

BS EN 60034-19:2014



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Rotating electrical machines

Part 19: Specific test methods for d.c.
machines on conventional and
rectifier-fed supplies

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National foreword

This British Standard is the UK implementation of EN 60034-19:2014. It is identical to IEC 60034-19:2014.

The UK participation in its preparation was entrusted to Technical Committee PEL/2, Rotating electrical machinery.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Rotating electrical machines - Part 19: Specific test methods for
d.c. machines on conventional and rectifier-fed supplies
(IEC 60034-19:2014)**

Machines électriques tournantes - Partie 19: Méthodes
spécifiques d'essai pour machines à courant continu à
alimentation conventionnelle ou redressée
(CEI 60034-19:2014)

Drehende elektrische Maschinen - Teil 19: Besondere
Prüfverfahren für Gleichstrommaschinen, betrieben an
gleichrichtergespeisten Leistungsverordnungen oder
anderen Gleichstromquellen
(IEC 60034-19:2014)

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

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Foreword

The text of document 2/1756/FDIS, future edition 2 of IEC 60034-19, prepared by IEC/TC 2 "Rotating machinery" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60034-19:2014.

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) 2015-07-30
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2017-10-30

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The text of the International Standard IEC 60034-19:2014 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, 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 60034-1	-	Rotating electrical machines - Part 1: Rating and performance	EN 60034-1	-
IEC 60034-2-1	-	Rotating electrical machines - Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)	EN 60034-2-1	-

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ROTATING ELECTRICAL MACHINES –

Part 19: Specific test methods for d.c. machines on conventional and rectifier-fed supplies

1 Scope

This part of IEC 60034 applies to d.c. machines rated 1 kW and above operating on rectifier-fed power supplies, d.c. buses or other d.c. sources.

Standardized methods are provided for determining characteristic quantities for conventional and rectifier-fed d.c. machines.

Excluded are d.c. machines for specific applications.

These methods supplement the requirements in IEC 60034-1 and IEC 60034-2-1.

NOTE It is not intended that this standard should be interpreted as requiring the carrying out of any or all of the tests described therein on any given machine.

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 60034-1, *Rotating electrical machines – Part 1: Rating and performance*

IEC 60034-2-1, *Rotating electrical machines – Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)*

3 Terms, definitions, symbols and subscripts

3.1 Terms and definitions

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

3.1.1

current ripple

peak-to-peak amplitude of the armature current of rectifier-fed d.c. machines

3.1.2

voltage ripple

peak-to-peak amplitude of the terminal voltage of rectifier-fed d.c. machines

3.1.3

time constant

time to achieve 63,2 % of steady-state value after applying a d.c. step input, assuming a first order system