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## Solcellsanläggningar – Konstruktions- och typgodkännande av solcellsmoduler – Del 1-1: Särskilda fordringar för provning av moduler med celler av kristallint kisel

*Terrestrial photovoltaic (PV) modules –  
Design qualification and type approval –  
Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules*

Som svensk standard gäller europastandarden EN 61215-1-1:2016. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61215-1-1:2016.

### Nationellt förord

Europastandarden EN 61215-1-1:2016

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61215-1-1, First edition, 2016 - Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 61215-1, utgåva 1, 2017 och SS-EN 61215-2, utgåva 1, 2017.

Tidigare fastställd svensk standard SS-EN 61215, utgåva 2, 2005, gäller ej fr o m 2019-04-13.

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Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden.  
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English Version

Terrestrial photovoltaic (PV) modules - Design qualification and  
type approval - Part 1-1: Special requirements for testing of  
crystalline silicon photovoltaic (PV) Modules  
(IEC 61215-1-1:2016)

Modules photovoltaïques (PV) pour applications terrestres -  
Qualification de la conception et homologation -  
Partie 1-1: Exigences particulières d'essai des modules  
photovoltaïques (PV) au silicium cristallin  
(IEC 61215-1-1:2016)

Terrestrische Photovoltaik-(PV-)Module - Bauarteignung  
und Bauartzulassung -  
Part 1-1: Besondere Anforderungen für das Prüfen von  
kristallinen Silizium-Photovoltaik-(PV )Modulen  
(IEC 61215-1-1:2016)

This European Standard was approved by CENELEC on 2016-04-13. 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.

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This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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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 82/1047/FDIS, future edition 1 of IEC 61215-1-1, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61215-1-1:2016.

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) 2017-01-13
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-04-13

This document supersedes EN 61215:2005 (partially).

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## **Endorsement notice**

The text of the International Standard IEC 61215-1-1:2016 was approved by CENELEC as a European Standard without any modification.

**Annex ZA**  
(normative)

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

Annexes ZA of EN 61215-1:2016 and of EN 61215-2:2016 applies.

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**TERRESTRIAL PHOTOVOLTAIC (PV) MODULES –  
DESIGN QUALIFICATION AND TYPE APPROVAL –****Part 1-1: Special requirements for testing of  
crystalline silicon photovoltaic (PV) modules**

## 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 61215-1-1 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

This edition cancels and replaces the second edition of IEC 61215, issued in 2005, and constitutes a technical revision.

This standard is to be read in conjunction with IEC 61215-1:2016 and IEC 61215-2:2016.

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

FDIS	Report on voting
82/1047/FDIS	82/1075/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 in the IEC 61215 series, published under the general title *Terrestrial photovoltaic (PV) modules – Design qualification and type approval*, can be found on the IEC website.

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 stability 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.



# TERRESTRIAL PHOTOVOLTAIC (PV) MODULES – DESIGN QUALIFICATION AND TYPE APPROVAL –

## Part 1-1: Special requirements for testing of crystalline silicon photovoltaic (PV) modules

### 1 Scope and object

This part of IEC 61215 lays down IEC requirements for the design qualification and type approval of terrestrial photovoltaic modules suitable for long-term operation in general open air climates, as defined in IEC 60721-2-1. This standard is intended to apply to all crystalline silicon terrestrial flat plate modules.

This standard does not apply to modules used with concentrated sunlight although it may be utilized for low concentrator modules (1 to 3 suns). For low concentration modules, all tests are performed using the current, voltage and power levels expected at the design concentration.

The object of this test sequence is to determine the electrical and thermal characteristics of the module and to show, as far as possible within reasonable constraints of cost and time, that the module is capable of withstanding prolonged exposure in climates described in the scope. The actual lifetime expectancy of modules so qualified will depend on their design, their environment and the conditions under which they are operated.

This standard defines PV technology dependent modifications to the testing procedures and requirements per IEC 61215-1:2016 and IEC 61215-2:2016.

### 2 Normative references

The normative references of IEC 61215-1:2016 and IEC 61215-2:2016 are applicable without modifications.