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Electromagnetic compatibility (EMC) - Part 4-31: Testing and measurement techniques - AC mains ports broadband conducted disturbance immunity test

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 06/17

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EUROPEAN STANDARD

EN 61000-4-31

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2017

ICS 33.100.20

English Version

Electromagnetic compatibility (EMC) -
Part 4-31: Testing and measurement techniques - AC mains
ports broadband conducted disturbance immunity test
(IEC 61000-4-31:2016)

Compatibilité électromagnétique (CEM) -
Partie 4-31: Techniques d'essai et de mesure - Essai
d'immunité aux perturbations conduites à large bande sur
les accès d'alimentation secteur en courant alternative
(IEC 61000-4-31:2016)

Elektromagnetische Verträglichkeit (EMV) -
Teil 4-31: Prüf- und Messverfahren - Prüfung der
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Störgrößen an Wechselstrom-Netzanschlüssen
(IEC 61000-4-31:2016)

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

EN 61000-4-31:2017**European foreword**

The text of document 77B/758/FDIS, future edition 1 of IEC 61000-4-31, prepared by SC 77B "High frequency phenomena" of IEC/TC 77 "Electromagnetic compatibility" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61000-4-31:2017.

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) 2017-08-24
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CISPR 16-1-2 NOTE Harmonized as EN 55016-1-2.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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 60050-161	-	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
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



INTERNATIONAL STANDARD

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BASIC EMC PUBLICATION
PUBLICATION FONDAMENTALE EN CEM

**Electromagnetic compatibility (EMC) –
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perturbations conduites à large bande sur les accès d'alimentation secteur en
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BASIC EMC PUBLICATION
PUBLICATION FONDAMENTALE EN CEM

**Electromagnetic compatibility (EMC) –
Part 4-31: Testing and measurement techniques – AC mains ports broadband
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**Compatibilité électromagnétique (CEM) –
Partie 4-31: Techniques d'essai et de mesure – Essai d'immunité aux
perturbations conduites à large bande sur les accès d'alimentation secteur en
courant alternatif**

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope and object.....	8
2 Normative references.....	8
3 Terms and definitions	8
4 General.....	10
5 Test levels.....	11
6 Test equipment and level setting procedures.....	13
6.1 Test generator	13
6.2 Coupling and decoupling devices.....	14
6.2.1 General	14
6.2.2 CDND for the port under test.....	15
6.2.3 Coupling/decoupling networks (CDNs) for cables that are not under test	15
6.3 Verification of the test systems	17
6.3.1 General	17
6.3.2 Verification procedure of test generator flatness	17
6.3.3 Verification procedure of the insertion loss of the CDND using transformer jigs.....	18
6.3.4 Insertion loss of the injection coupling system	20
6.4 Test level setting procedure	21
6.4.1 General	21
6.4.2 Setting of the output level at the EUT port of the CDND	21
7 Test set-up and injection methods.....	22
7.1 Test set-up.....	22
7.2 EUT comprised of a single unit.....	22
7.3 EUT comprised of several units	23
7.4 CDN and CDND termination application.....	25
8 Test procedure	26
9 Evaluation of the test results.....	27
10 Test report.....	27
Annex A (informative) Measurement uncertainty of the power spectral density test level.....	29
A.1 General.....	29
A.2 Uncertainty budgets for test methods.....	29
A.2.1 General symbols	29
A.2.2 Definition of the measurand.....	29
A.2.3 MU contributors of the measurand	29
A.2.4 Input quantities and calculation examples for expanded uncertainty	30
A.3 Expression of the calculated measurement uncertainty and its application.....	31
Annex B (informative) Rationale for the selection of the preferred broadband source – Information on test signal generation.....	33
B.1 General.....	33
B.2 Principles of band-limited broadband signal generation	33
B.2.1 General	33
B.2.2 (True) random noise generation.....	33

