



SLOVENSKI STANDARD SIST EN 62446:2010

01-februar-2010

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Grid connected PV systems - Minimum requirements for system documentation, commissioning tests, and inspection requirements

Netzgekoppelte Photovoltaik-Systeme – Mindestanforderungen an Systemdokumentation, Inbetriebnahmeprüfung und Prüfanforderungen

Systèmes PV connectés au réseau électrique - Exigences minimales pour la documentation du système, les essais de mise en service et exigences d'examen

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Ta slovenski standard je istoveten z: EN 62446:2009

ICS:

27.160

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Solar energy engineering

SIST EN 62446:2010

en,fr

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 62446

December 2009

ICS 27.160

English version

**Grid connected photovoltaic systems -
Minimum requirements for system documentation,
commissioning tests and inspection
(IEC 62446:2009)**

Systèmes photovoltaïques
connectés au réseau électrique -
Exigences minimales
pour la documentation du système,
les essais de mise en service et l'examen
(CEI 62446:2009)

Netzgekoppelte Photovoltaik-Systeme -
Mindestanforderungen
an Systemdokumentation,
Inbetriebnahmeprüfung
und Prüfanforderungen
(IEC 62446:2009)

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This European Standard was approved by CENELEC on 2009-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 82/558A/FDIS, future edition 1 of IEC 62446, prepared by IEC TC 82, Solar photovoltaic energy systems, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62446 on 2009-10-01.

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) 2010-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2012-10-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62446:2009 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 60364 (mod)	Series	Low-voltage electrical installations	HD 60364	Series
IEC 60364-6 (mod)	- ¹⁾	Low voltage electrical installations - Part 6: Verification	HD 60364-6	2007 ²⁾
IEC 60364-7-712	2002	Electrical installations of buildings - Part 7-712: Requirements for special installations or locations - Solar photovoltaic (PV) power supply systems	HD 60364-7-712 + corr. April	2005 2006
IEC/TR 60755	2008	General requirements for residual current operated protective devices	-	-
IEC 61557	Series	Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. - Equipment for testing, measuring or monitoring of protective measures	EN 61557	Series
IEC 61730-1 (mod)	- ¹⁾	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction	EN 61730-1	2007 ²⁾

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¹⁾ Undated reference.

²⁾ Valid edition at date of issue.

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IEC 62446

Edition 1.0 2009-05

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Grid connected photovoltaic systems – Minimum requirements for system documentation, commissioning tests and inspection

Systèmes photovoltaïques connectés au réseau électrique – Exigences minimales pour la documentation du système, les essais de mise en service et l'examen

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

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ICS 27.160

ISBN 2-8318-1037-6

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope and object.....	7
2 Normative references	7
3 Terms and definitions	7
4 System documentation requirements	8
4.1 General.....	8
4.2 System data	8
4.2.1 Basic system information.....	8
4.2.2 System designer information	8
4.2.3 System installer information.....	9
4.3 Wiring diagram	9
4.3.1 General	9
4.3.2 Array - general specifications	9
4.3.3 PV string information	9
4.3.4 Array electrical details	9
4.3.5 Earthing and overvoltage protection	9
4.3.6 AC system.....	10
4.4 Datasheets	10
4.5 Mechanical design information	10
4.6 Operation and maintenance information	10
4.7 Test results and commissioning data	10
5 Verification	10
5.1 General.....	10
5.2 General.....	11
5.3 Inspection	11
5.3.1 General	11
5.3.2 DC system inspection.....	11
5.3.3 Protection against overvoltage / electric shock	12
5.3.4 AC system.....	12
5.3.5 Labelling and identification	12
5.4 Testing.....	13
5.4.1 General	13
5.4.2 Continuity of protective earthing and/or equipotential bonding conductors.....	13
5.4.3 Polarity test.....	13
5.4.4 PV string - open circuit voltage measurement.....	13
5.4.5 PV string - current measurement	14
5.4.6 Functional tests	15
5.4.7 PV array Insulation resistance test	15
5.5 Verification reports	17
5.5.1 General	17
5.5.2 Initial verification	17
5.5.3 Periodic verification	17
Annex A (informative) Model verification certificate.....	18
Annex B (informative) Model inspection report	19

Annex C (informative) Model PV array test report	21
Annex D (informative) PV array infrared camera inspection procedure.....	23
Table 1 – Minimum values of insulation resistance.....	17

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SIST EN 62446:2010

<https://standards.iteh.ai/catalog/standards/sist/f0f55437-af90-4495-9417-d77d4266844a/sist-en-62446-2010>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**GRID CONNECTED PHOTOVOLTAIC SYSTEMS –
MINIMUM REQUIREMENTS FOR SYSTEM DOCUMENTATION,
COMMISSIONING TESTS AND INSPECTION**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62446 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

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

FDIS	Report on voting
82/558A/FDIS	82/564/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.

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

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.

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INTRODUCTION

Grid connected PV systems are expected to have a lifetime of decades, with maintenance or modifications likely at some point over this period. Building or electrical works in the vicinity of the PV array are very likely, for example roof works adjacent to the array or modifications (structural or electrical) to a home that has a PV system. The ownership of a system may also change over time, particularly for systems mounted on buildings. Only by the provision of adequate documentation at the outset can the long term performance and safety of the PV system and works, on or adjacent to the PV system, be ensured.

This standard is split into 2 parts:

- **System documentation requirements** (Clause 4) – This clause details the information that shall be provided, as a minimum, within the documentation provided to the customer following the installation of a grid connected PV system.
- **Verification** (Clause 5) – This clause provides the information expected to be provided following initial (or periodic) verification of an installed system. It includes requirements for inspection and testing.

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