

TECHNICAL SPECIFICATION

**Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive
charging of electric vehicles -
Part 7: Vehicle adapters**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Plugs, socket-outlets, vehicle connectors and vehicle inlets -
Conductive charging of electric vehicles -
Part 7: Vehicle adapters**

FOREWORD

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IEC TS 62196-7 has been prepared by subcommittee 23H: Plugs, socket-outlets and couplers for industrial and similar applications, and for electric vehicles, of IEC technical committee TC 23: Electrical accessories. It is a Technical Specification.

The text of this Technical Specification is based on the following documents:

Draft	Report on voting
23H/563/DTS	23H/576A/RVDTS

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 Technical Specification 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/publications.

A list of all parts in the IEC 62196 series, published 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 and IEC 62196-3:20—. The clauses of the particular requirements in IEC 62196-7 supplement or modify the corresponding clauses in IEC 62196-1 and IEC 62196-3. Where the text indicates "addition" to or "replacement" of the relevant requirement, test specification or explanation of IEC 62196-1 and IEC 62196-3, these changes are made to the relevant text of IEC 62196-1 and IEC 62196-3, which then becomes part of this document. 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 701.

In this document, 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 document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

There are currently four different charging interfaces specified in IEC 62196-3:20—, configuration AA, BB, EE, FF. In addition, some companies have introduced their own charging interfaces with different specifications. Various charging interfaces with similar functions but different shapes cause troubles for electric vehicle users. The application of adapters is necessary to solve the interoperability problem between different interfaces for the purposes of safety. Also, having reliable safety and interoperable adapters is a prerequisite for unifying the global charging interface in the future.

1 Scope

This part of IEC 62196, which is a Technical Specification, specifies the safety, interoperability, compatibility requirements and the configuration standard sheets for DC charging vehicle adapters

- with a rated voltage up to 1 500 V DC;
- between vehicle connector and vehicle inlet according to IEC 62196-3;
- used to adapt configuration GG vehicle inlet to configuration AA, BB vehicle connector as specified in the IEC 62196-3:20—.

NOTE DC vehicle adapters for other configuration combinations are under consideration.

This document is not applicable to:

- the adapter between the EV socket-outlet and the EV plug;
- the adapter between the AC vehicle connector and the AC vehicle inlet.

This document does not cover all safety aspects related to maintenance.

2 Normative references

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

Addition:

IEC 62196-1:2022, *Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 1: General requirements*

IEC 62196-3:20—, *Plugs, socket-outlets, vehicle connectors and vehicle inlets - Conductive charging of electric vehicles - Part 3: Dimensional compatibility requirements for DC and AC/DC pin and contact-tube vehicle couplers*¹

IEC 62893-1, *Charging cables for electric vehicles for rated voltages up to and including 0,6/1 kV - Part 1: General requirements*

IEC 62893-2, *Charging cables for electric vehicles for rated voltages up to and including 0,6/1 kV - Part 2: Test methods*

IEC 62893-4-1, *Charging cables for electric vehicles of rated voltages up to and including 0,6/1 kV - Part 4-1: Cables for DC charging according to mode 4 of IEC 61851-1 - DC charging without use of a thermal management system*

¹ Under preparation. Stage at the time of publication: IEC PRVD 62196-3:2026.

Bibliography

IEC GUIDE 117:2010, *Electrotechnical equipment - Temperatures of touchable hot surfaces*
