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Incorporating corrigendum January 2024



BSI Standards Publication

Electric vehicles conductive charging system

Part 3-6: DC EV supply equipment where protection relies on double or reinforced insulation — Voltage converter unit communication

bsi.

National foreword

This Published Document is the UK implementation of CLC IEC/TS 61851-3-6:2023. It is identical to IEC TS 61851-3-6:2023. It supersedes PD IEC TS 61851-3-6:2023, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/69, Electric vehicles.

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

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Konduktive Ladesysteme für Elektrofahrzeuge - Teil 3-6: Gleichstrom-Versorgungseinrichtungen für Elektrofahrzeuge mit Schutzwirkung durch doppelte oder verstärkte Isolierung - Spannungswandler Kommunikation (IEC/TS 61851-3-6:2023)

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European foreword

This document (CLC IEC/TS 61851-3-6:2023) consists of the text of IEC/TS 61851-3-6:2023, prepared by IEC/TC 69 "Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks".

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The text of the International Technical Specification IEC/TS 61851-3-6:2023 was approved by CENELEC as a European Technical Specification without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC/TS 61851-3-7:2023 NOTE Approved as CLC IEC/TS 61851-3-7:2023 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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.cencenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC/TS 61851-3-2	2023	Electric vehicle conductive charging system - Part 3-2: DC EV supply equipment where protection relies on double or reinforced insulation - Particular requirements for portable and mobile equipment	-	-
IEC/TS 61851-3-4	2023	Electric vehicles conductive charging system - Part 3-4: DC EV supply equipment where protection relies on double or reinforced insulation - General definitions and requirements for CANopen communication	-	-
IEC/TS 61851-3-5	2023	Electric vehicles conductive charging system - Part 3-5: DC EV supply equipment where protection relies on double or reinforced insulation - Pre-defined communication parameters and general application objects	-	-
		Industrial communications subsystem based on ISO 11898 (CAN) for controller-device interfaces - Part 4: CANopen	EN 50325-4	2002

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTRIC VEHICLES CONDUCTIVE CHARGING SYSTEM –

Part 3-6: DC EV supply equipment where protection relies on double or reinforced insulation – Voltage converter unit communication

FOREWORD

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IEC TS 61851-3-6 has been prepared by IEC technical committee 69: Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks. It is a Technical Specification.

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

Draft	Report on voting
69/652/DTS	69/673/RVDTS 69/673A/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.

In this document, the following print types are used:

– requirements: in roman type;

– notes: in small roman type;

– **text formatted in bold and using mixed capital and underline are used as state names and are not to be translated**.

A list of all parts in the IEC 61851 series, published under the general title *Electric vehicles conductive charging system,* can be found on the IEC website.

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

INTRODUCTION

This document is published in separate parts according to the following structure:

IEC TS 61851-3-1, *Electric vehicles conductive charging system – Part 3-1: DC EV supply equipment where protection relies on double or reinforced insulation – General rules and requirements for stationary equipment*

IEC TS 61851-3-2, *Electric vehicles conductive charging system – Part 3-2: DC EV supply equipment where protection relies on double or reinforced insulation – Particular requirements for portable and mobile equipment*

IEC TS 61851-3-4, *Electric vehicles conductive charging system – Part 3-4: DC EV supply equipment where protection relies on double or reinforced insulation – General definitions and requirements for CANopen communication*

IEC TS 61851-3-5, *Electric vehicles conductive charging system – Part 3-5: DC EV supply equipment where protection relies on double or reinforced insulation – Pre-defined communication parameters and general application objects*

IEC TS 61851-3-6, *Electric vehicles conductive charging system – Part 3-6: DC EV supply equipment where protection relies on double or reinforced insulation – Voltage converter unit communication*

IEC TS 61851-3-7, *Electric vehicles conductive charging system – Part 3-7: DC EV supply equipment where protection relies on double or reinforced insulation – Battery system communication*

ELECTRIC VEHICLES CONDUCTIVE CHARGING SYSTEM –

Part 3-6: DC EV supply equipment where protection relies on double or reinforced insulation – Voltage converter unit communication

1 Scope

This part of IEC 61851, which is a Technical Specification, applies to CANopen communication for the conductive transfer of electric power between the supply network and an electric road vehicle or a removable RESS or traction-battery of an electric road vehicle.

This document provides application objects provided by the AC/DC VCU or DC/DC VCU.

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 TS 61851-3-2:2023, *Electric vehicles conductive charging system – Part 3-2: DC EV supply equipment where protection relies on double or reinforced insulation – Particular requirements for portable and mobile equipment*

IEC TS 61851-3-4: 2023, *Electric vehicles conductive charging system – Part 3-4:DC EV supply equipment where protection relies on double or reinforced insulation – General definitions and requirements for CANopen communication*

IEC TS 61851-3-5: 2023, *Electric vehicles conductive charging system – Part 3-5: DC EV supply equipment where protection relies on double or reinforced insulation – Pre-defined communication parameters and general application objects*

EN 50325-4:2002, *Industrial communications subsystem based on ISO 11898 (CAN) for controller- device interfaces – Part 4: CANopen*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TS 61851-3-4:2023 apply.

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

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

4 Symbols and abbreviated terms

For the purposes of this document, the symbols and abbreviated terms given in IEC TS 61851-3-4:2023 apply.