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BSI Standards Publication

Electromagnetic compatibility (EMC)

Part 5-10: Installation and mitigation guidelines - Guidance on the protection of facilities against HEMP and IEMI

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National foreword

This Published Document is the UK implementation of IEC/TS 61000-5-10:2017.

The UK participation in its preparation was entrusted to Technical Committee GEL/210/11, EMC - Standards Committee.

A list of organizations represented on this committee can be obtained on request to its secretary.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical Specification IEC 61000-5-10 has been prepared by subcommittee 77C: High-power transient phenomena, of IEC technical committee 77: Electromagnetic compatibility.

It forms part 5-10 of IEC 61000. It has the status of a basic EMC publication in accordance with IEC Guide 107.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
77C/260/DTS	77C/262/RVDTS

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

This document 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 document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

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 (in so far as they 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 5-10: Installation and mitigation guidelines – Guidance on the protection of facilities against HEMP and IEMI

1 Scope

This part of IEC 61000 provides guidelines to protect commercial facilities from the high-power electromagnetic disturbances of high-altitude electromagnetic pulse (HEMP) and intentional electromagnetic interference (IEMI). These guidelines are developed from the entire body of IEC SC 77C publications.

This document is applicable to both existing facilities and new buildings when the customer has decided that protection of critical electronics from HEMP and IEMI is important to the function of the facility.

2 Normative references

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.

IEC TR 61000-1-3, *Electromagnetic compatibility (EMC) – Part 1-3: General – The effects of high-altitude EMP (HEMP) on civil equipment and systems*

IEC TR 61000-1-5, *Electromagnetic compatibility (EMC) – Part 1-5: General – High power electromagnetic (HPEM) effects on civil systems*

IEC 61000-2-9, *Electromagnetic compatibility (EMC) – Part 2: Environment – Section 9: Description of HEMP environment – Radiated disturbance*

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

IEC 61000-2-11, *Electromagnetic compatibility (EMC) – Part 2-11: Environment – Classification of HEMP environments*

IEC 61000-2-13, *Electromagnetic compatibility (EMC) – Part 2-13: Environment – High-power electromagnetic (HPEM) environments – Radiated and conducted*

IEC 61000-4-23:2016, *Electromagnetic compatibility (EMC) – Part 4-23: Testing and measurement techniques – Test methods for protective devices for HEMP and other radiated disturbances*

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

IEC 61000-4-25, *Electromagnetic compatibility (EMC) – Part 4-25: Testing and measurement techniques – HEMP immunity test methods for equipment and systems*