



# SLOVENSKI STANDARD SIST EN IEC 60904-7:2019

01-december-2019

Nadomešča:  
SIST EN 60904-7:2009

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## Fotonapetostne naprave - 7. del: Izračunavanje napake zaradi spektralnega neujemanja pri preskušanju fotonapetostnih naprav

Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices

Photovoltaische Einrichtungen, Teil 7: Berechnung der spektralen Fehlanpassungskorrektur für Messungen an photovoltaischen Einrichtungen  
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Dispositifs photovoltaïques - Partie 7: Calcul de la correction de désadaptation des réponses spectrales dans les mesures de dispositifs photovoltaïques

Ta slovenski standard je istoveten z: EN IEC 60904-7:2019

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### **ICS:**

27.160      Sončna energija      Solar energy engineering

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EUROPEAN STANDARD

EN IEC 60904-7

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2019

ICS 27.160

Supersedes EN 60904-7:2009 and all of its amendments  
and corrigenda (if any)

English Version

## Photovoltaic devices - Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices (IEC 60904-7:2019)

Dispositifs photovoltaïques - Partie 7: Calcul de la correction de désadaptation des réponses spectrales dans les mesures de dispositifs photovoltaïques  
(IEC 60904-7:2019)

Photovoltaische Einrichtungen - Teil 7: Berechnung der spektralen Fehlanpassungskorrektur für Messungen an photovoltaischen Einrichtungen  
(IEC 60904-7:2019)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

**EN IEC 60904-7:2019 (E)****European foreword**

The text of document 82/1590/FDIS, future edition 4 of IEC 60904-7, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60904-7:2019.

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) 2020-06-24
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-09-24

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The text of the International Standard IEC 60904-7:2019 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 are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where 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](http://www.cenelec.eu).

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u>   | <u>Year</u> |
|--------------------|-------------|---|----------------|-------------|
| 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 60904-1-1      | -           | Photovoltaic devices - Part 1-1: Measurement of current-voltage characteristics of multi-junction photovoltaic (PV) devices                   | EN 60904-1-1   | -           |
| IEC 60904-2        | -           | Photovoltaic devices - Part 2: Requirements for photovoltaic reference devices  | EN 60904-2     | -           |
| IEC 60904-3        | -           | Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data | EN IEC 60904-3 | -           |
| IEC 60904-8        | -           | Photovoltaic devices - Part 8: Measurement of spectral responsivity of a photovoltaic (PV) device   | EN 60904-8     | -           |
| IEC 60904-8-1      | -           | Photovoltaic devices - Part 8-1: Measurement of spectral responsivity of multi-junction photovoltaic (PV) devices                             | EN 60904-8-1   | -           |
| IEC 60904-9        | -           | Photovoltaic devices - Part 9: Solar simulator performance requirements   | EN 60904-9     | -           |
| IEC/TS 61836       | -           | Solar photovoltaic energy systems - Terms, definitions and symbols  | -              | -           |
| ISO 9288           | -           | Welding consumables - Solid wire electrodes, solid wires and rods for fusion welding of magnesium and magnesium alloys - Classification       | EN ISO 9288    | 1996        |

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IEC 60904-7

Edition 4.0 2019-08

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Photovoltaic devices –**  
**Part 7: Computation of the spectral mismatch correction for measurements of photovoltaic devices**

**Dispositifs photovoltaïques –**  
**Partie 7: Calcul de la correction de désadaptation des réponses spectrales dans les mesures de dispositifs photovoltaïques**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## PHOTOVOLTAIC DEVICES –

Part 7: Computation of the spectral mismatch correction  
for measurements of photovoltaic devices

## FOREWORD

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International Standard IEC 60904-7 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

This fourth edition cancels and replaces the third edition published in 2008. It constitutes a technical revision.

The main technical changes with respect to the previous edition are as follows:

- For better compatibility and less redundancy, the clause “Determination of test spectrum” refers to IEC 60904-9.
- The spectral mismatch factor is called *SMM* instead of *MM* to enable differentiation to the angular mismatch factor *AMM* and spectral angular mismatch factor *SAMM*.
- Formulae for the derivation and application of the spectral mismatch factor *SMM* are added.
- Links to new standards are given, e.g. concerning multi-junction devices.