

ELEKTRIAUTODE JUHTIVUSLIK LAADIMISSÜSTEEM.
OSA 21-2: ELEKTRISÕIDUKITE NÕUDED
JUHTIVUSLIKULE ÜHENDUSELE
VAHELDUV-/ALALISVOOLUTOITEGA - EMC NÕUDED
ELEKTRISÕIDUKITE VÄLISTELE
LAADIMISSÜSTEEMIDELE

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

<p>See Eesti standard EVS-EN IEC 61851-21-2:2021 sisaldab Euroopa standardi EN IEC 61851-21-2:2021 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.04.2021.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>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.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 30.04.2021.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
--	---

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 33.100.10, 43.120

<p>Standardite ja standardilaadsete dokumentide reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele</p> <p>Eesti standardid ja standardilaadsed dokumendid on Eesti Standardimis- ja Akrediteerimiskeskuse intellektuaalomand ning neid kasutatakse litsentsi alusel dokumentide kasutuslepingu tingimuste kohaselt.</p> <p>Ilma Eesti Standardimis- ja Akrediteerimiskeskuse eelneva kirjaliku loata on keelatud standardite ja standardilaadsete dokumentide täielik või osaline reprodutseerimine, levitamine, muutmine või kasutamine mis tahes kujul ja viisil - sealhulgas kopeerimise, skaneerimise või jagamise teel digiplatvormidel (k.a masinõppe ja tehisintellekti rakendustes). Loata kasutamine väljaspool litsentsi tingimusi käsitletakse õigusrikkumisena.</p> <p>Kui Teil on küsimusi standardite ja standardilaadsete dokumentide autoriõiguse kaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Veebileht www.evs.ee; telefon +372 6055050; e-post info@evs.ee</p> <p>The right to reproduce and distribute standards and standard-like documents belongs to the Estonian Centre for Standardisation and Accreditation</p> <p>Estonian standards and standard-like documents are the intellectual property of the Estonian Centre for Standardisation and Accreditation and are made available under license in accordance with the terms and conditions of the document use agreement.</p> <p>Without the prior written permission of the Estonian Centre for Standardisation and Accreditation, the full or partial reproduction, distribution, modification, or use of standards and standard-like documents in any form or by any means - including photocopying, scanning, storing, or sharing via digital platforms (incl. in machine learning and artificial intelligence applications) - is strictly prohibited. Any unauthorized use beyond the scope of the granted license is prohibited and may result in legal action.</p> <p>If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation: Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee</p>
--

EUROPEAN STANDARD

EN IEC 61851-21-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2021

ICS 33.100.10; 43.120

Supersedes EN 61851-21:2002 (partially)

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)

This European Standard was approved by CENELEC on 2018-05-23. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

Endorsement notice

The text of the International Standard IEC 61851-21-2:2018 was approved by CENELEC as a European Standard without any modification.

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)

INTERNATIONAL STANDARD

**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**



THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2017 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigenda or an amendment might have been published.

IEC Catalogue - webstore.iec.ch/catalogue

The stand-alone application for consulting the entire bibliographical information on IEC International Standards, Technical Specifications, Technical Reports and other documents. Available for PC, Mac OS, Android Tablets and iPad.

IEC publications search - www.iec.ch/searchpub

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee,...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and also once a month by email.

Electropedia - www.electropedia.org

The world's leading online dictionary of electronic and electrical terms containing 20 000 terms and definitions in English and French, with equivalent terms in 16 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

IEC Glossary - std.iec.ch/glossary

65 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: csc@iec.ch.

generated by EVS



IEC 61851-21-2

Edition 1.0 2018-04

INTERNATIONAL STANDARD

**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**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.100.10; 43.120

