

INTERNATIONAL STANDARD

**Residual current operated circuit-breakers for household and similar use –
Part 3-1: Particular requirements for RCDs with screwless-type terminals for
external copper conductors**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

RESIDUAL CURRENT OPERATED CIRCUIT-BREAKERS
FOR HOUSEHOLD AND SIMILAR USE –Part 3-1: Particular requirements for RCDs with screwless-
type terminals for external copper conductors

FOREWORD

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International Standard IEC 62873-3-1 has been prepared by subcommittee 23E: Circuit breakers and similar equipment for household use, of IEC technical committee 23: Electrical accessories.

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

FDIS	Report on voting
23E/964/FDIS	23E/982/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.

A list of all parts of the IEC 62873 series published under the general title *Residual current operated circuit-breakers for household and similar use* 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 website 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- withdrawn,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 document is part of the series described in the outline document IEC 62873-1.

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RESIDUAL CURRENT OPERATED CIRCUIT-BREAKERS FOR HOUSEHOLD AND SIMILAR USE –

Part 3-1: Particular requirements for RCDs with screwless- type terminals for external copper conductors

1 Scope

This part of IEC 62873 applies to RCDs equipped with screwless terminals, for current not exceeding 20 A primarily suitable for connecting unprepared (see 3.5) copper conductors of cross-section up to 4 mm².

This part of IEC 62873 cannot be used alone but it is intended to be applied together with an RCD product standard (IEC 61008-1 or IEC 61009-1) if an RCD is equipped with screwless terminals.

NOTE In AT, CZ, DK, NL, NO, PO, PT and CH, the upper limit of current for use of screwless terminals is 16 A.

In this part of IEC 62873, screwless terminals are referred to as terminals and copper conductors are referred to as conductors.

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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 61008-1, *Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules*

IEC 61009-1, *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) – Part 1: General rules*

IEC 62873-2, *Residual current operated circuit-breakers for household and similar use – Part 2: Residual current devices (RCDs) – Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 62873-2 and the following apply.

3.1

clamping units

parts of the terminal necessary for mechanical clamping and the electrical connection of the conductors including the parts which are necessary to ensure correct contact pressure

3.2

universal terminal

terminal for the connection and disconnection of all types of conductors (rigid and flexible)

Note 1 to entry: In the following countries, only universal screwless-type terminals are accepted: AT, BE, CN, DK, DE, ES, FR, IT, PT, SE and CH.

3.3

non-universal terminal

terminal for the connection and disconnection of a certain kind of conductor only (e.g. rigid-solid conductors only or rigid-[solid or stranded] conductors only)

3.4

push-wire terminal

non-universal terminal in which the connection is made by pushing in rigid (solid or stranded) conductors

3.5

unprepared conductor

conductor which has been cut and the insulation of which has been removed for insertion into a terminal

Note 1 to entry: A conductor the shape of which is arranged for introduction into a terminal or the strands of which are twisted to consolidate the end is considered as an unprepared conductor.

[SOURCE: IEC 60050-442:1998, 442-01-26]

4 Classification

Clause 4 of the RCD product standard applies.

5 Characteristics of RCDs

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Clause 5 of the RCD product standard applies.

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6 Marking and other product information

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In addition to Clause 6 of the RCD product standard, the following requirements apply:

Non-universal terminals:

- terminals declared for flexible conductors shall be marked by the letter "f".

An appropriate marking indicating the length of insulation to be removed before insertion of the conductor into the terminal shall be shown on the RCD.

The manufacturer shall also provide information, in his literature, on the maximum number of conductors which may be clamped.

7 Standard conditions for operation in service and for installation

Clause 7 of the RCD product standard applies.

8 Requirements for construction and operation

8.1 General

Clause 8 of the RCD product standard applies, with the following exceptions:

In 8.1.5, only 8.1.5.1, 8.1.5.2, 8.1.5.3, 8.1.5.6 and 8.1.5.7 apply.

Compliance is checked by inspection and by the tests of 9.2 and 9.3 of this standard.