4.4 Concentric model for design

A possible model for approaching the design of an accessible charging infrastructure is to use a "concentric" model, initially focusing on the physical design of the EVSE, and then extending outwards to the EVSE placement, the charging space, and the entire charging infrastructure. Figure 4 illustrates the "concentric" model for this document.

The concentric model approach can assist in understanding how to set the requirements for accessible charging infrastructure in a sequential and possibly logical manner.

The same sequence has been used to organize the content of this document.

In this context concentric model may also assist with understanding the application of the requirements of this document.



Key

(a) physical design of the EVSE
(b) EVSE placement
(c) charging space
(d) charging infrastructure

NOTE Adapted from "Concentric model for requirements" within BSI PAS 1899:2022.

Figure 4 — "Concentric" model for accessible EV charging infrastructure design

5 Key stakeholders

Key stakeholders in a charging infrastructure design and installation process are:

— Designers: Those responsible for the design of an accessible charging infrastructure.

— Installers: Those responsible for the proper, safe, and compliant installation of an accessible charging infrastructure, ensuring that the equipment is accessible and functional for all users, while also providing necessary maintenance and support.

— Operators: Those responsible for managing and maintaining the accessible charging infrastructure, ensuring its reliability and accessibility, optimizing user experience, and providing customer support.

— Procurement officers and Buyers: Those responsible for identifying EVSE and services to ensure these meet all necessary standards and regulations.

— Manufacturers: Those responsible for designing and producing reliable, efficient, and user-friendly EVSE that meets regulatory standards.

— Regulators: Those responsible for establishing and enforcing policies and standards that promote the development, installation, operation and accessibility of reliable and safe EV charging infrastructure.

It is crucial that all key stakeholders ensure that charging infrastructures are designed, procured, installed and maintained in accordance with the requirements set in this EN.

Table 1 summarizes the relevant aspects of this document for each key stakeholder involved in the design, procurement, installation, operation and regulation of accessible electric vehicle charging infrastructure.

Table 1 — Relevant aspects for each key stakeholder

Stakeholder	Key responsibilities	Relevant (sub)clauses
Designers	Conceptual and detailed design of EVSE, charging bays, interfaces, and surrounding built environment.	Clauses 4, 6, 7, 8
Installers	Physical installation of EVSE, civil works, positioning, signage, and verification on site.	Clauses 6, 7, 8.2
Operators (CPOs)	Operation, maintenance, user support, and digital information provision.	Clauses 6.5, 7.2.7, 8.1, 8.2
Procurement Officers / Buyers	Specification, tendering and acquisition of EVSE, services, and contractors.	Clauses 4, 6, 7, 8
Manufacturers	Design and production of EVSE hardware, interfaces, cable assemblies, and connectors.	Clauses 6, 8.1
Regulators	Establishing, aligning and enforcing accessibility requirements and policies.	Clauses 1–8

6 Physical design of EVSE

6.1 Scope and purpose

This clause sets out requirements and recommendations for the physical design, and operability of EVSE. The intent is to ensure that accessible EVSE are easy to use and intuitive for the broadest range of users, including those with disabilities, and that they meet the principles of UD and ergonomic best practice.

6.2 Location and identification

6.2.1 General

EVSE shall be located and configured to be easily identifiable, accessible at all times of day, and provide physical and visual accessibility for all users foreseen in the scope.

6.2.2 Contrasting colours

a) Text and images of text displayed on screens, as well as text on Operable parts with integrated illumination shall have a minimum contrast ratio of 4.5:1 (Level AA), as defined in EN 301549:2021, 11.1.4., under all light conditions, including direct sunlight (e.g. exposed to a light source of 100 000 lm).

A minimum contrast ratio of 7:1 (Level AAA), as defined in EN 301549:2021, 9.5 is recommended.

b) The EVSE shall avoid the use of colours on screens as well as on operable parts with integrated illumination as the only visual means to convey information, to indicate an action, or to distinguish a visual element (e.g. by red/green pairings to display an operational status). This ensures accessibility and clarity for individuals with different types of colour vision Red/green pairings.

6.2.3 Visibility with natural lighting

a) EVSE shall include anti-glare measures, such as coatings or physical shading.

b) Screens intended for interactive use shall be positioned with tilt in the range of +20° to −20° against the vertical axis, to reduce reflections (see Figure 5), while considering the eye level of the diversity of users. These include persons in a seated position, such as wheelchair users, standing adults and persons of small stature.

NOTE 1 According to EN 16584-2:2025, eye points located at 1840 mm and 1110 mm reflect the eye heights of a 95th percentile adult male standing up and a 5th percentile woman seating in a wheelchair.

