

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Propriétés diélectriques et résistives des matériaux isolants solides –
Partie 3-3: Détermination des propriétés résistives (méthodes en courant
continu) – Résistance d'isolement***



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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	5
4 Significance.....	8
5 Method of test	9
5.1 General.....	9
5.2 Test conditions	9
5.2.1 Voltage.....	9
5.2.2 Electrode material	9
5.3 Equipment	10
5.3.1 General	10
5.3.2 Accuracy	10
5.3.3 Voltage source	10
5.4 Calibration	10
5.5 Test specimen	11
5.5.1 Dimensions of test specimen	11
5.5.2 Test specimen for insulating resistance between tapered pin electrodes.....	11
5.5.3 Test specimen for insulating resistance between bar electrodes	11
5.5.4 Manufacturing of test specimen	11
5.5.5 Number of test specimen	12
5.5.6 Conditioning and pre-treatment of test specimen	12
5.6 Electrode application	12
5.6.1 Application of tapered pin electrodes.....	12
5.6.2 Application of bar electrodes	13
5.7 Test procedure.....	14
5.8 Evaluation.....	14
5.8.1 Insulating resistance between tapered pin electrodes	14
5.8.2 Insulating resistance between bar electrodes.....	14
6 Test report.....	14
7 Repeatability and reproducibility	15
Bibliography.....	16
Figure 1 – Pin electrode arrangements	6
Figure 2 – Bar electrode arrangement.....	7
Figure 3 – Specimen for measurement of the insulation resistance R_I between plugs.....	13
Table 1 – Composition of electrode steel	10

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**DIELECTRIC AND RESISTIVE PROPERTIES
OF SOLID INSULATING MATERIALS –****Part 3-3: Determination of resistive properties (DC methods) –
Insulation resistance**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with the conditions determined by agreement between the two organizations.
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International standard IEC 62631-3-3 has been prepared by IEC technical committee 112: Evaluation and qualification of electrical insulating materials and systems.

This first edition cancels and replaces the first edition of IEC 60167, published in 1964, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the first edition of IEC 60167:

- a) IEC 60167 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.

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

FDIS	Report on voting
112/341/FDIS	112/352/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 3-3: Determination of resistive properties (DC methods) – Insulation resistance

1 Scope

This part of IEC 62631 covers methods of test for the determination of the insulation resistance of electrical insulating materials or insulating systems 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 60216-4-1, *Electrical insulating materials – Thermal endurance properties – Part 4-1: Ageing ovens – Single-chamber ovens*

ISO 2339, *Taper pins, unhardened*

ISO 3465, *Hand taper pin reamers*

3 Terms and definitions

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

3.1

electrode arrangement

arrangement of two electrically conductive bodies in contact with the surface and the bulk volume of a test specimen

3.1.1

tapered pin electrodes

electrode arrangement using tapered pin electrodes

Note 1 to entry: See Figure 1.

3.1.2

bar electrodes

electrode arrangement using bar electrodes

Note 1 to entry: See Figure 2.