

ILNAS

Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 62196-2:2012

Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 2: Dimensional

Stecker, Steckdosen,
Fahrzeugkupplungen und
Fahrzeugstecker - Konduktives Laden
von Elektrofahrzeugen - Teil 2:

Fiches, socles de prise de courant, prises
mobiles et socles de connecteurs de
véhicule - Charge conductive des
véhicules électriques - Partie 2: Exigences

05/2012



National Foreword

This European Standard EN 62196-2:2012 was adopted as Luxembourgish Standard ILNAS-EN 62196-2:2012.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

**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
(IEC 62196-2:2011)**

Fiches, socles de prise de courant, prises mobiles et socles de connecteurs de véhicule -
Charge conductive des véhicules électriques -
Partie 2: Exigences dimensionnelles de compatibilité et d'interchangeabilité pour les appareils à broches et alvéoles pour courant alternatif
(CEI 62196-2:2011)

Stecker, Steckdosen, Fahrzeugkupplungen und Fahrzeugstecker -
Konduktives Laden von Elektrofahrzeugen -
Teil 2: Anforderungen und Hauptmaße für die Kompatibilität und Austauschbarkeit von Stift- und Buchsensteckvorrichtungen für Wechselstrom
(IEC 62196-2:2011)

This European Standard was approved by CENELEC on 2012-02-01. 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, 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.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 23H/267/FDIS, future edition 1 of IEC 62196-2, prepared by SC 23H, "Industrial plugs and socket-outlets", of IEC TC 23, "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62196-2:2012.

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) 2012-11-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-02-01

EN 62196-2 is to be read in conjunction with EN 62196-1. The clauses of the particular requirements in Part 2 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. Where no change is necessary, the words "This clause of Part 1 is applicable" are used.

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

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.

Endorsement notice

The text of the International Standard IEC 62196-2:2011 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Addition to Annex ZA of EN 62196-1:2012:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	EN 60068-2-14	-

Annex ZB
(normative)**Special national conditions**

Special national condition: National characteristic or practice that cannot be changed even over a long period, e.g. climatic conditions, electrical earthing conditions.

NOTE If it affects harmonization, it forms part of the European Standard / Harmonization Document.

For the countries in which the relevant special national conditions apply these provisions are normative, for other countries they are informative.

<u>Clause</u>	<u>Special national condition</u>
---------------	-----------------------------------

1	Finland
----------	----------------

In Finland, accessories and cable assemblies according to this standard are to be used in an ambient temperature between -35 °C and $+50\text{ °C}$.

6.1	United Kingdom
------------	-----------------------

Mode 1 is considered unsafe and will not be used in the United Kingdom.

10.101	France
---------------	---------------

Add a 2nd paragraph: When plugs & socket-outlets are used and socket-outlets are accessible to uninstructed persons, they shall be provided with shutters (as presently defined in Type 3).

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**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**

**Fiches, socles de prise de courant, prises mobiles et socles de connecteurs de véhicule – Charge conductive des véhicules électriques –
Partie 2: Exigences dimensionnelles de compatibilité et d'interchangeabilité pour les appareils à broches et alvéoles pour courant alternatif**

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 General	8
5 Ratings.....	8
6 Connection between the power supply and the electric vehicle	8
7 Classification of accessories	11
8 Marking	11
9 Dimensions	11
10 Protection against electric shock	12
11 Size and colour of earthing conductors	12
12 Provision for earthing	12
13 Terminals	12
14 Interlocks	13
15 Resistance to ageing of rubber and thermoplastic material	13
16 General construction	13
17 Construction of socket-outlets	13
18 Construction of plugs and vehicle connectors	13
19 Construction of vehicle inlets.....	13
20 Degrees of protection	13
21 Insulation resistance and dielectric strength	13
22 Breaking capacity	13
23 Normal operation.....	14
24 Temperature rise	14
25 Flexible cables and their connection	14
26 Mechanical strength	14
27 Screws, current-carrying parts and connections.....	15
28 Creepage distances, clearances and distances	15
29 Resistance to heat, to fire and to tracking.....	15
30 Corrosion and resistance to rusting	15
31 Conditional short-circuit current withstand test	15
32 Electromagnetic compatibility (EMC)	15
33 Vehicle driveover.....	15
101 Components	15
102 Coding resistors	16

Table 101 – Overview of the basic vehicle interface, configuration Type 1, single phase	10
---	----

Table 102 – Overview of the basic vehicle interface, configuration Types 2 and 3, three-phase or single phase.....	10
Table 103 – Configuration types and standard sheets.....	12