NOTE 2 EN 301549:2021, 8.3.5 requires that, where one or more display screens are available, at least one of each type of display screen is positioned such that the information on the screen is legible from a point located 1015 mm (40 inches) above the centre of the floor of the operating area).

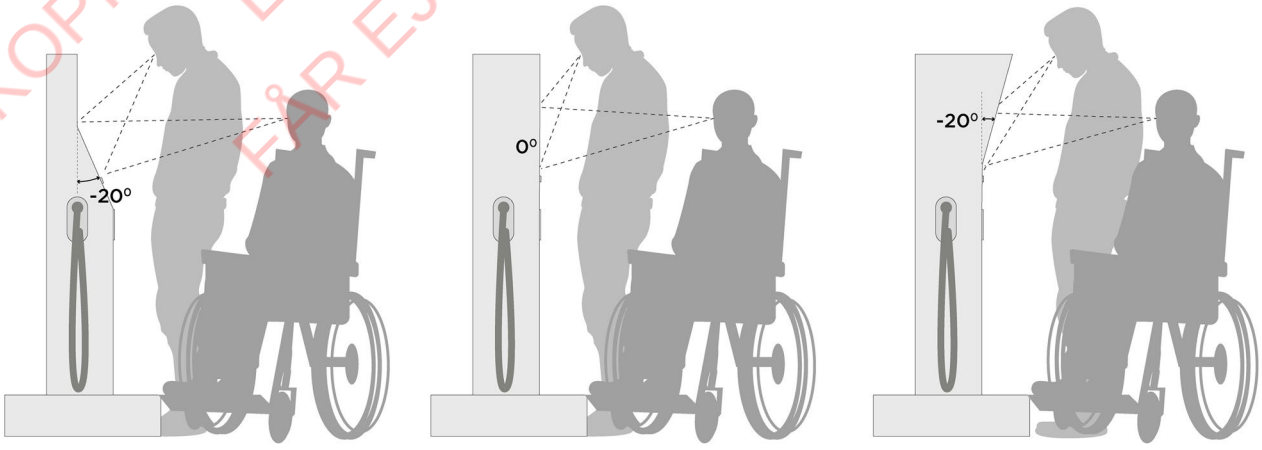


Figure 5 — Screens range of +20° to −20° against the vertical axis

6.2.4 Visibility with night lighting

a) Where the EVSE is equipped with a display, the EVSE shall automatically adjust the brightness of the display according to present lighting conditions to comply with 6.2.2.

b) Where the lighting of the site doesn't adequately illuminate the area close to the EVSE, see 7.2.6, the EVSE should illuminate the ground up to 1 m (top view) from the operable parts with minimum average illuminance of 50 lux.

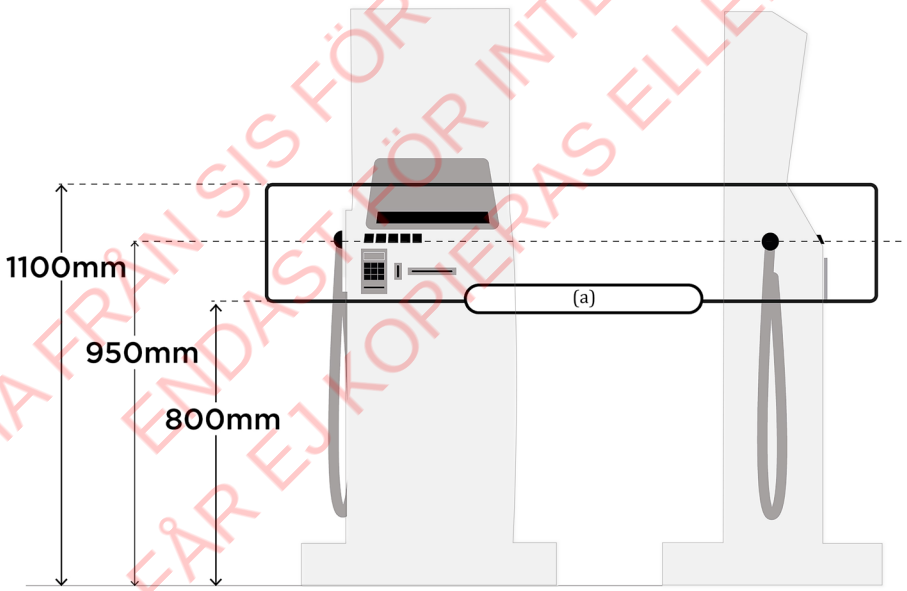
6.3 Heights of operable elements

a) The height of operable parts shall be measured against the ground level.

b) The active portion of the EVSE's operable parts shall be located within a height window between 800 mm and 1100 mm, measured from ground level (see Figure 6), unless another physical accessible method which allows to activate the operable parts is available.

c) The active portion of the vehicle connector and sockets outlet shall have the centre line installed at a height between 800 mm and 950 mm (see Figure 6).

d) The active portion of the payment terminal shall have the centre line installed at a height between 800 mm and 950 mm (see Figure 6).



