



CSA C22.2 No. 62790:20

Junction boxes for photovoltaic modules — Safety requirements and tests
(IEC 62790:2014, MOD)

CSA C22.2 n° 62790:20

**Boîtes de jonction pour modules photovoltaïques — Exigences de
sécurité et essais**
(IEC 62790:2014, MOD)



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CSA C22.2 No. 62790:20

May 2020

Title: *Junction boxes for photovoltaic modules — Safety requirements and tests*

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CSA C22.2 No. 62790:20 Junction boxes for photovoltaic modules — Safety requirements and tests (IEC 62790:2014, MOD)

Prepared by
International Electrotechnical Commission



Reviewed by



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Published in May 2020 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3

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ICS 27.160
ISBN 978-1-4883-2661-5

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CSA Preface

This is the first edition of CSA C22.2 No. 62790, *Junction boxes for photovoltaic modules — Safety requirements and tests*, which is an adoption, with Canadian deviations, of the identically titled IEC (International Electrotechnical Commission) Standard 62790 (first edition, 2014-11). It is one in a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*.

For brevity, this Standard will be referred to as “CSA C22.2 No. 62790” throughout.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed for Canadian adoption by the CSA Integrated Committee on Wiring Devices, under the jurisdiction of the CSA Technical Committee on Wiring Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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Junction boxes for photovoltaic modules – Safety requirements and tests

Boîtes de jonction pour modules photovoltaïques – Exigences de sécurité et essais



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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
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Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
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Junction boxes for photovoltaic modules – Safety requirements and tests

Boîtes de jonction pour modules photovoltaïques – Exigences de sécurité et essais

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SAFETY REQUIREMENTS AND TESTS**
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The European Standard EN 50548 (first edition, 2011), has served as a basis for the elaboration of this standard.

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

FDIS	Report on voting
82/876/FDIS	82/902/RVD

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JUNCTION BOXES FOR PHOTOVOLTAIC MODULES – SAFETY REQUIREMENTS AND TESTS

1 Scope

This International Standard describes safety requirements, constructional requirements and tests for junction boxes up to 1 500 V dc for use on photovoltaic modules according to class II of IEC 61140:2001.

This standard applies also to enclosures mounted on PV-modules containing electronic circuits for converting, controlling, monitoring or similar operations. Additional requirements concerning the relevant operations are applied under consideration of the environmental conditions of the PV-modules. This standard does not apply to the electronic circuits of these devices, for which other IEC-standards apply.

NOTE For junction boxes according to classes 0 and III of IEC 61140:2001, in photovoltaic-systems, this standard can be used as a guideline.

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

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

IEC 60068-2-14:2009, *Environmental testing – Part 2-14: Tests – Test N: Change of temperature*

IEC 60068-2-70, *Environmental testing – Part 2: Tests – Test Xb: Abrasion of markings and letterings caused by rubbing of fingers and hands*

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 60228, *Conductors of insulated cables*

IEC 60352-2, *Solderless connections – Part 2: Crimped connections – General requirements, test methods and practical guidance*

IEC 60512-12-1, *Connectors for electronic equipment – Tests and measurements – Part 12-1: Soldering tests – Test 12a: Solderability, wetting, solder bath method*

IEC 60512-12-2, *Connectors for electronic equipment – Tests and measurements – Part 12-2: Soldering tests – Test 12b: Solderability, wetting, soldering iron method*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*