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BS EN 61701:2012



BSI Standards Publication

Salt mist corrosion testing of photovoltaic (PV) modules

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This British Standard is the UK implementation of EN 61701:2012. It is identical to IEC 61701:2011. It supersedes BS EN 61701:2000 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/82, Photovoltaic Energy Systems.

A list of organizations represented on this committee can be obtained on request to its secretary.

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NORME EUROPÉENNE
EUROPÄISCHE NORM

March 2012

ICS 27.160

Supersedes EN 61701:1999

English version

Salt mist corrosion testing of photovoltaic (PV) modules (IEC 61701:2011)

Essai de corrosion au brouillard salin des
modules photovoltaïques (PV)
(CEI 61701:2011)

Salznebel-Korrosionsprüfung von
photovoltaischen (PV-)Modulen
(IEC 61701:2011)

This European Standard was approved by CENELEC on 2012-01-19. 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 CEN-CENELEC Management Centre or to any CENELEC member.

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CENELEC

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

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Foreword

The text of document 82/668/FDIS, future edition 2 of IEC 61701, prepared by IEC TC 82, "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61701:2012.

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) 2012-10-19
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-01-19

This document supersedes EN 61701:1999.

EN 61701:2012 includes the following significant technical changes with respect to EN 61701:1999:

- The scope has been updated to better reflect the applicability of the standard.
- Salt mist test is based on EN 60068-2-52 rather than EN 60068-2-11 as in EN 61701:1999 since the former standard is much more widely used in the electronic component field. According to this change EN 61701:2012 includes a cycling testing sequence that combines in each cycle a salt fog exposure followed by humidity storage under controlled temperature and relative humidity conditions. This testing sequence is more suitable to reflect the corrosion processes that happen in PV modules subjected to permanent or temporary corrosive atmospheres (NaCl). In EN 61701:1999 only a salt fog exposure was considered.
- Additional tests have also been included to verify the effect of the salt mist test not only in the PV module output but also in some of its components.
- Different testing sequences are considered depending on the PV module technology involved: crystalline silicon, thin-film and concentrator photovoltaic (CPV) modules.
- A test report clause has also been included.

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 61701:2011 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**

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> |
|--------------------|-------------|--|------------------|-------------|
| IEC 60068-2-52 | - | Environmental testing - Part 2: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution) | EN 60068-2-52 | - |
| IEC 61215 | 2005 | Crystalline silicon terrestrial photovoltaic (PV) modules - Design qualification and type approval | EN 61215 | 2005 |
| IEC 61646 | 2008 | Thin-film terrestrial photovoltaic (PV) modules - Design qualification and type approval | EN 61646 | 2008 |
| IEC 61730-2 (mod) | 2004 | Photovoltaic (PV) module safety qualification - Part 2: Requirements for construction | EN 61730-2 | 2007 |
| IEC 62108 | 2007 | Concentrator Photovoltaic (CPV) modules and assemblies - Design qualification and type approval | EN 62108 | 2008 |
| ISO/IEC 17025 | - | General requirements for the competence of testing and calibration laboratories | EN ISO/IEC 17025 | - |

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