

**Lightning Protection System Components (LPSC) - Part
2: Requirements for conductors and earth electrodes**

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**Lightning Protection System Components (LPSC) -
Part 2: Requirements for conductors and earth electrodes**
(IEC 62561-2:2012, modified)

Composants des systèmes de protection
contre la foudre (CSPF) -
Partie 2: Exigences pour les conducteurs
et les électrodes de terre
(CEI 62561-2:2012, modifiée)

Blitzschutzsystembauteile (LPSC) -
Teil 2: Anforderungen an Leiter und Erder
(IEC 62561-2:2012, modifiziert)

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European Committee for Electrotechnical Standardization

Comité Européen de Normalisation Electrotechnique

Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 81/417/FDIS, future edition 1 of IEC 62561-2, prepared by IEC/TC 81, "Lightning protection", was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62561-2:2012.

A draft amendment, which covers common modifications to IEC 62561-2 (81/417/FDIS), was prepared by CLC/TC 81X "Lightning protection" and approved by CENELEC.

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) 2013-03-16
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2015-03-16

This document supersedes EN 50164-2:2008.

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

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62561-2:2012 are prefixed "Z".

Endorsement notice

The text of the International Standard IEC 62561-2:2012 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

Whole document

Replace all references to IEC 62305 by references to EN 62305.

Replace all references to IEC 62561 by references to EN 62561.

4 Requirements

Under 4.3, Table 1, footnote ^g, **replace** "IEC 60228" by "EN 60228".

Under 4.5, Table 3, footnote ⁱ, **replace** "IEC 60228" by "EN 60228".

5 Tests

Under 5.2.5.1, 1st line, **replace** "ISO 6892-1" by "EN ISO 6892-1".

Under 5.2.5.1, 3rd line, **replace** "as per D.1 of ISO 6892-1:2009" by "as per D.1 of EN ISO 6892-1:2009".

Annexes

Annex A (normative) Environmental test for conductors, air termination rods and earth lead-in rods

In A.1, **replace** twice "IEC 60068-2-52:1996" by "EN 60068-2-52:1996".

Add the following new annexes:

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 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-2-52 + corr. July	1996 1996	Environmental testing – Part 2: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)	EN 60068-2-52	1996
IEC 62305-3	-	Protection against lightning – Part 3: Physical damage to structures and life hazard	EN 62305-3	-
IEC 62305-4	-	Protection against lightning – Part 4: Electrical and electronic systems within structures	EN 62305-4	-
IEC 62561-1	-	Lightning Protection System Components (LPSC) – Part 1: Requirements for connection components	EN 62561-1	-
ISO 1460	-	Metallic coatings – Hot dip galvanized coatings on ferrous metals – Gravimetric determination of the mass per unit area	EN ISO 1460	-
ISO 1461	-	Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods	EN ISO 1461	-
ISO 2178	-	Non-magnetic coatings on magnetic substrates – Measurement of coating thickness – Magnetic method	EN ISO 2178	-
ISO 6892-1	2009	Metallic materials – Tensile testing – Part 1: Method of test at room temperature	EN ISO 6892-1	2009
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

Annex ZB
(informative)

**Identification and differences of tests between
EN 62561-2:2012 and EN 50164-2:2008**

**Table ZB.1 – Identification and differences of tests
between EN 62561-2:2012 and EN 50164-2:2008**

Test description	EN 62561-2:2012 Clause:	Reference: Annex Table/Figure	EN 50164-2:2008 Clause:	Reference: Annex Table/Figure	Remarks/Deviations
General conditions for tests	5.1		5.1		None
Tests for thickness coating on conductors	5.2.1	Table 1 Table 3	5.2.1	Table 1	None
Bend and adhesion test for coated conductors	5.2.2		5.2.2		None
Environmental test	5.2.3	A.1 A.2	5.2.3	Annex A	Same tests. Listed as A.1 and A.2 in EN 62561-2:2012
Tensile and elongation test	5.2.4	Table 2 Table 4	5.2.4	Table 2	None
Electrical resistivity test	5.2.5	Annex D Table 2 Table 4	5.2.5	Annex D Table 2 Table 4	None
Tests for thickness coating on earth rods	5.3.1	Table 3	5.3.1	Table 3	None
Adhesion test	5.3.2	Figure 2	5.3.2	Figure 3	None
Bend test	5.3.3		5.3.3		None
Environmental test	5.3.4	A.1 A.2	5.3.4	Annex A	Same tests. Listed as A.1 and A.2 in EN 62561-2:2012
Tensile strength test	5.3.5	Table 4	5.3.5	Table 4	None
Electrical resistivity test	5.3.7	Annex D Table 4	5.3.6	Annex D Table 4	None
Yield/tensile ratio test	5.3.6	Table 4	5.3.7	Table 4	None
Compression test for joints for earth rods	5.4.1	Figure 4	5.4.1	Figure 2	None
Environmental electrical tests	5.4.2	A.1 A.2 A.3	5.4.2	Annex A	Same test. Listed as A.1, A.2 and A.3 in EN 62561-2:2012
Marking test	5.5				Addition to EN 62561-2:2012

Bibliography

Add the following reference:

EN 50164-2:2008, *Lightning Protection Components (LPC) – Part 2: Requirements for conductors and earth electrodes*

Replace the 2nd and 4th references by the following:

EN 60228, *Conductors of insulated cables (IEC 60228)*

EN 62305-1, *Protection against lightning – Part 1: General principles (IEC 62305-1)*

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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 of standards.

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LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 2: Requirements for conductors and earth electrodes

1 Scope

This part of IEC 62561 specifies the requirements and tests for:

- metallic conductors (other than “natural” conductors) that form part of the air termination system and down conductors;
- metallic earth electrodes that form part of the earth termination system.

2 Normative references

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.

IEC 60068-2-52:1996, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*

IEC 60228, *Conductors of insulated cables*

IEC 62305-3, *Protection against lightning – Part 3: Physical damage to structures and life hazard*

IEC 62305-4, *Protection against lightning – Part 4: Electrical and electronic systems within structures*

IEC 62561-1, *Lightning protection system components (LPSC) – Part 1: Requirements for connection components*

ISO 1460, *Metallic coatings – Hot dip galvanized coatings on ferrous materials – Gravimetric determination of the mass per unit area*

ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods*

ISO 2178, *Non-magnetic coatings on magnetic substrates – Measurement of coating thickness – Magnetic method*

ISO 6892-1:2009, *Metallic materials – Tensile testing – Part 1: Method of test at room temperature*

ISO 6957:1988, *Copper alloys – Ammonia test for stress corrosion resistance*

ISO 6988:1985, *Metallic and other non-organic coatings – Sulphur dioxide test with general condensation of moisture*