IEC 62631-3-2

Edition 2.0 2023-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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Dielectric and resistive properties of solid insulating materials – Part 3-2: Determination of resistive properties (DC methods) – Surface resistance and surface resistivity

Propriétés diélectriques et résistives des matériaux isolants solides – Partie 3-2: Détermination des propriétés résistives (méthodes en courant continu) – Résistance superficielle et résistivité superficielle

IEC 62631-3-2:2023-10 (en-fr)

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CONTENTS

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DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

Part 3-2: Determination of resistive properties (DC methods) – Surface resistance and surface resistivity

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IEC 62631-3-2 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems. It is an International Standard.

This second edition cancels and replaces the first edition published in 2015. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) descriptions of the electrode arrangements have been clarified;
b) new descriptions of the conductive means have been added;

c) a new informative Annex B summarizing the results of the comparative verification study on surface resistivities using different electrode arrangements has been added.

The text of this International Standard is based on the following documents:

Draft	Report on voting
112/612/FDIS	112/619/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62631 series, published under the general title *Dielectric and resistive properties of solid insulating materials*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

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DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

Part 3-2: Determination of resistive properties (DC methods) – Surface resistance and surface resistivity

1 Scope

This part of IEC 62631 describes methods of test for the determination of surface resistance and surface resistivity of electrical insulation materials by applying DC voltage.

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 60212, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 62631-3-1, *Dielectric and resistive properties of solid insulating materials – Part 3-1: Determination of resistive properties (DC methods) – Volume resistance and volume resistivity – General method*

IEC 62631-3-3, *Dielectric and resistive properties of solid insulating materials – Part 3-3: Determination of resistive properties (DC methods) – Insulation resistance*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
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3.1
electrode arrangement
electrical conductive bodies on the surface of a test specimen

Note 1 to entry: The arrangement of electrodes should include procedures to ascertain sufficient contact to the surface (e.g. by means of conducting paint) or the use of adequate mechanical system applying the necessary contact force to the test specimen's surface or both.