
Sistemi generatorjev vetrne turbine - 25-3. del: Komunikacije za spremljanje in nadzor vetrnih elektrarn - Modeli za izmenjavo informacij (IEC 61400-25-3:2006)

Wind turbines - Part 25-3: Communications for monitoring and control of wind power plants - Information exchange models

Windenergieanlagen - Teil 25-3: Kommunikation für die Überwachung und Steuerung von Windenergieanlagen - Dienste-Modelle für den Informationsaustausch

Eoliennes - Partie 25-3: Communications pour la surveillance et la commande des centrales éoliennes - Modeles d'échange d'informations

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ICS:

27.180	Sistemi turbin na veter in drugi alternativni viri energije	Wind turbine systems and other alternative sources of energy
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**Wind turbines -
Part 25-3: Communications for monitoring
and control of wind power plants -
Information exchange models
(IEC 61400-25-3:2006)**

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 88/276/FDIS, future edition 1 of IEC 61400-25-3, prepared by IEC TC 88, Wind turbines, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61400-25-3 on 2007-02-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-02-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61400-25-3:2006 was approved by CENELEC as a European Standard without any modification.

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Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61400-25	Series	Wind turbines - Part 25: Communications for monitoring and control of wind power plants	EN 61400-25	Series
IEC 61850-7-2	2003	Communication networks and systems in substations - Part 7-2: Basic communication structure for substation and feeder equipment - Abstract communication service interface (ACSI)	EN 61850-7-2	2003

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

WIND TURBINES –

**Part 25-3: Communications for monitoring
and control of wind power plants –
Information exchange models**

FOREWORD

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International Standard IEC 61400-25-3 has been prepared by IEC technical committee 88: Wind turbines.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The text of this standard is based on the following documents:

FDIS	Report on voting
88/276/FDIS	88/282/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

A list of all parts of the IEC 61400 series, under the general title *Wind turbines* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

The IEC 61400-25 series defines communications for monitoring and control of wind power plants. The modeling approach of the IEC 61400-25 series has been selected to provide abstract definitions of classes and services such that the specifications are independent of specific protocol stacks, implementations, and operating systems. The mapping of these abstract classes and services to a specific communication profile is not inside the scope of this part (IEC 61400-25-3) but inside the scope of IEC 61400-25-4¹.

This part of IEC 61400-25 defines services of the model of the information exchange of intelligent electronic devices in wind power plants. The services are referred to as the Abstract Communication Service Interface (ACSI). The ACSI has been defined so as to be independent of the underlying communication systems.

The information exchange model is defined in terms of

- a hierarchical class model of all information that can be accessed,
- information exchange services that operate on these classes,
- parameters associated with each information exchange service.

The ACSI description technique abstracts away from all the different approaches to implement the cooperation of the various devices.

These abstract service definitions shall be mapped into concrete object definitions that are to be used for a particular protocol. Mapping to specific protocol stacks is specified in IEC 61400-25-4.

NOTE 1 Abstraction in ACSI has two meanings. Firstly, only those aspects of a real device (for example, a rotor) or a real function that are visible and accessible over a communication network are modelled. This abstraction leads to the hierarchical class models and their behaviour defined in IEC 61400-25-2. Secondly, the ACSI abstracts from the aspect of concrete definitions on how the devices exchange information; only a conceptual cooperation is defined. The concrete information exchange is defined in IEC 61400-25-4.

NOTE 2 Performance of the IEC 61400-25 series implementations are application specific. The IEC 61400-25 series does not guarantee a certain level of performance. This is beyond the scope of the IEC 61400-25 series. However, there is no underlying limitation in the communications technology to prevent high speed application (millisecond level responses).

¹ To be published.