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Wearable electronic devices and technologies - Part 201-4: Electronic textile - Test method for determining sheet resistance of conductive fabrics after abrasion

Táto norma obsahuje anglickú verziu európskej normy.

This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/25

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EN IEC 63203-201-4

February 2025

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English Version

**Wearable electronic devices and technologies - Part 201-4:
Electronic textile - Test method for determining sheet resistance
of conductive fabrics after abrasion
(IEC 63203-201-4:2024)**

Technologies et dispositifs électroniques prêts-à-porter -
Partie 201-4: Textile électronique - Méthode d'essai pour la
détermination de la résistance d'une pièce d'étoffe
conductrice après abrasion
(IEC 63203-201-4:2024)

Tragbare elektronische Geräte und Technologien -
Teil 201-4: Elektronische Textilien - Prüfverfahren zur
Bestimmung der Abriebfestigkeit von leitfähigen textilen
Flächengebilden
(IEC 63203-201-4:2024)

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EN IEC 63203-201-4:2025 (E)**European foreword**

The text of document 124/290/FDIS, future edition 1 of IEC 63203-201-4, prepared by TC 124 "Wearable electronic devices and technologies" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63203-201-4:2025.

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Annex ZA (normative)

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62899-202	2023	Printed electronics - Part 202: Materials - Conductive ink	-	-
ISO 139	-	Textiles - Standard atmospheres for conditioning and testing	EN ISO 139	-
ISO 12947-1	1998	Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 1: Martindale abrasion testing apparatus	EN ISO 12947-1	1998
ISO 12947-2	2016	Textiles - Determination of the abrasion resistance of fabrics by the Martindale method - Part 2: Determination of specimen breakdown	EN ISO 12947-2	2016



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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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résistance d'une pièce d'étoffe conductrice après abrasion**

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 201-4: Electronic textile – Test method for determining sheet resistance of conductive fabrics after abrasion

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IEC 63203-201-4 has been prepared by IEC technical committee 124: Wearable electronic devices and technologies. It is an International Standard.

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

Draft	Report on voting
124/290/FDIS	124/301/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.

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- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

Electrical properties can be changed by surface wear of conductive fabric, so abrasion resistance is a critical property for conductive fabric.

The failure modes of conductive fabric are specimen breakdown, appearance change and damage of coated layer in the case of coated fabric, etc. These physical failure modes result in changes in electrical properties.

This document specifies the test method and evaluation criteria for abrasion resistance of conductive fabrics.

WEARABLE ELECTRONIC DEVICES AND TECHNOLOGIES –

Part 201-4: Electronic textile – Test method for determining sheet resistance of conductive fabrics after abrasion

1 Scope

This part of IEC 63203-201 specifies a test procedure to measure the sheet resistance of conductive fabrics after abrasion treatment using the Martindale abrasion machine.

This document is applicable to woven, knitted conductive fabrics, conductive nonwovens, coated conductive fabrics, and embroidery fabrics using conductive yarns.

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.

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