



**NSAI**  
Standards

Irish Standard  
I.S. EN 62631-3-3:2016

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

**I.S. EN 62631-3-3:2016**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN 62631-3-3:2016 is the adopted Irish version of the European Document EN 62631-3-3:2016, Dielectric and resistive properties of solid insulating materials - Part 3-3: Determination of resistive properties (DC Methods) - Insulation resistance

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EUROPEAN STANDARD

**EN 62631-3-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2016

ICS 17.220.99; 29.035.01

Supersedes HD 568 S1:1990

English Version

**Dielectric and resistive properties of solid insulating materials -  
Part 3-3: Determination of resistive properties (DC Methods) -  
Insulation resistance  
(IEC 62631-3-3:2015)**

Propriétés diélectriques et résistives des matériaux isolants  
solides - Partie 3-3: Détermination des propriétés résistives  
(Méthodes en courant continu) - Résistance d'isolement  
(IEC 62631-3-3:2015)

Dielektrische und resistive Eigenschaften fester Isolierstoffe  
- Teil 3-3: Bestimmung resistiver Eigenschaften  
(Gleichspannungsmethoden) - Isolationswiderstand  
(IEC 62631-3-3:2015)

This European Standard was approved by CENELEC on 2016-01-08. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

**EN 62631-3-3:2016**

**European foreword**

The text of document 112/341/FDIS, future edition 1 of IEC 62631-3-3, prepared by IEC/TC 112 "Evaluation and qualification of electrical insulating materials and systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62631-3-3:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-10-08
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-01-08

This document supersedes HD 568 S1:1990.

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**Endorsement notice**

The text of the International Standard IEC 62631-3-3:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 62631-3-1	NOTE	Harmonized as EN 62631-3-1 <sup>1)</sup> .
IEC 62631-3-2	NOTE	Harmonized as EN 62631-3-2.

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1) To be published.

## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60212	-	Standard conditions for use prior to and during the testing of solid electrical insulating materials	EN 60212	-
IEC 60216-4-1	-	Electrical insulating materials - Thermal endurance properties -- Part 4-1: Ageing ovens - Single-chamber ovens	EN 60216-4-1	-
ISO 2339	-	Hand taper pin reamers	EN 22339	-
ISO 3465	-		-	-

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**IEC 62631-3-3**

Edition 1.0 2015-12

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**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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**IEC 62631-3-3**

Edition 1.0 2015-12

# **INTERNATIONAL STANDARD**

# **NORME INTERNATIONALE**

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**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**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

COMMISSION  
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ICS 17.220.99; 29.035.01

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

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### DIELECTRIC AND RESISTIVE PROPERTIES OF SOLID INSULATING MATERIALS –

#### Part 3-3: Determination of resistive properties (DC methods) – Insulation resistance

#### FOREWORD

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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.

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