Key

(a) operative areas
operable parts
active area of operative parts

Figure 6 — Heights of operable elements

e) Cable assemblies (tethered or untethered) should be managed appropriately to ensure they do not obstruct other road users, including footpaths and cycling lanes.

6.4 Handling

6.4.1 Modes of operation

a) Each function required for EVSE operation shall be accessible via at least two independent methods (e.g. physical button/touch and digital control).

b) The EVSE shall allow the user to manoeuvre the operable parts without grasping, pinching, wrist-twisting.

6.4.2 Cable assembly design and management

a) All cable assemblies shall be flexible and paired with retraction or management systems to prevent tripping and minimize user effort.

b) The length of any tethered cable assembly shall not exceed 7,5 m.

c) The force required to insertion and withdrawal vehicle connector shall not exceed 100 N. according to EN IEC 62196-1:2022.

d) The force required to lift the vehicle connector shall not exceed:

— 22 N for mode 3 EVSE, equipped with type 2 (as per IEC 62196-2) vehicle connector;

— 40 N for mode 4 EVSE equipped with vehicle connector rated up to 150 A;

— 100 N for mode 4 EVSE equipped with vehicle connector rated above 150 A.

e) Charging handles shall be ergonomic, non-slip, and suitable for one-handed use.

f) Manufacturers should achieve a threshold of 22 N where possible.

6.5 User interaction

6.5.1 Cognitive Accessibility

a) EVSE displayed graphic elements shall use internationally recognizes pictograms and icons, as per ISO 7000, where available.

b) Where text is provided, it shall appear in concise, plain language, easy to understand. It should also be provided in English and, when relevant, in the two of the most widely spoken local languages.

c) The EVSE shall provide status and error feedback using complementary visual or tactile or audio cues. It is recommended to provide information at least in two senses to provide better cognitive access.

6.5.2 Error Management

a) The EVSE interface shall clearly indicate the current stage of the charging or payment process and provide the user with the opportunity to correct input or restart the process at any time.

7 Site design

7.1 EVSE placement

7.1.1 General

This subclause deals with placement and installation position of the EVSE. It refers to the area that includes the EVSE and the associated parking spot.

7.1.2 EVSE location

a) The EVSE shall be located in an easily accessible position, with sufficient space to allow a vehicle to approach, park, and depart with no more than one reverse movement.

b) Accessible EVSEs shall be identified with vertical and pavement signage with the International Symbol of Access (ISA) and with PI TF 044 from ISO 7001:2003 at a suitable height, see 6.3.1, and free of obstacles, so that they can be easily seen from a distance when approaching in a vehicle.

NOTE This document does not cover parking policies.

c) When the use of the parking space is not exclusive for people with reduced mobility, this shall be indicated, complementing the ISA with information stating that the use is not exclusive for people with reduced mobility.

d) The EVSE shall be positioned on the ground level to allow easy and direct access. If this is not possible, the horizontal distance between the EVSE and the edge of the step shall be less or equal to 255 mm, to ensure that all elements are accessible from ground level (see Figure 7).

