

AS 1359.101—1997
IEC 34-1:1996

Australian Standard[®]

**Rotating electrical machines—
General requirements**

Part 101: Rating and performance

[IEC title: Rotating electrical machines, Part 1: Rating and performance]

This Australian Standard was prepared by Committee EL/9, Rotating Electrical Machinery. It was approved on behalf of the Council of Standards Australia on 21 April 1997 and published on 5 July 1997.

The following interests are represented on Committee EL/9:

Australian British Chamber of Commerce
Australian Chamber of Commerce and Industry
Australian Electrical and Electronic Manufacturers Association
Bureau of Steel Manufacturers of Australia
Department of Defence
Electricity Supply Association of Australia
Institution of Engineers Australia

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Rotating electrical machines— General requirements

Part 101: Rating and performance

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PREFACE

This Standard was prepared by the Standards Australia Committee EL/9 on Rotating Electrical Machinery to supersede various Parts of AS 1359, *Rotating electrical machines—General requirements*. The superseded subject matter can be found in Sections of Parts 101, 30 and 31 as follows:

AS 1359 Superseded Part	Part title	See AS 1359: Part 101
Part 1—1987	Definitions	Section 2
Part 4—1983	Rating plate markings	Section 9
Part 30—1987 (superseded in part) ¹	Duty and rating	Section 3 Section 4
Part 31—1986 (superseded in part) ²	Service and operating conditions	Section 5 Section 6
Part 32—1974	Temperature-rise limits and measurements of temperature	Section 7
Part 40—1977 (superseded in part) ³	Characteristics of synchronous generators	Section 8
Part 60—1986	Tests	Section 7 Section 8
Part 69—1974	Tolerances	Section 11
FOOTNOTES: 1 See also Part 30—1997 , Part retitled: <i>Preferred outputs and frame sizes</i> . 2 See also Part 31—1997 , Part retitled: <i>Three-phase induction motors—Operation on unbalanced voltages</i> . 3 The remainder of Part 40 remains in effect until revised or withdrawn.		

This Standard is identical to and, with the exception of Australian Appendix AA, is reproduced from IEC 34-1, Edition 10:1996, *Rotating electrical machines*, Part 1: *Rating and performance*.

This Standard is a Part of the AS 1359 series listed in [AS 1359.0](#), Part titled: *Introduction and list of Parts*.

The objective of this Standard is to provide the rotating electrical machine industry with standard duties, ratings, operating conditions, and performance.

As this Standard is reproduced from an International Standard, the following applies:

- Its number does not appear on each page of text and its identity is shown only on the cover and title page.
- In the source text ‘this International Standard’ should read ‘this Australian Standard’.
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- (e) References to International Standards should be replaced by references to Australian Standards, as follows:

<i>Reference to International Standard</i>		<i>Australian Standard</i>	
IEC		AS	
27	Letter symbols to be used in electrical technology	1046	Letter symbols for use in electrotechnology
27-1	Part 1: General	1046.1	Part 1: General
27-4	Part 4: Symbols for quantities to be used for rotating electrical machines	1046.4	Part 4: Symbols for quantities to be used for rotating electrical machines
34	Rotating electrical machines	1359	Rotating electrical machines—General requirements
34-2	Part 2: Methods for determining losses and efficiency of rotating electrical machinery from tests (excluding machines for traction vehicles)	1359.102.1	Part 102.1: Methods for determining losses and efficiency—General
34-3	Part 3: Specific requirements for turbine-type synchronous machines	—	
34-5	Part 5: Classification of degrees of protection provided by enclosures of rotating electrical machines (IP code)	1359.20	Part 20: Classification of types of enclosure
34-6	Part 6: Methods of cooling (IC Code)	1359.106	Part 106: Methods of cooling (IC Code)
34-12	Part 12: Starting performance of single-speed three-phase cage induction motors for voltages up to and including 660 V	1359.41	Part 41: General characteristics
34-15	Part 15: Impulse voltage withstand levels of rotating a.c. machines with form-wound stator coils	—	
34-17	Part 17: Guide to the application of cage induction motors when fed from converters	—	
38	IEC standard voltages	—	
50	International Electrotechnical Vocabulary (IEV)	1852	International Electrotechnical Vocabulary
50(411)	Chapter 411: Rotating machines	—	
72	Dimensions and output series for rotating electrical machines	—	
85	Thermal evaluation and classification of electrical insulation	2768	Electrical insulating materials—Evaluation and classification based on thermal endurance
279	Measurement of winding resistance of an a.c. machine during operation at alternating voltage	—	
364	Electrical installations of buildings	—	
364-4	Part 4: Protection of safety	—	
364-4-41	Chapter 41: Protection against electric shock	—	

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