



NSAI
Standards

Irish Standard
I.S. EN IEC 60276:2019

Carbon brushes, brush holders, commutators and slip-rings - Definitions and nomenclature

I.S. EN IEC 60276:2019

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

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EUROPEAN STANDARD

EN IEC 60276

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2019

ICS 01.040.29; 29.100.20

Supersedes EN 60276:1996 and all of its amendments
and corrigenda (if any)

English Version

**Carbon brushes, brush holders, commutators and slip-rings -
Definitions and nomenclature
(IEC 60276:2018)**

Balais de charbon, porte-balais, collecteurs et bagues -
Définitions et nomenclature
(IEC 60276:2018)

Definitionen und Benennungen für Kohlebürsten,
Bürstenhalter, Kommutatoren und Schleifringe
(IEC 60276:2018)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN IEC 60276:2019 (E)

European foreword

The text of document 2/1898/FDIS, future edition 2 of IEC 60276, prepared by IEC/TC 2 "Rotating machinery" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60276:2019.

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) 2020-03-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-09-20

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE 1 Where 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 60136	-	Dimensions of brushes and brush-holders for electrical machinery	-	-
IEC 60773	-	Test methods and apparatus for measurement of the operational characteristics of brushes	-	-

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IEC 60276

Edition 2.0 2018-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Carbon brushes, brush holders, commutators and slip-rings – Definitions and nomenclature

Balais de charbon, porte-balais, collecteurs et bagues – Définitions et nomenclature





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IEC 60276

Edition 2.0 2018-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE



Carbon brushes, brush holders, commutators and slip-rings – Definitions and nomenclature

Balais de charbon, porte-balais, collecteurs et bagues – Définitions et nomenclature

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CARBON BRUSHES, BRUSH HOLDERS, COMMUTATORS AND SLIP-RINGS – DEFINITIONS AND NOMENCLATURE

FOREWORD

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International Standard IEC 60276 has been prepared by IEC technical committee 2: Rotating machinery.

This second edition cancels and replaces the first edition, issued in 1968 and its Amendment 1, issued in 1987. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- Some nomenclature has been deleted or added, whereas remaining definitions have been detailed and clarified, to reflect the technical evolution since 1987.
- Additional definitions have been included to address the request for reviewing this standard, in particular nomenclature of commutator/slip-rings markings, brush markings and commutation sparks codes.

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

FDIS	Report on voting
2/1898/FDIS	2/1901/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.

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

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CARBON BRUSHES, BRUSH HOLDERS, COMMUTATORS AND SLIP-RINGS – DEFINITIONS AND NOMENCLATURE

1 Scope

This document applies to carbon brushes for electrical machinery. For the present, it applies only to carbon brushes for commutators and slip-rings in rotating machines.

Terms and definitions are relative to the brush construction (references 100's to 500's and parts of 900's) and to the markings when operating on a rotating machine (references 600's to 800's).

By extension, terms and definitions may be relevant for any kind of sliding electrical contacts for electrical machinery.

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.

IEC 60136, *Dimensions of brushes and brush-holders for electrical machinery*

IEC 60773, *Test methods and apparatus for measurement of the operational characteristics of brushes*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

NOTE Brushes are classified according to the class of grade used, as follows.

3.1

grade

brush material used for the brush body, defined by its composition and its physical properties

3.2

carbon

consists of various forms of amorphous carbon, generally made of a mixture of carbonaceous powders agglomerated with a binder, moulded and baked at suitable temperature to carbonize the binder

Note 1 to entry: Also named hard carbon (or plain carbon).

Note 2 to entry: The material can contain additives and can be impregnated with oils, wax or resin. This material contains principally carbon, because it is not graphitized during baking operation.

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