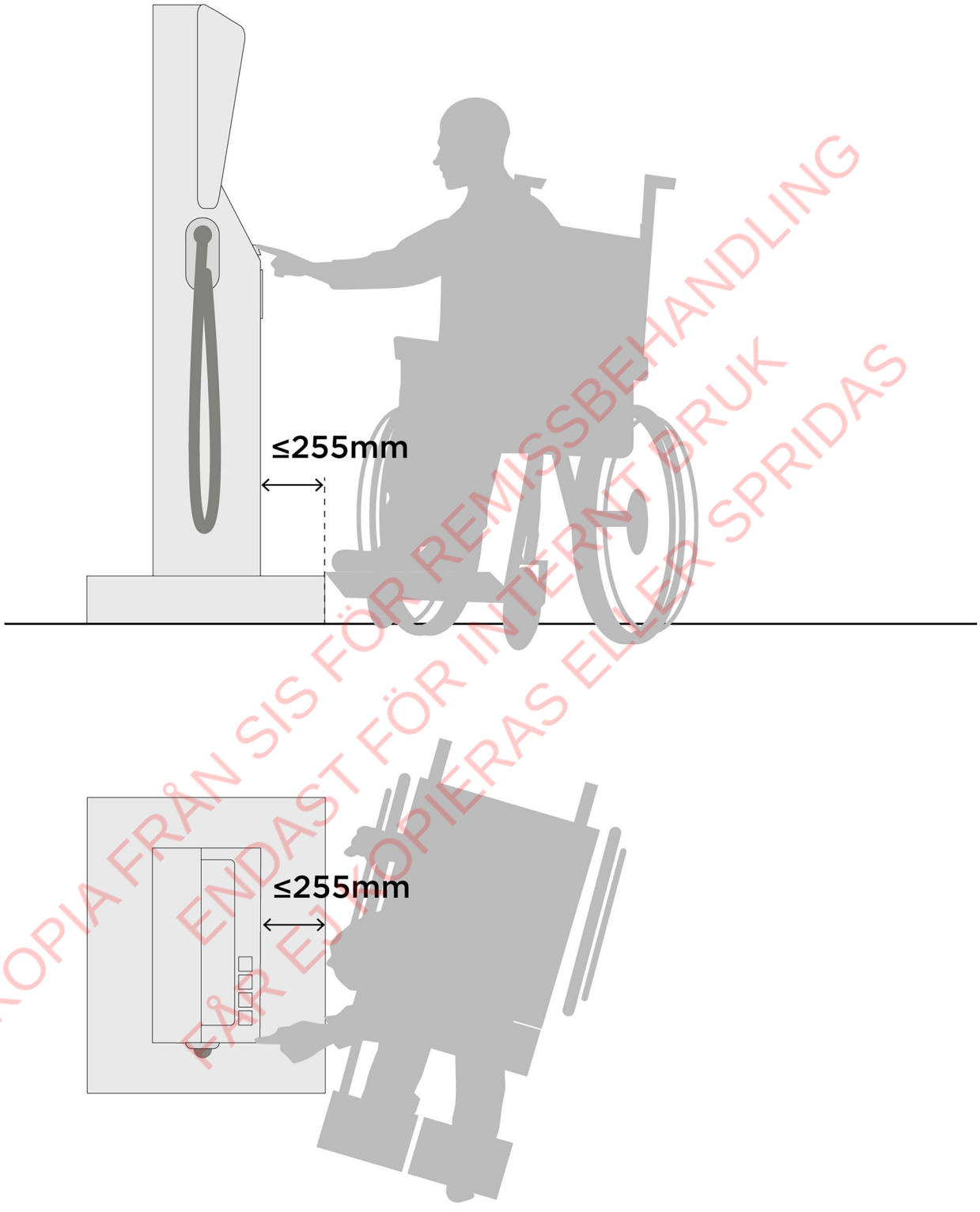


Figure 7 — Horizontal distance between the EVSE and the edge of the step

e) Where required, the charging space should incorporate a designated queuing area, complete with clearly visible signage, to ensure safety while awaiting the charging process.

f) If there is a EVSE that serves multiple parking spots, it should be located in the middle between both spots, outside of the access area.

7.1.3 Spatial requirements and clearances

The charging space are designed to accommodate all drivers to get in and out of their vehicles, move around the vehicle safely, access the EVSE, and park comfortably. For this purpose:

a) to ensure universal access, the parking spot shall include a 1500 mm wide obstacle free zone on all sides: right, left, front, and rear (see Figure 8 and Figure 9).

b) The EVSE shall be outside these obstacle free zones (see Figure 8 and Figure 9).

