

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

This document is a preview generated by EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62561-1:2017 sisaldab Euroopa standardi EN 62561-1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 62561-1:2017 consists of the English text of the European standard EN 62561-1:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 09.06.2017.	Date of Availability of the European standard is 09.06.2017.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 29.020, 91.120.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

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.

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

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).
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 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

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

Preview generated by EVS

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.

This document is a preview generated by EVS