

**BUREAU OF INDIAN STANDARDS**  
**DRAFT FOR COMMENTS ONLY**

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*Draft Indian Standard*

**INSULATION COORDINATION FOR EQUIPMENT WITHIN LOW-VOLTAGE  
SYSTEMS**

**Part 4: Consideration of High-Frequency Voltage Stress**

( *Second Revision* )

(ICS 29.080.30)

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High Voltage Engineering  
Sectional Committee, ETD 19

Last date for Comments: 22/12/2023

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**NATIONAL FOREWORD**

This Draft Standard which is identical with IEC 60664-4-2005 ‘Insulation coordination for equipment within low-voltage systems – Part 4: Consideration of High-Frequency Voltage Stress’ issued by the International Electrotechnical Commission (IEC) is proposed to be adopted by the Bureau of Indian Standards on the recommendation of the Electrical Installation Sectional Committee and approval of the Electrotechnical Division Council.

The text of the IEC Standard has been 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.

October 2023

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 60112:2003, Method for determining the comparative and the proof tracking indices of solid insulating materials under moist conditions	IS 2824 : 2007 IEC 60112 : 2003 Method for the determination of the proof and the comparative tracking indices of solid insulating materials (Second Revision)	Identical
IEC 60664-1:1992, Insulation coordination for equipment within low-voltage systems: Part 1: Principles, requirements and tests	IS 15382 (Part 1) : 2014 60664-1:2020 Insulation coordination for equipment within low - Voltage systems: Part 1 principles, requirements and tests (First Revision)	Identical with IEC 60664-1 : 2020

In this adopted standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

The technical committee has reviewed the provisions of the following international standards referred in this adopted standard and decided that they are acceptable for use in conjunction with this standard.

<i>International Standard</i>	<i>Title</i>
IEC 60664-5:2003	Insulation coordination for equipment within low-voltage systems: A comprehensive method for determining clearances and creepage distances equal to or less than 2 mm
IEC Guide 104:1997	The preparation of safety publications and the use of basic safety publications and group safety publications

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, 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 the same as that of the specified value in this standard.

## **Scope**

This standard deals with basic, supplementary and reinforced insulation subjected to high-frequency voltage stress within low-voltage equipment. The dimensioning values directly apply for basic insulation; for reinforced insulation additional requirements apply according to Part 1. It is applicable for the dimensioning of clearances, creepage distances and solid insulation stressed by any type of periodic voltages with a fundamental frequency above 30 kHz and up to 10 MHz.

It applies to equipment for use up to 2 000 m above sea level having a rated voltage up to a.c. 1 000 V. It specifies the requirements for clearances, creepage distances and solid insulation for equipment based upon their performance criteria. It includes methods of electric testing with respect to insulation coordination.

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Note — The technical content of their document has not been enclosed as there are identical with the corresponding IEC standards for details, please refer the corresponding IEC 60664-4-2005 or kindly contact:

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