

**BUREAU OF INDIAN STANDARDS**  
**DRAFT FOR COMMENTS ONLY**

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*Draft Indian Standard*

**Rotating electrical machines – Part 18-41: Partial discharge free electrical insulation systems (Type I) used in rotating electrical machines fed from voltage converters – Qualification and quality control tests**

*(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 60034-18-41:2014+AMD1:2019 CSV 'Rotating electrical machines –Part 18-41: Partial discharge free electrical insulation systems (Type I) used in rotating electrical machines fed from voltage converters – Qualification and quality control tests ' 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 2018. The revision of this standard has been undertaken to align it with the latest version of IEC 60034-18-41:2014+AMD1:2019 CSV.

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 60034-18-41:2014, Rotating electrical machines – Part 18-41: Partial discharge free | IS 15999 (Part 18/Sec 41) :2018/IEC 60034-18-41:2014 Rotating electrical machines: Part 18 partial discharge free electrical insulation | Identical                    |

|   |   |           |
|---|---|-----------|
| (Type I) electrical insulation systems used in rotating electrical machines fed from voltage converters – Qualification and quality control tests   | systems (Type I) used in rotating electrical machines fed from voltage converters Sec 41 qualification and quality control tests  |           |
| IEC/TS 60034-18-42, Rotating electrical machines – Part 18-42: Qualification and acceptance tests for partial discharge resistant electrical insulation systems (Type II) used in rotating electrical machines fed from voltage converters <sup>1</sup> | 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 60172, Test procedure for the determination of the temperature index of enamelled winding wires   | IS 5825 : 2018/ IEC 60172 : 2015 Test procedure for the determination of the temperature index of enamelled and tape wrapped winding wires ( <i>Second Revision</i> )   | 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 60034-18-1:2010           | Rotating electrical machines – Part 18-1: Functional evaluation of insulation systems. General guidelines  |
| IEC 60034-18-21               | Rotating electrical machines – Part 18-21: Functional evaluation of insulation systems – Test procedures for wire-wound windings – Thermal evaluation and classification   |
| IEC/TS 60034-25:2007          | Rotating electrical machines – Part 25: Guidance for the design and performance of a.c. motors specifically designed for converter supply  |
| IEC 60034-18-31               | Rotating electrical machines – Part 18-31: Functional evaluation of insulation systems – Test procedures for form-wound windings – Thermal evaluation and classification of insulation systems used in rotating machines |
| IEC TS 60034-27               | Rotating electrical machines – Part 27: Off-line partial discharge measurements on the stator winding insulation of rotating electrical machines   |
| IEC 60664-1                   | Insulation co-ordination for equipment within low voltage systems – Part 1: Principles, requirements and tests   |
| IEC/TS 61800-8                | Adjustable speed electrical power drive systems – Part 8: Specification of voltage on the power interface  |
| IEC/TS 61934                  | Electrical insulating materials and systems – Electrical measurement of partial discharges (PD) under short rise time and repetitive voltage impulses  |

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 60034-18-41:2014+AMD1:2019 CSV or kindly contact:

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