



SLOVENSKI STANDARD

SIST EN 61851-24:2014

01-september-2014

Sistem kabelskega napajanja električnih vozil - 24. del: Digitalna komunikacija med enosmerno (d.c.) EV-napajalno postajo in električnim vozilom za krmiljenje enosmernega (d.c.) napajanja (IEC 61851-24:2014)

Electric vehicle conductive charging system - Part 24: Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging

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Système de charge conductive pour véhicules électriques - Partie 24: Communication digitale entre la borne de charge à courant continu et le véhicule électrique pour le contrôle de la charge à courant continu

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Ta slovenski standard je istoveten z: EN 61851-24:2014

ICS:

43.120 Električna cestna vozila Electric road vehicles

SIST EN 61851-24:2014 en

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EUROPEAN STANDARD

EN 61851-24

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2014

ICS 43.120

English Version

**Electric vehicle conductive charging system - Part 24: Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging
(IEC 61851-24:2014)**

Système de charge conductive pour véhicules électriques -
Partie 24: Communication digitale entre la borne de charge
à courant continu et le véhicule électrique pour le contrôle
de la charge à courant continu
(CEI 61851-24:2014)

Konductive Ladesysteme für Elektrofahrzeuge - Teil 24:
Digitale Kommunikation zwischen einer
Gleichstromladestation für Elektrofahrzeuge und dem
Elektrofahrzeug zur Steuerung des
Gleichstromladevorgangs
(IEC 61851-24:2014)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 69/273/FDIS, future edition 1 of IEC 61851-24, prepared by IEC/TC 69 "Electric road vehicles and electric industrial trucks" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61851-24:2014.

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) 2015-01-11
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-04-11

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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NOTE 1 When 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.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61851-1	2010	Electric vehicle conductive charging system - Part 1: General requirements	EN 61851-1	2011
IEC 61851-23	2014	Electric vehicle conductive charging system - Part 23: D.C. electric vehicle charging station	EN 61851-23	2013
ISO/IEC 15118-1		Road vehicles – Vehicle to grid communication interface - Part 1: General information and use-case definition		-
ISO/IEC 15118-2		Road vehicles – Vehicle to grid communication interface - Part 2: Technical protocol description and open systems interconnections (OSI) layer requirements		-
ISO/IEC 15118-3		Road vehicles - Vehicle to grid communication - interface - Part 3 Physical layer requirements		-
ISO 11898-1	2003	Road vehicles - Controller area network (CAN) - Part 1: Data link layer and physical signalling		-
ISO 11898-2	2003	Road vehicles - Controller area network (CAN) - Part 2: High-speed medium access unit		-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Electric vehicle conductive charging system –
Part 24: Digital communication between a d.c. EV charging station and an
electric vehicle for control of d.c. charging**

**Système de charge conductive pour véhicules électriques –
Partie 24: Communication digitale entre la borne de charge à courant continu et
le véhicule électrique pour le contrôle de la charge à courant continu**

INTERNATIONAL
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM –**Part 24: Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging**

FOREWORD

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International Standard IEC 61851-24 has been prepared by IEC technical committee 69: Electric road vehicles and electric industrial trucks.

The text of this standard is based on the following documents:

FDIS	Report on voting
69/273FDIS	69/280/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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

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INTRODUCTION

The introduction and commercialisation of electric vehicles has been accelerated in the global market, responding to the global concerns on CO₂ reduction and energy security. Concurrently, the development of charging infrastructure for electric vehicles has also been expanding. As supplementary system of a.c. charging system, d.c. charging is recognized as an effective solution to extend the available range of electric vehicles, and different d.c. charging systems are being used over the world. The international standardization in terms of charging infrastructure including d.c. charging systems is indispensable for the diffusion of electric vehicles, and this standard is developed for the manufacturers' convenience by providing general specifications for control communication protocols between off-board d.c. charger and electric vehicles.

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ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM –

Part 24: Digital communication between a d.c. EV charging station and an electric vehicle for control of d.c. charging

1 Scope

This part of IEC 61851, together with IEC 61851-23, applies to digital communication between a d.c. EV charging station and an electric road vehicle (EV) for control of d.c. charging, with an a.c. or d.c. input voltage up to 1 000 V a.c. and up to 1 500 V d.c. for the conductive charging procedure.

The EV charging mode is mode 4, according to IEC 61851-23. The charging station supplied by high voltage a.c. supply is not covered by this standard.

Annexes A, B, and C give descriptions of digital communications for control of d.c. charging specific to d.c. EV charging systems A, B and C as defined in Part 23.

2 Normative references

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IEC 61851-1:2010, *Electric vehicle conductive charging system – Part 1: General requirements*

IEC 61851-23:2014, *Electric vehicle conductive charging system – Part 23: DC electric vehicle charging station*

ISO/IEC 15118-1¹, *Road vehicles – Vehicle to grid communication interface – Part 1: General information and use-case definition*

ISO/IEC 15118-2:—¹, *Road vehicles – Vehicle to grid communication interface – Part 2: Technical protocol description and open systems interconnections (OSI) layer requirements*

ISO/IEC 15118-3:—¹, *Road vehicles – Vehicle to grid communication interface – Part 3 Physical layer requirements*

ISO 11898-1:2003, *Road vehicles – Controller area network (CAN) – Part 1: Data link layer and physical signalling*

ISO 11898-2:2003, *Road vehicles – Controller area network (CAN) – Part 2: High-speed medium access unit*