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# AS/NZS 61008.1:2004 Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) - Part 1: General rules

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## Abbreviation

AS/NZS 61008.1:2004

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## Information provider

Standards New Zealand

## