
**Elementi za zaščito pred strelo (LPC) - 1. del: Zahteve za povezovalne
elemente**

Lightning protection components (LPC) - Part 1: Requirements for connection
components

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SIST EN 50164-1:2000/A1:2006
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**Lightning Protection Components (LPC)
Part 1: Requirements for connection components**

Composants de protection contre la
foudre (CPF)
Partie 1: Prescriptions
pour les composants de connexion

Blitzschutzbauteile
Teil 1: Anforderungen
an Verbindungsbauteile

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This amendment A1 modifies the European Standard EN 50164-1:1999; it was approved by CENELEC on 2006-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 Central Secretariat or to any CENELEC member.

This amendment 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This amendment was prepared by the Technical Committee CENELEC TC 81X, Lightning protection.

The text of the draft was submitted to the formal vote and was approved by CENELEC as amendment A1 to EN 50164-1:1999 on 2006-03-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-03-01
 - latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2009-03-01
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Contents

Add:

7 Electromagnetic compatibility (EMC)

Replace “Annex A (informative) Summary of the requirements and corresponding tests” by “Annex A Void”

2 Normative references

Add after EN ISO 6988 the following new reference:

IEC 61312-1 1995 Protection against lightning electromagnetic impulse - Part 1: General principles

3 Definitions

Add:

3.10

bonding bar

metal bar on which metal installations, external conductive parts, electric power and telecommunication lines, and other cables can be connected to an LPS

5 Requirements

5.1 General

Delete the note.

5.8 Marking

Replace in the 2nd paragraph “b)” by “b) and c)”.

Delete in the last paragraph “by inspection and”.

Add:

5.9 Terminals of bonding bars

Terminals of bonding bars used for lightning protection installations, shall have connection sizes equal to or greater than 16 mm².

6 Tests

6.1 General

Replace the subclause by:

6.1 General condition on tests

6.1.1 The tests in accordance with this standard are type tests.

6.1.2 Unless otherwise specified, tests are carried out with the specimens assembled and installed as in normal use according to the manufacturer's or supplier's installation instructions with the recommended conductor materials, sizes and the tightening torques. If the connection component is suitable for various conductors materials, then it shall be tested on each material combination.

6.1.3 All tests are carried out on new specimens.

6.1.4 Unless otherwise specified, three specimens are subjected to the tests and the requirements are satisfied if all the tests are met.

If only one of the specimens does not satisfy a test due to an assembly or a manufacturing fault, that test and any preceding one which may have influenced the results of the test shall be repeated and also the tests which follow shall be carried out in the required sequence on another full set of specimens, all of which shall comply with the requirements.

NOTE The applicant, when submitting a set of specimens, may also submit an additional set of specimens which may be necessary should one specimen fail. The testing station will then, without further request, test the additional set of specimens and will reject only if a further failure occurs. If the additional set of specimens is not submitted at the same time, the failure of one specimen will entail rejection.

6.1.5 The test shall be carried out in the order given after conditioning/ ageing the arrangement of the specimen in accordance with 6.2.2.

6.2 Test preparation

6.2.1 Arrangement of the specimen

Replace the 1st paragraph by:

If not otherwise specified by the manufacturer the conductors and specimens shall be cleaned by using a suitable degreasing agent followed by cleaning in demineralized water and drying.

Insert after the 3rd paragraph:

If a connection component is used in more than one arrangement (see Annex B) as recommended by the manufacturer's installation instructions, then it shall be tested for each one of these arrangements.

If the connection component is declared by the manufacturer suitable for use above ground and for use buried in the ground, then it shall be tested for both applications. If the connection component for use buried in the ground is protected by an anti corrosive tape according to the manufacturer's recommendation, then only the test for use above ground shall be carried out.

Replace in the last paragraph, the 1st sentence by:

The basic arrangement of the specimen with cross connection component, parallel connection component, bridging component and equipotential bonding bar is shown in Figures 1, 2, 3 and 4 respectively. Terminals of bonding bars are only tested if the connection size is equal to or greater than 16 mm². The test is carried out using the smallest conductor size within the range of the terminal with a minimum of 16 mm² conductor.

