

INTERNATIONAL STANDARD

NORME INTERNATIONALE

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

**Composants des systèmes de protection contre la foudre (CSPF) –
Partie 3: Exigences pour les éclateurs d'isolement**



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CONTENTS

CONTENTS	2
FOREWORD	4
INTRODUCTION	6
1 Scope	7
2 Normative references	7
3 Terms and definitions	8
4 Classification	9
4.1 According to ISGs capability to withstand lightning current	9
4.2 According to ISGs location installation	9
5 Requirements	10
5.1 General	10
5.2 Environmental requirements	10
5.3 Installation instructions	10
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 power frequency withstand voltage	10
5.7 Isolation resistance	10
5.8 Marking	11
5.9 UV (ultraviolet) resistance	11
6 Tests	11
6.1 General conditions for tests	11
6.2 UV (ultraviolet) light test	12
6.3 Resistance tests to corrosion	12
6.4 Mechanical tests	12
6.5 Electrical tests	14
6.5.1 Isolation resistance	14
6.5.2 Withstand voltage	14
6.5.3 Rated impulse sparkover voltage	15
6.5.4 Lightning current	15
6.6 Installation instructions	16
6.6.1 General conditions for tests	16
6.6.2 Acceptance criteria	16
6.7 Marking test	16
6.7.1 General conditions for tests	16
6.7.2 Acceptance criteria	16
7 Electromagnetic compatibility (EMC)	16
8 Structure and content of the test report	16
8.1 General	16
8.2 Report identification	17
8.3 Specimen description	17
8.4 Standards and references	17
8.5 Test procedure	17
8.6 Testing equipment description	18
8.7 Measuring instruments description	18

8.8	Results and parameters recorded	18
8.9	Statement of pass/fail	18
Annex A (normative)	Flow chart of tests.....	19
Annex B (normative)	Environmental test for isolating spark gaps	21
B.1	General.....	21
B.2	Salt mist treatment.....	21
B.3	Humid sulphurous atmosphere treatment	21
B.4	Ammonia atmosphere treatment.....	21
Annex C (normative)	Environmental test for outdoor isolating spark gaps – Resistance to ultraviolet light.....	22
C.1	General.....	22
C.2	The tests.....	22
C.3	First alternative test to C.2.....	22
C.4	Second alternative test to C.2	22
Bibliography.....		23
Figure 1 – Pendulum hammer test apparatus		13
Figure A.1 – Flow chart of the sequence of tests for ISGs		20
Table 1 – Lightning impulse current (I_{imp}) parameters.....		15

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 81: Lightning protection.

This bilingual version (2018-11) corresponds to the monolingual English version, published in 2017-06.

This second edition cancels and replaces the first edition, published in 2012. This edition constitutes a technical revision.

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

- a) a new classification has been added related to ISGs location installation;
- b) an updated flow chart of tests has been developed.

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

FDIS	Report on voting
81/561/FDIS	81/566/RVD

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

The French version of this document has not been voted upon.

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

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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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

INTRODUCTION

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

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 power 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 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 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 60068-2-52:1996, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)*¹

IEC 60068-2-75:1997, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*²

¹ 2nd edition (1996). A 3rd edition IEC 60068-2-52: *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium chloride solution)* is under preparation. Stage at the time of publication: IEC PRVC 60068-2-52:2017.

² 1st edition (1997). This 1st edition was replaced in 2014 by a 2nd edition IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*.