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Anslutningsdon för konduktiv laddning av elfordon – Del 3: Mått för anslutningsdon med stift och kontakthylsor för likström och för lik- och växelström i kombination

*Plugs, socket-outlets, vehicle connectors and vehicle inlets –
Conductive charging of electric vehicles –
Part 3: Dimensional compatibility and interchangeability requirements
for d.c. and a.c./d.c. pin and contact-tube vehicle couplers*

Som svensk standard gäller europastandarden EN 62196-3:2014. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62196-3:2014.

Nationellt förord

Europastandarden EN 62196-3:2014

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62196-3, First edition, 2014 - Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility and interchangeability requirements for d.c. and a.c./d.c. pin and contact-tube vehicle couplers**

utarbetad inom International Electrotechnical Commission, IEC.

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English Version

**Plugs, socket-outlets, vehicle connectors and vehicle inlets -
Conductive charging of electric vehicles - Part 3: Dimensional
compatibility and interchangeability requirements for d.c. and
a.c./d.c. pin and contact-tube vehicle couplers
(IEC 62196-3:2014)**

Fiches, socles de prise de courant, prises mobiles de
véhicule et socles de connecteur de véhicule - Charge
conductive des véhicules électriques - Partie 3: Exigences
dimensionnelles de compatibilité et d'interchangeabilité
pour les connecteurs de véhicule à broches et alvéoles
pour courant continu et pour courants alternatif et continu
(CEI 62196-3:2014)

Stecker, Steckdosen und Fahrzeugsteckvorrichtungen -
Konduktives Laden von Elektrofahrzeugen - Teil 3:
Anforderungen an und Hauptmaße für Stifte und Buchsen
für die Austauschbarkeit von Fahrzeugsteckvorrichtungen
zum dedizierten Laden mit Gleichstrom und als kombinierte
Ausführung zum Laden mit Wechselstrom/Gleichstrom
(IEC 62196-3:2014)

This European Standard was approved by CENELEC on 2014-07-24. 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.

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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 23H/303/FDIS, future edition 1 of IEC 62196-3, prepared by IEC/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 62196-3:2014.

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) 2015-05-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-07-24

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

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 62196-3:2014 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Clause 2 of EN 62196-1:2014 applies, except as follows.

Additional normative reference:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62196-2	2011	Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories	EN 62196-2 +A11 +A12	2012 2013 2014

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PLUGS, SOCKET-OUTLETS, VEHICLE
CONNECTORS AND VEHICLE INLETS –
CONDUCTIVE CHARGING OF ELECTRIC VEHICLES –****Part 3: Dimensional compatibility and interchangeability requirements
for d.c. and a.c./d.c. pin and contact-tube vehicle couplers**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62196-3 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 standard is based on the following documents:

FDIS	Report on voting
23H/303/FDIS	23H/306/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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 part of IEC 62196 is to be read in conjunction with IEC 62196-1. The clauses of the particular requirements in Part 3 supplement or modify the corresponding clauses in Part 1. Where the text indicates an "addition" to or a "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 the standard.

Subclauses, figures, tables or notes which are additional to those in IEC 62196-1 are numbered starting from 301.

In this standard, the following print types are used:

- requirements proper: in roman type;
- *test specifications: in italic type*;
- notes: in smaller roman type.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Responding to global challenges of CO₂ reduction and energy security, the automobile industries have been accelerating the development and commercialization of electric vehicles and hybrid electric vehicles.

In addition to the prevailing hybrid electric vehicles, battery electric vehicles including plug-in hybrid electric vehicles are going to be mass-marketed.

To support the diffusion of such vehicles, this standard provides the standard interface configurations of vehicle couplers to be used in conductive charging of electric vehicles, taking the most frequent charging situations into consideration.

IEC 62196 is divided into several parts as follows:

- Part 1: General requirements, comprising clauses of a general character.
- Part 2: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories.
- Part 3: Dimensional compatibility and interchangeability requirements for d.c. and a.c./d.c. pin and contact-tube vehicle couplers.

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

Part 3: Dimensional compatibility and interchangeability requirements for d.c. and a.c./d.c. pin and contact-tube vehicle couplers

1 Scope

This part of IEC 62196 is applicable to vehicle couplers with pins and contact-tubes of standardized configuration, herein also referred to as “accessories”, intended for use in electric vehicle conductive charging systems which incorporate control means, with rated operating voltage up to 1 500 V d.c. and rated current up to 250 A, and 1 000 V a.c. and rated current up to 250 A.

This part of IEC 62196 applies to high power d.c. interfaces and combined a.c./d.c. interfaces of vehicle couplers specified in IEC 62196-1:2014, and intended for use in conductive charging systems for circuits specified in IEC 61851-1:2010, and IEC 61851-23:2014.

The d.c. vehicle connectors covered by this part of the standard are used only in charging mode 4, according to Case C in Clause 6.2 of IEC 61851-1:2010, Figure 3 in Clause 6.3.1 of IEC 61851-1:2010 and IEC 62196-2:2011.

The d.c. vehicle inlets covered by this part of the standard are used only in charging mode 4, according to Case C in Clause 6.2 of IEC 61851-1:2010, Figure 3 in Clause 6.3.1 of IEC 61851-1:2010.

These vehicle couplers are intended to be used for circuits similar to those specified in IEC 61851-23 which operate at different voltages and which may include ELV and communication signals.

This part of IEC 62196 applies to the vehicle couplers to be used in an ambient temperature of between –30 °C and +50 °C.

NOTE 1 In some countries, other requirements may apply.

NOTE 2 In the following country, –35 °C applies: SE.

These vehicle couplers are intended to be connected only to cables with copper or copper-alloy conductors.

2 Normative references

Clause 2 of IEC 62196-1:2014 applies, except as follows.

Additional normative reference:

IEC 62196-2:2011, *Plugs, socket-outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Part 2: Dimensional compatibility and interchangeability requirements for a.c. pin and contact-tube accessories*