

## **SLOVENSKI STANDARD SIST EN 50164-3:2006/A1:2009**

01-september-2009

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Lightning Protection Components (LPC) -- Part 3: Requirements for isolating spark gaps

Blitzschutzbauteile -- Teil 3: Anforderungen an Trennfunkenstrecken

Composants de protection contre la foudre (CPF) -- Partie 3: Prescriptions pour les éclateurs d'isolement

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Ta slovenski standard je istoveten z: EN 50164-3:2006/A1:2009

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53e25ab0fd20/sist-en-50164-3-2006-a1-2009

ICS:

91.120.40 Zæz ãæÁ¦^åÁd^| Lightning protection

SIST EN 50164-3:2006/A1:2009 en,fr,de

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#### **EUROPEAN STANDARD**

#### EN 50164-3/A1

### NORME EUROPÉENNE EUROPÄISCHE NORM

January 2009

ICS 91.120.40

English version

### Lightning Protection Components (LPC) - Part 3: Requirements for isolating spark gaps

Composants de protection contre la foudre (CPF) - Partie 3: Prescriptions pour les éclateurs d'isolement

Blitzschutzbauteile -Teil 3: Anforderungen an Trennfunkenstrecken

This amendment A1 modifies the European Standard EN 50164-3:2006; it was approved by CENELEC on 2008-11-01. 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 CENEDEC member.

https://standards.iteh.ai/catalog/standards/sist/47ffeda3-b6bc-48fa-abc7This 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, Bulgaria, 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: avenue Marnix 17, B - 1000 Brussels

#### **Foreword**

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

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as amendment A1 to EN 50164-3:2006 on 2008-11-01.

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) 2009-11-01

 latest date by which the national standards conflicting with the amendment have to be withdrawn

(dow) 2011-11-01

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<u>SIST EN 50164-3:2006/A1:2009</u> https://standards.iteh.ai/catalog/standards/sist/47ffeda3-b6bc-48fa-abc7-53e25ab0fd20/sist-en-50164-3-2006-a1-2009

#### **Foreword**

At the end of the Foreword **add** the following paragraphs:

EN 50164 series is a family standard under the generic title "Lightning Protection Components (LPC)" and consists of the following parts:

Part 1: Requirements for connection components

Part 2: Requirements for conductors and earth electrodes

Part 3: Requirements for isolating spark gaps

Part 4: Requirements for conductor fasteners

Part 5: Requirements for earth electrode inspection housings and earth electrode seals

Part 6: Requirements for lightning strike counters

Part 7: Requirements for earth enhancing compounds

#### 1 Scope

**Delete** 3<sup>rd</sup> dash: auxiliary earth electrodes of voltage operated earth fault circuit breakers.

#### 2 Normative references

Add the following references:

EN 61643-11:2002 + A11:2007, Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and tests (IEC 61643-1:1998, mod. + corr. Dec. 1998, mod.)

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

EN 62305-3, Protection against lightning a Part 3/Physical damage to structures and life hazard (IEC 62305-3, mod.) 53e25ab0fd20/sist-en-50164-3-2006-a1-2009

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

#### 3 Definitions

**Add** the relevant abbreviations to the following definition headings:

#### 3.5.1

rated power frequency withstand voltage  $[U_{wAC}]$ 

#### 3.5.2

rated DC withstand voltage  $[U_{wDC}]$ 

#### 3.7

rated impulse sparkover voltage [ $U_{r imp}$ ]

#### 5.3 Installation instructions

Add the following abbreviations and ISG characteristic information:

- rated impulse sparkover voltage  $[U_{rimp}]$ ;
- rated power frequency with stand voltage [ $U_{\mathrm{wAC}}$ ];
- rated DC withstand voltage [U<sub>wDC</sub>];

After Clause 7, "Electromagnetic compatibility (EMC)", add the following Clause 8:

#### Structure and content of the test report

The purpose of this instruction is to provide general requirements for laboratory test reports. This document is intended to promote clear, complete reporting procedures for laboratories submitting test reports.

The results of each test carried out by the laboratory shall be reported accurately, clearly, unambiguously and objectively, in accordance with any instructions in the test methods. The results shall be reported in a test report and shall include all the information necessary for the interpretation of the test results and all information required by the method used.

Particular care and attention shall be paid to the arrangement of the report, especially with regard to presentation of the test data and ease of assimilation by the reader. The format shall be carefully and specifically designed for each type of test carried out, but the headings shall be standardized as indicated

The structure of each report shall include at least information according to 8.1 to 8.7.

#### 8.1 Report identification

- 8.1.1 A title or subject of the report.
- 8.1.2 Name, address and telephone number of the test laboratory.
- 8.1.3 Name, address and telephone number of the sub test laboratory where the test was carried out if different from company which has been assigned to perform the test.
- 8.1.4 Unique identification number (or serial number) of the test report.
- 8.1.5 Name and address of the vendor.
- Report shall be paginated and the total number of pages indicated. 8.1.6
- standards.iteh.ai) 8.1.7 Date of issue of report.
- Date(s) of performance of test(s).
  SIST EN 50164-3:2006/A1:2009 8.1.8

- 8.1.9 Signature and title or an equivalent identification of the person(s) authorized to sign for the testing laboratory for the content of the report /sist-en-50164-3-2006-a1-2009
- **8.1.10** Signature and title of person(s) conducting the test.

#### 8.2 Specimen description

- 8.2.1 Sample description.
- 8.2.2 Detailed description and unambiguous identification of the test sample and/or test assembly.
- 8.2.3 Characterization and condition of the test sample and/or test assembly.
- 8.2.4 Sampling procedure, where relevant.
- 8.2.5 Date of receipt of test items.
- 8.2.6 Photographs, drawings or any other visual documentation, if available.

#### 8.3 Standards and references

- 8.3.1 Identification of the test standard used and the date of issue of the standard.
- 8.3.2 Other relevant documentation with the documentation date.

#### 8.4 Test procedure

- 8.4.1 Description of the test procedure.
- 8.4.2 Justification for any deviations from, additions to or exclusions from the referenced standard.
- 8.4.3 Any other information relevant to a specific test such as environmental conditions.
- 8.4.4 Configuration of testing assembly.
- 8.4.5 Location of the arrangement in the testing area and measuring techniques.

- 8.5 Testing equipment, description
- **8.5.1** Description of equipment used for every test conducted i.e. generator, conditioning/ageing device.
- 8.6 Measuring instruments description
- **8.6.1** Characteristics and calibration date of all instruments used for measuring the values specified in the standard i.e. shunts, oscilloscope, ohmmeter, torque meter.
- 8.7 Results and parameters recorded
- **8.7.1** The measured, observed or derived results shall be clearly identified at least for:
- **8.7.1.1** isolating resistance,
- **8.7.1.2** withstand voltage (power frequency withstand voltage, DC withstand voltage),
- **8.7.1.3** rated sparkover voltage,
- **8.7.1.4** lightning current carrying capability (current, charge, specific energy, duration),
- 8.7.1.5 connection component test results (ohmic resistance tightening and loosening torques),
- **8.7.1.6** marking,
- 8.7.1.7 UV resistant.
- **8.7.2** A statement of pass/fail identifying the part of the test for which the specimen has failed and also a description of the failure.

The above shall be presented by tables, graphs, drawings, photographs or other documentation of visual observations as appropriate.

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