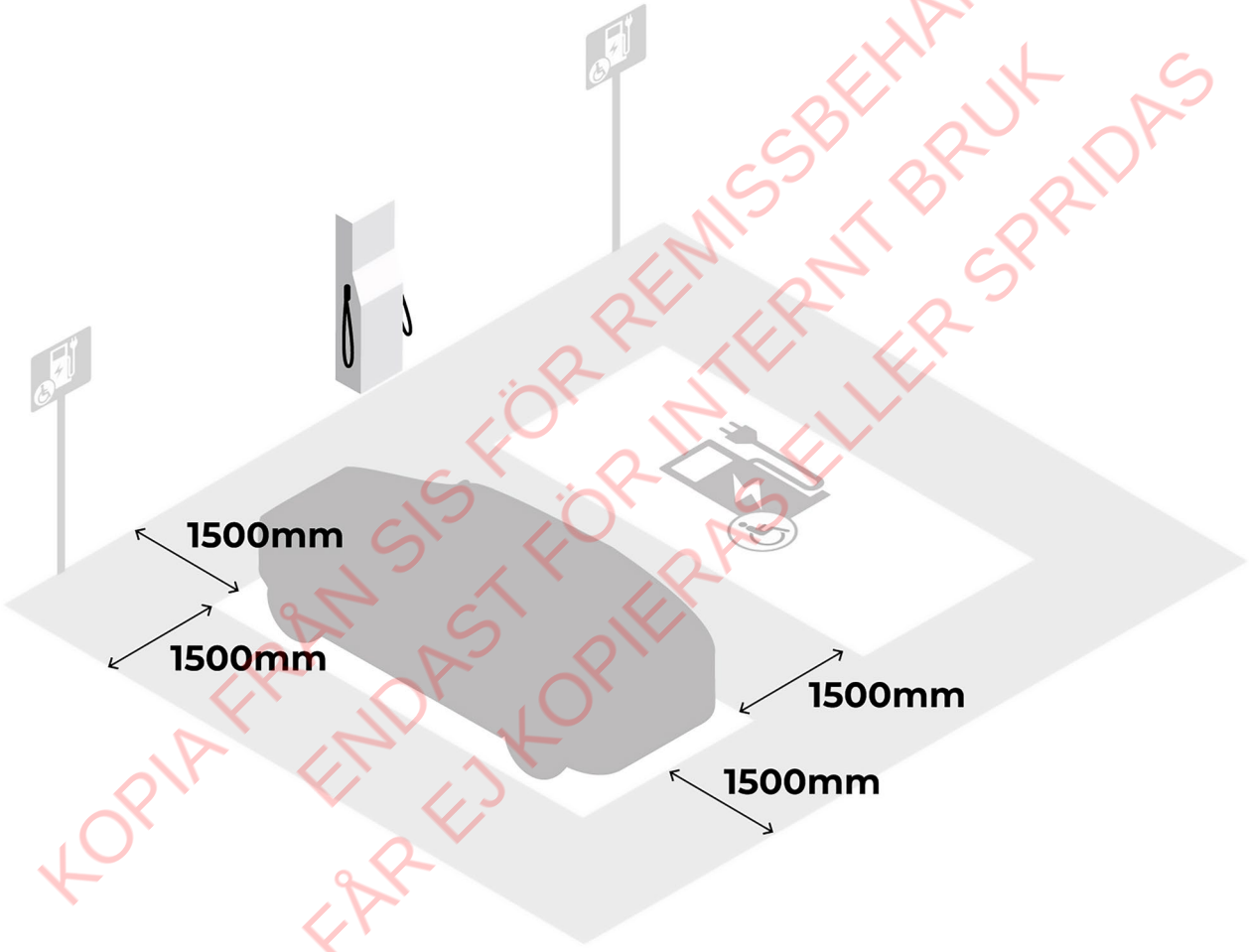


Figure 8 — Perpendicular parking spot

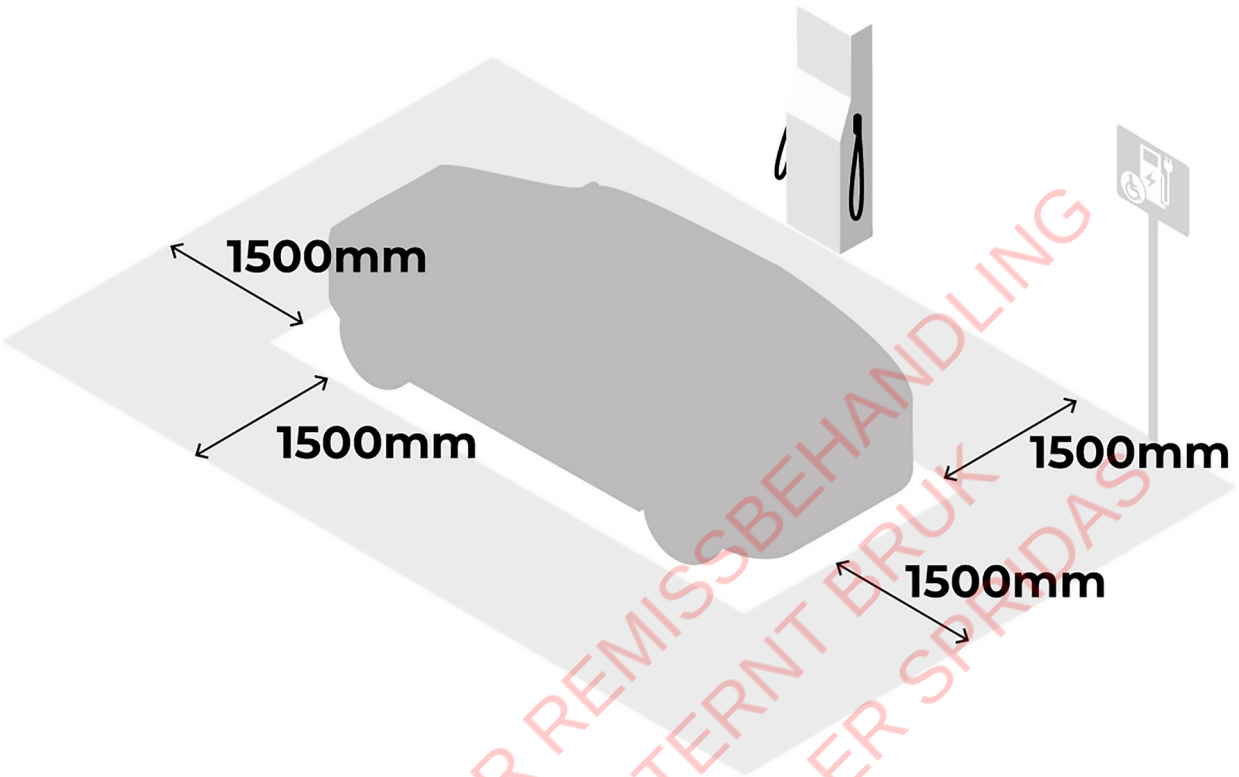


Figure 9 — Parallel parking spot

c) The placement and orientation of the EVSE shall ensure that all components remain accessible and within reach for the driver.

d) The obstacle free zones should be increased to 1800 mm where possible to facilitate manoeuvring.

7.1.4 Ground surface specifications

a) The ground surface type below and surrounding the EVSE shall be smooth (but not slippery in normal or wet conditions) and stable (without grass, mud, gravel or other potholes or surface deformities).

b) The ground surface below and surrounding the EVSE shall be made of any material suitable for and with slip resistance appropriate for footway use.

c) The ground surface below and surrounding the EVSE shall be flat, with max. 2 % in every side, but including suitable drainage to prevent significant accumulation of water in the vicinity of the charge station.

7.2 Built environment around the EVSE

7.2.1 General

This subclause deals with the built environment around the EVSE. It refers to the surrounding area external to the charging space.

7.2.2 Pedestrian routes around EVSEs

a) The built environment surrounding accessible EVSEs shall take into account accessibility guidance for the built environment within EN 17210.

b) EVSE shall be installed such that the impact of it in combination with other existing street furniture does not further compromise the accessibility of the surrounding environment, in particular for wheelchair users, users of other mobility aids and visually impaired people.

c) Where supporting electrical infrastructure for EVSE is installed, the installation shall be such that it does not reduce the accessibility of the surrounding built environment in combination with other existing street furniture.

d) Obstacles around the EVSE shall be removed.

e) To assist visually impaired people, the siting of EVSEs, and any impact protection measures (e.g. wheel stops, bollards), shall be easily detected with the sweep of a cane.

f) To assist visually impaired people, the siting of EVSEs, and any associated impact protection measures shall feature a high visual contrast with the background, to reduce the risk of collision.

