

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 6: Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers intended to be used for DC EV supply equipment where protection relies on electrical separation

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 62196-6:2022 sisaldab Euroopa standardi EN IEC 62196-6:2022 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 62196-6:2022 consists of the English text of the European standard EN IEC 62196-6:2022.
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 and Accreditation.
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English Version

Plugs, socket-outlets, vehicle connectors and vehicle inlets -
Conductive charging of electric vehicles - Part 6: Dimensional
compatibility requirements for DC pin and contact-tube vehicle
couplers intended to be used for DC EV supply equipment where
protection relies on electrical separation
(IEC 62196-6:2022)

Fiches, socles de prise de courant, prises mobiles de
véhicule et socles de connecteur de véhicule - Charge
conductive des véhicules électriques - Partie 6: Exigences
dimensionnelles de compatibilité pour les prises de courant
de véhicules à broches et alvéoles à courant continu pour
système d'alimentation pour véhicules électriques en
courant continu lorsque la protection est réalisée par
séparation électrique
(IEC 62196-6:2022)

Stecker, Steckdosen, Fahrzeugkupplungen und
Fahrzeugstecker - Konduktives Laden von
Elektrofahrzeugen - Teil 6: Anforderungen an die
Kompatibilität von Maßen für Gleichstrom-
Fahrzeugsteckvorrichtungen mit Stiften und
Kontaktbuchsen, vorgesehen für den Gebrauch mit
Gleichstrom-Versorgungseinrichtungen für
Elektrofahrzeuge, bei denen der Schutz auf elektrischer
Trennung beruht
(IEC 62196-6:2022)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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European foreword

The text of document 23H/501/FDIS, future edition 1 of IEC 62196-6, prepared by SC 23H "Plugs, Socket-outlets and Couplers for industrial and similar applications, and for Electric Vehicles" of IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62196-6:2022.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-02-27
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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Plugs, socket-outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles –

Part 6: Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers intended to be used for DC EV supply equipment where protection relies on electrical separation

Fiches, socles de prise de courant, prises mobiles de véhicule et socles de connecteurs de véhicule – Charge conductive des véhicules électriques –

Partie 6: Exigences dimensionnelles de compatibilité pour les prises de courant de véhicules à broches et alvéoles à courant continu pour système d'alimentation pour véhicules électriques en courant continu lorsque la protection est réalisée par séparation électrique



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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Part 6: Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers intended to be used for DC EV supply equipment where protection relies on electrical separation**

**Fiches, socles de prise de courant, prises mobiles de véhicule et socles de connecteurs de véhicule – Charge conductive des véhicules électriques –
Partie 6: Exigences dimensionnelles de compatibilité pour les prises de courant de véhicules à broches et alvéoles à courant continu pour système d'alimentation pour véhicules électriques en courant continu lorsque la protection est réalisée par séparation électrique**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PLUGS, SOCKET-OUTLETS, VEHICLE CONNECTORS AND VEHICLE INLETS – CONDUCTIVE CHARGING OF ELECTRIC VEHICLES –**Part 6: Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers intended to be used for DC EV supply equipment where protection relies on electrical separation**

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International Standard IEC 62196-6 has been prepared by subcommittee 23H: Plugs, socket-outlets and couplers for industrial and similar applications, and for electric vehicles, of IEC technical committee 23: Electrical accessories.

The text of this International Standard is based on the following documents:

Draft	Report on voting
23H/501/FDIS	23H/505/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all the parts in the IEC 62196 series, under the general title *Plugs, socket-outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles*, can be found on the IEC website.

This document is to be read in conjunction with IEC 62196-1:2022. The clauses of the particular requirements in Part 6 supplement or modify the corresponding clauses in Part 1. Where the text indicates "addition" to or "replacement" of the relevant requirement, test specification or explanation of Part 1, these changes are made to the relevant text of Part 1, which then becomes part of this standard. Where no change is necessary, the words "Clause X of IEC 62196-1:2022 is applicable" are used.

Subclauses, figures or tables which are additional to those in IEC 62196-1:2022 are numbered starting from 601.

In this standard, the following print types are used:

- requirements proper: in roman type;
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- reconfirmed,
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INTRODUCTION

With the continued development and expansion of the use of electric power into other classes of electric vehicles (EV) and hybrid electric vehicles, the introduction and commercialization of electric powered two or three wheelers (hereafter e-PTWs) are being accelerated in the global market and responding to the global concerns on CO₂ reduction and energy saving.

In comparison with the passenger cars, e-PTWs have a shorter range per charge and need more charging possibilities, especially public DC charging stations. This document provides general and basic requirements for a compact interface for small sized DC EV supply equipment, which could be installed in various places such as convenience stores, newspaper stands, lottery shops, etc., and could help the diffusion of e-PTWs.

PLUGS, SOCKET-OUTLETS, VEHICLE CONNECTORS AND VEHICLE INLETS – CONDUCTIVE CHARGING OF ELECTRIC VEHICLES –

Part 6: Dimensional compatibility requirements for DC pin and contact-tube vehicle couplers intended to be used for DC EV supply equipment where protection relies on electrical separation

1 Scope

This part of IEC 62196 is applicable to vehicle connectors, vehicle inlets and cable assemblies for electric vehicle (EV), intended for use in conductive charging systems which incorporate control means, with a rated operating voltage up to 120 V DC and rated current up to 100 A.

These accessories are intended to be used for a DC interface of the conductive charging system according to IEC 61851-25:2020.

This document applies to accessories and cable assemblies to be used in an ambient temperature of between –30 °C and +40 °C.

The vehicle connector and vehicle inlets are intended to be connected only to cables with copper or copper-alloy conductors.

2 Normative references

Clause 2 of IEC 62196-1:2022 applies, except as follows:

Addition:

IEC 61851-25:2020, *Electric vehicle conductive charging system – Part 25: DC EV supply equipment where protection relies on electrical separation*

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

Clause 3 of IEC 62196-1:2022 applies.

4 General

Clause 4 of IEC 62196-1:2022 applies, except as follows:

4.1 General requirements

Replacement of the first paragraph:

The accessories covered by this document shall only be used with DC EV supply equipment that complies with the requirements of IEC 61851-25.