

BUREAU OF INDIAN STANDARDS
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Draft Indian Standard

**Rotating electrical machines –
Part 25: AC electrical machines used in power drive systems – Application guide**

(First Revision)

(ICS 29.160.01)

Rotating Machinery Sectional
Committee, ETD 15

Last date for comments-20/09/2024

NATIONAL FOREWORD

This Draft Indian Standard (First Revision) which is identical with IEC TS 60034-25:2022 ‘Rotating electrical machines –Part 25: AC electrical machines used in power drive systems – Application guide’ Issued by the International Electrotechnical Commission (IEC) is proposed to be adopted by the Bureau of Indian Standards on the recommendation of the Rotating Machinery Sectional Committee and approval of the Electrotechnical Division Council.

This standard was originally published in 2009. The revision of this standard has been undertaken to align it with the latest version of IEC TS 60034-25:2022.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appears referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 60034-1:2022, Rotating electrical machines – Part 1: Rating and performance	IS 15999 (Part 1) : 2021/ IEC 60034-1: 2017 Rotating electrical machines - Part 1 : Rating and performance	Identical
IEC 60034-14:2018, Rotating electrical machines – Part 14:	IS 12075 : 2008 Mechanical vibration of rotating electrical machines with shaft	Technically Equivalent

Mechanical vibration of certain machines with shaft heights 56 mm and higher – Measurement, evaluation and limits of vibration severity	heights 56 mm and higher - Measurement, evaluation and limits of vibration severity (<i>First Revision</i>)	
IEC 60034-18-41:2014, Rotating electrical machines – Part 18-41: Partial discharge free (Type I) electrical insulation systems used in rotating electrical machines fed from voltage converters – Qualification and quality control tests	IS 15999 (Part 18/Sec 41) :2018/ IEC 60034-18-41:2014 Rotating electrical machines: Part 18 partial discharge free electrical insulation systems (Type I) used in rotating electrical machines fed from voltage converters Sec 41 qualification and quality control tests	Identical
IEC 60034-18-42:2017, Rotating electrical machines – Part 18-42: Partial discharge resistant electrical insulation systems (Type II) used in rotating electrical machines fed from voltage converters – Qualification tests	IS 15999 (Part 18/Sec 42) : 2018/ IEC 60034-18-42 : 2008 Rotating Electrical Machines Part 18 Qualification and Acceptance Tests for Partial Discharge Resistant Electrical Insulation Systems (Type II) Section 42 Used in rotating electrical machines fed from voltage converters	Identical
IEC 60079 (all parts): Explosive atmospheres	IS/IEC 60079 (Series) Explosive atmospheres	Identical
IEC 60079-7, Explosive atmospheres – Part 7: Equipment protection by increased safety "e"	IS/IEC 60079-7 : 2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e" (Second Revision)	Identical
IEC 61800-3, Adjustable speed electrical power drive systems – Part 3: EMC requirements and specific test methods	IS/IEC 61800-3 : 2017 Adjustable Speed Electrical Power Drive Systems Part 3 EMC Requirements and Specific Test Methods	Identical
IEC 61800-5-1, Adjustable speed electrical power drive systems – Part 5-1: Safety requirements – Electrical, thermal and energy	IS/IEC 61800-5-1 : 2016 Adjustable Speed Electrical Power Drive Systems Part 5 Safety Requirements Section 1 Electrical, thermal and energy	Identical

The technical committee has reviewed the provisions of the following international standards referred in this adopted standard and decided that they are acceptable for use in conjunction with this standard.

<i>International Standard</i>	<i>Title</i>
IEC 60034-2-1	Rotating electrical machines – Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)
IEC 60034-2-2	Rotating electrical machines – Part 2-2: Specific methods for determining separate losses of large machines from tests – Supplement to IEC 60034-2-1
IEC 60034-2-3	Rotating electrical machines – Part 2-3: Specific test methods for determining losses and efficiency of converter-fed AC induction motors

IEC 60034-6	Rotating electrical machines – Part 6: Methods of cooling (IC Code)
IEC 60034-9:2021	Rotating electrical machines – Part 9: Noise limits
IEC 60034-12	Rotating electrical machines – Part 12: Starting performance of single-speed three-phase cage induction motors
IEC TR 61000-5-1	Electromagnetic compatibility (EMC) – Part 5: Installation and mitigation guidelines – Section 1: General considerations – Basic EMC publication
IEC TR 61000-5-2	Electromagnetic compatibility (EMC) – Part 5: Installation and mitigation guidelines – Section 2: Earthing and cabling
IEC TS 61800-8:2010	Adjustable speed electrical power drive systems – Part 8: Specification of voltage on the power interface
IEC TS 62578:2015	Power electronics systems and equipment – Operation conditions and characteristics of active infeed converter (AIC) applications including design recommendations for their emission values below 150 kHz

Only English language text has been retained while adopting it in this Indian Standard, and as such the page numbers given here are not the same as in the International Standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated expressing the result of a test, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

NOTE - The technical content of their document has not been enclosed as there are identical with the corresponding IEC standards for details, please refer the corresponding IEC TS 60034-25:2022 or kindly contact:

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