

# FINAL VERSION

# VERSION FINALE

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**Connectors for DC-application in photovoltaic systems – Safety requirements and tests**

**Connecteurs pour applications en courant continu pour systèmes photovoltaïques – Exigences de sécurité et essais**

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**CONNECTORS FOR DC-APPLICATION IN PHOTOVOLTAIC SYSTEMS –  
SAFETY REQUIREMENTS AND TESTS**

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**This Consolidated version of IEC 62852 bears the edition number 1.1. It consists of the first edition (2014-11) [documents 82/878/FDIS and 82/905/RVD] and its amendment 1 (2020-03) [documents 82/1646/FDIS and 82/1667/RVD]. The technical content is identical to the base edition and its amendment.**

**This Final version does not show where the technical content is modified by amendment 1. A separate Redline version with all changes highlighted is available in this publication.**

International Standard IEC 62852 has been prepared by IEC technical committee 82: Solar photovoltaic energy systems.

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

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

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- withdrawn,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

# CONNECTORS FOR DC-APPLICATION IN PHOTOVOLTAIC SYSTEMS – SAFETY REQUIREMENTS AND TESTS

## 1 Scope

This International Standard applies to connectors for use in the d.c. circuits of photovoltaic systems according to class II of IEC 61140:2001 with rated voltages up to 1 500 V d.c. and rated currents up to 125 A per contact.

This standard applies to connectors without breaking capacity but which might be engaged and disengaged under voltage.

This standard also applies to connectors which are intended to be built-in or integrated in enclosures of devices for photovoltaic systems. This standard may be used as a guide for connectors in photovoltaic systems of classes 0 and III according to IEC 61140:2001 as well as for protection for Class II equipment intended for use at less than 50 V d.c. This document does not apply to connectors for data collection, tracker controls or similar, but it may be used as a guide for those connectors.

## 2 Normative references

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.

IEC 60050 (all parts): *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org>)

IEC 60060-1, *High-voltage test techniques – Part 1: General definitions and test requirements*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-14, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-75, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60068-2-78, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state*

IEC 60112, *Method for the determination of the proof and the comparative tracking indices of solid insulating materials*

IEC 60216-1, *Electrical insulating materials – Thermal endurance properties – Part 1: Ageing procedures and evaluation of test results*

IEC 60216-5, *Electrical insulating materials – Thermal endurance properties – Part 5: Determination of relative thermal endurance index (RTE) of an insulating material*

IEC 60228, *Conductors of insulated cables*