

Identification of vehicles and infrastructures
compatibility - Graphical expression for consumer
information on EV power supply

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 17186:2019 sisaldab Euroopa standardi EN 17186:2019 ingliskeelset teksti.	This Estonian standard EVS-EN 17186:2019 consists of the English text of the European standard EN 17186:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.03.2019.	Date of Availability of the European standard is 20.03.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 43.120

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

Identification of vehicles and infrastructures compatibility
- Graphical expression for consumer information on EV
power supply

Identification de la compatibilité des véhicules -
Expression graphique pour l'information des
consommateurs sur l'alimentation pour véhicules
électriques

Identifikation von Fahrzeug- und
Infrastrukturkompatibilität - Grafische Darstellung von
Kundeninformationen für die Energieversorgung von
Elektrofahrzeugen

This European Standard was corrected and reissued by the CEN-CENELEC Management Centre on 2019-04-03.

This European Standard was approved by CEN on 2 December 2018.

CEN 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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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

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



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Contents	Page
European foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Assembly Principle	10
5 General identifier requirements	10
5.1 Shape of identifier.....	10
5.2 Colour scheme for electrical interfaces	11
5.3 Size.....	11
5.4 Compatibility categorization	11
5.5 Durability	11
6 Label description	12
6.1 General.....	12
6.2 Basic label with mandatory identifier content.....	12
6.2.1 Content of the label.....	12
6.2.2 Design of the label.....	12
6.3 Full label with mandatory identifier and possibly optional information.....	12
6.3.1 Content of the label.....	13
6.3.2 Design of the label.....	13
7 Placement of the label	14
7.1 General.....	14
7.2 Label location on EV charging stations, electric vehicles and detachable cable assembly.....	14
7.2.1 EV charging station.....	14
7.2.2 Electric vehicle	15
7.2.3 Detachable cable assembly.....	15
7.3 Vehicle manuals and dealerships.....	15
Annex A (normative) Colour scheme of identifiers	16
Annex B (normative) Table of labels	17
B.1 AC Charging	17
B.2 DC Charging	18
B.3 Others	19
Annex C (informative) Examples of labels	20
Bibliography	21

European foreword

This document (EN 17186:2019) has been prepared by Technical Committee CEN/TC 301 “Road vehicles”, the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by September 2019, and conflicting national standards shall be withdrawn at the latest by September 2019.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

In accordance with Article 7 of the Directive 2014/94/EU, the EU Member States had to bring into force by 18 November 2016 the laws, regulations and administrative provisions necessary in order to ensure that user information on the compatibility of their vehicles with the fuels (covered by EN 16942:2016, published by CEN/TC 441) or electricity recharging points is provided in motor vehicle manuals, at refueling and recharging points, as well as on motor vehicles and in motor vehicle dealerships in their territory.

As specified in the Article, this information has to be based on labelling provisions of ESO standards setting technical specifications of fuels. For electric vehicles, the provisions should include a graphical expression, with a colour coding scheme. However, none of the labelling provisions of the existing European Standards for quality includes a graphical expression that meets the requirements of the Directive. This graphical expression should be in line with the requirements detailed in Article 7 of Directive 2014/94/EU:

- to provide relevant, consistent and clear information as regards to those EVs which can be charged at compatible EV charging stations placed on the market,
- to be simple and easy to understand,
- to be able to be placed in a clearly visible manner during normal use.

This European Standard provides harmonized compatibility labelling across Europe and thus effectively supports the implementation of Article 7 of Directive 2014/94/EU by EU Member States. The European Standard complements the information needs of an electric vehicle user arriving at a connecting point with respect to the connection of his electric vehicle. Indeed, the consumer needs to be able to easily distinguish the different types of proposed electrical interfaces, in order to identify the correct interface of the connecting point compatible with his electric vehicle, and also to give optional information like power levels.

The development of this standard focused on vehicles placed on the market for the first time, which does not preclude the application of this standard also to vehicles already in circulation.

This document is not intended to replace any existing quality, safety or performance recommendations, marketing or branding communication currently featured in similar locations at EV charging stations, cable assemblies, EVs or vehicle manuals. It complements European Standards for setting technical specifications of electrical energy and also for installation and commissioning of EV charging stations.

The implementation of this European Standard on the components of the EV charging system ensures the consumer a guarantee of mechanical, electrical and electronic compatibility for the two interfaces:

- connection to the EV,
- connection to the EV charging station.

This European Standard makes it possible to take a decisive step forward in the interoperability of EV charging systems. Nevertheless, the full interoperability will rely on a rigorous application of all relevant standards for the system, the components and the communication of the charging system.

1 Scope

This document lays down harmonized identifiers for power supply for electric road vehicles. The requirements in this standard are to complement the informational needs of users regarding the compatibility between the EV charging stations, the cable assemblies and the vehicles that are placed on the market. The identifier is intended to be visualized at EV charging stations, on vehicles, on cable assemblies, in EV dealerships and in consumer manuals as described in this document.

Power supply for EVs uses vehicle inlets, socket-outlets, connectors and plugs, as mentioned in EN IEC 61851-1:— and EN 62196-1:2014.

This document defines for each harmonized identifier the size, shape, colour and other information of relevance for compatibility recognition, as well as the label location.

The station side identifier gives unmistakable compatibility information with either the plug of the cable assembly in case of a socket outlet configuration, or the vehicle inlet in case of attached cable configuration.

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 16942, *Fuels — Identification of vehicle compatibility — Graphical expression for consumer information*

EN IEC 61851-1:—, *Electric vehicle conductive charging system — Part 1: General requirements (IEC 61851-1:2017)*¹

EN 62196-1:2014, *Plugs, socket-outlets, vehicle connectors and vehicle inlets — Conductive charging of electric vehicles — Part 1: General requirements (IEC 62196-1:2014)*

ISO 16750-4, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 4: Climatic loads*

ISO 16750-5, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 5: Chemical loads*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16942 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

cable assembly

piece of equipment that is used to establish the connection between the electric vehicle and the electric vehicle supply equipment

¹ Under preparation. Stage at time of publication: FprEN 61851-1:2016.