BUREAU OF INDIAN STANDARDS
DRAFT FOR COMMENTS ONLY

Draft Indian Standard

Adjustable speed electrical power drive systems (PDS) – Part 9-2: Ecodesign for motor systems – Energy efficiency determination and classification

(ICS 29.130.01; 29.160.30; 29.200)

Power Electronics Sectional Committee, ETD 31	Last date for comments-06/09/2024

NATIONAL FOREWORD

This Draft Indian Standard which is identical with IEC 61800-9-2:2023 'Adjustable speed electrical power drive systems (PDS) – Part 9-2: Ecodesign for motor systems – Energy efficiency determination and classification' Issued By The International Electrotechnical Commission (IEC) is proposed to be adopted by the Bureau of Indian Standards on the recommendation of the Power Electronics Sectional Committee and approval of the Electrotechnical Division Council.

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:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
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 60034-2-1:2014, Rotating electrical machines – Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction	IS 15999 (Part 2/Sec 1) : 2023/ IEC 60034-2-1 : 2014 Rotating Electrical Machines Part 2-1: Standard Methods for Determining Losses and Efficiency from Tests	Identical

vehicles)	Excluding Machines for Traction Vehicles	
IEC 60034-30-1:2014, Rotating electrical machines – Part 30-1: Efficiency classes of line operated AC motors (IE code)	IS 12615 : 2018/ IEC 60034-30-1:2014 Line operated three phase AC motors (IE Code) "Efficiency classes and performance specification" (*Third Revision*)	Technically Equivalent
IEC 60038:2009, IEC standard voltages	IS 12360 : 1988/ IEC 60038 Voltage bands for electrical installations including preferred voltages and frequency	Technically Equivalent
IEC 60050-161, International Electrotechnical Vocabulary (IEV) – Part 161: Electromagnetic compatibility	IS 1885 (Part 85) : 2003/ IEC 60050-161: 1990 Electrotechnical vocabulary: Part 85 electromagnetic compatibility	Identical
IEC 60947-4-1:2018, Low voltage switchgear and controlgear – Part 4-1: Contactors and motorstarters – Electromechanical contactors and motor-starters	IS/IEC 60947-4-1 : 2018/ IEC 60947-4-1: 2018 Low-Voltage switchgear and controlgear : Part 4-1 Contactors and motor starters electromechanical contactors and motor-Starters	Identical

The technical committee has reviewed the provision of the following International Standard referred in this adopted standard and has decided that it is acceptable for use in conjunction with this standard:

International Standard	*Title*
IEC 60034-2-3:2020	Rotating electrical machines – Part 2-3: Specific test methods for determining losses and efficiency of converter-fed AC induction motors
IEC TS 60034-30-2:2016	Rotating electrical machines – Part 30-2: Efficiency classes of variable speed AC motors (IE-code)
IEC TS 60034-31:2021	Rotating electrical machines – Part 31: Selection of energy-efficient motors including variable speed applications – Application guidelines
IEC 61000-3-12:2011	Electromagnetic compatibility (EMC) – Part 3-12: Limits – Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and ≤ 75 A per phase
IEC Guide 118:2017	Inclusion of energy efficiency aspects in electrotechnical publications

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 61800-9-2:2023 ‘or kindly contact:

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