

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

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 61730-1:2007 sisaldab Euroopa standardi EN 61730-1:2007 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 25.07.2007 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 61730-1:2007 consists of the English text of the European standard EN 61730-1:2007.</p> <p>This document is endorsed on 25.07.2007 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala:</p> <p>This part of IEC 61730 describes the fundamental construction requirements for photovoltaic (PV) modules in order to provide safe electrical and mechanical operation during their expected lifetime. Specific topics are provided to assess the prevention of electrical shock, fire hazards, and personal injury due to mechanical and environmental stresses. This part of IEC 61730 pertains to the particular requirements of construction. IEC 61730-2 outlines the requirements of testing. This standard attempts to define the basic requirements for various application classes of PV modules, but it cannot be considered to encompass all national or regional building codes. The specific requirements for marine and vehicle applications are not covered. This standard is not applicable to modules with integrated AC inverters (AC modules). This standard is designed so that its test sequence can coordinate with those of IEC 61215 or IEC 61646, so that a single set of samples may be used to perform both the safety and performance evaluation of a photovoltaic module design.</p>	<p>Scope:</p> <p>This part of IEC 61730 describes the fundamental construction requirements for photovoltaic (PV) modules in order to provide safe electrical and mechanical operation during their expected lifetime. Specific topics are provided to assess the prevention of electrical shock, fire hazards, and personal injury due to mechanical and environmental stresses. This part of IEC 61730 pertains to the particular requirements of construction. IEC 61730-2 outlines the requirements of testing. This standard attempts to define the basic requirements for various application classes of PV modules, but it cannot be considered to encompass all national or regional building codes. The specific requirements for marine and vehicle applications are not covered. This standard is not applicable to modules with integrated AC inverters (AC modules). This standard is designed so that its test sequence can coordinate with those of IEC 61215 or IEC 61646, so that a single set of samples may be used to perform both the safety and performance evaluation of a photovoltaic module design.</p>
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ICS 27.160

Võtmesõnad:

**Photovoltaic (PV) module safety qualification –
Part 1: Requirements for construction
(IEC 61730-1:2004, modified)**

Qualification pour la sûreté de
fonctionnement des modules
photovoltaïques (PV) –
Partie 1: Exigences pour la construction
(CEI 61730-1:2004, modifiée)

Photovoltaik (PV) -Module –
Sicherheitsqualifikation –
Teil 1: Anforderungen an den Aufbau
(IEC 61730-1:2004, modifiziert)

This European Standard was approved by CENELEC on 2007-02-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 82/356/FDIS, future edition 1 of IEC 61730-1, prepared by IEC TC 82, Solar photovoltaic energy systems, was submitted to the IEC-CENELEC parallel vote.

A draft amendment, prepared by the Technical Committee CENELEC TC 82, Solar photovoltaic energy systems, was submitted to the Unique Acceptance Procedure.

The combined texts were approved by CENELEC as EN 61730-1 on 2007-02-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2008-02-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-02-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61730-1:2004 was approved by CENELEC as a European Standard with agreed common modifications as given below.

COMMON MODIFICATIONS

General

Replace all references to "this part of IEC 61730" and "IEC 61730-2" by "this part of EN 61730" and "EN 61730-2".

2 Normative references

Replace the entire clause by:

See Annex ZA.

3 Application classes

3.2 Class A: General access, hazardous voltage, hazardous power applications

Replace the text by:

Modules rated for use in this application class may be used in systems operating at greater than 120 V DC. Modules qualified for safety through this part of EN 61730 and EN 61730-2 within this application class are considered to meet the requirements for safety class II.

3.4 Class C: Limited voltage

Change the title of the subclause as given above.

Replace the text by:

Modules rated for use in this application class are restricted to systems operating at less than 120 V DC. Modules qualified for safety through this part of EN 61730 and EN 61730-2 within this application class are considered to meet the requirements for safety class III.

NOTE Safety classes are defined within EN 61140.

5 Polymeric materials

5.1 General

Replace the second paragraph by:

Exception: Encapsulation materials (such as EVA, PVB, TPU etc.) are not required to meet these requirements.

5.2 Polymers serving as an enclosure for live parts

In Item c), **replace** "ANSI/UL 746C" by "EN ISO 4892 series".