

Draft European Annex Amendment 11

EN IEC 61730-2:2018/AMD11

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

Note: Also planned to be amended to upcoming EN IEC 61730-2:2023 (this note can be deleted).

Annex D (normative)

Extended static mechanical load test and Extended module breakage test

D.1 General

National building code authorities in Europe typically re-evaluate PV modules used for BAPV applications for structural safety. In this evaluation, results for tests beyond base-level module safety tests were found to be useful and may help to support the approval process. The purpose of these tests is to evaluate the load-bearing capacity of modules. These tests are optional and not required for compliance with EN IEC 61730-2. Results of optionally performed tests shall be added to the test report section.

D.2 Extended static mechanical load test

D.2.1 Procedure

Based on the installation instructions, the worst-case mounting configuration, as identified in MST 34, shall be used for these extended tests. Additional tests with different mounting configurations are permitted.

The extended static mechanical load test is identical to MST 34 and shall be performed with five samples. Samples shall be exposed to the damp heat test MST 53.

The initial test load can be selected by the manufacturer and is typically higher than the maximum load tested for MST 34. The tests shall be continued with an incremental test load (in steps of for example 600 Pa) until breakage occurs which impairs the mechanical integrity of the module.

NOTE 1 Mechanical integrity can be impaired by e.g. glass breakage, failure of frames, separation of glass from the frame or mounting material.

D.2.2 Reporting

All passed and failed test loads shall be reported. Photographs of the module shall be taken after each test and the failure mode shall be documented. It is recommended to report the maximum deflection of glass and frame for each load level.

D.3 Extended module breakage test

D.3.1 Procedure

This test is identical to MST 32 and shall be performed with five modules. Based on the installation instructions, the worst-case mounting configuration, as identified in MST 32, shall be used. Additional tests with different mounting configurations are permitted.

The initial drop height can be selected by the manufacturer and is typically higher than the maximum drop height of MST 32. The tests shall be continued with an incremental increase of drop height (in steps of 300 mm) until glass breakage occurs.

D.3.2 Reporting

All passed and failed drop heights shall be reported. Photographs of the module shall be taken after each test.

CENELEC	TC82/Sec0250/Q July 05, 2023
EUROPEAN COMMITTEE FOR ELECTROTECHNICAL STANDARDIZATION	
Technical Committee 82 – Solar photovoltaic energy systems	

To: National Committees

Questionnaire on CLC EN IEC 61730-2:2018/AMD11 “Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing” Draft.

Justification

This document (AMD11 Draft) describes some optional test about BAPV and reporting. In particular, National building code authorities in Europe typically re-evaluate PV modules used for BAPV applications for structural safety. In this evaluation, results for tests beyond base-level module safety tests were found to be useful and may help to support the approval process. The purpose of these tests is to evaluate the load-bearing capacity of modules.

These tests are optional and not required for compliance with EN IEC 61730-2. Results of optionally performed tests shall be added to the test report section.

Proposal

Considering the above, CLC/TC 82 members are asked to respond to the following questions by 2023-08-02 in order to:

- 1) Request CLC/BT to start an NWIP about the EN IEC 61730-2:2018 AMD11 “Annex D (normative) Extended static mechanical load test and Extended module breakage test”;
- 2) In that case (acceptation to do the NWIP on 1), accepting to collaborate to the NWIP ad-hoc team, to make a revision of attached German proposal.

National Committees are asked to vote.

Question	Yes	No
1. Do you agree with an NWIP about the EN IEC 61730-2:2018 AMD11 “Annex D (normative) Extended static mechanical load test and Extended module breakage test”?	X (NL) X (SI) X (DE) X (ES) X (CZ) X (AT) X (CH)	

<p>2. In that case (acceptation to do the NWIP on 1), do you accept to collaborate to the NWIP ad-hoc team, to make a revision of attached German proposal? (If you do, please indicate the name of the member who will participate to the team work)</p>	<p>X (DE) Mr. Ralf Haselhuhn and Mr. Peter Seidel would like to be a member of the working group X (CZ) X (AT) Krametz Thomas thomas.krametz@ait.ac.at X (CH) Bellenda Giovanni giovanni.bellenda@supsi.ch</p>	<p>X (NL) X (SI) X (ES)</p>
<p>National Committee</p>		

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