

Electric vehicle conductive charging system - Part 21-2:
Electric vehicle requirements for conductive
connection to an AC/DC supply - EMC requirements for
off board electric vehicle charging systems

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 61851-21-2:2021 sisaldab Euroopa standardi EN IEC 61851-21-2:2021 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61851-21-2:2021 consists of the English text of the European standard EN IEC 61851-21-2:2021.
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English Version

Electric vehicle conductive charging system - Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply - EMC requirements for off board electric vehicle charging systems
(IEC 61851-21-2:2018)

Système de charge par conduction pour véhicules électriques - Partie 21-2: Exigences applicables aux véhicules électriques pour connexion par conduction à une alimentation en courant alternatif ou courant continu - Exigences CEM concernant les systèmes de charge non embarqués pour véhicules électriques
(IEC 61851-21-2:2018)

Konduktive Ladesysteme für Elektrofahrzeuge - Teil 21-2: Anforderungen für den konduktiven Anschluss von Elektrofahrzeugen an eine Wechsel-/Gleichstromversorgung - EMV-Anforderungen an externe Ladesysteme für Elektrofahrzeuge
(IEC 61851-21-2:2018)

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European foreword

The text of document 69/531/FDIS, future edition 1 of IEC 61851-21-2, prepared by IEC/TC 69 "Electrical power/energy transfer systems for electrically propelled road vehicles and industrial trucks" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61851-21-2:2021.

The following dates are fixed:

- latest date by which the document has to be implemented at national (dop) 2021-10-30 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2024-04-30 document have to be withdrawn

This document (partially) supersedes EN 61851-21:2002 and all of its amendments and corrigenda (if any).

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61851-21-1	NOTE	Harmonized as EN 61851-21-1
IEC 61980 (series)	NOTE	Harmonized as EN IEC 61980 (series)
CISPR 11:2015	NOTE	Harmonized as EN 55011:2016
CISPR 16-2-1:2014	NOTE	Harmonized as EN 55016-2-1:2014 (not modified)
ISO 15118-3:2015	NOTE	Harmonized as EN ISO 15118-3:2016 (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.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60038 (mod)	2009	IEC standard voltages	EN 60038	2011
IEC 61000-3-2	2014	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)	EN 61000-3-2	2014
IEC 61000-3-3	2013	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection	EN 61000-3-3	2013
IEC 61000-3-11	2017	Electromagnetic compatibility (EMC) - Part 3-11 - Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current ≤ 75 A and subject to conditional connection	EN IEC 61000-3-2019	2019
IEC 61000-3-12	2011	Electromagnetic compatibility (EMC) - Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current >16 A and ≤ 75 A per phase	EN 61000-3-12	2011
IEC 61000-4-2	2008	Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test	EN 61000-4-2	2009
IEC 61000-4-3	2006	Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	2006
+ A1	2007		+ A1	2008
+ A2	2010		+ A2	2010

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61000-4-4	2012	Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test	EN 61000-4-4	2012
IEC 61000-4-5	2014	Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test	EN 61000-4-5	2014
+ A1	2017		+ A1	2017
IEC 61000-4-6	2013	Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields	EN 61000-4-6	2014
IEC 61000-4-8	2009	Electromagnetic compatibility (EMC) - Part 4-8: Testing and measurement techniques - Power frequency magnetic field immunity test	EN 61000-4-8	2010
IEC 61000-4-11	2004	Electromagnetic compatibility (EMC) - Part 4-11: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests	EN 61000-4-11	2004
+ A1	2017		+ A1	2017
IEC 61000-4-34	2005	Electromagnetic compatibility (EMC) - Part 4-34: Testing and measurement techniques - Voltage dips, short interruptions and voltage variations immunity tests for equipment with input current more than 16 A per phase	EN 61000-4-34	2007
+ A1	2009		+ A1	2009
IEC 61000-6-1	2016	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity standard for residential, commercial and light-industrial environments	EN IEC 61000-6-1	2019
IEC 61000-6-2	2016	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments	EN IEC 61000-6-2	2019
IEC 61000-6-3	2006	Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments	EN 61000-6-3	2007
+ A1	2010		+ A1	2011
-	-		+ AC	2012
IEC 61000-6-4	2006	Electromagnetic compatibility (EMC) -- Part 6-4: Generic standards - Emission standard for industrial environments	EN 61000-6-4	2007
+ A1	2010		+ A1	2011
IEC 61851-1	2017	Electric vehicle conductive charging system - Part 1: General requirements	EN IEC 61851-1	2019

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61851-23	2014	Electric vehicle conductive charging system - Part 23: DC electric vehicle charging station	EN 61851-23	2014
IEC 62053-21	2003	Electricity metering equipment (a.c.) - Particular requirements - Part 21: Static meters for active energy (classes 1 and 2)	EN 62053-21	2003
CISPR 16-1-2	2014	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurements	EN 55016-1-2	2014
CISPR 16-1-4	2010	Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-4: Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements	EN 55016-1-4	2010
+ A1	2012		+ A1	2012
+ A2	2017		+ A2	2017
CISPR 25	2008	Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers	-	-
CISPR 32	2015	Electromagnetic compatibility of multimedia equipment - Emission requirements	EN 55032	2015
-	-		+ A11	2020
MIL-STD-461F	2007	Department of Defense interface standard requirements for the control of electromagnetic interference characteristics of subsystems and equipment		

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTRIC VEHICLE CONDUCTIVE CHARGING SYSTEM –**Part 21-2: Electric vehicle requirements for conductive connection to an AC/DC supply – EMC requirements for off-board electric vehicle charging systems**

FOREWORD

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International Standard IEC 61851-21-2 has been prepared by IEC technical committee 69: Electric road vehicles and electric industrial trucks.

This first edition, together with IEC 61851-21-1, cancels and replaces IEC 61851-21:2001. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61851-21:2001:

- a) this document addresses now only EMC related tests instead of other electrical tests;
- b) Clauses 2 and 3 have been updated;
- c) the port definition, the test-setups and their corresponding limits as well as the operation modes are defined more precisely;

d) Annexes A to F have been added.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
69/531/FDIS	69/545/RVD

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

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

A list of all parts of 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 document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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