SVENSK STANDARD SS-EN IEC 61000-6-2

Fastställd	Utgåva	Sida	Ansvarig kommitté
2019-04-10	4	1 (1+21)	SEK TK EMC

Elektromagnetisk kompatibilitet (EMC) – Del 6-2: Generella fordringar – Immunitet hos utrustning i industrimiljö

Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity standard for industrial environments

Som svensk standard gäller europastandarden EN IEC 61000-6-2:2019. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 61000-6-2:2019.

Nationellt förord

Europastandarden EN IEC 61000-6-2:2019

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61000-6-2, Third edition, 2016 - Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61000-6-2, utgåva 3, 2005 och SS-EN 61000-6-2 C1, utgåva 1, 2005, gäller ej fr o m 2022-02-22.

ICS 33.100.20

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Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61000-6-2

February 2019

ICS 33.100.20

Supersedes EN 61000-6-2:2005

English Version

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

Compatibilité électromagnétique (CEM) - Partie 6-2: Normes génériques - Norme d'immunité pour les environnements industriels (IEC 61000-6-2:2016)

Elektromagnetische Verträglichkeit - Teil 6-2: Fachgrundnormen - Störfestigkeit für Industriebereiche (IEC 61000-6-2:2016)

This European Standard was approved by CENELEC on 2016-09-14. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, 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

Ref. No. EN IEC 61000-6-2:2019 E

SEK Svensk Elstandard

SS-EN IEC 61000-6-2, utg 4:2019

European foreword

The text of document 77/521/FDIS, future edition 3 of IEC 61000-6-2, prepared by IEC/TC 77 "Electromagnetic compatibility" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61000-6-2:2019.

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) 2019-08-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-02-22

This document supersedes EN 61000-6-2:2005.

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, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s) see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 61000-6-2:2016 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 61000-4-12	NOTE	Harmonized as EN 61000-4-12
IEC 61000-4-13	NOTE	Harmonized as EN 61000-4-13
IEC 61000-4-16	NOTE	Harmonized as EN 61000-4-16
IEC 61000-4-18	NOTE	Harmonized as EN 61000-4-18
IEC 61000-4-19	NOTE	Harmonized as EN 61000-4-19
IEC 61000-4-29	NOTE	Harmonized as EN 61000-4-29
IEC 61000-4-31	NOTE	Harmonized as EN 61000-4-31
CISPR 11:2009	NOTE	Harmonized as EN 55011:2009 (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.

Publication	Year	Title	EN/HD	Year
IEC 60050-161	-	International Electrotechnical Vocabulary - Chapter 161: Electromagnetic compatibility	-	-
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
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
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

Publication	Year	Title	EN/HD	Year
IEC 61000-4-20	2010	Electromagnetic compatibility (EMC) - Part 4-20: Testing and measurement techniques - Emission and immunity testing in transverse electromagnetic (TEM) waveguides	EN 61000-4-20	2010
IEC 61000-4-21	2011	Electromagnetic compatibility (EMC) - Part 4-21: Testing and measurement techniques - Reverberation chamber test methods	EN 61000-4-21	2011
IEC 61000-4-22	2010	Electromagnetic compatibility (EMC) - Part 4-22: Testing and measurement techniques - Radiated emissions and immunity measurements in fully anechoic rooms (FARs)	EN 61000-4-22	2011
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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 6-2: Generic standards – Immunity standard for industrial environments

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.
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International Standard IEC 61000-6-2 has been prepared by IEC technical committee 77: Electromagnetic compatibility.

This third edition cancels and replaces the second edition published in 2005. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) improvement of the environmental description;
b) extension of the frequency range for the radio-frequency electromagnetic field test according to IEC 61000-4-3;
c) amended test levels at particular frequencies for the radio-frequency electromagnetic field test according to IEC 61000-4-3;

d) change of the repetition frequency for the fast transients immunity test according to IEC 61000-4-4;

e) introduction of requirements according to IEC 61000-4-34;

f) revision of the test levels;

g) consideration of measurement uncertainty;

h) addition of Annex A.

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

FDIS	Report on voting
77/521/FDIS	77/523/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.

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 (insofar as these limits 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).

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 6-2: Generic standards – Immunity standard for industrial environments

1 Scope

This part of IEC 61000 for EMC immunity requirements applies to electrical and electronic equipment intended for use in industrial locations, as described below. Immunity requirements in the frequency range 0 Hz to 400 GHz are covered. No tests need to be performed at frequencies where no requirements are specified.

This generic EMC immunity standard is applicable if no relevant dedicated product or product-family EMC immunity standard exists.

This standard applies to electrical and electronic equipment intended to be operated in industrial locations, as defined in 3.7, both indoor and outdoor.

This standard applies also to equipment intended to be directly connected to a DC distribution network or which is battery operated, and intended to be used in industrial locations.

This standard defines the immunity test requirements for equipment specified in the scope in relation to continuous and transient, conducted and radiated disturbances, including electrostatic discharges.

The immunity requirements have been selected to ensure an adequate level of immunity for equipment operating within industrial locations. The levels do not, however, cover extreme cases, which may occur at any location, but with an extremely low probability of occurrence. Not all disturbance phenomena have been included for testing purposes in this standard, but only those considered as relevant for the equipment covered by this standard. These test requirements represent essential electromagnetic compatibility immunity requirements. They are specified for each port considered.

NOTE 1 Information on other disturbance phenomena is given in IEC TR 61000-4-1.

NOTE 2 Safety considerations are not covered by this standard.

NOTE 3 In special cases, situations will arise where the level of disturbances may exceed the levels specified in this standard, for example where equipment is installed in proximity to industrial, scientific and medical equipment as defined in CISPR 11 or where a hand-held transmitter is used in close proximity to equipment. In these instances, special mitigation measures may have to be employed.

The industrial environment may be changed by special mitigation measures. Where such measures can be shown to produce an electromagnetic environment equivalent to the residential, commercial or light-industrial environment, then the generic standard for this environment, or the relevant product standard, may be applied.

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 – Part 161: Electromagnetic compatibility* (available at: www.electropedia.org)

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 61000-4-6:2013, *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 61000-4-20:2010, *Electromagnetic compatibility (EMC) – Part 4-20: Testing and measurement techniques – Emission and immunity testing in transverse electromagnetic (TEM) waveguides*

IEC 61000-4-21:2011, *Electromagnetic compatibility (EMC) – Part 4-21: Testing and measurement techniques – Reverberation chamber test methods*

IEC 61000-4-22:2010, *Electromagnetic compatibility (EMC) – Part 4-22: Testing and measurement techniques – Radiated emissions and immunity measurements in fully anechoic rooms (FARs)*

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 mains current more than 16 A per phase*
IEC 61000-4-34:2005/AMD1:2009