

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

(Not to be reproduced without the permission of BIS or used as an Indian Standard)

मसौदा भारतीय मानक
विद्युत चुंबकीय संगतता (ई एम सी) –
भाग 5: स्थापना और शमन दिशानिर्देश–
अनुभाग 1: सामान्य विचार

Draft Indian Standard
Electromagnetic Compatibility (EMC) –
Part 5: Installation and Mitigation Guidelines –
Section 1: General Considerations

ICS 33.100.01

©BIS 2024

©IEC 2023

LITD 09 Electromagnetic Compatibility
Sectional Committee

Last Date for Comments: 26 April 2024.

NATIONAL FOREWORD

(Formal clauses will be added later)

This Draft Indian Standard (Part 5/Section 1) which is identical with IEC 61000-5-1:2023 'Electromagnetic compatibility (EMC) - Part 5-1: Installation and mitigation guidelines - General considerations' issued by the International Electrotechnical Commission (IEC) *will be* adopted by the Bureau of Indian Standards on the recommendation of the Electromagnetic Compatibility Sectional Committee (LITD 09) and approval of the Electronics and Information Technology Division Council.

This standard (Part 5) is one of the parts of a series of standards on ‘Installation and Mitigation Guidelines’. The other parts in this series are:

Part 5-2: Installation and mitigation guidelines - Earthing and cabling

Part 5-6: Installation and mitigation guidelines - Mitigation of external EM influences

The text of IEC Standard *will be* approved as suitable for publication as an Indian Standard without deviations. Certain conventions are however not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2:2022 ‘Rules for rounding off numerical values (*Second Revision*)’. The number of significant places retained in the rounded off value should be same as that of the specified value in this standard.

SCOPE OF IEC 61000-5-1:2023

“This part of IEC 61000-5, which is a technical report, covers general considerations and guidelines on mitigation methods aimed at ensuring electromagnetic compatibility (EMC) among electrical and electronic apparatus or systems used in industrial, commercial, and residential installations. This document is intended for use by all using and installing sensitive electrical or electronic installations and systems, and equipment with high emission levels that could degrade the overall electromagnetic (EM) environment. It applies primarily to new installations, but also applies during modifications or enhancements of legacy installations.

Specific topics, such as recommendations on the design and implementation of the earthing system, including the earth electrode and the earth network, the design and implementation of bonding apparatus or systems to earth or to the earth network, the selection and installation of appropriate cables, and the design and implementation mitigation means involving shielded enclosures, high-frequency filters, isolating transformers, surge-protective devices, etc., will be addressed in other parts of IEC 61000-5. Within this document the fundamental measures will be described.

The practices presented in this document address the EMC concerns of the installation, not the safety aspects of the installation nor the efficient transportation of power within the installation. Nevertheless, these two prime objectives are taken into consideration in the technical observations

concerning EMC. These two primary objectives can be implemented concurrently for enhanced EMC of the installed sensitive apparatus or systems without conflict by applying the practices presented in this document and the relevant safety requirements. It is the responsibility of the designer and the installer to select the relevant technique most appropriate to a particular installation.”

Note: - The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details please refer to IEC 61000-5-1:2023 or kindly contact.

Head,

Electronics & IT Department

Bureau of Indian Standards

9, B.S. Zafar Marg,

New Delhi-110002

Email: hlitd@bis.gov.in, litd9@bis.gov.in

Tele: 011-23608451