ICS 27.160 SLOVENSKÁ TECHNICKÁ NORMA December 2017

STN	**Terestriálne fotovoltické (PV) moduly Posúdenie návrhu a typové schválenie Časť 1-4: Osobitné požiadavky na skúšanie fotovoltických (PV) modulov na báze tenkých vrstiev Cu(In, Ga)(S, Se)2**	**STN EN 61215-1-4** 36 4630

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-4: Special requirements for testing of thin-film Cu(In,GA)(S,Se)2 based photovoltaic (PV) modules

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/17

Obsahuje: EN 61215-1-4:2017, IEC 61215-1-4:2016

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61215-1-4

May 2017

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Supersedes EN 61646:2008

English Version

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1-4: Special requirements for testing of thin-film Cu(In,GA)(S,Se)$_2$ based photovoltaic (PV) modules (IEC 61215-1-4:2016)

Modules photovoltaïques (PV) pour applications terrestres - Qualification de la conception et homologation - Partie 1-4: Exigences particulières d'essai des modules photovoltaïques (PV) au Cu(In,GA)(S,Se)$_2$ à couches minces (IEC 61215-1-4:2016)

Terrestrische kristalline Silizium-Photovoltaik-(PV)-Module - Bauarteignung und Bauartzulassung - Teil 1-4: Besondere Anforderungen für Prüfungen von Photovoltaik-(PV)-Modulen aus Kupfer-Indium-Gallium-Selenid (CIGS) und Kupfer-Indium-Selenid (CIS) (IEC 61215-1-4:2016)

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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 82/1184/FDIS, future edition 1 of IEC 61215-1-4, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61215-1-4:2017.

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) 2017-11-05
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-05-05

This document supersedes EN 61646:2008.

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The text of the International Standard IEC 61215-1-4:2016 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 EN 61215-2:2017 are applicable.

IEC 61215-1-4

Edition 1.0 2016-12

INTERNATIONAL STANDARD

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IEC 61215-1-4:2016-12(en-fr)

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FOREWORD

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International Standard IEC 61215-1-4 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

This edition cancels and replaces the second edition of IEC 61646, issued in 2008, and constitutes a technical revision.

It constitutes a technical revision for thin-film $Cu(In,Ga)(S,Se)_2$ based terrestrial photovoltaic modules.

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
82/1184/FDIS	82/1208/RVD

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

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

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.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

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

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

Part 1-4: Special requirements for testing of thin-film $Cu(In,Ga)(S,Se)_2$ based 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 document is intended to apply to all thin-film $Cu(In,Ga)(S,Se)_2$ based terrestrial flat plate modules. As such it addresses special requirements for testing of this technology supplementing IEC 61215-1:2016 and IEC 61215-2:2016 requirements for testing.

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