



SLOVENSKI STANDARD
SIST EN 61730-1:2008/A1:2012
01-april-2012

**Varnostne zahteve fotonapetostnih (PV) modulov - 1. del: Konstrukcijske zahteve -
Dopolnilo A1 (IEC 61730-1:2004/A1:2011)**

Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction

Photovoltaik (PV) -Module - Sicherheitsqualifikation - Teil 1: Anforderungen an den
Aufbau

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Qualification pour la sûreté de fonctionnement des modules photovoltaïques (PV) -
Partie 1: Exigences pour la construction

[SIST EN 61730-1:2008/A1:2012](https://standards.itih.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a411eb160200/sist-en-61730-1-2008-a1-2012)

Ta slovenski standard je istoveten z: EN 61730-1:2007/A1:2012

ICS:

27.160 Sončna energija Solar energy engineering

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[SIST EN 61730-1:2008/A1:2012](https://standards.iteh.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a41feb6620b/sist-en-61730-1-2008-a1-2012)

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 61730-1/A1

February 2012

ICS 27.160

English version

**Photovoltaic (PV) module safety qualification -
Part 1: Requirements for construction
(IEC 61730-1:2004/A1:2011)**

Qualification pour la sûreté de
fonctionnement des modules
photovoltaïques (PV) -
Partie 1: Exigences pour la construction
(CEI 61730-1:2004/A1:2011)

Photovoltaik (PV) -Module -
Sicherheitsqualifikation -
Teil 1: Anforderungen an den Aufbau
(IEC 61730-1:2004/A1:2011)

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This amendment A1 modifies the European Standard EN 61730-1:2007; it was approved by CENELEC on 2011-12-19. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 CEN-CENELEC Management Centre or to any CENELEC member.

This amendment 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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CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 82/659A/FDIS, future edition 1 of IEC 61730-1:2004/A1, prepared by IEC/TC 82, "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61730-1:2007/A1:2012.

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) 2012-09-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-12-19

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61730-1:2004/A1:2011 was approved by CENELEC as a European Standard without any modification.

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[SIST EN 61730-1:2008/A1:2012](https://standards.iteh.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a41feb6620b/sist-en-61730-1-2008-a1-2012)

<https://standards.iteh.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a41feb6620b/sist-en-61730-1-2008-a1-2012>

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 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>
Addition to Annex ZA of EN 61730-1:2007:				
IEC 60065	-	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	-
IEC 60587	-	Electrical insulating materials used under severe ambient conditions - Test methods for evaluating resistance to tracking and erosion	EN 60587	-
IEC 60695-2-10	-	Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure	EN 60695-2-10	-
IEC 60695-2-20	-	Fire hazard testing - Part 2: Glowing/hot-wire based test methods - Section 20: Hot-wire coil ignitability test on materials	-	-
IEC 60695-11-10	-	Fire hazard testing - Part 11-10: Test flames - 50 W horizontal and vertical flame test methods	EN 60695-11-10	-
IEC 60695-11-20	-	Fire hazard testing - Part 11-20: Test flames - 500 W flame test methods	EN 60695-11-20	-
Replace IEC 60130 (series) by:				
IEC 61984	-	Connectors - Safety requirements and tests	EN 61984	-

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[SIST EN 61730-1:2008/A1:2012](#)

<https://standards.iteh.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a41febfb620b/sist-en-61730-1-2008-a1-2012>



IEC 61730-1

Edition 1.0 2011-11

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Photovoltaic (PV) module safety qualification –
Part 1: Requirements for construction
ITeH STANDARD PREVIEW
(standards.iteh.ai)

Qualification pour la sûreté de fonctionnement des modules photovoltaïques
(PV) –
Partie 1: Exigences pour la construction
SIST EN 61730-1:2008/A1:2012
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SIST EN 61730-1:2008/A1:2012

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ICS 27.160

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FOREWORD

This amendment has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

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

FDIS	Report on voting
82/659A/FDIS	82/677/RVD

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

The committee has decided that the contents of this amendment and the base 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.

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2 Normative references

[SIST EN 61730-1:2008/A1:2012](https://standards.iteh.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a41feb8620b/sist-en-61730-1-2008-a1-2012)

<https://standards.iteh.ai/catalog/standards/sist/2a237ed2-11aa-4179-8618-a41feb8620b/sist-en-61730-1-2008-a1-2012>

Replace

IEC 60130 (all parts), *Connectors for frequencies below 3 MHz*

by

IEC 61984, *Connectors – Safety requirements and tests*

Add

IEC 60065, *Audio, video and similar electronic apparatus – Safety requirements*

IEC 60587, *Electrical insulating materials used under severe ambient conditions – Test methods for evaluating resistance to tracking and erosion*

IEC 60695-2-10, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

IEC 60695-2-20, *Fire hazard testing – Part 2-20: Glowing/hot wire based test methods – Hot-wire coil ignitability – Apparatus, test method and guidance¹*

IEC 60695-11-10, *Fire hazard testing – Part 11-10: Test flames 50 W horizontal and vertical flame test methods*

¹ The 2004 edition of this publication was withdrawn in 2007. A new edition is currently under consideration.

IEC 60695-11-20, *Fire hazard testing – Part 11-20: Test flames – 500 W flame test methods*

5.1 General

All polymeric materials shall have a minimum relative thermal index (electrical and mechanical as defined by IEC 60216-5) of 20 °C above the maximum measured operating temperature of said material in application, as measured during the temperature test (IEC 61730-2, MST 21).

NOTE Polymers serving as a superstrate or substrate have additional requirements, as specified in 5.3. and 5.4.

Add between thermal and index, the word endurance.

5.2 Polymers serving as an enclosure for live parts

Replace existing items a) to d) by the following

- 5-V flammability rating (IEC 60695-11-20), either by material test or by testing the end-product component;
- 5-V flammability rating either by material test or testing the end-product design (IEC 60695-11-20), after the water immersion and exposure test;
- ultraviolet radiation resistance (if exposed to direct sunlight in the application), as determined in accordance with ISO 4892-2, and
- a minimum resistance to hot wire ignition rating of 30 (IEC 60695-2-20).

5.3 Polymers serving to support live parts

- have a flammability classification of HB, V-2, V-1, or V-0 and have a minimum high-current arc ignition rating determined in accordance with IEC 60695-1-1, as shown in Table 1,

Add between V-0 and and: "in accordance with IEC 60695-11-10"

Replace

IEC 60695-1-1

by

ANSI/UL 746C.

- have a Comparative Tracking Index (CTI) of 250 V or more, if the system voltage rating is 600 V or less, as determined in accordance with IEC 60112,

Replace

250 V

by

250.

Add the following new note

NOTE Polymeric materials having a CTI of 250 or more are within material group IIIa of IEC 60664-1.

- have an inclined plane tracking rating of 1 h using the time to track method at 2,5 kV according to ASTM D2303, if the maximum system operating voltage rating is in the 601 V – 1 500 V range, and