

<b>STN</b>	<b>Koncentrátorové fotovoltaické (CPV) moduly Tepelná cyklická skúška na rozlíšenie zvýšenej odolnosti voči tepelnej únave</b>	<b>STN EN 62925</b>  36 4605
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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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Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017  
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EUROPEAN STANDARD

**EN 62925**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2017

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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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.

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



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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

**Modules photovoltaïques à concentration (CPV) – Essai de cycles thermiques pour la détermination de la durabilité renforcée à la fatigue thermique**





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**Modules photovoltaïques à concentration (CPV) – Essai de cycles thermiques pour la détermination de la durabilité renforcée à la fatigue thermique**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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.

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- 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.

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