



SLOVENSKI STANDARD

SIST EN 62561-3:2017

01-november-2017

Nadomešča:
SIST EN 62561-3:2012

Elementi za zaščito pred strelo (LPSC) - 3. del: Zahteve za izolacijska iskrišča

Lightning Protection System Components (LPSC) - Part 3: Requirements for isolating spark gaps

Blitzschutzsystembauteile (LPSC) - Teil 3: Anforderungen an Trennfunkenstrecken

Composants des systèmes de protection contre la foudre (CSPF) - Partie 3: Exigences pour les éclateurs d'isolement

[SIST EN 62561-3:2017](https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-3e11453b4/sist-en-62561-3-2017)

<https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-3e11453b4/sist-en-62561-3-2017>

Ta slovenski standard je istoveten z EN 62561-3:2017

ICS:

29.080.99	Drugi standardi v zvezi z izolacijo	Other standards related to insulation
91.120.40	Zaščita pred strelo	Lightning protection

SIST EN 62561-3:2017

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-3:2017

<https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-f3ebb466b3b4/sist-en-62561-3-2017>

EUROPEAN STANDARD

EN 62561-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2017

ICS 29.020; 91.120.40

Supersedes EN 62561-3:2012

English Version

Lightning Protection System Components (LPSC) - Part 3: Requirements for isolating spark gaps (ISG) (IEC 62561-3:2017)

Composants des systèmes de protection contre la foudre
(CSPF) - Partie 3: Exigences pour les éclateurs d'isolement
(IEC 62561-3:2017)

Blitzschutzsystembauteile (LPSC) - Teil 3: Anforderungen
an Trennfunkensrecken
(IEC 62561-3:2017)

This European Standard was approved by CENELEC on 2017-07-20. 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.

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 62561-3:2017**European foreword**

The text of document 81/561/FDIS, future edition 2 of IEC 62561-3, prepared by IEC/TC 81, "Lightning protection", was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62561-3:2017.

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) 2018-04-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-07-20

This document supersedes EN 62561-3:2012.

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 62561-3:2017 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 60529	NOTE	Harmonized as EN 60529. SIST EN 62561-3:2017
IEC 62305-3	NOTE	Harmonized as EN 62305-3. SIST EN 62561-3:2017
IEC 62305-4	NOTE	Harmonized as EN 62305-4.
IEC 61643-11	NOTE	Harmonized as EN 61643-11.
IEC 62305-1	NOTE	Harmonized as EN 62305-1.

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 60068-2-75	1997	Environmental testing -- Part 2-75: Tests - Test Eh: Hammer tests	-EN 60068-2-75	1997
IEC 62561-1	-	Lightning protection system components (LPSC) -- Part 1: Requirements for connection components	EN 62561-1	-
ISO 4892-2	2006	Plastics - Methods of exposure to laboratory light sources - Part-2: Xenon-arc lamps	-	-
ISO 4892-3	2006	Plastics - Methods of exposure to laboratory light sources (Part 3: Fluorescent UV lamps	-	-
ISO 4892-4	-	Plastics - Methods of exposure to laboratory light sources -- Part 4: Open- flame carbon-arc lamps	-	-
ISO 6957	-	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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-3:2017

<https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-f3ebb466b3b4/sist-en-62561-3-2017>



IEC 62561-3

Edition 2.0 2017-06

INTERNATIONAL STANDARD

**Lightning protection system components (LPSC) –
Part 3: Requirements for isolating spark gaps (ISG)**

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-3:2017
<https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-f3ebb466b3b4/sist-en-62561-3-2017>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 91.120.40

ISBN 978-2-8322-4455-5

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 Classification.....	9
4.1 According to ISGs capability to withstand lightning current.....	9
4.2 According to ISGs location installation	9
5 Requirements	10
5.1 General.....	10
5.2 Environmental requirements	10
5.3 Installation instructions	10
5.4 Lightning current carrying capability.....	10
5.5 Rated impulse sparkover voltage	10
5.6 Rated withstand voltage.....	10
5.6.1 Rated DC withstand voltage.....	10
5.6.2 Rated power frequency withstand voltage.....	10
5.7 Isolation resistance.....	10
5.8 Marking.....	11
5.9 UV (ultraviolet) resistance.....	11
6 Tests.....	11
6.1 General conditions for tests.....	11
6.2 UV (ultraviolet) light test.....	12
6.3 Resistance tests to corrosion.....	12
6.4 Mechanical tests.....	12
6.5 Electrical tests	14
6.5.1 Isolation resistance.....	14
6.5.2 Withstand voltage	14
6.5.3 Rated impulse sparkover voltage	15
6.5.4 Lightning current.....	15
6.6 Installation instructions	16
6.6.1 General conditions for tests	16
6.6.2 Acceptance criteria	16
6.7 Marking test.....	16
6.7.1 General conditions for tests	16
6.7.2 Acceptance criteria	16
7 Electromagnetic compatibility (EMC)	16
8 Structure and content of the test report.....	16
8.1 General.....	16
8.2 Report identification.....	17
8.3 Specimen description.....	17
8.4 Standards and references	17
8.5 Test procedure.....	17
8.6 Testing equipment description	18
8.7 Measuring instruments description.....	18
8.8 Results and parameters recorded	18

8.9	Statement of pass/fail	18
Annex A (normative)	Flow chart of tests	19
Annex B (normative)	Environmental test for isolating spark gaps	21
B.1	General.....	21
B.2	Salt mist treatment.....	21
B.3	Humid sulphurous atmosphere treatment	21
B.4	Ammonia atmosphere treatment.....	21
Annex C (normative)	Environmental test for outdoor isolating spark gaps – Resistance to ultraviolet light	22
C.1	General.....	22
C.2	The tests.....	22
C.3	First alternative test to C.2.....	22
C.4	Second alternative test to C.2	22
Bibliography	23
Figure 1	– Pendulum hammer test apparatus	13
Figure A.1	– Flow chart of the sequence of tests for ISGs	20
Table 1	– Lightning impulse current (I_{imp}) parameters.....	15

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 62561-3:2017](https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-f3ebb466b3b4/sist-en-62561-3-2017)

<https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-f3ebb466b3b4/sist-en-62561-3-2017>

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –**Part 3: Requirements for isolating spark gaps (ISG)**

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 62561-3 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) a new classification has been added related to ISGs location installation;
- b) an updated flow chart of tests has been developed.

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

FDIS	Report on voting
81/561/FDIS	81/566/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.

A bilingual version of this publication may be issued at a later date

ITeH STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 62561-3:2017

<https://standards.iteh.ai/catalog/standards/sist/29412629-3acc-4bc4-bfe7-f3ebb466b3b4/sist-en-62561-3-2017>