ISBN 978-2-8322-5123-2

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	5
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	9
4 Test plan	11
4.1 General.....	11
4.2 Configuration of EUT	11
4.3 Termination of the EUT during testing	12
4.4 Operating and test conditions	12
4.4.1 General	12
4.4.2 Immunity.....	12
4.4.3 Emissions.....	12
4.4.4 Environmental conditions/limitations	13
5 Immunity requirements	13
5.1 General.....	13
5.2 Performance criteria	22
5.2.1 General	22
5.2.2 Performance criteria A.....	22
5.2.3 Performance criteria B.....	22
5.2.4 Performance criteria C.....	22
6 Emission requirements	23
6.1 General.....	23
6.2 Limits and test conditions for disturbances in the low frequency (LF) range	23
6.2.1 Overview	23
6.2.2 Harmonic currents	23
6.2.3 Voltage fluctuations and flicker	23
6.3 Limits and test conditions for disturbances in the radio frequency (RF) range	23
6.3.1 Overview	23
6.3.2 Power input port (150 kHz to 30 MHz)	24
6.3.3 CPT port (150 kHz to 30 MHz).....	26
6.3.4 Wired network port or signal/control port (150 kHz to 30 MHz).....	27
6.3.5 Enclosure port (above 30 MHz).....	29
7 Test results and test report.....	31
Annex A (normative) Example test setups	32
Annex B (informative) Radiated disturbance test for keyless entry	35
B.1 General.....	35
B.2 Test setup.....	35
B.3 Test method.....	35
B.4 Limits for radiated disturbances keyless entry (2 kHz to 185 kHz)	36
Annex C (normative) Termination of ports	37
C.1 General.....	37
C.2 Termination of communication lines – Impedance stabilization networks (ISN).....	37
C.2.1 General	37

C.2.2	Symmetric communication lines (e.g. CAN)	37
C.2.3	Coupling devices for PLC on power lines	39
C.2.4	PLC (technology) on control pilot	40
C.3	Coupling and termination devices for other communication and signalling lines	41
Annex D (normative)	Voltage transient disturbances from DC charging equipment	42
Annex E (normative)	Voltage surge test setup for DC charging EUT	44
Annex F (informative)	Transient immunity test for DC charging EUT	46
Bibliography	47
Figure 1	– Examples of ports of off- board charging equipment	10
Figure A.1	– Example test setup for floor standing equipment for radiated and conducted emission and immunity	33
Figure A.2	– Example test setup for table top and wall mounted equipment for emission and immunity	34
Figure B.1	– Example of a test setup for measurement of radiated disturbances to keyless entry (layout and spacing for the loop sensor)	36
Figure C.1	– Example of an impedance stabilization network for symmetric communication lines	38
Figure C.2	– Example of a circuit for emission tests of PLC on AC or DC power lines	39
Figure C.3	– Example of a circuit for immunity tests of PLC on AC or DC power lines	39
Figure C.4	– Example of a circuit for emission tests of PLC on control pilot line	40
Figure C.5	– Example of a circuit for immunity tests of PLC on control pilot line	41
Figure C.6	– Example of a termination circuit for testing of system A	41
Figure D.1	– Voltage transient of DC charging EUT	42
Figure D.2	– Voltage transient measurement equipment	43
Figure E.1	– Example of transient test setup	45
Table 1	– AC charging immunity requirements – Environments other than residential	14
Table 2	– AC charging immunity requirements – Residential environments	16
Table 3	– DC charging immunity requirements – Environments other than residential	18
Table 4	– DC charging immunity requirements – Residential environments	20
Table 5	– References for evaluation of low frequency (LF) phenomena	23
Table 6	– References for evaluation of disturbances appearing in the radio frequency (RF) range	24
Table 7	– Disturbance voltage limits for class A equipment for AC power input port	25
Table 8	– Disturbance voltage limits for class B equipment for AC power input port	25
Table 9	– Disturbance voltage limits for DC power input port	26
Table 10	– Disturbance voltage limits for class A equipment for AC CPT port	26
Table 11	– Disturbance voltage limits for class B equipment for AC CPT port	26
Table 12	– Disturbance voltage limits for DC CPT port	27
Table 13	– Requirements for asymmetric mode conducted emissions from Class A equipment	28
Table 14	– Requirements for asymmetric mode conducted emissions from Class B equipment	29
Table 15	– Required highest frequency for radiated measurement	29

