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Interim
Australian Standard™

Wind turbines

**Part 2: Design requirements for small
wind turbines**

STANDARDS
Australia



This Interim Australian Standard was prepared by Committee EL-048, Wind Turbine Systems. It was approved on behalf of the Council of Standards Australia on 16 May 2006.
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Australian Business Council for Sustainable Energy
Australian Electrical and Electronic Manufacturers Association
Australian Greenhouse Office, Department of the Environment and Heritage
Australian Wind Energy Association
Electrical Regulatory Authorities Council
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PREFACE

This Interim Standard was prepared by the Standards Australia Committee EL-048, Wind Turbine Systems.

The objective of this Interim Standard is to provide designers, manufacturers, test laboratories and users with requirements for small wind turbines (viz with a swept area up to 200 m², see Clause 3.48).

This Interim Standard is identical with, and has been reproduced from IEC 61400-2, Ed.2 (2006), *Wind turbines – Part 2: Design requirements for small wind turbines*. Some minor editorial corrections have been made to the IEC Standard.

Standards Australia invites comment on this Interim Australian Standard from persons and organizations concerned with this subject. The closing date for comment is 12 months after publication at which time the Committee will either consider its withdrawal at the end of its two years life, extend its life for another 2 years or revise it in the light of public comment, with the view to the publication of an Australian Standard before the expiry date.

During the life of this document the Committee will monitor all comment as it is received. Attention is drawn to the fact that this document is an Interim Australian Standard and should be regarded as a development Standard and liable to future alteration.

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Australian Standard

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Part 2: Design requirements for small wind turbines

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1 Scope

This part of IEC 61400 deals with safety philosophy, quality assurance, and engineering integrity and specifies requirements for the safety of Small Wind Turbines (SWTs) including design, installation, maintenance and operation under specified external conditions. Its purpose is to provide the appropriate level of protection against damage from hazards from these systems during their planned lifetime.

This part of IEC 61400 is concerned with all subsystems of SWT such as protection mechanisms, internal electrical systems, mechanical systems, support structures, foundations and the electrical interconnection with the load.

While this part of IEC 61400 is similar to IEC 61400-1 it does simplify and make significant changes in order to be applicable to small turbines.

This part of IEC 61400 applies to wind turbines with a rotor swept area smaller than 200 m², generating at a voltage below 1 000 V a.c. or 1 500 V d.c.

This part of IEC 61400 should be used together with the appropriate IEC and ISO standards (see Clause 2).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

References to international standards that are struck through in this clause are replaced by references to Australian or Australian/New Zealand Standards that are listed immediately thereafter and identified by shading. Any Australian or Australian/New Zealand Standard that is identical to the International Standard it replaces is identified as such.

~~IEC 60034-1, Rotating electrical machines—Part 1: Rating and performance~~

AS 1359.101, *Rotating electrical machines—General requirements—Rating and performance* (identical to IEC 60034-1:1996)

~~IEC 60034-2, Rotating electrical machines—Part 2: Methods for determining losses and efficiency of rotating electrical machinery from tests (excluding machines for traction vehicles)~~

AS 1359.102.1, *Rotating electrical machines—General requirements—Methods for determining losses and efficiency—General*