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PUBLICLY AVAILABLE SPECIFICATION

colour inside

Plugs, socket-outlets, vehicle connectors and vehicle inlets – Conductive charging of electric vehicles – Dimensional compatibility description for configuration FF AC/DC contact-tube vehicle coupler



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PLUGS, SOCKET-OUTLETS, VEHICLE CONNECTORS AND VEHICLE INLETS – CONDUCTIVE CHARGING OF ELECTRIC VEHICLES – DIMENSIONAL COMPATIBILITY DESCRIPTION FOR CONFIGURATION FF AC/DC CONTACT-TUBE VEHICLE COUPLER

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IEC PAS 63472 has been processed 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 PAS is based on the following document:	This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document
Draft PAS	**Report on voting**
23H/517/DPAS	23H/519/RVDPAS

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INTRODUCTION

With the increasing success of electromobility, more and more use cases and usage situations are emerging. Some of these usage situations could not be foreseen when the charging accessories were developed. There were also constraints in the development of the Combined Charging System resulting from the use of the existing AC connectors.

In order not to impair the user experience and the further successful introduction of electromobility, there is an urgent need for action. To this end, this document describes optional measures that are suitable for supporting the reliability of the connector even in charging situations with non-axial constraint of the charging line. These optional measures are limited to the connector to allow easy implementation for new products and easy retrofitting of existing products. Plug-in compatibility with inlets designed in accordance with standards is thus still ensured.

It is planned to implement the measures described and, if necessary, further measures in the further development of IEC 62196-3. This will be coordinated with IEC SC23H MT8.

It is intended to withdraw this document once the content has been incorporated into an IEC 62196-3 document.

PLUGS, SOCKET-OUTLETS, VEHICLE CONNECTORS AND VEHICLE INLETS – CONDUCTIVE CHARGING OF ELECTRIC VEHICLES – DIMENSIONAL COMPATIBILITY DESCRIPTION FOR CONFIGURATION FF AC/DC CONTACT-TUBE VEHICLE COUPLER

1 Scope

This document describes dimensional options for CONFIGURATION FF AC/DC contact-tube vehicle couplers as defined in IEC 62196-3. These possibilities serve to improve the reliability of a mated connection when the charging cable is not axially constrained. The options can be implemented optionally and maintain mating compatibility with CONFIGURATION FF according to IEC 62196-3.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

IEC 62196-3:2022, *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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62196-3:2022 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

4 General

Clause 4 of IEC 62196-3:2022 applies.

5 Ratings

Clause 5 of IEC 62196-3:2022 applies.

6 Connection between the power supply and the electric vehicle

Clause 6 of IEC 62196-3:2022 applies.