IEC 61730-2

Edition 2.0 2016-08

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Photovoltaic (PV) module safety qualification – Part 2: Requirements for testing

Qualification pour la sûreté de fonctionnement des modules photovoltaïques (PV) – Partie 2: Exigences pour les essais

IEC 61730-2:2016-08(en-fr)

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 27.160

ISBN 978-2-8322-3575-1

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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PHOTOVOLTAIC (PV) MODULE SAFETY QUALIFICATION –

Part 2: Requirements for testing

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61730-2 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

This second edition cancels and replaces the first edition of IEC 61730-2, issued in 2004 and its amendment 1 (2011), and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) Rearrange test sequences.
b) MST 01: Visual inspection: added nameplate requirement and modified pass criteria.
c) Added sharp edge test MST 06.
d) Added insulation thickness test MST 04.
e) MST 11: Accessibility test: defined force for test finger.
f) MST 12: Cut susceptibility test: defined blade radius for cut test.

g) MST 14: removed preconditioning requirement TC200 from Figure 1.

h) MST 15: Partial discharge test removed.

i) Renamed dielectric breakdown test MST 16 to insulation test.

j) MST 21: Temperature test: rewritten test procedure; removed short circuit mode; allow alternative indoor test method.

k) MST 23: Fire test: subclause rewritten; fire test requirements related to national building codes; moved optional test description to informative annex.

l) Added ignitability test MST 24.

m) MST 26: Reverse current overload test: changed specification of wooden board.

n) MST 32: Module breakage test: defined new dimensions of impactor to allow other filling compounds; consider variety of mounting techniques for glass breakage test; reduced impact height to only 300 mm; corrected diameter of opening according to referenced standard (65 cm^2 instead of 6,5 cm^2).

o) Added screw connection test MST 33.

p) Added peel test MST 35 for proof of cemented joints.

q) Added lap shear strength test MST 36 for proof of cemented joints.

r) Added materials creep test MST 37.

s) Added PV module test sequence with moisture and UV to stress polymers to Figure 1. The new UV sequence was added as a response to the Kyoto meeting, where it was decided to add a coupon test and a PV module test sequence. As it is not possible to perform the ISO UV test on PV modules (no affordable equipment available) it was decided to rely on already available PV module test equipment. R&D work has shown that cycling UV and HF are best to age polymers in PV modules.

t) Added new sequence for Pollution Degree (PD) testing (sequence B1).

u) Added annex: Recommendations for testing of PV modules from production.

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

FDIS	Report on voting
82/1129/FDIS	82/1147/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

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