

SLOVENSKI STANDARD

SIST EN ISO 15118-8:2020

01-december-2020

Nadomešča:

SIST EN ISO 15118-8:2019

Cestna vozila - Komunikacijski vmesnik med vozilom in omrežjem - 8. del: Zahteve za fizične in podatkovne povezovalne plasti za brezžično komunikacijo (ISO 15118-8:2020)

Road vehicles - Vehicle to grid communication interface - Part 8: Physical layer and data link layer requirements for wireless communication (ISO 15118-8:2020)

Straßenfahrzeuge - Kommunikationsschnittstelle zwischen Fahrzeug und Ladestation - Teil 8: Anforderungen an physikalische und Datenverarbeitungsschnittstelle für die drahtlose Kommunikation (ISO 15118-8:2020)

Véhicules routiers - Interface de communication entre véhicule et réseau électrique - Partie 8: Exigences relatives à la couche physique et à la couche de liaison entre les données pour la communication sans fil (ISO 15118-8:2020)

Ta slovenski standard je istoveten z: EN ISO 15118-8:2020

ICS:

| | | |
|-----------|---|--|
| 35.100.05 | Večslojne uporabniške rešitve | Multilayer applications |
| 43.040.15 | Avtomobilska informatika. Vgrajeni računalniški sistemi | Car informatics. On board computer systems |

SIST EN ISO 15118-8:2020

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 15118-8

September 2020

ICS 43.120

Supersedes EN ISO 15118-8:2019

English Version

Road vehicles - Vehicle to grid communication interface -
Part 8: Physical layer and data link layer requirements for
wireless communication (ISO 15118-8:2020)

Véhicules routiers - Interface de communication entre
véhicule et réseau électrique - Partie 8: Exigences
relatives à la couche physique et à la couche de liaison
entre les données pour la communication sans fil (ISO
15118-8:2020)

Straßenfahrzeuge - Kommunikationsschnittstelle
zwischen Fahrzeug und Ladestation - Teil 8:
Anforderungen an physikalische und
Datenverbindungsschnittstelle für die drahtlose
Kommunikation (ISO 15118-8:2020)

This European Standard was approved by CEN on 20 September 2020.

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European foreword

This document (EN ISO 15118-8:2020) has been prepared by Technical Committee ISO/TC 22 "Road vehicles" in collaboration with 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 March 2021, and conflicting national standards shall be withdrawn at the latest by March 2021.

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.

This document supersedes EN ISO 15118-8:2019.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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, Turkey and the United Kingdom.

Endorsement notice

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INTERNATIONAL
STANDARDISO
15118-8Second edition
2020-09

**Road vehicles — Vehicle to grid
communication interface —****Part 8:
Physical layer and data link
layer requirements for wireless
communication**

*Véhicules routiers — Interface de communication entre véhicule et
réseau électrique*

*Partie 8: Exigences relatives à la couche physique et à la couche de
liaison entre les données pour la communication sans fil*

Reference number
ISO 15118-8:2020(E)

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barrier to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared jointly by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 31, *Data communication*, and Technical Committee ISO/TC 69, *Electric road vehicles and electric industrial trucks* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 301, *Road vehicles*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 15118-8:2018) of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

- DFS and/or TPC are now used instead of only DFS, see [7.2.3](#) and [7.3.3](#);
- correction of requirement V2G8-034;
- editorial corrections.

A list of all parts in the ISO 15118 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The pending energy crisis and necessity to reduce greenhouse gas emissions has led the vehicle manufacturers to a very significant effort to reduce the energy consumption of their vehicles. They are presently developing vehicles partly or completely propelled by electric energy. Those vehicles will reduce the dependency on oil, improve the global energy efficiency and reduce the total CO₂ emissions for road transportation if the electricity is produced from renewable sources. To charge the batteries of such vehicles, a specific charging infrastructure is required.

Much of the standardization work on dimensional and electrical specifications of the charging infrastructure and the vehicle interface is already treated in the relevant ISO or IEC groups. However, the question of information transfer between the EV and the EVSE has not been treated sufficiently.

Such communication is necessary for the optimization of energy resources and energy production systems so that vehicles can recharge in the most economic or most energy efficient way. It is also required to develop efficient and convenient billing systems in order to cover the resulting micro-payments. The necessary communication channel may serve in the future to contribute to the stabilization of the electrical grid, as well as to support additional information services required to operate electric vehicles efficiently and economically.

In ISO 15118-3, the messages exchanged between the vehicle and the infrastructure are transported by the cable used for power transfer. With the inception of wireless power transfer technologies and the tremendous development of wireless communication in our societies, the need for a wireless communication between vehicle and charging infrastructure becomes imperative. This is the main focus of this document. The relevant information on use-case definitions and network and application protocol requirements can be found in ISO 15118-1 and ISO 15118-2, respectively.

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