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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

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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

FOREWORD

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

This first edition cancels and replaces the second edition of IEC 60093, published in 1980, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the second edition of IEC 60093:

a) IEC 60093 has been completely revised, both editorially and technically, and incorporated into the new IEC 62631 series;
b) test methods have been updated to current day state of the art;
c) volume and surface resistance and resistivity are now separated into IEC 62631-3-1 and IEC 62631-3-2, respectively.

The text of this standard is based on the following documents:

FDIS	Report on voting
112/340FDIS	112/351/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

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

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- withdrawn,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

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 covers 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, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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*[1]

IEC 62631-3-3, *Dielectric and resistive properties of solid insulating materials – Part 3-3: Determination of resistive properties (DC Methods) – Insulation resistance*[1]

3 Terms and definitions

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

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) and/or the use of an adequate mechanical system applying the necessary contact force to the test specimen's surface.

3.1.1
spring loaded electrodes
line electrode system using two parallel lines of conducting spring tongues with sharp edges, separated by a gap

3.1.2
line electrodes
electrode arrangement provided by two parallel lines, separated by a gap, applied to the test specimen's surface using a conductive material

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1 To be published.