



# SLOVENSKI STANDARD

## SIST EN 61191-2:2014

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Nadomešča:  
SIST EN 61191-2:2001

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**Sestavi plošč tiskanih vezij - 2. del: Področna specifikacija - Zahteve za površinsko nameščene spajkane sestave**

Printed board assemblies - Part 2: Sectional specification - Requirements for surface mount soldered assemblies

Elektronikaufbauten auf Leiterplatten - Teil 2: Rahmenspezifikation - Anforderungen an gelötete Baugruppen in Oberflächenmontage

Ensembles de cartes imprimées - Partie 2: Spécification intermédiaire - Exigences relatives à l'assemblage par brasage pour montage en surface

**Ta slovenski standard je istoveten z: EN 61191-2:2013**

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**ICS:**

31.180 Tiskana vezja (TIV) in tiskane Printed circuits and boards plošče

**SIST EN 61191-2:2014**

**en**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 61191-2**

October 2013

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Supersedes EN 61191-2:1998

English version

**Printed board assemblies -  
Part 2: Sectional specification -  
Requirements for surface mount soldered assemblies  
(IEC 61191-2:2013)**

Ensembles de cartes imprimées -  
Partie 2: Spécification intermédiaire -  
Exigences relatives à l'assemblage par  
brasage pour montage en surface  
(CEI 61191-2:2013)

Elektronikaufbauten auf Leiterplatten -  
Teil 2: Rahmenspezifikation -  
Anforderungen an gelötete Baugruppen in  
Oberflächenmontage  
(IEC 61191-2:2013)

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This European Standard was approved by CENELEC on 2013-07-10. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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**CENELEC**

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 91/1091/FDIS, future edition 2 of IEC 61191-2, prepared by IEC/TC 91 "Electronics assembly technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61191-2:2013.

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) 2014-04-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-07-10

This document supersedes EN 61191-2:1998.

EN 61191-2:2013 includes the following significant technical changes with respect to EN 61191-2:1998:

- IPC-A-610 on workmanship has been included as a normative reference;
- some of the terminology used in the document has been updated;
- references to EN standards have been corrected;
- the use of lead-free solder paste and plating are addressed.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

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## Endorsement notice

The text of the International Standard IEC 61191-2:2013 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 When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61191-1	2013	Printed board assemblies Part 1: Generic specification - Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies	EN 61191-1	2013
IPC-A-610E	2010	Acceptability of Electronic Assemblies	-	-

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IEC 61191-2

Edition 2.0 2013-06

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Printed board assemblies –**  
**Part 2: Sectional specification – Requirements for surface mount soldered assemblies**

**Ensembles de cartes imprimées –**  
**Partie 2: Spécification intermédiaire – Exigences relatives à l'assemblage par brasage pour montage en surface**

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COMMISSION

COMMISSION  
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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PRINTED BOARD ASSEMBLIES –****Part 2: Sectional specification –  
Requirements for surface mount soldered assemblies**

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 61191-2 has been prepared by IEC technical committee 91: Electronics assembly technology.

This second edition cancels and replaces the first edition, published in 1998, and constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- IPC-A-610 on workmanship has been included as a normative reference;
- some of the terminology used in the document has been updated;
- references to IEC standards have been corrected;
- the use of lead-free solder paste and plating are addressed.

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

FDIS	Report on voting
91/1091/FDIS	91/1103/RVD

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

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

A list of all parts of IEC 61191 under the general title *Printed board assemblies* can be found in the IEC website.

The committee has decided that the contents of this publication 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.

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## PRINTED BOARD ASSEMBLIES –

### Part 2: Sectional specification – Requirements for surface mount soldered assemblies

#### 1 Scope

This part of IEC 61191 gives the requirements for surface mount solder connections. The requirements pertain to those assemblies that are totally surface mounted or to the surface mounted portions of those assemblies that include other related technologies (e.g. through-hole, chip mounting, terminal mounting, etc.).

#### 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 61191-1:2013, *Printed board assemblies – Part 1: Generic specification – Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies*

IPC-A-610E:2010, *Acceptability of Electronic Assemblies*

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#### 3 Conventions

Unless otherwise specified by the user, the word "shall" signifies that the requirement is mandatory. Deviations from any "shall" requirement requires written acceptance by the user, e.g. via assembly drawing, specification or contract provision.

The word "should" is used to indicate a recommendation or guidance statement. The word "may" indicates an optional situation. Both "should" and "may" express non-mandatory situations. "Will" is used to express a declaration of purpose.

#### 4 General requirements

Clause 4 of IEC 61191-1:2013 is a mandatory part of this standard.

Workmanship of surface mount assemblies shall meet the requirements of IPC-A-610E in accordance with the classification requirements of this standard.

#### 5 Classification

This standard recognizes that electrical and electronic assemblies are subject to classifications by intended end-item use. Three general end-product classes have been established to reflect differences in producibility, complexity, functional performance requirements, and verification (inspection/test) frequency. These are the following:

Level A: General electronic products

Level B: Dedicated service electronic products