



# SLOVENSKI STANDARD SIST EN 60904-5:2001

01-september-2001

Photovoltaic devices -- Part 5: Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method

Photovoltaische Einrichtungen -- Teil 5: Bestimmung der gleichwertigen Zelltemperatur von photovoltaischen (PV) Betriebsmitteln nach dem Leerlaufspannungs-Verfahren

Dispositifs photovoltaïques -- Partie 5: Détermination de la température de cellule équivalente (ECT) des dispositifs photovoltaïques (PV) par la méthode de la tension en circuit ouvert

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Ta slovenski standard je istoveten z: EN 60904-5:1995

## ICS:

27.160 Solar energy engineering

SIST EN 60904-5:2001

en

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EUROPEAN STANDARD  
 NORME EUROPÉENNE  
 EUROPÄISCHE NORM

**EN 60904-5**

June 1995

ICS 31.260

Descriptors: Solar energy, photovoltaic modules, crystalline silicon, terrestrial application, test procedures, design qualification, qualification approval

English version

**Photovoltaic devices**  
**Part 5: Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method (IEC 904-5:1993)**

Dispositifs photovoltaïques  
 Partie 5: Détermination de la température de cellule équivalente (ECT) des dispositifs photovoltaïques (PV) par la méthode de la tension en circuit ouvert  
 (CEI 904-5:1993)

Photovoltaische Einrichtungen  
 Teil 5: Bestimmung der gleichwertigen Zelltemperatur von photovoltaischen (PV) Betriebsmitteln nach dem Leerlaufspannungs-Verfahren  
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This European Standard was approved by CENELEC on 1995-05-15. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and 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 the International Standard IEC 904-5:1993, prepared by IEC TC 82, Solar photovoltaic energy systems, was submitted to the formal vote and was approved by CENELEC as EN 60904-5 on 1995-05-15 without any modification.

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) 1996-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-07-01

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 904-5:1993 was approved by CENELEC as a European Standard without any modification.

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## Annex ZA (normative)

Normative references to international publications  
with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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>
IEC 891	1987	Procedures for temperature and irradiance corrections to measured I-V characteristics of crystalline silicon photovoltaic devices	EN 60891 <sup>1)</sup>	1994
IEC 904-1	1987	Photovoltaic devices Part 1: Measurement of photovoltaic current-voltage characteristics	EN 60904-1	1993

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1) EN 60891 includes A1:1992 to IEC 891.

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NORME  
INTERNATIONALE  
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CEI  
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904-5

Première édition  
First edition  
1993-11

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**Dispositifs photovoltaïques –**

**Partie 5:**

Détermination de la température de cellule équivalente (ECT) des dispositifs photovoltaïques (PV) par la méthode de la tension en circuit ouvert

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**Photovoltaic devices –**

**Part 5:**

Determination of the equivalent cell temperature (ECT) of photovoltaic (PV) devices by the open-circuit voltage method

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International Electrotechnical Commission  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## PHOTOVOLTAIC DEVICES –

**Part 5: Determination of the equivalent cell temperature (ECT)  
of photovoltaic (PV) devices  
by the open-circuit voltage method**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters, prepared by technical committees on which all the National Committees having a special interest therein are represented, express, as nearly as possible, an international consensus of opinion on the subjects dealt with.
- 3) They have the form of recommendations for international use published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

International Standard IEC 904-5 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

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

DIS	Report on voting
82(CO)57	82(CO)72

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