

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Portable residual current devices (PRCDs) without integral overcurrent protection for household and similar use

Dispositifs différentiels portables à courant résiduel (PCDM) sans protection incorporée contre les surintensités pour usages domestiques et analogues





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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**PORTABLE RESIDUAL CURRENT DEVICES (PRCDS) WITHOUT
INTEGRAL OVERCURRENT PROTECTION FOR HOUSEHOLD
AND SIMILAR USE**

FOREWORD

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IEC 61540 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 1997 and its Amendment 1:1998. This edition constitutes a technical revision.

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

- a) The content of the document was revised and aligned with IEC 60755 (group safety publication for residual current devices) and standard library "blocks and modules".
- b) Introduction of classification "4.3 According to behaviour after opening automatically in case of failure of the line voltage".

- c) New requirements and tests were added to cover the introduced protection function against shock hazard:
- Verification of correct performance in the case of missing protective conductor.
 - Verification of correct performance in the case of hazardous live protective conductor.
 - Verification of correct performance in the case of loss of protective conductor.
 - Verification of behaviour in the case of external fault current in the protective conductor.
- d) Clearances/creepage distances revised and modified in alignment with IEC 62752 (IC-CPD).
- e) Revision of values for minimum operating voltages.
- f) Introduction of requirements and test for ambient air temperature between –25 °C and +40 °C.
- g) Test of dielectric properties revised and aligned with standard library "blocks and modules".
- h) Relevant clauses aligned with IEC 62752 (IC-CPD); IC-CPD is a product standard describing similar product/features.
- i) All annexes revised and adapted to content of main document.

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

In this document, the following print types are used:

- requirements: in roman type;
- *conformity statements: in italic type;*
- notes: in small roman type.

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

INTRODUCTION

A portable residual current device (hereafter referred to as PRCD), consists of a plug, a residual current device (RCD) and one or more socket-outlets or a provision for connection.

This document is harmonized as far as practicable with the rules and requirements of IEC 60755 (group safety publication for RCD) and the standard library "blocks and modules", as defined in IEC 62873-1.