6.2.2.1 Connection components above ground

Add a note after the 1st paragraph:

NOTE Bonding bars only for indoor applications are tested without conditioning/ageing.

6.3 Electrical test

Replace in the 1st paragraph, 3rd line “close to“ by “to approximately”.

Add a note after the 2nd paragraph:

NOTE The parameters specified in Table 1 can typically be achieved by an exponential decaying current with T_2 in the range of 350 µs according to IEC 61312-1.

Add to 1st dashed item of the last paragraph, after “1 mΩ”:

“but in the special case of stainless steel a value of 2,5 mΩ;”

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Add to 3rd dashed item of the last paragraph, the sentence:

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In the case of connectors with more than one screw, only the loosening torque of the first screw is relevant to this test.

6.4 Marking test

Replace in the 1st paragraph, 1st line “After 6.3 the” by “The”.

Add:

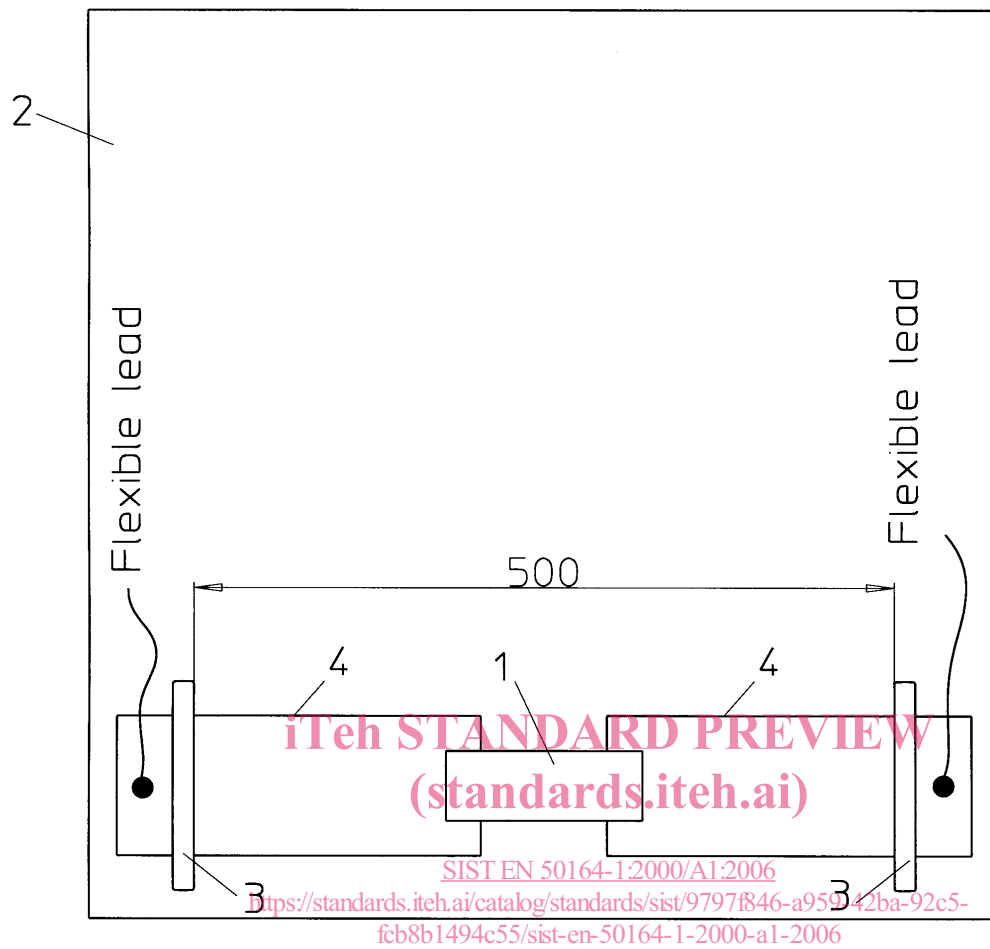
7 Electromagnetic compatibility (EMC)

Products covered by this standard are, in normal use, passive in respect of electromagnetic influences (emission and immunity).

Figure 1 and Figure 2

Replace in the key “Fastener” by “Rigid fastener”.

