SLOVENSKI STANDARD
SIST EN 60286-4:2014

01-januar-2014

Nadomešča:
SIST EN 60286-4:2002

Pakiranje komponent za avtomatsko obdelavo - 4. del: Palične posode za elektronske komponente, inkapsulirane v ohišjih različnih oblik

Packaging of components for automatic handling - Part 4: Stick magazines for electronic components encapsulated in packages of different forms

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Emballage de composants pour opérations automatisées - Partie 4 : Magasins chargeurs pour composants électroniques encapsulés dans des boîtiers de différentes formes

Ta slovenski standard je istoveten z: **EN 60286-4:2013**

ICS:

31.020	Elektronske komponente na splošno	Electronic components in general
55.160	Zaboji. Škatle. Plastični zaboji	Cases. Boxes. Crates

SIST EN 60286-4:2014 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60286-4

November 2013

ICS 31.020; 31.240

Supersedes EN 60286-4:1998

English version

Packaging of components for automatic handling - Part 4: Stick magazines for electronic components encapsulated in packages of different forms

(IEC 60286-4:2013)

Emballage des composants pour opérations automatisées – Partie 4: Magasins chargeurs pour composants électroniques encapsulés dans des boîtiers de différentes formes
(CEI 60286-4:2013)

Gurtung und Magazinierung von Bauteilen für automatische Verarbeitung - Teil 4: Stangenmagazine für elektronische Bauelemente mit verschiedenen Gehäusen
(IEC 60286-4:2013)

This European Standard was approved by CENELEC on 2013-08-30. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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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

Ref. No. EN 60286-4:2013 E

Foreword

The text of document 40/2230/FDIS, future edition 3 of IEC 60286-4, prepared by IEC TC 40, "Capacitors and resistors for electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60286-4:2013.

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)	2014-05-30
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2016-08-30

This document supersedes EN 60286-4:1998.

EN 60286-4:2013 includes the following significant technical changes with respect to EN 60286-4:1998:

Clause 4 describes the guidelines for customer specific stick magazine design. It replaces the magazine design rules for IEC outlined components and rules for orientation of components in stick magazines which have been moved to Annexes Z to D.

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.

Endorsement notice

The text of the International Standard IEC 60286-4:2013 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

ISO 11469 NOTE Harmonized as EN ISO 11469.

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.

Publication	Year	Title	EN/HD	Year
IEC 60191-3	1999	Mechanical standardization of semiconductor devices - Part 3: General rules for the preparation of outline drawings of integrated circuits	EN 60191-3	1999
IEC 60747-1 + corr. August + A1	2006 2008 2010	Semiconductor devices - Part 1: General	-	-

IEC 60286-4

Edition 3.0 2013-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Packaging of components for automatic handling –
Part 4: Stick magazines for electronic components encapsulated in packages of different forms

Emballage des composants pour opérations automatisées –
Partie 4: Magasins chargeurs pour composants électroniques encapsulés dans des boîtiers de différentes formes

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –

Part 4: Stick magazines for electronic components encapsulated in packages of different forms

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 60286-4 has been prepared by IEC technical committee 40: Capacitors and resistors for electronic equipment.

This third edition cancels and replaces the second edition published in 1997 and constitutes a technical revision.

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

– Clause 4 describes the guidelines for customer specific stick magazine design. It replaces the magazine design rules for IEC outlined components and rules for orientation of components in stick magazines which have been moved to Annexes A to D.

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

FDIS	Report on voting
40/2230/FDIS	40/2241/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 in the IEC 60286 series, published under the general title *Packaging of components for automatic handling*, can be found on 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.

PACKAGING OF COMPONENTS FOR AUTOMATIC HANDLING –

Part 4: Stick magazines for electronic components encapsulated in packages of different forms

1 Scope

This part of IEC 60286 is applicable to stick magazines (including end stoppers) intended to be used for storage of electronic components, for transport from the manufacturer to the customer and for in-house use in the manufacturing plant. They are also used to feed automatic placement machines for surface mounting as well as for through-hole mounting of electronic components.

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 60191-3:1999, *Mechanical standardization of semiconductor devices – Part 3: General rules for the preparation of outline drawings of integrated circuits*

IEC 60747-1:2006, *Semiconductor devices – Part 1: General*
Amendment 1:2010

3 Terms, definitions and conventions

3.1 Terms and definitions

For the purposes of this document, the following definitions apply.

3.1.1
stick magazine
elongated container which has an appropriate cross section designed to accommodate devices

Note 1 to entry: Alternative terms such as tube, rail and magazine may be used.

3.1.2
end stoppers
mechanism placed at each end of the stick magazine to keep the devices from falling out of the stick magazine

Note 1 to entry: Alternative terms such as pins, plugs, end plugs, nails, retainers etc. may be used, but for the purposes of this standard "end stopper" shall be used.

3.2 Conventions

All dimensions in tables and figures representing sizes are in millimetres. All dimensions in tables and figures representing angles or radii are in degrees.