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ELEKTROMAGNETILINE ÜHILDUVUS. OSA 5-7: PAIGALDUS- JA LEEVENDUSJUHENDID. ÜMBRISTEGA TAGATUD ELEKTROMAGNETILISTE HÄIRINGUTE VASTANE KAITSEASTE (EM-KOOD)

Electromagnetic compatibility (EMC) - Part 5-7: Installation and mitigation guidelines; Degrees of protection by enclosures against electromagnetic disturbances (EM code)



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

6				
See Eesti standard EVS-EN 61000-5-7:2002 sisaldab Euroopa standardi EN 61000-5-7:2001 ingliskeelset teksti.	This Estonian standard EVS-EN 61000-5-7:2002 consists of the English text of the European standard EN 61000-5-7:2001.			
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.			
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Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.			

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EUROPEAN STANDARD

EN 61000-5-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2001

ICS 33.100.01

English version

Electromagnetic compatibility (EMC) Part 5-7: Installation and mitigation guidelines -Degrees of protection by enclosures against electromagnetic disturbances (EM code)

(IEC 61000-5-7:2001)

Compatibilité électromagnétique (CEM) Partie 5-7: Guide d'installation et d'atténuation -Degrés de protection procurés par les enveloppes contre les perturbations électromagnétiques (Code EM) (CEI 61000-5-7:2001) Elektromagnetische Verträglichkeit (EMV) Teil 5-7: Installationsrichtlinien und Abhilfemaßnahmen -Schutzarten durch Gehäuse gegen elektromagnetische Störgrößen (EM-Code) (IEC 61000-5-7:2001)

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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 77C/96/FDIS, future edition 1 of IEC 61000-5-7, prepared by SC 77C, High power transient phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-5-7 on 2001-01-01.

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) 2001-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn
 (dow) 2004-01-01

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 to D are informative. Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61000-5-7:2001 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 60297-1	NOTE: Harmonized as HD 493.1 S1:1988 (not modified).
IEC 60297-2	NOTE: Harmonized as HD 493.2 S1:1988 (not modified).
IEC 60297-3	NOTE: Harmonized as HD 493.3 S1:1988 (not modified).
IEC 60297-4	NOTE: Harmonized as EN 60297-4:1995 (not modified).
IEC 60917-1	NOTE: Harmonized as EN 60917-1:1998 (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.

<u>Year</u>	Title	<u>EN/HD</u>	<u>Year</u>
1)	International Electrotechnical Vocabulary (IEV) - Chapter 161: Electromagnetic compatibility	-	-
1)	Chapter 826: Electrical installations of buildings	HD 384.2 S2	2001 ²⁾
1)	Environmental testing Part 1: General and guidance	EN 60068-1	1994 ²⁾
1)	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993 ²⁾
1)	Electromagnetic compatibility (EMC) Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test	EN 61000-4-3	1996 ²⁾
1)	Part 4-23: Testing and measurement techniques - Test methods for protective devices for HEMP and other radiated disturbances	EN 61000-4-23	2000 ²⁾
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¹⁾ undated reference.

²⁾ valid edition at date of issue.

CONTENTS

	Page
FOREWORD	5
INTRODUCTION	7
Clause	

1	Scop	e	9			
2	Normative references1					
3	General					
4	Defin	itions	.13			
5	Shiel	ding performance designations	. 19			
6	Gene	ral test approach	.21			
7	Testii	ng requirements	23			
	7.1	Climatic conditions	.23			
	7.2	Test samples	. 25			
	7.3	Analysis requirements	. 25			
	7.4	Test frequency selection	. 25			
	7.5	Test matrix definition	. 27			
	7.6	Test equipment requirements	. 27			
	7.7	Safety requirements	.27			
	7.8	Test plan requirements	. 29			
	7.9	Test performance	29			
	7.10	Test conclusions	.41			
	7.11	Test documentation	.41			
8	Class	ification	.41			
A		(informative). Come include for extention of another statement in				
orof	iex A (tectior	Informative) Some issues for selection of enclosure electromagnetic	.43			
Ann	iex B ((informative) Summary of responsibilities of relevant end-product technical				
con	mitte	es	.45			
Ann	iex C	(informative) Other test methods – TEM cells and striplines	47			
Ann	iex D	(informative) Antennas	.49			
Bibl	iograp	ohy	.51			
Figu	uro 1	Shielding offectiveness test est up for low frequency range	22			
Figu	uro 2	- Shielding effectiveness test set up for low-frequency range – herdwised				
(mu	ltiple -	polarisations are to be used as in figure 1)	.35			
Figu	ure 3 -	- Example noise measurement configuration for low-frequency range testing	.37			
Fia	ure 4 -	- Example calibration test set-up for low-frequency range testing	. 39			
Tab	le 1 –	EM shielding code designators	. 19			
Tab	le 2 –	Enclosure shielding effectiveness typical test equipment requirements	.27			

INTRODUCTION

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

Part 1: General

General consideration (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 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, 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 completed by a second number identifying the subdivision (example: 61000-6-1).

This part of IEC 61000 gives electromagnetic shielding performance markings, and test requirements and procedures related to the electromagnetic shielding performance of empty electrical and electronics equipment enclosures.

ELECTROMAGNETIC COMPATIBILITY (EMC) -

Part 5-7: Installation and mitigation guidelines – Degrees of protection provided by enclosures against electromagnetic disturbances (EM code)

1 Scope

This part of IEC 61000 describes performance requirements, test methods and classification procedures for degrees of protection provided by empty enclosures against electromagnetic disturbances for frequencies between 10 kHz and 40 GHz. The shielding performance is to be measured prior to the installation of internal electrical and/or electronic equipment and components. This shielding protection is measured for the purpose of demonstrating that the enclosure provides adequate shielding of electromagnetic energy to support acceptable performance of the complete assembled units when tested to applicable IEC standards. However, it should be noted that satisfactory performance of an empty enclosure does not necessarily ensure that the completed units will pass all EMC performance test standards for the operating equipment (see discussion in annex A).

The purpose of this standard is to provide a repeatable means for evaluating the electromagnetic shielding performance of empty mechanical enclosures, including cabinets and subracks, and to specify a marking code to allow a manufacturer to select an enclosure with a known capability for attenuating electromagnetic fields. The requirements for immunity to various types of electromagnetic disturbances, including lightning and high-altitude electromagnetic pulse (HEMP) will need to be considered by manufacturers when determining the need for application of this standard for specific equipment and applications, and for the specific enclosure shielding requirements which are necessary as a function of frequency.

The adoption of the classification system in this standard will, whenever possible, promote uniformity in methods of describing the protection against electromagnetic stresses provided by the enclosure. This includes protection of equipment inside the enclosure from external electromagnetic stresses, as well as protection of external equipment from internally generated electromagnetic stresses.

Technical Committees responsible for enclosures may decide on the extent and manner in which the classification defined in this standard is used in their standards and to define "enclosure" as it applies to their equipment. However, the tests and performance categories must not differ from those specified in this standard. An informative guide for the details to be specified in relevant enclosure product standards is given in annex B.

52