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Responsible committee: PEL/121/1 Low voltage switchgear and controlgear

Interested committees:

Title: BS EN IEC 60947-5-5 Low-voltage switchgear and controlgear

Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function

Please notify the secretary if you are aware of any keywords that might assist in classifying or identifying the standard or if the content of this standard

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Information on the co-operating organizations represented on the committees referenced above may be obtained from <http://standardsdevelopment.bsigroup.com>

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## Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

## UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

## Submission of Comments

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## Template for comments and secretariat observations

|                  |                        |
|------------------|------------------------|
| Date: xx/xx/20xx | Document: ISO/DIS xxxx |
|------------------|------------------------|

| 1  | 2                                          | (3)                          | 4               | 5                                                                                                                                  | (6)                                                                      | 7                                                  |
|----|--------------------------------------------|------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------|
| MB | Clause No./ Subclause No./Annex (e.g. 3.1) | Paragraph/Figure/ Table/Note | Type of comment | Commend (justification for change) by the MB                                                                                       | Proposed change by the MB                                                | Secretariat observations on each comment submitted |
|    | 3.1                                        | Definition 1                 | ed              | Definition is ambiguous and needs clarifying.                                                                                      | Amend to read '...so that the mains connector to which no connection...' |                                                    |
|    | 6.4                                        | Paragraph 2                  | te              | The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK. | Delete reference to UV photometer.                                       |                                                    |



# 121A/596/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER:  
**IEC 60947-5-5 ED2**

DATE OF CIRCULATION:  
**2024-01-26**

CLOSING DATE FOR COMMENTS:  
**2024-03-22**

SUPERSEDES DOCUMENTS:  
**121A/542/CD, 121A/551A/CC**

|                                                                                                                                                                                            |                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| IEC SC 121A : LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR                                                                                                                                       |                                                                                                                                                          |
| SECRETARIAT:<br>France                                                                                                                                                                     | SECRETARY:<br>Mr Michaël LAHEURTE                                                                                                                        |
| OF INTEREST TO THE FOLLOWING COMMITTEES:<br>TC 44                                                                                                                                          | PROPOSED HORIZONTAL STANDARD:<br><input type="checkbox"/><br>Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary. |
| FUNCTIONS CONCERNED:<br><input checked="" type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input checked="" type="checkbox"/> SAFETY |                                                                                                                                                          |

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Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

**Low-voltage switchgear and controlgear - Part 5-5: Control circuit devices and switching elements - Electrical emergency stop device with mechanical latching function**

NOTE FROM TC/SC OFFICERS:

SC121A Officers support circulation of CD3 for project IEC 60947-5-5 ED2.

Secretary Note: NC experts are kindly requested to refer their comments to line number.

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 5-5: Control circuit devices and switching elements –  
Electrical emergency stop device with mechanical latching function**

## FOREWORD

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International Standard IEC 60947-5-5 has been prepared by subcommittee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear and their assemblies for low voltage.

This second edition cancels and replaces the first edition published in 1997. This edition constitutes a technical revision.

This edition includes the following significant changes with respect to the previous edition:

- a) Re-shaping document with the clause numbers and names as other 60947 series;
- b) Review the test method to reasonably determine that the latch mechanism meets the requirements of the standard;

c) New Annex B for special requirements for illuminated button type emergency stop devices, including the reference to a function to distinguish between “active and inactive” by changing the colour of the button depending on the illumination.

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

|            |                  |
|------------|------------------|
| FDIS       | Report on voting |
| XX/XX/FDIS | XX/XX/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 language used for the development of this International Standard is English.

This standard shall be used in conjunction with IEC 60947-1 and with IEC 60947-5-1.

The provisions of the general rules, IEC 60947-1, are applicable to this standard, where specifically called for. General rules clauses and subclauses thus applicable, as well as tables, figures and annexes are identified by a reference to IEC 60947-1, for example 1.2.3 or Annex A of IEC 60947-1:2020.

A list of all parts in the IEC 60947 series, under the general title Low-voltage switchgear and controlgear, can be found on the IEC website.

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 <http://www.iec.ch/standardsdev/publications>.

The committee has decided that the contents of the base publication and its amendment 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.
-

## INTRODUCTION

The present document deals specifically with electrical emergency stop devices with mechanical latching function and gives additional electrical and mechanical requirements to those given in the following International Standards:

- ISO 13850 giving requirements for the emergency stop function of a machine, whatever be the energy used;
- IEC 60204-1 giving additional requirements for an emergency stop function realized by the electrical equipment of a machine;
- IEC 60947-5-1 specifying electrical characteristics of electromechanical control circuit devices.

**LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR –**  
**Part 5-5: Control circuit devices and switching elements –**  
**Electrical emergency stop device with mechanical latching function**

## **1 Scope**

This part of IEC 60947-5 provides detailed specifications relating to the electrical and mechanical construction of emergency stop devices with mechanical latching function and to their testing.

This standard is applicable to electrical control circuit devices and switching elements which are used to initiate an emergency stop signal. Such devices can be provided with their own enclosure and shall be installed according to the product documentation.

This standard does not apply to:

- emergency stop devices for non-electrical control applications, for example hydraulic or pneumatic;
- emergency stop devices without mechanical latching function.

An emergency stop device conforming to this document can also be used as part of an emergency switching off means in compliance with IEC 60364-5-53.

NOTE See also 9.2.3.4 of IEC 60204-1:2016+AMD1:2021.

This standard does not deal with any specific requirements on acoustic noise as the noise emission of electrical emergency stop devices with mechanical latching function is not considered to be a relevant hazard.

## **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 60068-2-1:2007, *Environmental testing – Part 2-1: Tests – Test A: Cold*

IEC 60068-2-2:2007, *Environmental testing – Part 2-2: Tests – Test B: Dry heat*

IEC 60068-2-6:2007, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)*

IEC 60068-2-11:2021, *Environmental testing – Part 2: Tests – Test Ka: Salt mist*

IEC 60068-2-27:2008, *Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock*

IEC 60068-2-30:2005, *Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

IEC 60068-2-75:2014, *Environmental testing – Part 2-75: Tests – Test Eh: Hammer tests*

IEC 60947-1:2020, *Low-voltage switchgear and controlgear – Part 1: General rules*