



# SLOVENSKI STANDARD

## oSIST prEN IEC 62561-8:2025

01-september-2025

---

**Elementi za zaščito pred strelo (LPSC) - 8. del: Elementi za zaščito pred strelo (LPSC) - 8. del: Zahteve za elemente električno izoliranega sistema LPS**

Lightning protection system components (LPSC) - Part 8: Requirements for components for electrically insulated LPS

Composants de système de protection contre la foudre (CSPF) - Partie 8: Exigences pour les composants de système isolé de protection contre la foudre

**Ta slovenski standard je istoveten z: prEN IEC 62561-8:2025**

---

<https://standards.iteh.ai/catalog/standards/sist/6eee59be-73a5-46f8-a08b-53e1cbd32291/osist-pren-iec-62561-8-2025>

**ICS:**

91.120.40	Zaščita pred strelo	Lightning protection
-----------	---------------------	----------------------

**oSIST prEN IEC 62561-8:2025**

**en,fr,de**





## COMMITTEE DRAFT FOR VOTE (CDV)

PROJECT NUMBER:

**IEC 62561-8 ED1**

DATE OF CIRCULATION:

**2025-08-01**

CLOSING DATE FOR VOTING:

**2025-10-24**

SUPERSEDES DOCUMENTS:

**81/757/CD, 81/766C/CC**

IEC TC 81 : LIGHTNING PROTECTION	
SECRETARIAT: Italy	SECRETARY: Mrs Marina Bernardi
OF INTEREST TO THE FOLLOWING COMMITTEES: SC 37A, TC 64, TC 88	HORIZONTAL FUNCTION(S):
ASPECTS CONCERNED: Safety	
<input checked="" type="checkbox"/> SUBMITTED FOR CENELEC PARALLEL VOTING  <b>Attention IEC-CENELEC parallel voting</b>  The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.  The CENELEC members are invited to vote through the CENELEC online voting system.	<input type="checkbox"/> NOT SUBMITTED FOR CENELEC PARALLEL VOTING

oSIST prEN IEC 62561-8:2025

<https://standards.iteh.ai/catalog/standards/sist/62561-8-2025/sist-62561-8-2025>

This document is still under study and subject to change. It should not be used for reference purposes.

Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any relevant "In Some Countries" clauses to be included should this proposal proceed. Recipients are reminded that the CDV stage is the final stage for submitting ISC clauses. (SEE AC/22/2007 OR NEW GUIDANCE DOC).

TITLE:

**Lightning protection system components (LPSC) - Part 8: Requirements for components for electrically insulated LPS**

PROPOSED STABILITY DATE: 2029

NOTE FROM TC/SC OFFICERS:

Based on the comments from GB2 in 81/766C/CC, the project title has been changed from "Lightning protection system components (LPSC) – Part 8: Requirements for components for isolated LPS" to "Lightning protection system components (LPSC) – Part 8: Requirements for components for electrically insulated LPS".

**Copyright © 2025 International Electrotechnical Commission, IEC.** All rights reserved. It is permitted to download this electronic file, to make a copy and to print out the content for the sole purpose of preparing National Committee positions. You may not copy or "mirror" the file or printed version of the document, or any part of it, for any other purpose without permission in writing from IEC.

## IEC CDV 62561-8 Ed1 © IEC 2025

## CONTENTS

1		
2		
3		
4	FOREWORD .....	5
5	INTRODUCTION .....	7
6	1 Scope .....	8
7	2 Normative references .....	8
8	3 Terms and definitions .....	9
9	4 Insulating stand-off .....	11
10	4.1 Classification .....	11
11	4.1.1 General .....	11
12	4.1.2 According to conductor clamping arrangement .....	11
13	4.1.3 According to mounting .....	11
14	4.2 Requirements .....	11
15	4.2.1 General .....	11
16	4.2.2 Construction .....	11
17	4.2.3 Mechanical requirements .....	12
18	4.2.4 Electrical requirements .....	13
19	4.2.5 Documentation and installation instructions .....	14
20	4.2.6 Marking .....	14
21	4.3 Tests .....	15
22	4.3.1 General test conditions .....	15
23	4.3.2 General test setup .....	17
24	4.3.3 Documentation .....	18
25	4.3.4 Marking test .....	18
26	4.3.5 Environmental influence tests .....	18
27	4.3.6 Mechanical tests .....	19
28	4.3.7 Electrical test .....	24
29	4.4 Electromagnetic compatibility (EMC) .....	26
30	4.5 Structure and content of the test report .....	26
31	4.5.1 General .....	26
32	4.5.2 Report identification .....	26
33	4.5.3 Specimen description .....	26
34	4.5.4 Characterization and condition of the test specimen and/or test assembly .....	27
35		
36	5 Insulating down-conductor .....	27
37	5.1 Classification .....	27
38	5.2 Lightning current carrying capability .....	28
39	5.3 Preferred values of equivalent separation distance $s_e$ .....	28
40	5.4 Requirements .....	28
41	5.4.1 General .....	28
42	5.4.2 Environmental requirements .....	29
43	5.4.3 Mechanical requirements .....	29
44	5.4.4 Electrical requirements .....	29
45	5.4.5 Documentation .....	30
46	5.4.6 Marking .....	30
47	5.5 Tests .....	30
48	5.5.1 General test conditions .....	30

