



SLOVENSKI STANDARD

SIST EN 62561-1:2017

01-september-2017

Nadomešča:
SIST EN 62561-1:2012

Elementi za zaščito pred strelo (LPSC) - 1. del: Zahteve za spojne komponente

Lightning Protection System Components (LPSC) - Part 1: Requirements for connection components

Blitzschutzsystembauteile (LPSC) - Teil 1: Anforderungen an Verbindungsbauteile

Composants des systèmes de protection contre la foudre (CSPF) - Partie 1: Exigences pour les composants de connexion

[SIST EN 62561-1:2017](https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-71b/sist-en-62561-1:2017)

[https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-](https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-71b/sist-en-62561-1:2017)

Ta slovenski standard je istoveten z: EN 62561-1:2017

ICS:

29.120.20	Spojni elementi	Connecting devices
91.120.40	Zaščita pred strelo	Lightning protection

SIST EN 62561-1:2017

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-1:2017

<https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017>

EUROPEAN STANDARD

EN 62561-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2017

ICS 29.020; 91.120.40

Supersedes EN 62561-1:2012

English Version

Lightning Protection System Components (LPSC) - Part 1: Requirements for connection components (IEC 62561-1:2017)

Composants des systèmes de protection contre la foudre
(CSPF) - Partie 1: Exigences pour les composants de
connexion
(IEC 62561-1:2017)

Blitzschutzsystembauteile (LPSC) - Teil 1: Anforderungen
an Verbindungsbauteile
(IEC 62561-1:2017)

This European Standard was approved by CENELEC on 2017-04-13. 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 62561-1:2017

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

EN 62561-1:2017**European foreword**

The text of document 81/551/FDIS, future edition 2 of IEC 62561-1, prepared by IEC/TC 81, "Lightning protection", was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62561-1:2017.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-01-13
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-04-13

This document supersedes EN 62561-1:2012.

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.

Endorsement notice

The text of the International Standard IEC 62561-1:2017 was approved by CENELEC as a European Standard without any modification.

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

IEC 62305 (series)	NOTE Harmonized as EN 62305 (series). SIST EN 62561-1:2017
IEC 62305-1	NOTE Harmonized as EN 62305-1. https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017

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 1 When 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 60068-2-52	1996	Environmental testing -- Part 2-52: Tests Test Kb: Salt mist, cyclic (sodium chloride solution)	-EN 60068-2-52	1996
IEC 62561-2	-	Lightning Protection System Components (LPSC) -- Part 2: Requirements for conductors and earth electrodes	EN 62561-2	-
ISO 6957	1988	Copper alloys; ammonia test for stress- corrosion resistance	-	-
ISO 6988	1985	Metallic and other non-organic coatings Sulfur dioxide test with general condensation of moisture	-EN ISO 6988	1994

<https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-1:2017

<https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017>



INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Lightning protection system components (LPSC) –
Part 1: Requirements for connection components**

**Composants des systèmes de protection contre la foudre (CSPF) –
Partie 1: Exigences pour les composants de connexion**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 29.020; 91.120.40

ISBN 978-2-8322-4050-2

**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
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	7
4 Classification.....	9
4.1 According to the ability to withstand lightning current.....	9
4.2 According to the installation location.....	9
4.3 According to the mechanical behaviour of connection components	9
4.4 According to whether or not a connection is permanent	9
5 Requirements.....	9
5.1 General.....	9
5.2 Installation instructions	9
5.3 Lightning current carrying capability.....	9
5.4 Static mechanical stress	10
5.5 Permanent connection	10
5.6 Non-permanent connection	10
5.7 Dismantling of test joints	10
5.8 Damage to conductors and metal installations.....	10
5.9 Reliable connection	10
5.10 Terminals of bonding bars.....	10
5.11 Marking.....	10
6 Tests.....	11
6.1 General condition on tests	11
6.2 Preparation of the specimen	11
6.3 Conditioning/ageing	15
6.3.1 Connection components not embedded in concrete	15
6.3.2 Connection components embedded in concrete	15
6.4 Electrical test.....	16
6.5 Static mechanical test.....	17
6.5.1 General	17
6.5.2 Test procedure	17
6.6 Marking test.....	17
7 Electromagnetic compatibility (EMC)	17
8 Structure and content of the test report.....	18
8.1 General.....	18
8.2 Report identification.....	18
8.3 Specimen description.....	18
8.4 Conductor	18
8.5 Standards and references	18
8.6 Test procedure.....	19
8.7 Testing equipment description	19
8.8 Measuring instruments description.....	19
8.9 Results and parameters recorded	19
8.10 Statement of pass/fail	19

Annex A (normative) Summary of the requirements and corresponding tests	20
Annex B (informative) Typical connection configurations for various LPSCs.....	21
Annex C (normative) Flow chart of tests for connection components.....	22
Annex D (normative) Conditioning/ageing for connection components	24
D.1 General.....	24
D.2 Salt mist treatment.....	24
D.3 Humid sulphurous atmosphere treatment	24
D.4 Ammonia atmosphere treatment.....	24
Bibliography.....	25
Figure 1 – Basic arrangement of specimen with cross-connection component.....	12
Figure 2 – Basic arrangement of specimen with parallel connection component.....	13
Figure 3 – Basic arrangement of specimen with bridging component.....	14
Figure 4 – Basic arrangement of specimen with equipotential bonding bar	15
Figure 5 – Basic arrangement for contact measurement of expansion piece.....	17
Figure B.1 – Typical arrangements for various LPSCs	21
Figure C.1 – Flow chart of tests for connection components	23
Table 1 – Lightning impulse current (I_{imp}) parameters.....	16
Table A.1 – Requirements and corresponding tests.....	20

ITeh STANDARD PREVIEW
 (standards.iteh.ai)
 SIST EN 62561-1:2017
<https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 1: Requirements for connection components

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 62561-1 has been prepared by IEC technical committee 81: Lightning protection.

This second edition cancels and replaces the first edition, published in 2012. This edition constitutes a technical revision.

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

- a) classification of connection components in permanent and non-permanent connection;
- b) requirements and corresponding tests for permanent connection components such as exothermic, brazing, welding, crimping, seaming;
- c) flow chart of tests for connection components.

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

FDIS	Report on voting
81/551/FDIS	81/559/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.

A list of all parts in the IEC 62561 series, published under the general title *Lightning protection system components (LPSC)*, can be found on the IEC website.

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 62561-1:2017](https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017)

<https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017>

INTRODUCTION

This part of IEC 62561 deals with the requirements and tests for lightning protection system components (LPSC) used for the installation of a lightning protection system (LPS) designed and implemented according to the IEC 62305 series.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-1:2017

<https://standards.iteh.ai/catalog/standards/sist/15173e76-d792-48ea-9654-97e4c0bec71b/sist-en-62561-1-2017>