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SVENSK STANDARD SS-EN 61000-4-16

Handläggande organ	Fastställd	Utgåva	Sida	Ingår i
Svenska Elektriska Kommissionen, SEK	1998-04-24	1	1 (1+25)	SEK Översikt 77
				Reg 421 18 96

Elektromagnetisk kompatibilitet (EMC) – Del 4-16: Mät- och provningsmetoder – Provning av immunitet mot ledningsbundna symmetriska störningar i frekvensområdet 0 Hz till 150 kHz

Electromagnetic compatibility (EMC) –
Part 4-16: Testing and measurement techniques –
Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz

Som svensk standard gäller europastandarden EN 61000-4-16:1998. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61000-4-16:1998.

Nationellt förord

Europastandarden EN 61000-4-16:1998

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61000-4-16, First edition, 1998 - Electromagnetic compatibility (EMC) - Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz**

utarbetad inom International Electrotechnical Commission, IEC.

ICS 33.100

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Descriptors: Electromagnetic compatibility, electric equipment, electronic equipment, radio disturbances, direct current, tests, measurements

English version

Electromagnetic compatibility (EMC)
Part 4-16: Testing and measurement techniques
Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz
(IEC 61000-4-16:1998)

Compatibilité électromagnétique (CEM)
Partie 4-16: Techniques d'essai et de mesure - Essai d'immunité aux perturbations conduites en mode commun dans la gamme de fréquences de 0 Hz à 150 kHz
(CEI 61000-4-16:1998)

Elektromagnetische Verträglichkeit (EMV)
Teil 4-16: Prüf- und Meßverfahren
Prüfung der Störfestigkeit gegen leitungsgeführte, asymetrische Störgrößen im Frequenzbereich von 0 Hz bis 150 kHz
(IEC 61000-4-16:1998)

This European Standard was approved by CENELEC on 1998-01-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

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Foreword

The text of document 77A/201/FDIS, future edition 1 of IEC 61000-4-16, prepared by SC 77A, Low-frequency phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-4-16 on 1998-01-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1998-10-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1998-10-01

Annexes designated "normative" are part of the body of the standard.
Annexes designated "informative" are given for information only.
In this standard, annex ZA is normative and annexes A, B and C are informative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61000-4-16:1998 was approved by CENELEC as a European Standard without any modification.

In the official version, for annex C, Bibliography, the following note has to be added for the standard indicated:

IEC 61000-4-6 NOTE: Harmonized as EN 61000-4-6:1996 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 60050(161)	1990	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 60068-1	1988	Environmental testing Part 1: General and guidance	EN 60068-1[1)]	1994

1) EN 60068-1:1988 includes the corrigendum October 1988 and A1:1992 to IEC 60068-1.

CONTENTS

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-16: Testing and measurement techniques – Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz

1 Scope

This part of IEC 61000 relates to the immunity requirements and test methods for electrical and electronic equipment to conducted, common mode disturbances in the range d.c. to 150 kHz.

The object of this standard is to establish a common and reproducible basis for testing electrical and electronic equipment with the application of common mode disturbances to power supply, control, signal and communication ports.

This standard defines

- test voltage and current waveform;
- range of test levels;
- test equipment;
- test set-up;
- test procedures.

For some types of ports, for example ports intended to be used with highly balanced lines, additional test provisions may be established by product committee specifications.

The test is intended to demonstrate the immunity of electrical and electronic equipment when subjected to conducted, common mode disturbances such as those originating from power line currents and return leakage currents in the earthing/grounding system.

The disturbances produced by 400 Hz mains systems are not included in the scope of this standard.

Actual interference due to these disturbance phenomena is relatively rare, except in industrial plants. Product Committees should therefore consider whether there is a justification for applying this standard in their Product/Product Family standards (see also clause 3).

This test is not relevant for equipment ports intended to be connected to short cables, having a length less than 20 m or less.

The immunity to harmonics and interharmonics, including mains signalling, on a.c. power ports (in differential mode) is not included in the scope of this standard and is covered by IEC 61000-4-13.

The immunity to conducted disturbances generated by intentional radio-frequency transmitters is not included in the scope of this standard and is covered by IEC 61000-4-6.

Some ITU-T Recommendations, e.g. K17, K20 and K21, establish similar methods for testing the resistibility of equipment; however, they are dedicated to telecommunication ports and deal with power induction at frequency of the a.c. mains or electric railways.

Product Committees are advised to consider the Recommendations above, as far as applicable, in preparing their product standards.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61000. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 61000 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050(161): 1990, *International Electrotechnical Vocabulary (IEV) – Chapter 161: Electromagnetic compatibility*

IEC 60068-1: 1988, *Environmental testing – Part 1: General and guidance*