



SLOVENSKI STANDARD SIST EN IEC 60372:2020

01-december-2020

Nadomešča:
SIST EN 60372:2004

Zaklepni mehanizmi za spojke z betičem in ponvico za člene izolatorskih verig - Dimenzije in preskusi (IEC 60372:2020)

Locking devices for ball and socket couplings of string insulator units - Dimensions and tests (IEC 60372:2020)

Sicherungsvorrichtungen für Klöppel- und Pfannenverbindungen von Kettenisolatoren - Maße und Prüfungen (IEC 60372:2020)

Dispositifs de verrouillage pour les assemblages à rotule et logement de rotule des éléments de chaînes d'isolateurs - Dimensions et essais (IEC 60372:2020)

Ta slovenski standard je istoveten z: **EN IEC 60372:2020**

ICS:

29.080.10 Izolatorji Insulators

SIST EN IEC 60372:2020 en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 60372:2020

<https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-939078a46ef6/sist-en-iec-60372-2020>

EUROPEAN STANDARD

EN IEC 60372

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2020

ICS 29.240.20; 29.080.10

Supersedes EN 60372:2004 and all of its amendments
and corrigenda (if any)

English Version

Locking devices for ball and socket couplings of string insulator units - Dimensions and tests (IEC 60372:2020)

Dispositifs de verrouillage pour les assemblages à rotule et
logement de rotule des éléments de chaînes d'isolateurs -
Dimensions et essais
(IEC 60372:2020)

Sicherungsvorrichtungen für Klöppel- und
Pfannenverbindungen von Kettenisolatoren - Maße und
Prüfungen (IEC 60372:2020)

This European Standard was approved by CENELEC on 2020-08-26. 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.

[SIST EN IEC 60372:2020](https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-59716a60038e/iec-60372-2020)

[https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-](https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-59716a60038e/iec-60372-2020)

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

EN IEC 60372:2020 (E)**European foreword**

The text of document 36/485/FDIS, future edition 4 of IEC 60372, prepared by IEC/TC 36 "Insulators" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60372:2020.

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) 2021-05-26
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-08-26

This document supersedes EN 60372:2004 and all of its amendments and corrigenda (if any).

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

iTeh STANDARD PREVIEW
Endorsement notice
(standards.iteh.ai)

The text of the International Standard IEC 60372:2020 was approved by CENELEC as a European Standard without any modification.

<https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-939078a46ef6/sist-en-iec-60372-2020>

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60120:2020	NOTE	Harmonized as EN IEC 60120:2020 (not modified)
IEC 61325:1995	NOTE	Harmonized as EN 61325:1995 (not modified)

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>
IEC 60050-471	-	International Electrotechnical Vocabulary - Part 471: Insulators	-	-
ISO 6506-1	-	Metallic materials - Brinell hardness test - Part 1: Test method	EN ISO 6506-1	-
ISO 6507-1	-	Metallic materials – Vickers Hardness – Test Part 1: Test Method	EN ISO 6507-1	-
ISO 6508-1	-	Metallic materials – Rockwell Hardness – Test Part 1: Test Method	EN ISO 6508-1	-

STANDARD PREVIEW
(standards.iteh.ai)
SIST EN IEC 60372:2020
<https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-939078a46ef6/sist-en-iec-60372-2020>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN IEC 60372:2020

<https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-939078a46ef6/sist-en-iec-60372-2020>



IEC 60372

Edition 4.0 2020-07

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Locking devices for ball and socket couplings of string insulator units –
Dimensions and tests (standards.iteh.ai)

Dispositifs de verrouillage pour les assemblages à rotule et logement de rotule
des éléments de chaînes d'isolateurs – Dimensions et essais

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.080.10; 29.240.20

ISBN 978-2-8322-8477-3

**Warning! Make sure that you obtained this publication from an authorized distributor.
Attention! Veuillez vous assurer que vous avez obtenu cette publication via un distributeur agréé.**

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	6
4 Shapes and dimensions.....	7
4.1 General.....	7
4.2 Shapes of the locking devices.....	7
4.2.1 Split-pin.....	7
4.2.2 W-clip.....	7
4.3 Dimensions of locking devices	7
4.3.1 The split-pins (standard and alternative type)	7
4.3.2 The W-clips	8
5 Test.....	9
5.1 Classification of tests	9
5.2 Qualification tests	10
5.2.1 Test items and the samples	10
5.2.2 Hardness test	10
5.2.3 Verification of resistance of bending	10
5.2.4 Corrosion resistance test.....	11
5.3 Sample tests and sampling.....	12
5.3.1 Sample tests.....	12
5.3.2 Sampling	12
5.3.3 Visual examination	13
5.3.4 Verification of dimensions.....	13
5.3.5 Hardness test	14
5.3.6 Verification of resistance to bending (for split-pins only)	14
5.4 Re-test procedure	14
Annex A (normative) Gauge for W-clips	15
Annex B (normative) Other dimensions of split-pins	17
Annex C (informative) Method of using the locking devices.....	18
C.1 Overview.....	18
C.2 Method of using the locking devices – Split-pin.....	18
C.3 Method of using the locking devices – W-clip	18
Bibliography.....	19
Figure 1 – Shape of split-pins	8
Figure 2 – Shape of W-clips.....	9
Figure 3 – Arrangement of verification of resistance of bending	11
Figure 4 – Verification of L	13
Figure A.1 – Gauge for W-clips	15
Figure A.2 – Symbol marks for dimensions of W-clips	16
Figure B.1 – Other dimensions of the split-pins	17
Figure C.1 – Positions of split-pin	18
Figure C.2 – Positions of W-clip.....	18

Table 1 – Dimensions of the split-pins	8
Table 2 – Dimensions of W-clips	9
Table 3 – Radii of verification of resistance of bending	11
Table 4 – Size of the sample and acceptance number A_c	12
Table 5 – Specifications of K and D_4 in Figure 4	13
Table A.1 – Dimensions of the gauge for W-clips	16
Table B.1 – Other dimensions of the split-pins	17

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN IEC 60372:2020](#)

<https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-939078a46ef6/sist-en-iec-60372-2020>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LOCKING DEVICES FOR BALL AND SOCKET COUPLINGS
OF STRING INSULATOR UNITS – DIMENSIONS AND TESTS**

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.
- 2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60372 has been prepared by IEC technical committee 36: Insulators.

This fourth edition cancels and replaces the third edition published in 1984. This edition constitutes a technical revision.

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

- a) Two new designated size of couplings, 36 and 40, were introduced;
- b) According to the results of the questionnaire (36/424/Q), the relevant content of the 28B W-clip was deleted;
- c) Annex A is informative, Annex B is normative, Annex C is informative.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
36/485/FDIS	36/493/RVD

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

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

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

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

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN IEC 60372:2020](#)

<https://standards.iteh.ai/catalog/standards/sist/7ddd439b-66ad-4b52-b43a-939078a46ef6/sist-en-iec-60372-2020>