SLOVENSKI STANDARD
SIST EN 61215-1:2017

01-februar-2017

Nadomešča:
SIST EN 61215:2005

Prizemni fotonapetostni (PV) moduli - Ocena zasnove in odobritev tipa - 1. del: Zahteve za preskušanje

Terrestrial photovoltaic (PV) modules – Design qualification and type approval - Part 1: Requirements for testing

Ta slovenski standard je istoveten z: EN 61215-1:2016

ICS:

27.160	Sončna energija	Solar energy engineering

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61215-1

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Supersedes EN 61215:2005 (partially)

English Version

Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 1: Test requirements (IEC 61215-1:2016)

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

Terrestrische Photovoltaik-(PV-)Module - Bauarteignung und Bauartzulassung - Part 1: Prüfanforderungen (IEC 61215-1:2016)

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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

Ref. No. EN 61215-1:2016 E

European foreword

The text of document 82/1046/FDIS, future edition 1 of IEC 61215-1, prepared by IEC/TC 82 “Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61215-1:2016.

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• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-04-13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 partially EN 61215:2005.

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Endorsement notice

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

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

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.

Publication	Year	Title	EN/HD	Year
IEC 60050	series	International Electrotechnical Vocabulary	-	series
IEC 60269-6	-	Low-voltage fuses -- Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems	EN 60269-6	-
IEC 60891	-	Photovoltaic devices - Procedures for temperature and irradiance corrections to measured I-V characteristics	EN 60891	-
IEC 60904-1	-	Photovoltaic devices -- Part 1: Measurement of photovoltaic current-voltage characteristics	EN 60904-1	-
IEC 60904-3	-	Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data	EN 60904-3	-
IEC 60904-10	-	Photovoltaic devices -- Part 10: Methods of linearity measurement	EN 60904-10	-
IEC 61215-2	-	Terrestrial photovoltaic (PV) modules - Design qualification and type approval -- Part 2: Test procedures	EN 61215-2	-
IEC 61730-2	-	Photovoltaic (PV) module safety qualification -- Part 2: Requirements for testing	EN 61730-2	-
IEC 61853-1	-	Photovoltaic (PV) module performance testing and energy rating -- Part 1: Irradiance and temperature performance measurements and power rating	EN 61853-1	-
IEC 61853-2	-	Photovoltaic (PV) module performance testing and energy rating -- Part 2: Spectral response, incidence angle and module operating temperature measurements	-	-
IEC/TS 61836	-	Solar photovoltaic energy systems - Terms, definitions and symbols	CLC/TS 61836	-
IEC/TS 62915	-	Photovoltaic (PV) Modules - Retesting for type approval, design and safety qualification	-	-
ISO/IEC 17025	-	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	-
ISO/IEC Guide 98-3	-	Uncertainty of measurement -- Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)	-	-

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Terrestrial photovoltaic (PV) modules – Design qualification and type approval – Part 1: Test requirements

Modules photovoltaïques (PV) pour applications terrestres – Qualification de la conception et homologation – Partie 1: Exigences d'essai

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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CONTENTS

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

Part 1: Test requirements

FOREWORD

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

This first edition of IEC 61215-1 cancels and replaces the second edition of IEC 61215, published in 2005; it constitutes a technical revision.

This edition of IEC 61215-1 includes the following significant technical changes with respect to the second edition of IEC 61215:2005 and the second edition of IEC 61646:2008:

a) New standard series structure consistent with other IEC standards: Part 1 lists general requirements, Part 1-x specifics for each PV technology and Part 2 defines testing. All tests defined in Part 2 are MQTs (module quality tests).
b) Sampling procedure rewritten (Clause 4).
c) Marking requirements better defined for name plate and general documentation.

d) Pass/fail criteria have been divided into two “gates”. Gate No. 1 verifies the initial maximum power at STC with respect to name plate rating and Gate No. 2 defines the power loss during accelerated aging testing.

e) Revised hot-spot endurance test (MQT 09).

f) Update of the other tests to be consistent with changes in IEC 61646.

g) Removal of the method for measuring temperature coefficients and reference to IEC 60891.

h) Definition of NMOT as the nominal module operating temperature measured with the module under maximum power conditions.

i) Rewriting of the standard using NMOT instead of NOCT and reference to future IEC 61853-2 for the test procedure.

j) Rewriting of the robustness of termination test (MQT 14) to include evaluation of both cables and junction boxes.

k) Stabilization of PV modules implemented. This replaces either light soaking procedure from IEC 61646 or preconditioning from IEC 61215.

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

FDIS	Report on voting
82/1046/FDIS	82/1074/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.

INTRODUCTION

Whereas Part 1 of this standard series describes requirements (both in general and specific with respect to device technology), the sub-parts of Part 1 define technology variations and Part 2 defines a set of test procedures necessary for design qualification and type approval. The test procedures described in Part 2 are valid for all device technologies.