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Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 1: Grid connected systems - Documentation, commissioning tests and inspection

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ICS 27.160

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EUROPEAN STANDARD
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EN 62446-1

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English Version

Photovoltaic (PV) systems - Requirements for testing,
documentation and maintenance - Part 1: Grid connected
systems - Documentation, commissioning tests and inspection
(IEC 62446-1:2016)

Systèmes photovoltaïques (PV) - Exigences pour les
essais, la documentation et la maintenance - Partie 1:
Systèmes connectés au réseau électrique - Documentation,
essais de mise en service et examen
(IEC 62446-1:2016)

Photovoltaik (PV) Systeme - Anforderungen an Prüfung,
Dokumentation und Instandhaltung - Teil 1: Netzkoppelte
Systeme - Dokumentation, Inbetriebnahmeprüfung und
Prüfanforderungen
(IEC 62446-1:2016)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 82/1036/FDIS, future edition 1 of IEC 62446-1, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62446-1:2016.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-11-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-02-23

This document supersedes EN 62446:2009.

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Annex ZA

(normative)

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

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here:
www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60364-6	-	Low voltage electrical installations -- Part 6: Verification	HD 60364-6	-
IEC 61010	series	Safety requirements for electrical equipment for measurement, control and laboratory use	EN 61010	series
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	series	Photovoltaic (PV) module safety qualification	EN 61730	series
IEC/TS 62548	2013	Photovoltaic (PV) arrays - Design requirements	-	-

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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 part of IEC 62446 is split into two sections:

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

This part of IEC 62446 references IEC TS 62548:2013, which is in the process of being converted into an International Standard. It is envisaged that work on the second edition of IEC 62446-1 will start when IEC 62548 is completed.