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Electric vehicle conductive charging system

Part 1-1: Specific requirements for electric vehicle conductive charging system using type 4 vehicle coupler

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A list of organizations represented on this committee can be obtained on request to its committee manager.

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ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM –

Part 1-1: Specific requirements for electric vehicle conductive charging system using type 4 vehicle coupler

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IEC PAS 61851-1-1 has been processed by IEC technical committee 69: Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks.

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**
69/860/DPAS	69/869/RVDPAS

Following publication of this PAS, which is a pre-standard publication, the technical committee or subcommittee concerned may transform it into an International Standard.

This PAS shall remain valid for an initial maximum period of 2 years starting from the publication date. The validity may be extended for a single period up to a maximum of 2 years, at the end of which it shall be published as another type of normative document or shall be withdrawn.

This document is to be read in conjunction with IEC 61851-1:2017. The clauses of particular requirements in this document supplement or modify the corresponding clauses in IEC 61851-1:2017. Where the text of subsequent clauses indicates an "addition" to or a "replacement" of the relevant requirement, test specification or explanation of IEC 61851-1:2017, these changes are made to the relevant text of IEC 61851-1:2017, which then becomes part of this document. Where no change is necessary, the words "Clause X or Subclause X.Y of IEC 61851-1:2017 is applicable" are used.”

INTRODUCTION

Currently, three AC charging couplers are defined in the IEC 62196 series, namely type 1 adopted in North America and Japan, type 2 proposed by Germany, and type 3, which is not widely used.

This document introduces an AC charging system widely used in China and some other markets. The number of BEV and PHEVs using the Chinese AC system has exceeded 5 million, and public AC charging facilities have exceeded 400 000 in China alone. At the IEC TC69 WG12 meeting held in Shanghai in November 2019, China's interpretation of the control pilot circuits and compatibility with existing IEC 61851-1 was accepted.

Taking into account the long standard maintenance cycle for IEC 61851-1, at the WG12 meeting of TC 69 in December 2021, it is recommended that the Chinese AC charging system be published in IEC as PAS first and then be discussed and merged into IEC 61851-1 Ed.4 when it is published in this maintenance cycle.

ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM –

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1 Scope

This document applies to a new type of AC EV supply equipment for charging electric road vehicles, with a rated supply voltage up to 1 000 V AC and a rated output voltage up to 1 000 V AC.

This document provides specific requirements for AC charging system using type 4 vehicle coupler.

Type 4 vehicle coupler is under consideration by SC23H.

Vehicle inlet and vehicle connector of type 4 are intended to be used for charging in modes 2 and 3, case C.

2 Normative references

This clause of IEC 61851-1:2017 is applicable.

3 Terms and definitions

This clause of IEC 61851-1:2017 is applicable.

4 General requirements

This clause of IEC 61851-1:2017 is applicable.

5 Classification

This clause of IEC 61851-1:2017 is applicable, except as follows.

5.1.2 Characteristics of power supply output

This subclause of IEC 61851-1:2017 is not applicable.

6 Charging modes and functions

This clause of IEC 61851-1:2017 is applicable, except as follows:

6.2.3 Mode 3

Addition after the last paragraph:

NOTE In the following countries, the rated output current of the EV supply equipment is limited to 32 A for single phase and to 63 A for three phases: CN.