ICS 27.160 SLOVENSKÁ TECHNICKÁ NORMA December 2017

STN	**Koncentrátorové fotovoltické (CPV) moduly Tepelná cyklická skúška na rozlíšenie zvýšenej odolnosti voči tepelnej únave**	**STN EN 62925** 36 4605

Concentrator photovoltaic (CPV) modules - Thermal cycling test to differentiate increased thermal fatigue durability

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 11/17

Obsahuje: EN 62925:2017, IEC 62925:2016

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EUROPEAN STANDARD **EN 62925**

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ICS 27.160

English Version

Concentrator photovoltaic (CPV) modules - Thermal cycling test to differentiate increased thermal fatigue durability (IEC 62925:2016)

Modules photovoltaïques à concentration (CPV) - Essai de cycles thermiques pour la détermination de la durabilité renforcée à la fatigue thermique (IEC 62925:2016)

CPV-Module - Temperaturwechselprüfung für CPV-Module zur Bewertung erhöhter Temperaturwechselbeständigkeit (IEC 62925:2016)

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

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Ref. No. EN 62925:2017 E

European foreword

The text of document 82/1185/FDIS, future edition 1 of IEC 62925, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62925:2017.

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) 2017-11-05
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-05-05

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Endorsement notice

The text of the International Standard IEC 62925:2016 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, 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 1 When 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.

Publication	Year	Title	EN/HD	Year
IEC 62108	2016	Concentrator photovoltaic (CPV) modules and assemblies - Design qualification and type approval	EN 62108	2016

IEC 62925

Edition 1.0 2016-12

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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CONTENTS

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CONCENTRATOR PHOTOVOLTAIC (CPV) MODULES – THERMAL CYCLING TEST TO DIFFERENTIATE INCREASED THERMAL FATIGUE DURABILITY

FOREWORD

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International Standard IEC 62925 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

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

FDIS	Report on voting
82/1185/FDIS	82/1210/RVD

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

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

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

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

IEC 62108 defines IEC requirements for the design qualification of concentrator modules for long-term operation in general open-air climates. This standard, IEC 62925, is not compulsory with but will supplement IEC 62108 by providing tests that differentiate thermal fatigue durability of concentrator modules for deployment in a larger range of applications and climates.

CONCENTRATOR PHOTOVOLTAIC (CPV) MODULES – THERMAL CYCLING TEST TO DIFFERENTIATE INCREASED THERMAL FATIGUE DURABILITY

1 Scope

This document defines a test sequence that will quickly uncover CPV module failures that have been associated with field exposure to thermal cycling for many years. This document was specifically developed to relate to thermal fatigue failure of the HCPV die-attach, however, it also applies, to some extent, to all thermal fatigue related failure mechanisms for the assemblies submitted to test.

IEC 62108, the CPV module qualification test already includes an accelerated thermal cycle sequence in one leg of the testing, however, the parameters of that test only represent a qualification level of exposure. This test procedure applies more stress and will provide a route for comparative testing to differentiate CPV modules with improved durability to thermal cycling and the associated mechanical stresses.

2 Normative references

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.

IEC 62108:2016, *Concentrator photovoltaic (CPV) modules and assemblies – Design qualification and type approval*