g) Impact protection measures shall be positioned to facilitate safe and convenient use of the EVSE and avoid being an obstacle for other road users.

h) To ensure the safety and protection of the EVSE, impact protection measures should be installed but without create an obstacle for access and operation by users.

i) Impact protection measures should avoid reflecting light.

7.2.3 Access to Amenities

a) Pedestrian crossings, where needed, shall be placed near the EVSEs.

b) If the EVSE is located in a place where there are public toilets, there shall be at least one accessible toilet in accordance with the requirements of EN 17210.

c) This accessible public toilet shall be connected to the EVSE by means of an accessible pedestrian route.

d) EVSEs should be installed as close as possible to any available amenities in the immediate vicinity (e.g. shops, toilets, cafés).

e) Universally designed public seating in the vicinity of the EVSE should be provided where this does not cause obstruction to individuals.

7.2.4 Weather protection

Weather protection should cover the EVSE up to the vehicle's inlet, to ensure that adverse weather conditions have minimal impact on the user experience.

EXAMPLE 1 to enable charging by a person who cannot hold an umbrella while charging

EXAMPLE 2 to keep the approach and manoeuvring space around the vehicle free of snow

7.2.5 Security considerations

a) EVSEs should be in the most highly trafficked sections of a car park to facilitate passive surveillance and a feeling of security for users.

b) Sightlines to other users and nearby amenities should be considered.

c) EVSEs should be placed near associated facilities when relevant.

7.2.6 Lighting

a) The charging space should have an adequate and consistent lighting throughout different parts of the day, including nighttime hours when service is provided with the requirements of EN 17210.

b) Lighting should be provisioned to align with environmental constraints, (e.g. minimizing light pollution).

7.2.7 Site maintenance

Accessibility of charging space shall be maintained.

8 Information and communications

8.1 Digital information and communications

8.1.1 General

This subclause deals with the digital information and communications a user has access to before, during, and after a charging process.

