

SLOVENSKI

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PREDSTANDARD

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**Elektromagnetna združljivost (EMC) – 4-20. del: Preskusne in merilne tehnike
– Preskušanje oddajanja in odpornosti pri prečnih elektromagnetnih (TEM)
valovih (IEC 61000-4-20:2003)**

Electromagnetic compatibility (EMC) - Part 4-20: Testing and measurement
techniques – Emission and immunity testing in transverse electromagnetic (TEM)
waveguides

ICS 33.100.10; 33.100.20

Referenčna številka
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77B/478/CDV

COMMITTEE DRAFT FOR VOTE (CDV) PROJET DE COMITÉ POUR VOTE (CDV)

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Secretary: Jacques DELABALLE Secrétaire:		
Also of interest to the following committees Intéresse également les comités suivants CISPR/A		Supersedes document Remplace le document 77B/477/MCR
Functions concerned Fonctions concernées <input type="checkbox"/> Safety Sécurité		
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Titre : Amendement 1 à la CEI 61000-4-20 édition 1

Titre : Amendment 1 to IEC 61000-4-20 edition 1

Note d'introduction

Ce CDV est diffusé comme amendement à la CEI 61000-4-20 édition 1. Il a été décidé de diffuser cet amendement en réponse aux contributions formulées par le 77B GT 10 (77B/383/DC). Les commentaires des Comités nationaux (77B/442/INF) seront traités dans une deuxième étape au cours de la révision complète de la norme.

Introductory note

This CDV is circulating as an amendment to IEC 61000-4-20 edition 1. It has been decided to circulate this amendment in response to the inputs provided by 77B WG 10 (77B/383/DC). The comments made by National committees (77B/442/INF) will be dealt with in a second step for the complete revision of the standard.

ATTENTION	ATTENTION
CDV soumis en parallèle au vote (CEI) et à l'enquête (CENELEC)	Parallel IEC CDV/CENELEC Enquiry

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FOREWORD

This amendment has been prepared by Subcommittee 77B: High frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility, in cooperation with CISPR subcommittee A: Radio interference measurements and statistical methods.

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

FDIS	Report on voting

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the maintenance result date¹⁾ indicated on the IEC web site 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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1 Scope and object

Add, after the list, the following note and paragraph:

NOTE Test methods are defined in this part of IEC 61000 for measuring the effects of electromagnetic radiation on equipment and the electromagnetic emissions from equipment concerned. The simulation and measurement of electromagnetic radiation is not adequately exact for quantitative determination of effects for all end-use installations. The test methods defined are structured for a primary objective of establishing adequate repeatability of results at various test facilities for qualitative analysis of effects.

This part of IEC 61000 does not intend to specify the tests to be applied to any particular apparatus or system(s). The main intention of this part is to provide a general basic reference for all interested product committees of the IEC. For radiated emissions testing, product committees shall select emission limits and test methods in consultation with CISPR. For radiated immunity testing, product committees remain responsible for the appropriate choice of immunity tests and immunity test limits to be applied to equipment within their scope. This part of IEC 61000 describes test methods that are separate from those of IEC 61000-4-3 and CISPR 16-2. These separate, other test methods may be used when so specified by product committees, in consultation with CISPR and TC 77.

2 Normative references

Delete the following reference

¹⁾ The National Committees are requested to note that for this publication the maintenance result date is 200x.

IEC 61000-4-3, *Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test*. Basic EMC publication

Replace the outdated references to CISPR 16-1 and CISPR 16-2 with the following:

CISPR 16-1-1, Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-1: Radio disturbance and immunity measuring apparatus

CISPR 16-1-4, Specification for radio disturbance and immunity measuring apparatus and methods – Part 1-4: Ancillary equipment – Radiated disturbances

CISPR 16-2-3, Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements

CISPR 16-2-4, Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-4: Methods of measurement of disturbances and immunity – Immunity measurements

CISPR 16-4-1, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-1: Uncertainties, statistics and limit modelling – Uncertainties in standardized EMC tests

CISPR 16-4-2, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-1: Uncertainties, statistics and limit modelling – Uncertainty in EMC measurements

CISPR 16-4-3, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-3: Uncertainties, statistics and limit modelling – Statistical considerations in the determination of EMC compliance of mass-produced products

CISPR 16-4-4, Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-4: Uncertainties, statistics and limit modelling – Statistics of complaints and a model for the calculation of limits

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B.1 Introduction

Replace this subclause by the following:

This annex describes immunity testing in TEM waveguides. The intent is to enable the testing of electrical and electronic equipment for immunity to an incident electromagnetic field.

The test is performed with a specific arrangement of the EUT. This requires that the test set-up and the test limits or levels are defined by specific product or product family standards.

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B.2.2 Calibration of field

Replace the paragraph following note 1 by the following:

The use of a transmission line avoids perturbation due to semi-anechoic chamber ground-reflected fields; thus, uniform fields may be established in the vicinity of the inner and outer conductors (in the normal direction only).

Replace the penultimate paragraph by the following:

Alternatively, an equivalent procedure is to establish a constant primary component electric field strength in the range of 3 V/m to 10 V/m and record the forward power delivered to the input port. The principles outlined in a), d), e), f) and g) shall be respected. This method is known as "constant field strength" method.

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B.2.4 Correlation to IEC 61000-4-3

Delete this entire subclause, and re-number subclause B.2.5 to B.2.4.

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B.4 Test procedures

Add, before note 1, the following paragraph:

The frequency step size shall be 1 % of the previous frequency. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised and to respond, but shall in no case be less than 0,5 s.

Delete the following note, and delete note number from note 1:

NOTE 2 Frequency steps and dwell time should be chosen according to IEC 61000-4-3.

Add, as last paragraph of this subclause, the following paragraph:

The frequency ranges to be considered are swept with the signal 80 % amplitude modulated with a 1 kHz sine wave, pausing to adjust the RF signal level or to switch oscillators as necessary.