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Lightning protection system components (LPSC) – Part 3: Requirements for isolating spark gaps (ISG)

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COMMISSION

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CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Terms and definitions	8
4 Classification.....	9
5 Requirements	9
5.1 General	9
5.2 Environmental requirements	9
5.3 Installation instructions	9
5.4 Lightning current carrying capability	10
5.5 Rated impulse sparkover voltage.....	10
5.6 Rated withstand voltage	10
5.6.1 Rated DC withstand voltage	10
5.6.2 Rated AC withstand voltage.....	10
5.7 Isolation resistance	10
5.8 Marking	10
5.9 UV resistance.....	10
6 Tests.....	11
6.1 General conditions for tests.....	11
6.2 Electrical test	11
6.2.1 Isolation resistance.....	11
6.2.2 Withstand voltage	11
6.2.3 Rated impulse sparkover voltage	12
6.2.4 Lightning current	12
6.2.5 Isolation resistance.....	13
6.2.6 Withstand voltage	13
6.2.7 Rated impulse sparkover voltage	13
6.3 Marking test	13
6.3.1 General conditions for tests	13
6.3.2 Acceptance criteria	13
7 Electromagnetic compatibility (EMC)	14
8 Structure and content of the test report	14
8.1 General.....	14
8.2 Report identification	14
8.3 Specimen description	14
8.4 Standards and references	14
8.5 Test procedure	15
8.6 Testing equipment description	15
8.7 Measuring instruments description	15
8.8 Results and parameters recorded.....	15
8.9 Statement of pass/fail.....	15
Annex A (normative) Environmental test for isolating spark gaps	16
Annex B (normative) Flow chart of tests.....	17

This is a preview of "IEC 62561-3 Ed. 1.0 ...". [Click here to purchase the full version from the ANSI store.](#)

Bibliography..... 18

Table 1 – Lightning impulse current (I_{imp}) parameters^a..... 13

INTERNATIONAL ELECTROTECHNICAL COMMISSION

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 3: Requirements for isolating spark gaps (ISG)

FOREWORD

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International Standard IEC 62561-3 has been prepared by IEC technical committee: Lightning protection.

The text of this standard is based on the following documents:

FDIS	Report on voting
81/418/FDIS	81/424A/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The content of this part of IEC 62561 is taken from the European Standard EN 50164-3.

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A list of all the 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 publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

This part of IEC 62561 deals with the requirements and tests for isolating spark gaps (ISG) used for the installation of a lightning protection system (LPS) designed and implemented according to IEC 62305 series of standards.

LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

Part 3: Requirements for isolating spark gaps (ISG)

1 Scope

This part of IEC 62561 specifies the requirements and tests for isolating spark gaps (ISG) for lightning protection systems.

ISGs can be used to indirectly bond a lightning protection system to other nearby metalwork where a direct bond is not permissible for functional reasons.

Typical applications include the connection to:

- earth termination systems of power installations;
- earth termination systems of telecommunication systems;
- auxiliary earth electrodes of voltage-operated, earth fault circuit breakers;
- rail earth electrode of AC and DC railways;
- measuring earth electrodes for laboratories;
- installations with cathodic protection and stray current systems;
- service entry masts for low-voltage overhead cables;
- bypassing insulated flanges and insulated couplings of pipelines.

This standard does not cover applications where follow currents occur.

NOTE Lightning protection system components (LPSC) can also be suitable for use in hazardous conditions such as fire and explosive atmosphere. Due regard will be taken of the extra requirements necessary for the components to be installed in such conditions.

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 61643-11, *Low-voltage surge protective devices – Part 11: Surge protective devices connected to low-voltage power systems – Requirements and test methods*

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

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

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*