



IEC 61009-2-2

Edition 2.0 2024-11

INTERNATIONAL STANDARD

**Residual current operated circuit-breakers with integral overcurrent protection
for household and similar uses (RCBOs) –
Part 2-2: RCBOs according to classification 4.1.2, 4.1.3, 4.1.4, 4.1.5 and 4.1.6**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.120.50

ISBN 978-2-8327-0013-6

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FOREWORD

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IEC 61009-2-2 has been prepared by subcommittee 23E: Circuit-breakers and similar equipment for household use, of IEC technical committee 23: Electrical accessories. It is an International Standard.

This second edition cancels and replaces the first edition published in 1991. This edition constitutes a technical revision.

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

- a) harmonization of all clauses between the IEC 61008, IEC 61009 and IEC 60755 series using blocks and modules approach;

- b) harmonization of all tables and figures between the IEC 61008, IEC 61009 and IEC 60755 series;
- c) terms and definitions are now referred to IEC 62873-2;
- d) modification of 4.1 for classification according to supply conditions;
- e) modification of Clause 6 for markings of RCBOs with a functional earth (FE);
- f) specific tests for operating characteristics of RCBO according to classifications 4.1.2, 4.1.3, 4.1.4, 4.1.5 and 4.1.6;
- g) specific test conditions for dielectric properties (9.7), temperature-rise (9.8), electrical and mechanical endurance (9.10), short-circuit tests (9.11), verification of trip-free (9.15), behaviour in the event of loss of the supply voltage (9.17), surge current tests (9.19), reliability (9.20), ageing (9.21) and temporary overvoltage TOV (9.24);
- h) additional tests for RCBOs with a terminal connected to the FE: Connecting capacity of FE terminal (9.200); Limitation of standing current in the FE (9.201).

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

Draft	Report on voting
23E/1372/FDIS	23E/1390/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 International Standard is to be used in conjunction with IEC 61009-1:2024.

Where this document states "addition", "deletion" or "replacement", the corresponding requirement, test specification or explanatory material in IEC 61009-1:2024 is adapted accordingly.

Where this document defines a new subclause, this subclause number starts at 200 (for example an additional definition in this part would read 3.200).

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. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 61009 series, published under the general title *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs)*, 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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

RESIDUAL CURRENT OPERATED CIRCUIT-BREAKERS WITH INTEGRAL OVERCURRENT PROTECTION FOR HOUSEHOLD AND SIMILAR USES (RCBOs) –

Part 2-2: RCBOs according to classification 4.1.2, 4.1.3, 4.1.4, 4.1.5 and 4.1.6

1 Scope

IEC 61009-1:2024, Clause 1 is applicable except for the first paragraph, which is replaced by the first paragraph below, and the last paragraph, which is replaced by the second paragraph and note below:

This document applies to residual current operated circuit-breakers, with integral overcurrent protection, for household and similar uses (hereafter referred to as RCBOs), classified according to IEC 61009-1:2024, 4.1.2, 4.1.3, 4.1.4, 4.1.5 and 4.1.6. RCBOs according to this document are intended for voltages not exceeding 440 V AC with frequencies of 50 Hz, 60 Hz or 50/60 Hz and currents not exceeding 125 A and rated short-circuit capacities not exceeding 25 000 A for operation at 50 Hz or 60 Hz.

This document applies in conjunction with IEC 61009-1:2024. It specifies requirements, tests and test sequences to verify compliance and is used for certification purposes.

NOTE Devices according to this document are not permitted in: DE.

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 61009-1:2024, *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) – Part 1: General rules*

IEC 61543:2022, *Residual current-operated protective devices (RCDs) for household and similar use – Electromagnetic compatibility*

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

IEC 62873-3-1, *Residual current operated circuit-breakers for household and similar use – Part 3-1: Particular requirements for devices with screwless-type terminals for external copper conductors*

IEC 62873-3-2, *Residual current operated circuit-breakers for household and similar use – Part 3-2: Particular requirements for devices with flat quick-connect terminations*