



NSAI
Standards

Irish Standard
I.S. EN 62631-3-2:2016

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

I.S. EN 62631-3-2:2016

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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National Foreword

I.S. EN 62631-3-2:2016 is the adopted Irish version of the European Document EN 62631-3-2:2016, 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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EUROPEAN STANDARD

EN 62631-3-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2016

ICS 17.220.99; 29.035.01

English Version

**Dielectric and resistive properties of solid insulating materials -
Part 3-2: Determination of resistive properties (DC Methods) -
Surface resistance and surface resistivity
(IEC 62631-3-2:2015)**

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 62631-3-2:2015)

Dielektrische und resistive Eigenschaften fester Isolierstoffe - Teil 3-2: Bestimmung von Widerstandseigenschaften (Gleichstromverfahren) - Oberflächenwiderstand und spezifischer Oberflächenwiderstand (IEC 62631-3-2:2015)

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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 62631-3-2:2016**European foreword**

The text of document 112/340/FDIS, future edition 1 of IEC 62631-3-2, 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 62631-3-2:2016.

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

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

IEC 60893-2	NOTE	Harmonized as EN 60893-2.
IEC 61212-2	NOTE	Harmonized as EN 61212-2.
IEC 62011-2	NOTE	Harmonized as EN 62011-2.
ISO 10350 (Series)	NOTE	Harmonized as EN ISO 10350 (Series).
ISO 10350-1	NOTE	Harmonized as EN ISO 10350-1.
ISO 10350-2	NOTE	Harmonized as EN ISO 10350-2.
ISO 14526 (Series)	NOTE	Harmonized as EN ISO 14526 (Series).
ISO 14527 (Series)	NOTE	Harmonized as EN ISO 14527 (Series).
ISO 14528 (Series)	NOTE	Harmonized as EN ISO 14528 (Series).
ISO 14529 (Series)	NOTE	Harmonized as EN ISO 14529 (Series).
ISO 14530 (Series)	NOTE	Harmonized as EN ISO 14530 (Series).
ISO 15252 (Series)	NOTE	Harmonized as EN ISO 15252 (Series).

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.

<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 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 3-1 Determination of resistive properties (DC Methods) - Volume resistance and volume resistivity, general method	EN 62631-3-3	-

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IEC 62631-3-2

Edition 1.0 2015-12

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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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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IEC 62631-3-2

Edition 1.0 2015-12

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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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

¹ To be published.

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