8.1.2 Pre-charging information provision

a) CPO shall make comprehensive, real-time information about EVSEs available through digital channels (e.g. websites, apps, open data).

b) This information shall include operational status and accessibility features defined in the present document.

8.1.3 Digital user interface on EVSEs)

a) All digital user interfaces on EVSEs shall comply with EN 301549.

b) Text and icons shall be clear and contrasting as defined in 6.2.2.

c) Operable digital controls shall be discernible by touch.

d) Touchscreens without tactile feedback shall be supplemented by an alternative input mode.

e) Visual feedback shall be complemented by auditory or tactile cues, ensuring that no single sensory mode serves as the sole indicator.

f) Remote operation via mobile applications should be supported.

g) Applications, where provided, shall be accessible, according to EN 301549.

8.1.4 Language and clarity

a) Instructions, messages and pictograms shall be presented in concise, plain language, consistent with the cognitive accessibility requirements in 6.5.1.

8.1.5 Mobile applications and online platforms

a) Users shall be able to initiate and pay for charging without the requirement to use a proprietary application.

b) Applications, where provided, should support account-free use, multiple languages, and push notifications.

8.1.6 Charging session feedback

a) EVSEs shall provide clear, multimodal feedback on session status, including start confirmation, charging progress, completion, and error/fault notifications.

b) Indicator lights shall be visible in all conditions and shall be accompanied by text or audio cues.

c) Colour codes should be used consistently across platforms as per prEN IEC 61851-1:2025. Green = available, blue = charging and red = fault.

8.1.7 User support and emergency communication

Alternative communication channels (e.g. SMS, online chat) should be available for users with hearing or speech impairments.

8.1.8 Interoperability and open access

a) EVSEs shall implement relevant adopted standards and payment methods to ensure universal access (e.g. chip and pin, contactless, Plug and Charge EN ISO 15118 series).

b) The digital experience should be consistent across networks and locations.

8.1.9 Network connectivity

a) CPO should provide reliable communication connectivity at each charging site to support digital information, payment and authentication functions.

8.1.10 Payment accessibility

a) Payment interfaces shall comply with EN 301549 and be operable without fine motor control.

b) Payment terminals, where present, shall be installed within the accessible reach range specified in 6.3.1(d) and shall be operable with one hand.

8.1.11 Data privacy and security

8.1.12 User feedback and reporting

a) CPOs shall provide an accessible channel for users to report technical faults or accessibility barriers.

b) Reported issues should be acknowledged, and corrective action should be taken in a timely manner.

8.1.13 Consistency across platforms

a) Information provided digitally (e.g. websites, apps, in-vehicle navigation, third-party maps) shall be consistent with physical signage and EVSE information.

b) Terminology, identifiers (e.g. connecting point numbers), and visual symbols shall be the same across all communication platforms.

8.2 Physical information and communications

8.2.1 General

This subclause deals with the physical information and communications a user has access to before, during, and after a charging process.

8.2.2 Directional and wayfinding signage

a) EVSEs shall be indicated by clear directional signage from nearby roads, parking entrances, and within large facilities.

b) Recognized EV charging symbols shall be used, supplemented by the International Symbol of Access (ISA) in accordance with ISO 7000, using standardized pictogram sets.

c) Signs shall be visible both day and night, and positioned at decision points for easy navigation.

8.2.3 On-site identification and operational information

a) Where there is more than one connecting point, each of them shall be uniquely identified with a visible code consistent with digital listings.

NOTE 1 Clear identification assists in directing users to accessible EVSEs where applicable.

NOTE 2 If not all EVSEs are designed to be accessible this allows for a management assigning an accessible EVSE to charging users.

b) An information panel shall display: operating instructions, connector types, emergency stop guidance, and emergency numbers.

8.2.4 Signage design and accessibility

a) All signage shall use contrasting, non-glare finishes and large sans-serif fonts.

b) Colour shall not be used as the sole visual means of conveying information.

c) Signage intended for tactile interaction shall be mounted within the accessible reach range specified in 6.3.1(d). Other informational signage is not subject to reach-range requirements.

d) Tactile or braille information should be provided for users with low vision and only to manually operated EVSEs.

8.2.5 Parking spot signs and restrictions

a) Each parking spot shall display needed signage indicating its purpose and other relevant information (e.g. “EV charging only”, restrictions, maximum duration).

b) Accessible parking spots shall be marked with the International Symbol of Access (ISA) in accordance with ISO 7000, consistent with the signage requirements in 7.1.2(b).

8.2.6 Ground markings

a) Parking spots shall be delineated with painted boundaries and a recognized EV symbol.

b) Access aisles and manoeuvring areas shall be marked with high-contrast hatching and kept clear.

c) Slip-resistant materials shall be used for markings.

