EESTI STANDARD

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



EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN IEC 60276:2019 sisaldab Euroopa standardi EN IEC 60276:2019 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 60276:2019 consists of the English text of the European standard EN IEC 60276:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 20.09.2019.	Date of Availability of the European standard is 20.09.2019.
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ICS 01.040.29, 29.100.20

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EUROPEAN STANDARD NORME EUROPÉENNE

EN IEC 60276

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 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 (dop) 2020-03-20 level by publication of an identical national standard or by endorsement
- latest date by which the national standards conflicting with the (dow) 2022-09-20 document have to be withdrawn

This document supersedes EN 60276:1996 and all of its amendments and corrigenda (if any).

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Endorsement notice

The text of the International Standard IEC 60276:2018 was approved by CENELEC as a European Standard without any modification.

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.

Publication	Year	Title	<u>EN/HD</u>	Year
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		25

CONTENTS

FOREWC)RD	3
1 Scop	e	5
2 Norm	native references	5
3 Term	is and definitions	5
4 Sym	bols and abbreviated terms	7
<u></u> <u></u>	Symbols	7
4.1	Subscripts	7
5 Nom	enclature	7
5 Nom	Druches	7
0.1 511	101: Pody / block	7
512	101. Body / Diock	7
512	105 to 112 : Angles	······
5.1.3	113 to 123. Edges and faces	9
515	124 to 136: Brush ton	
516	137 to 146: Monobloc, divided or double brushes	15
517	147 to 153: Other configurations	13
5.2	Tons (references No. 201 and following)	
5.3	Elevibles (shunts) and other electrical connections (references No. 301 and	
0.0	following)	20
5.4	Terminals (references No. 401 and following)	21
5.5	Commutators and slip-ring (references No. 501 and following)	22
5.5.1	501 to 512: Commutators	22
5.5.2	2 513 to 514: Slip-rings	24
5.5.3	515: Profile	24
5.5.4	516: Flat contact	25
5.6	Commutator and slip-rings markings (references No. 601 and following)	25
5.7	Brush markings (references No. 701 and following)	31
5.7.1	701 to 710: Sliding surface markings	31
5.7.2	2 711 to 716: Edge/corner markings	
5.7.3	717 to 721: Side markings	34
5.7.4	722 to 727: Connection markings	36
5.8	Spark evaluation (references No. 801 and following)	37
5.9	Miscellaneous (references No. 901 and following)	38
Annex A	(informative) Spark codes	40
A.1	Criteria for assessment of sparking	40
A.2	Complementary observations	41
A.3	Relation between spark code and Westinghouse scale	41
Figure 1 -	 Elements of the brush for definition of r dimension 	9
Table A.1	- Additional definitions of spark	
Table A 2	P – Relationship between energy colour, sound and spark code	41
	Delationship between energy, colour, sound and spark code	۱ ۲
Table A.3	- Relationship between spark code and westinghouse scale	41

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.

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.

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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.