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## **Elektromagnetisk kompatibilitet (EMC) – Del 2-10: Miljöbetingelser – Beskrivning av ledningsbunden nukleär elektromagnetisk puls (HEMP)**

*Electromagnetic compatibility (EMC) –*

*Part 2-10: Environment –*

*Description of HEMP environment –*

*Conducted disturbance*

Som svensk standard gäller europastandarden EN 61000-2-10:1999. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61000-2-10:1999.

### **Nationellt förord**

Europastandarden EN 61000-2-10:1999

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61000-2-10, First edition, 1998 - Electromagnetic compatibility (EMC) - Part 2-10: Environment - Description of HEMP environment - Conducted disturbance**

utarbetad inom International Electrotechnical Commission, IEC.

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ICS 33.100.01

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Descriptors: Electromagnetic compatibility, environments, pulses, electromagnetism, nuclear radiation, explosions, altitude, electromagnetic waves, radio disturbances

English version

**Electromagnetic compatibility (EMC)**  
**Part 2-10: Environment - Description of HEMP environment**  
**Conducted disturbance**  
**(IEC 61000-2-10:1998)**

Compatibilité électromagnétique (CEM)  
Partie 2-10: Environnement  
Description de l'environnement  
IEMN-HA - Perturbations conduites  
(CEI 61000-2-10:1998)

Elektromagnetische Verträglichkeit  
(EMV)  
Teil 2-10: Umgebungsbedingungen  
Beschreibung der HEMP-Umgebung  
Leitungsgeführte Störgrößen  
(IEC 61000-2-10:1998)

This European Standard was approved by CENELEC on 1999-01-01. 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**

## Foreword

The text of document 77C/61/FDIS, future edition 1 of IEC 61000-2-10, prepared by SC 77C, Immunity to high altitude nuclear electromagnetic pulse (HEMP), of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-2-10 on 1999-01-01.

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) 1999-10-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2001-10-01

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, C and D are informative.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61000-2-10:1998 was approved by CENELEC as a European Standard without any modification.

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**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>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050(161)	1990	International Electrotechnical Vocabulary (IEV) Chapter 161: Electromagnetic compatibility	-	-
IEC 61000-2-9	1996	Electromagnetic compatibility (EMC) Part 2: Environment Section 9: Description of HEMP environment - Radiated disturbance - Basic EMC publication	EN 61000-2-9	1996
IEC 61000-4-24	1997	Part 4: Testing and measurement techniques Section 24: Test methods for protective devices for HEMP conducted disturbance Basic EMC publication	EN 61000-4-24	1997

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## **ELECTROMAGNETIC COMPATIBILITY (EMC) –**

### **Part 2-10: Environment – Description of HEMP environment – Conducted disturbance**

#### **1 Scope**

This International Standard defines the high-altitude electromagnetic pulse (HEMP) conducted environment that is one of the consequences of a high-altitude nuclear explosion.

Those dealing with this subject consider two cases:

- high-altitude nuclear explosions;
- low-altitude nuclear explosions.

For civil systems the most important case is the high-altitude nuclear explosion. In this case, the other effects of the nuclear explosion: blast, ground shock, thermal and nuclear ionizing radiation are not present at the ground level.

However, the electromagnetic pulse associated with the explosion may cause disruption of, and damage to, communication, electronic and electric power systems thereby upsetting the stability of modern society.

The object of this standard is to establish a common reference for the conducted HEMP environment in order to select realistic stresses to apply to victim equipment for evaluating their performance.

#### **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 standards 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 61000-2-9:1996, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 1: Description of HEMP environment – Radiated disturbance* – Basic EMC publication

IEC 61000-4-24:1997, *Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques – Section 24: Test methods for protective devices for HEMP conducted disturbance* – Basic EMC publication