8.2.7 Lighting and visibility

a) EVSEs, signage, and surrounding areas shall be illuminated to enable safe and independent use at night.

b) Lighting levels shall meet the applicable accessibility requirements of EN 17210 and ISO 21542.

c) Lighting requirements shall be coordinated with 7.2.6 for associated pedestrian routes.

d) Lighting shall avoid glare and shadows that obscure information or hazards.

8.2.8 Physical wayfinding cues and hazard marking

a) Tactile walking surface indicators shall be installed only on pedestrian routes connecting sidewalks or public pedestrian paths to EVSEs, excluding vehicle-only areas.

b) Hazards such as bollards or curbs shall be marked with high-contrast colours or reflective patterns.

8.2.9 Supplementary signage and consistency

a) Terminology, labelling, and symbols shall be consistent between physical signage and digital platforms.

b) Supplementary notice boards or placards should provide information about nearby amenities, instructions for first-time users.

8.2.10 Physical payment information

a) Physical signage at the EVSE shall indicate accepted payment methods.

b) Payment terminals shall be mounted within the accessible reach range specified in 6.3.1(d) and operable with one hand.

c) Labels and symbols on the payment terminal shall be discernible by touch.

8.2.11 Environmental and contextual information

a) Where applicable, physical signage should indicate the location of nearby amenities useful during charging (e.g. accessible toilets, seating, shelter, food services).

b) Signage should highlight features relevant for users with disabilities, such as step-free routes to amenities or the presence of assistance points.

8.2.12 Temporary conditions and maintenance

a) When a EVSE or its associated parking spot is temporarily unavailable, this status shall be clearly indicated on-site through visible physical signage or markings placed so that they are detectable when approaching the EVSE.

NOTE Examples of on-site indication include a sign on the unit, a temporary cover, barrier or a ground-level marking clearly stating that the station or bay cannot be used.

b) Information about the expected duration of downtime should be provided whenever possible.

Bibliography

EN ISO 9241-112:2025, *Ergonomics of human-system interaction - Part 112: Principles for the presentation of information (ISO 9241-112:2025)*

EN 12464-1, *Light and lighting - Lighting of work places - Part 1: Indoor work places*

EN 12464-2, *Light and lighting - Lighting of work places - Part 2: Outdoor work places*

EN ISO 15118 (all parts), *Road vehicles — Vehicle to grid communication interface (ISO 15118)*

CEN/TR 17621:2021, *Accessibility and usability of the built environment - Technical performance criteria and specifications*

CEN ISO/TR 22411:2021, *Ergonomics data for use in the application of ISO/IEC Guide 71:2014 (ISO/TR 22411:2021)*

prEN IEC 61851-1:2025, *Conductive power and energy transfer systems for electric vehicles - Part 1: General system and specific mode 3 EV charging station requirements*

British Standards Institution (BSI). PAS 1899:2022, *Electric vehicles — Accessible charging — Specification*, October 2022. https://www.bsigroup.com/

Deutsches Institut für Normung. DIN SPEC 91504:2024, *Barrierefreie Ladeinfrastruktur für Elektrofahrzeuge*, November 2024. https://www.dinmedia.de/

Swedish Institute for Standards — SIS, SIS/TS 520000:2025, *Accessible recharging spaces for electric road vehicles — Requirements and recommendations*

European Commission. Directorate-General for Mobility and Transport, *Guidelines on accessibility of electric recharging infrastructure in the EU*, Publications Office of the European Union, 2025, https://data.europa.eu/doi/10.2832/5192398

Architektur H. Leaflet 150 — *Wheelchair-accessible charging stations,* June 2021, available in Englisch, French, Italian and German https://architettura-senzaostacoli.ch/

E-Mobility Europe (formerly AVERE), *A Vision for an Accessible European Charging Infrastructure,* February 2024. https://www.emobilityeurope.org/

Ministerio de Industria y Turismo, *Guía técnica de aplicación de la ITC-BT 52: Infraestructura para la recarga de vehículos eléctricos,* September 2024. https://industria.gob.es/

Ladeinfrastruktur N.L. Leitfaden Barrierefreie Ladeinfrastruktur, April 2023. https://nationale-leitstelle.de/

SiSL Mellersta Norrland. Accessible Charging Stations: Practical advice on designing inclusive charging stations, n.a. https://biofuelregion.se/

U.S. Access Board. Design Recommendations for Accessible Electric Vehicle Charging Stations, July 2023. https://www.access-board.gov/

Zero E.V.I. (ZEVI), *Universal Design Guidelines for Electric Vehicle Charging Infrastructure,* May 2024. https://www.zevi.ie/