Table 16 – Requirements for radiated emissions at frequencies up to 1 GHz for Class A equipment	30
Table 17 – Requirements for radiated emissions at frequencies above 1 GHz for Class A equipment	30
Table 18 – Requirements for radiated emissions at frequencies up to 1 GHz for Class B equipment	31
Table 19 – Requirements for radiated emissions at frequencies above 1 GHz for Class B equipment	31
Table B.1 – Limit values of radiated disturbances (2 kHz to 185 kHz)	36
Table C.1 – Termination of ports	37
Table D.1 – Voltage transient limit of EUT	42
Table E.1 – Maximum voltage to be measured on the CPT	44

This document is a preview generated by EVS

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

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

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

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

A bilingual version of this publication may be issued at a later date.

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

1 Scope

This part of IEC 61851 defines the EMC requirements for any off-board components or equipment of such systems used to supply or charge electric vehicles with electric power by conductive power transfer (CPT), with a rated input voltage, according to IEC 60038:2009, up to 1 000 V AC or 1 500 V DC and an output voltage up to 1 000 V AC or 1 500 V DC.

This document covers off-board charging equipment for mode 1, mode 2, mode 3 and mode 4 charging as defined in IEC 61851-1:2017.

Cables where there is no electronics or no electric/electronic switching are considered as passive (benign) and are deemed to comply with the emission and immunity requirements of this document without any need for testing.

This document does not apply to any on-board components or equipment of charging or power supply systems being part of the vehicles. The EMC requirements for such equipment are covered by IEC 61851-21-1: 2017.

Compliance with the emission and immunity requirements of this document is verified where it can be demonstrated that the equipment under test (EUT) meets the respective limits, during type tests in the measuring arrangement of this document.

Requirements for electric vehicle wireless power transfer (WPT) systems are covered in IEC 61980 (all parts).

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 61851-1:2017, *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*

IEC 60038:2009, *IEC standard voltages*

IEC 62053-21:2003, *Electricity metering equipment (a.c.) – Particular requirements – Part 21: Static meters for active energy (classes 1 and 2)*

IEC 61000-3-2:2014, *Electromagnetic compatibility (EMC) – Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase)*

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 connexion*

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*

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*

IEC 61000-4-2:2008, *Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test*

IEC 61000-4-3:2006, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*
IEC 61000-4-3:2006/AMD1:2007
IEC 61000-4-3:2006/AMD2:2010

IEC 61000-4-4:2012, *Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test*

IEC 61000-4-5:2014, *Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test*
IEC 61000-4-5:2014/AMD1:2017

IEC 61000-4-6:2013, *Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields*

IEC 61000-4-8:2009, *Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test*

IEC 61000-4-11:2004, *Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests*
IEC 61000-4-11:2004/AMD1:2017

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*
IEC 61000-4-34:2005/AMD1:2009

IEC 61000-6-1:2016, *Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity standard for residential, commercial and light-industrial environments*

IEC 61000-6-2:2016, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity standard for industrial environments*

IEC 61000-6-3:2006, *Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments*
IEC 61000-6-3:2006/AMD1:2010

IEC 61000-6-4:2006, *Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments*
IEC 61000-6-4:2006/AMD1:2010

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*

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*

CISPR 16-1-4:2010/AMD1:2012

CISPR 16-1-4:2010/AMD2:2017

CISPR 25:2008, *Vehicles, boats and internal combustion engines – Radio disturbance characteristics – Limits and methods of measurement for the protection of on-board receivers*¹

CISPR 32:2015, *Electromagnetic compatibility of multimedia equipment – Emission requirements*

MIL-STD-461F:2007, *Department of Defense interface standard requirements for the control of electromagnetic interference characteristics of subsystems and equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61851-1 and the following 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>

3.1

associated equipment

AE

equipment needed to exercise and/or monitor the operation of the EUT

3.2

port

particular interface of the specified apparatus with external electromagnetic environment

Note 1 to entry: See Figure 1.

¹ 3rd edition (2008). This 3rd edition has been replaced in 2016 by a 4th edition CISPR 25:2016, Vehicles, boats and internal combustion engines - Radio disturbance characteristics - Limits and methods of measurement for the protection of on-board receivers.