B.2.3	Pseudo-random noise sequence.....	34
B.2.4	Impulse.....	38
B.2.5	OFDM scheme.....	40
B.3	Selection of the preferred broadband source.....	42
	Bibliography.....	43
Figure 1	– Immunity test to broadband conducted disturbances.....	11
Figure 2	– Example of voltage spectrum of a broadband test signal measured with a 120 kHz resolution bandwidth.....	13
Figure 3	– Principle of the test generator.....	14
Figure 4	– Example of simplified diagram for the circuit of CDND.....	15
Figure 5	– Example of coupling and decoupling network for power ports other than AC mains.....	16
Figure 6	– Test set-up regarding test generator flatness and typical test signal.....	18
Figure 7	– Typical circuit diagram of the transformer jig showing 50 Ω side and 100 Ω side of the transformer and 2 pcs 0,1 μ F coupling capacitors.....	18
Figure 8	– Transformer jig specifications.....	20
Figure 9	– Example of the set-up geometry to verify the insertion loss of the injection coupling system.....	20
Figure 10	– Set-up for the evaluation of the total insertion loss of the injection coupling system.....	21
Figure 11	– Set-up for level setting.....	22
Figure 12	– Example of test set-up for an EUT comprised of a single unit (top view).....	23
Figure 13	– Example of a test set-up for an EUT comprised of several units (top view).....	24
Figure 14	– Immunity test to a 2-port EUT (when only CDNDs can be used).....	26
Figure A.1	– Example of influences upon the power spectral density test level using a CDND.....	30
Figure B.1	– White noise source.....	34
Figure B.2	– Principle of band-limited broadband signal generation with an arbitrary waveform generator.....	35
Figure B.3	– Signal spectrum of a band-limited pseudo-random noise signal (measured with a 120 kHz resolution bandwidth).....	36
Figure B.4	– Extract of the band-limited pseudo noise signal in time domain (measured with an oscilloscope).....	37
Figure B.5	– Signal spectrum of the band-limited pseudo noise signal without an anti-alias filter.....	37
Figure B.6	– Extract of the signal spectrum of a band-limited pseudo noise signal (measured with a 200 Hz resolution bandwidth).....	38
Figure B.7	– Signal spectrum of a band-limited impulse signal (measured with a 120 kHz resolution bandwidth).....	39
Figure B.8	– Extract of the band-limited impulse signal in time domain (measured with an oscilloscope).....	39
Figure B.9	– Extract of the signal spectrum of a band-limited impulse signal (measured with a 200 Hz resolution bandwidth).....	40
Figure B.10	– Signal spectrum of an OFDM signal (measured with a 120 kHz resolution bandwidth).....	41
Figure B.11	– Extract of the signal spectrum of an OFDM signal (measured with a 200 Hz resolution bandwidth).....	41

Figure B.12 – Signal spectrum of an OFDM signal with an amplitude step at 30 MHz (measured with a 120 kHz resolution bandwidth)	42
Table 1 – Test levels.....	12
Table 2 – Characteristics of the test generator.....	14
Table 3 – Specification of the main parameters of the CDND for current ≤ 16 A.....	15
Table 4 – Usage of CDNs.....	16
Table A.1 – CDND level setting process	31
Table B.1 – Comparison of white noise signal generation methods.....	42

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMAGNETIC COMPATIBILITY (EMC) –**Part 4-31: Testing and measurement techniques –
AC mains ports broadband conducted disturbance immunity test**

FOREWORD

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International Standard IEC 61000-4-31 has been prepared by subcommittee 77B: High-frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

This standard forms Part 4-31 of the IEC 61000 series. It has the status of a basic EMC publication in accordance with IEC Guide 107.

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

FDIS	Report on voting
77B/758/FDIS	77B/760/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 61000 series, published under the general title *Electromagnetic compatibility (EMC)*, 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 website 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

IEC 61000 is published in separate parts according to the following structure:

Part 1: General

General considerations (introduction, fundamental principles)
Definitions, terminology

Part 2: Environment

Description of the environment
Classification of the environment
Compatibility levels

Part 3: Limits

Emission limits
Immunity limits (in so far as they do not fall under the responsibility of the product committees)

Part 4: Testing and measurement techniques

Measurement techniques
Testing techniques

Part 5: Installation and mitigation guidelines

Installation guidelines
Mitigation methods and devices

Part 6: Generic standards

Part 9: Miscellaneous

Each part is further subdivided into several parts, published either as International Standards or as Technical Specifications or Technical Reports, some of which have already been published as sections. Others will be published with the part number followed by a dash and a second number identifying the subdivision (example: IEC 61000-6-1).

This part is an International Standard which gives immunity requirements and test procedure related to conducted broadband disturbances.

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-31: Testing and measurement techniques – AC mains ports broadband conducted disturbance immunity test

1 Scope and object

This part of IEC 61000 relates to the conducted immunity of electrical and electronic equipment to electromagnetic disturbances coming from intended and/or unintended broadband signal sources in the frequency range 150 kHz up to 80 MHz.

The object of this standard is to establish a common reference to evaluate the immunity of electrical and electronic equipment when subjected to conducted disturbances caused by intended and/or unintended broadband signal sources on AC mains ports. The test method documented in this standard describes a consistent method to assess the immunity of an equipment or system against a defined phenomenon.

Equipment not having at least one AC mains port is excluded. The power ports not intended to be connected to AC mains distribution networks are not considered as “AC mains ports” and therefore are excluded.

This standard is applicable only to single phase equipment having rated input current ≤ 16 A; the application of the broadband disturbance to multiple phase equipment and/or equipment with rated input current > 16 A is under consideration.

NOTE As described in IEC Guide 107, this standard is a basic EMC publication for use by product committees of the IEC. As also stated in Guide 107, the IEC product committees are responsible for determining whether this immunity test standard is to be applied or not, and if applied, they are responsible for determining the appropriate test levels and performance criteria. TC 77 and its sub-committees are prepared to co-operate with product committees in the evaluation of the value of particular immunity tests for their products.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-161, *International Electrotechnical Vocabulary (IEV) – Part 161: Electromagnetic compatibility (available at www.electropedia.org)*

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

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