

INTERNATIONAL STANDARD

**Lightning protection system components (LPSC) -
Part 2: Requirements for conductors and earth electrodes**



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CONTENTS

FOREWORD	4
INTRODUCTION	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Requirements	10
4.1 General	10
4.2 Documentation and installation instructions	10
4.3 Air-termination conductors, air-termination rods, catenary wires and down conductors	10
4.4 Earth electrodes	13
4.4.1 General	13
4.4.2 Earth conductors	15
4.4.3 Earth rods	15
4.4.4 Earth plates and equipotential earth grids	15
4.4.5 Couplers for earth rods	15
4.5 Earth lead-in conductors	16
4.6 Marking	16
4.6.1 Content of marking	16
4.6.2 Durability and legibility	17
5 Tests	17
5.1 General test conditions	17
5.2 Air-termination conductors, air-termination rods, catenary wires, down conductors, earth lead-in conductors, earth conductors, earth plates and equipotential earth grids	17
5.2.1 General	17
5.2.2 Test for thickness of coating	18
5.2.3 Resistance test for coated conductors	20
5.2.4 Bending test for coated conductors	20
5.2.5 Environmental test for coated conductors	20
5.2.6 Electrical resistivity test	21
5.2.7 Tensile strength test	22
5.2.8 Material, configuration and cross-sectional area test	22
5.3 Earth rods	22
5.3.1 General	22
5.3.2 Test for thickness of coating on earth rods	22
5.3.3 Adhesion test for copper coated earth rods	22
5.3.4 Electrical resistance test for coated earth rods	23
5.3.5 Bending test for copper coated steel earth rods	24
5.3.6 Environmental test for coated earth rods	24
5.3.7 Electrical resistivity test for earth rods	24
5.3.8 Tensile strength test for earth rods	25
5.3.9 Test for yield/tensile ratio for copper coated steel earth rods	25
5.3.10 Material, configuration and cross-sectional area test for earth rods	26
5.4 Couplers for earth rods	26
5.4.1 General	26

5.4.2	Compression test by mechanical means	26
5.4.3	Environmental test.....	28
5.4.4	Lightning current test.....	28
5.4.5	Tensile strength test for couplers of earth rods	28
5.5	Marking test.....	29
5.5.1	General test conditions	29
5.5.2	Acceptance criteria	29
5.6	Documentation and installation instructions	29
5.6.1	General test conditions	29
5.6.2	Acceptance criteria	29
6	Electromagnetic compatibility (EMC)	29
7	Structure and content of the test report.....	29
7.1	General.....	29
7.2	Report identification	30
7.3	Specimen description.....	30
7.4	Conductor	30
7.5	Standards and references	30
7.6	Test procedure.....	30
7.7	Testing equipment description	30
7.8	Measuring instruments description.....	31
7.9	Results and parameters recorded	31
7.10	Statement of pass or fail	31
Annex A	(normative) Environmental test	32
A.1	General.....	32
A.2	Salt mist treatment.....	32
A.3	Humid sulphurous atmosphere treatment.....	32
A.4	Ammonia atmosphere treatment	32
Annex B	(normative) Lightning current test	33
B.1	General.....	33
B.2	Acceptance criteria	33
Annex C	(normative) Requirements and tests for air-termination conductors, air-termination rods, catenary wires and down conductors	34
Annex D	(normative) Requirements and tests for earth lead-in conductors, earth electrodes, equipotential earth grids and couplers for earth rods	35
Annex E	(normative) Sequence of tests for air-termination conductors, air-termination rods, catenary wires, earth lead-in conductors, down-conductors, earth conductors, earth plates and equipotential earth grids	36
Annex F	(normative) Sequence of tests for earth rods.....	38
Annex G	(normative) Sequence of tests of couplers for earth rods	39
Annex H	(normative) Material, configuration and cross-sectional area test.....	40
H.1	General.....	40
H.2	Acceptance criteria for air-termination conductors, air-termination rods, catenary wires and down conductors	40
H.3	Acceptance criteria for earth lead-in conductors, earth electrodes, equipotential earth grids	40
Annex I	(normative) Applicability of previous tests	41
Bibliography	42

Figure 1 – Coating measurements around the circumference of a round conductor	18
Figure 2 – Coating measurements of a plate conductor.....	18
Figure 3 – Typical test arrangement for adhesion test.....	23
Figure 4 – Definitions of upper yield strength R_{eH} and tensile strength R_m	25
Figure 5 – Typical test arrangement for the compression test by mechanical means	27
Figure E.1 – Flow chart of tests for air-termination conductors, air-termination rods, catenary wires, earth lead-in conductors, down-conductors, earth electrodes and equipotential earth grids	37
Figure F.1 – Flow chart of tests for earth rods.....	38
Figure G.1 – Flow chart of tests of couplers for earth rods	39
Table 1 – Material, configuration and cross-sectional area of air-termination conductors, air-termination rods, catenary wires and down-conductors	11
Table 2 – Material properties	12
Table 3 – Material, configuration and cross-sectional area of earth lead-in conductors, earth electrodes and equipotential earth grids.....	13
Table B.1 – Lightning impulse current (I_{imp}) parameters	33
Table C.1 – Summary of requirements and tests for various elements tested according to Table 1 and Table 2.....	34
Table D.1 – Summary of requirements and tests for various elements tested according to Table 2 and Table 3.....	35
Table I.1 – Differences in the requirements for conductors and earth electrodes complying with IEC 62561-2:2012 or IEC 62561-2:2018.....	41

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Lightning protection system components (LPSC) -
Part 2: Requirements for conductors and earth electrodes**

FOREWORD

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IEC 62561-2 has been prepared by IEC technical committee 81: Lightning protection. It is an International Standard.

This third edition cancels and replaces the second edition published in 2018. This edition constitutes a technical revision.

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

- a) definitions of new conductor types mentioned in this document have been added;
- b) the document has been updated in line with IEC 60068-2-52:2017 on salt mist treatment;
- c) the document has been updated in line with ISO 22479:2019 on humid sulphurous atmosphere treatment;
- d) a new normative Annex H for material, configuration and cross-sectional area test has been introduced;

- e) a new normative Annex I for applicability of previous tests has been introduced.
- f) equipotential earth grid has been introduced.

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

Draft	Report on voting
81/794/FDIS	81/800/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

INTRODUCTION

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

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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 and down-conductor systems, and
- metallic earth electrodes that form part of the earth-termination system.

NOTE 1 Additional requirements can be necessary for conductors and earth electrodes intended for use in hazardous environments.

NOTE 2 In CENELEC member countries, testing requirements of components for explosive atmospheres are specified in CLC/TS 50703-2.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60068-2-52:2017, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution)*

IEC 60228, *Conductors of insulated cables*

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

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

ISO 1461:2022, *Hot dip galvanized coatings on fabricated iron and steel articles – Specifications and test methods*

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

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

ISO 22479:2019, *Corrosion of metals and alloys – Sulphur dioxide test in a humid atmosphere (fixed gas method)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>