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IEC 62561-6

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# INTERNATIONAL STANDARD



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**Lightning protection system components (LPSC) –  
Part 6: Requirements for lightning strike counters (LSCs)**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

### LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

#### Part 6: Requirements for lightning strike counters (LSCs)

#### FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as “IEC Publication(s)”). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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IEC 62561-6 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) a new classification according to the internal circuit of LSCs has been added;
- b) the tests flowchart in Annex C has been updated to reflect this new classification;
- c) the applicability of previous tests has been added (Annex D).

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

FDIS	Report on voting
81/723/FDIS	81/726/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

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## INTRODUCTION

This part of IEC 62561 deals with the requirements and tests for lightning protection system components (LPSC) ~~that may be~~ used to determine the number of impulses or nominal currents on specific conductors associated with a lightning protection system (LPS) designed and implemented according to the IEC 62305 series.

## LIGHTNING PROTECTION SYSTEM COMPONENTS (LPSC) –

### Part 6: Requirements for lightning strike counters (LSCs)

#### 1 Scope

This part of IEC 62561 specifies the requirements and tests for devices intended to count the number of lightning strikes based on the current flowing in a conductor. This conductor ~~may~~ can be part of a lightning protection system (LPS) or connected to an SPD installation or other conductors, which are not intended to conduct a significant portion of lightning currents.

~~LSCs may also be suitable for use in hazardous atmospheres and there are therefore extra requirements necessary for the components to be installed in such conditions.~~

Extra requirements for the components can be necessary for LSCs intended for use in hazardous atmospheres.

NOTE 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 60068-2-52:19962017, *Environmental testing – Part 2-52: Tests – Test Kb: Salt mist, cyclic (sodium, chloride solution)*

IEC 60068-2-75:19972014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61000-6-2, *Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity standard for industrial environments*

IEC 61000-6-4, *Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission standard for industrial environments*

ISO 4892-2:2013, *Plastics – Methods of exposure to laboratory light sources – Part 2: Xenon-arc lamps*

ISO 4892-3:2016, *Plastics – Methods of exposure to laboratory light sources – Part 3: Fluorescent UV lamps*

ISO 4892-4:2013, *Plastics – Methods of exposure to laboratory light sources – Part 4: Open-flame, carbon-arc lamps*

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

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~~



# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

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**Lightning protection system components (LPSC) –  
Part 6: Requirements for lightning strike counters (LSCs)**

**Composants des systèmes de protection contre la foudre (CSPF) –  
Partie 6: Exigences pour les compteurs de coups de foudre (LSC)**



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## COMMISSION ÉLECTROTECHNIQUE INTERNATIONALE

### COMPOSANTS DES SYSTÈMES DE PROTECTION CONTRE LA Foudre (CSPF) –

#### Partie 6: Exigences pour les compteurs de coups de foudre (LSC)

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L'IEC 62561-6 a été établie par le comité d'études 81: Protection contre la foudre. Il s'agit d'une Norme internationale.

Cette troisième édition annule et remplace la deuxième édition parue en 2018. Cette édition constitue une révision technique.

Cette édition inclut les modifications techniques majeures suivantes par rapport à l'édition précédente:

- a) ajout d'une nouvelle classification en fonction du circuit interne des LSC;
- b) mise à jour du logigramme des essais de l'Annexe C pour refléter la nouvelle classification;

c) ajout de l'applicabilité d'essais précédents (Annexe D).

Le texte de cette Norme internationale est issu des documents suivants:

FDIS	Rapport de vote
81/723/FDIS	81/726/RVD

Le rapport de vote indiqué dans le tableau ci-dessus donne toute information sur le vote ayant abouti à son approbation.

La langue employée pour l'élaboration de cette Norme internationale est l'anglais.

Ce document a été rédigé selon les Directives ISO/IEC, Partie 2, il a été développé selon les Directives ISO/IEC, Partie 1 et les Directives ISO/IEC, Supplément IEC, disponibles sous [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). Les principaux types de documents développés par l'IEC sont décrits plus en détail sous [www.iec.ch/standardsdev/publications](http://www.iec.ch/standardsdev/publications).

Une liste de toutes les parties de la série IEC 62561, publiée sous le titre général *Composants des systèmes de protection contre la foudre (CSPF)*, se trouve sur le site web de l'IEC.

Le comité a décidé que le contenu de ce document ne sera pas modifié avant la date de stabilité indiquée sur le site web de l'IEC sous [webstore.iec.ch](http://webstore.iec.ch) dans les données relatives au document recherché. À cette date, le document sera

- reconduit,
- supprimé,
- remplacé par une édition révisée, ou
- amendé.

## INTRODUCTION

La présente partie de l'IEC 62561 traite des exigences et des essais pour les composants des systèmes de protection contre la foudre (CSPF) utilisés pour déterminer le nombre de chocs ou de courants nominaux sur des conducteurs spécifiques associés à un système de protection contre la foudre (SPF) conçu et mis en œuvre conformément à la série IEC 62305.

## COMPOSANTS DES SYSTÈMES DE PROTECTION CONTRE LA Foudre (CSPF) –

### Partie 6: Exigences pour les compteurs de coups de foudre (LSC)

#### 1 Domaine d'application

La présente partie de l'IEC 62561 spécifie les exigences et les essais applicables aux dispositifs destinés à compter le nombre de coups de foudre à partir du courant qui circule dans un conducteur. Ce conducteur peut faire partie d'un système de protection contre la foudre (SPF) ou être relié à une installation de parafoudre ou à d'autres conducteurs, qui ne sont pas destinés à conduire une partie significative des courants de foudre.

Des exigences supplémentaires peuvent être nécessaires pour les composants des LSC destinés à être utilisés dans des atmosphères dangereuses.

NOTE Dans les pays membres du CENELEC, les exigences d'essai des composants pour atmosphères explosives sont spécifiées dans la CLC/TS 50703-2.

#### 2 Références normatives

Les documents suivants cités dans le texte constituent, pour tout ou partie de leur contenu, des exigences du présent document. Pour les références datées, seule l'édition citée s'applique. Pour les références non datées, la dernière édition du document de référence s'applique (y compris les éventuels amendements).

IEC 60068-2-52:2017, *Essais d'environnement – Partie 2-52: Essais – Essai Kb: Brouillard salin, essai cyclique (solution de chlorure de sodium)*

IEC 60068-2-75:2014, *Essais d'environnement – Partie 2-75: Essais – Essai Eh: Essais au marteau*

IEC 60529, *Degrés de protection procurés par les enveloppes (Code IP)*

IEC 61000-6-2, *Compatibilité électromagnétique (CEM) – Partie 6-2: Normes génériques – Norme d'immunité pour les environnements industriels*

IEC 61000-6-4, *Compatibilité électromagnétique (CEM) – Partie 6-4: Normes génériques – Norme sur l'émission pour les environnements industriels*

ISO 4892-2:2013, *Plastiques – Méthodes d'exposition à des sources lumineuses de laboratoire – Partie 2: Lampes à arc au xénon*

ISO 4892-3:2016, *Plastiques – Méthodes d'exposition à des sources lumineuses de laboratoire – Partie 3: Lampes fluorescentes UV*

ISO 4892-4:2013, *Plastiques – Méthodes d'exposition à des sources lumineuses de laboratoire – Partie 4: Lampes à arc au carbone*

ISO 22479:2019, *Corrosion des métaux et alliages – Essai au dioxyde de soufre en atmosphère humide (méthode avec volume fixe de gaz)*

ISO 6957:1988, *Alliages de cuivre – Essai à l'ammoniaque pour la résistance à la corrosion sous contrainte*