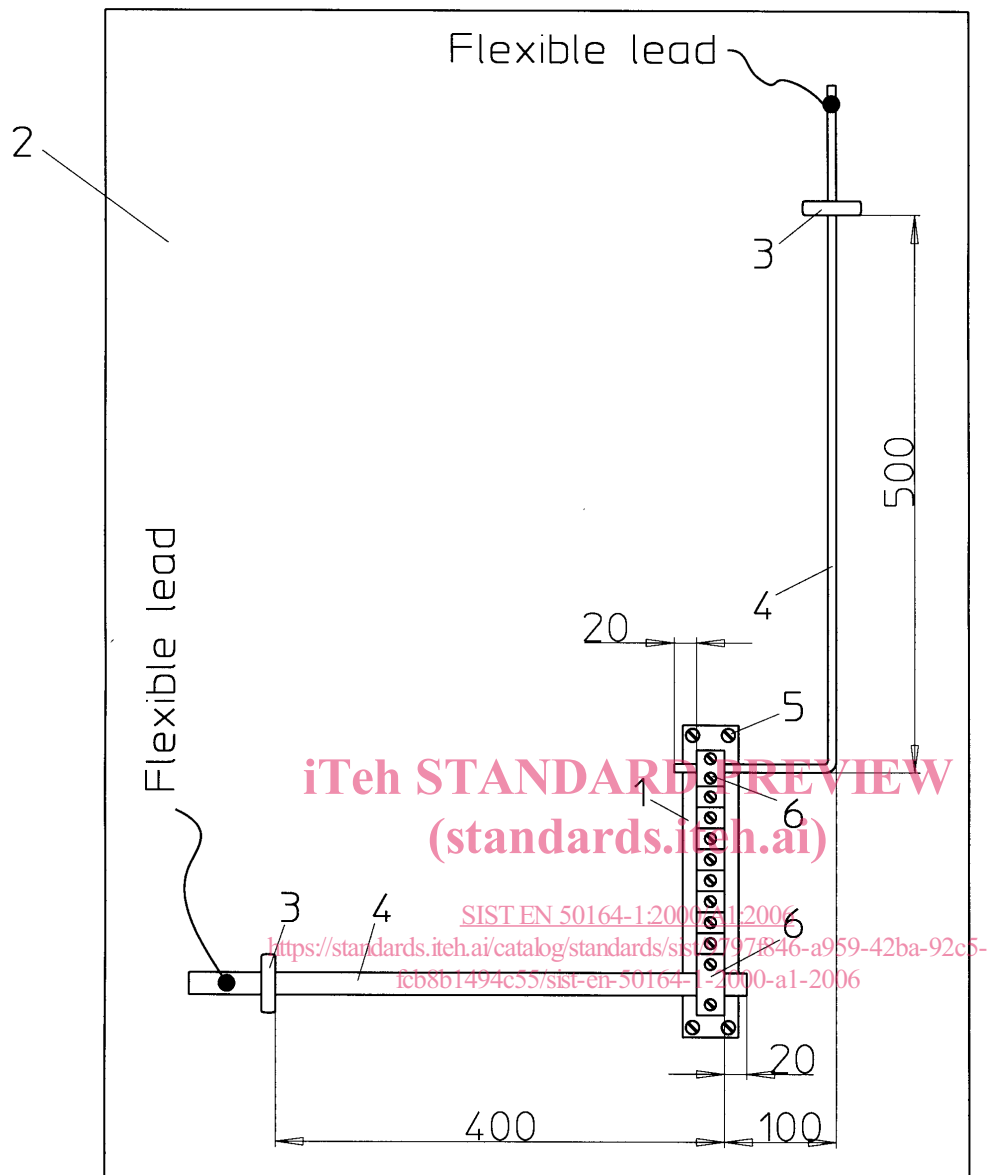
Add new figures:



Key

- 1 bridging component
- 2 plate made of insulating material
- 3 rigid fastener
- 4 metal installation

Figure 3 - Basic arrangement of specimen with bridging component



Key

- 1 equipotential bonding bar
- 2 plate made of insulating material
- 3 rigid fastener
- 4 conductor
- 5 fixing points of equipotential bonding bar
- 6 connection to be tested

Figure 4 - Basic arrangement of specimen with equipotential bonding bar