## IEC CDV 62561-8 Ed1 © IEC 2025

49	5.5.2	General test setup .....	32
50	5.5.3	Documentation .....	32
51	5.5.4	Marking test.....	32
52	5.5.5	Environmental influence tests .....	32
53	5.5.6	Mechanical tests.....	34
54	5.5.7	Electrical tests .....	35
55	5.6	Electromagnetic compatibility (EMC) .....	39
56	5.7	Structure and content of the test report .....	39
57	5.7.1	General .....	39
58	5.7.2	Report identification.....	40
59	5.7.3	Specimen description .....	40
60	5.7.4	Characterization and condition of the test specimen and/or test assembly .....	40
62	5.7.5	Insulating Down-Conductor.....	40
63	5.7.6	Standards and references.....	40
64	5.7.7	Test procedure .....	41
65	5.7.8	Testing equipment description .....	41
66	5.7.9	Measuring instruments description.....	41
67	5.7.10	Results and parameters recorded .....	41
68	Annex A (normative)	Environmental test – corrosion resistance .....	42
69	A.1	General.....	42
70	A.2	Salt mist test.....	42
71	A.3	Humid sulphurous atmosphere test .....	42
72	A.4	Ammonia atmosphere test.....	42
73	Annex B (normative)	Environmental test – resistance to ultraviolet light.....	43
74	B.1	General.....	43
75	B.2	Test .....	43
76	B.3	First alternative test to clause B.2 .....	43
77	B.4	Second alternative test to clause B.2 .....	43
78	Annex C (normative)	Flow chart of tests for insulating stand-offs .....	44
79	Annex D (normative)	Flow chart of tests for insulating down-conductors .....	45
80	Annex E (informative)	High voltage impulse test to determine the actual correction factor $k_X$ for insulating stand-offs .....	46
82	E.1	Specimen preparation .....	46
83	E.2	Test setup.....	46
84	E.3	Test procedure.....	46
85	Annex F (informative)	Installation arrangement test to determine the influence of supporting structures on the separation distance .....	48
87	F.1	General.....	48
88	F.2	Specimen preparation for the high voltage installation arrangement test ....	48
89	F.3	Test procedure.....	49
90	Annex G (normative)	Alternate test arrangement for high voltage impulse test .....	50
91	Annex H (normative)	Applicability of previous tests .....	52
92	Bibliography.....		53

## IEC CDV 62561-8 Ed1 © IEC 2025

95	Figure 1 - Typical insulating stand-off with a metallic fastener.....	12
96	Figure 2 - Typical insulating stand-off with a non-metallic fastener.....	13
97	Figure 3 - Typical insulating stand-off with a metallic fastener prepared for testing ....	15
98	Figure 4 - Typical insulating stand-off with a non-metallic fastener prepared for testing	
99	16	
100	Figure 5 - Basic arrangement for bending test.....	20
101	Figure 6 - Pendulum hammer test apparatus.....	21
102	Figure 7 - Basic arrangements for pull out test on rigidly fixed insulating stand-off.....	22
103	Figure 8 - Basic arrangements for pull out test on free standing insulating stand-off ..	23
104	Figure 9 - Typical test arrangement for the high voltage impulse test of an insulating	
105	stand-off .....	24
106	Figure 10 - Specimen preparation for UV light test .....	34
107	Figure 11 - Basic arrangement for the lightning current carrying capability test .....	35
108	Figure 12 a - Test arrangement I for the high voltage impulse test of the insulating	
109	down-conductor .....	37
110	Figure 12 b - Alternate test arrangement II for the high voltage impulse test of the	
111	insulating down-conductor .....	37
112	Figure 13 a - Test arrangement I for insulating down-conductors .....	38
113	Figure 13 b - Alternate test arrangement II for insulating down-conductors .....	38
114	Figure C.1 - Tests for insulating stand-offs .....	44
115	Figure D.1 - Tests for insulating down-conductors.....	45
116	Figure F.1 - Example for installation arrangement test – specimen under test .....	48
117	Figure F.2 - Alternate example for installation arrangement test – specimen under test	
118	49	
119	Figure G.1 - Typical test arrangement for the high voltage impulse test of an insulating	
120	stand-off – alternate test arrangement to Figure 9.....	50
121	Figure G.2 - General description of the test setup for the high voltage impulse test of	
122	the insulating down-conductor – alternate test set-up to Figure 12 a .....	50
123		
124	<b>TABLES</b>	
125	Table 1 - Type test requirements for an insulating stand-off.....	17
126	Table 2 - Lightning impulse current ( $I_{imp}$ ) parameters .....	28
127	Table 3 - Type test requirements for an insulating down-conductor .....	32
128	Table H.1 - Differences in the requirements for conductors and earth electrodes	
129	complying with IEC TS 62561-8:2018.....	52

130

## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –****Part 8: Requirements for components for electrically insulated LPS****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.

IEC 62561 is a family of Standards and consists of the following parts under the generic title *Lightning Protection System Components (LPSC)*:

- |        |   |
|--------|---|
| Part 1 | <i>Requirements for connection components</i>   |
| Part 2 | <i>Requirements for conductors and earth electrodes</i>                               |
| Part 3 | <i>Requirements for isolating spark gaps (ISG)</i>                                    |
| Part 4 | <i>Requirements for conductor fasteners</i>   |
| Part 5 | <i>Requirements for earth electrode inspection housings and earth electrode seals</i> |
| Part 6 | <i>Requirements for lightning strike counters (LSC)</i>                               |
| Part 7 | <i>Requirements for earthing enhancing compounds</i>                                  |
| Part 8 | <i>Requirements for components for electrically insulated LPS</i>                     |