



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN IEC 62688:2018

**Concentrator photovoltaic (CPV)
modules and assemblies - Safety
qualification**

Konzentrator-Photovoltaik (CPV-)Module
und -Anordnungen -
Sicherheitsqualifikation

Modules et ensembles photovoltaïques à
concentration - Qualification de la
sécurité

02/2018



National Foreword

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ILNAS-EN IEC 62688:2018

EUROPEAN STANDARD **EN IEC 62688**

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2018

ICS 27.160

English Version

**Concentrator photovoltaic (CPV) modules and assemblies -
Safety qualification
(IEC 62688:2017)**

Modules et ensembles photovoltaïques à concentration -
Qualification de la sécurité
(IEC 62688:2017)

Konzentrator-Photovoltaik (CPV-)Module und -
Anordnungen - Sicherheitsqualifikation
(IEC 62688:2017)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 82/1299/FDIS, future edition 1 of IEC 62688, prepared by IEC/TC 82 "Solar photovoltaic energy systems" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62688:2018.

The following dates are fixed:

- latest date by which the document has to be (dop) 2018-08-02
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2021-02-02
standards conflicting with the
document have to be withdrawn

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Endorsement notice

The text of the International Standard IEC 62688:2017 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 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.

NOTE 1 Where 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
-	-	Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests	EN 13501-1:2007 +A1:2009	-
IEC 60060-1	-	High-voltage test techniques - Part 1: General definitions and test requirements	EN 60060-1	-
IEC 60065	-	Audio, video and similar electronic apparatus - Safety requirements	EN 60065	-
IEC 60112	-	Method for the determination of the proof and the comparative tracking indices of solid insulating materials	EN 60112	-
IEC 60216-5	-	Electrical insulating materials - Thermal endurance properties - Part 5: Determination of relative thermal endurance index (RTE) of an insulating material	EN 60216-5	-
IEC 60243-2	-	Electric strength of insulating materials - Test methods - Part 2: Additional requirements for tests using direct voltage	EN 60243-2	-
IEC 60417-DB	-	Graphical symbols for use on equipment	-	-
IEC 60529	-	Degrees of protection provided by enclosures (IP Code)	EN 60529	-
IEC 60664-1	2007	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests	EN 60664-1	2007
IEC/TR 60664-2-1	2011	Insulation coordination for equipment within low-voltage systems - Part 2-1: Application guide - Explanation of the application of the IEC 60664 series, dimensioning examples and dielectric testing	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60664-3	2016	Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution	EN 60664-3	2017
IEC 60695-1-10	-	Fire hazard testing - Part 1-10: Guidance for assessing the fire hazard of electrotechnical products - General guidelines	EN 60695-1-10	-
IEC 60695-1-11	-	Fire hazard testing - Part 1-11: Guidance for assessing the fire hazard of electrotechnical products - Fire hazard assessment	EN 60695-1-11	-
IEC 60695-2-10	-	Fire hazard testing - Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure	EN 60695-2-10	-
IEC 60695-11-20	-	Fire hazard testing - Part 11-20: Test flames - 500 W flame test method	EN 60695-11-20	-
IEC 60904-3	-	Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data	EN 60904-3	-
IEC 60947-1	-	Low-voltage switchgear and controlgear - Part 1: General rules	EN 60947-1	-
IEC 60950-1 (mod)	2005	Information technology equipment - Safety - Part 1: General requirements	EN 60950-1 +A11 +AC +A12	2006 2009 2011 2011
IEC 61032	-	Protection of persons and equipment by enclosures - Probes for verification	EN 61032	-
IEC 61140	2016	Protection against electric shock - Common aspects for installation and equipment	EN 61140	2016
IEC 61215-2	-	Terrestrial photovoltaic (PV) modules - Design qualification and type approval - Part 2: Test procedures	EN 61215-2	-
IEC 61508	Series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	Series
IEC 61730-1	2016	Photovoltaic (PV) module safety qualification - Part 1: Requirements for construction	EN 61730-1	2016
IEC 61730-2	2016	Photovoltaic (PV) module safety qualification - Part 2: Requirements for testing	EN 61730-2	2016
IEC/TS 61836	-	Solar photovoltaic energy systems - Terms, definitions and symbols	-	-

<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
IEC 62305-2	-	Protection against lightning - Part 2: Risk management	EN 62305-2	-
IEC 62305-3	-	Protection against lightning - Part 3: Physical damage to structures and life hazard	EN 62305-3	-
IEC 62548	-	Photovoltaic (PV) arrays - Design requirements	-	-
IEC 62670-1	-	Photovoltaic concentrators (CPV) - Performance testing - Part 1: Standard conditions	EN 62670-1	-
IEC 62790	-	Junction boxes for photovoltaic modules - Safety requirements and tests	EN 62790	-
IEC 62852	2014	Connectors for DC-application in photovoltaic systems - Safety requirements and tests	EN 62852	2015
ISO 179-1	-	Plastics - Determination of Charpy impact properties - Part 1: Non-instrumented impact test	EN ISO 179-1	-
ISO 261	-	ISO general-purpose metric screw threads - General plan	-	-
ISO 262	-	ISO general purpose metric screw threads - Selected sizes for screws, bolts and nuts	-	-
ISO 527	Series	Plastics - Determination of tensile properties	EN ISO 527	Series
ISO 834-1	-	Fire-resistance tests - Elements of building - construction - Part 1: General requirements	-	-
ISO/TR 834-3	-	Fire-resistance tests - Elements of building - construction - Part 3: Commentary on test method and guide to the application of the outputs from the fire-resistance test	-	-
ISO 1456	-	Metallic and other inorganic coatings - Electrodeposited coatings of nickel, nickel plus chromium, copper plus nickel and of copper plus nickel plus chromium	EN ISO 1456	-
ISO 1461	-	Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods	EN ISO 1461	-
ISO 2081	-	Metallic and other inorganic coatings - Electroplated coatings of zinc with supplementary treatments on iron or steel	EN ISO 2081	-
ISO 2093	-	Electroplated coatings of tin; Specification and test methods	-	-

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 4892-2	-	Plastics - Methods of exposure to laboratory light sources - Part 2: Xenon-arc lamps	EN ISO 4892-2	-
ISO 5657	-	Reaction to fire tests - Ignitability of building products using a radiant heat source	-	-
ISO 8124-1	-	Safety of toys - Part 1: Safety aspects related to mechanical and physical properties	-	-
ENV 1187-1 to -4		Test methods for roof coverings under the influence of a thermal attack of burning brands and radiant heat		
ANSI/UL 790	2004	Standard for Standard Test Methods for Fire Tests of Roof Coverings	-	-
ANSI/UL 746B	-	Standard for Polymeric Materials - Long Term Property Evaluations	-	-
ANSI/UL 746C	-	Standard for Polymeric Materials - Use in Electrical Equipment Evaluations	-	-
ANSI/UL 1703	-	Standard for Flat-Plate Photovoltaic Modules and Panels	-	-
ASTM E162-13	-	Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source	-	-
ASTM D3755-14	-	Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials Under Direct-Voltage Stress	-	-
ASTM D257-14	-	Standard Test Methods for DC Resistance or Conductance of Insulating Materials	-	-
ASTM D1002-10	-	Standard Test Method for Apparent Shear Strength of Single-Lap-Joint Adhesively Bonded Metal Specimens by Tension Loading (Metal-to-Metal)	-	-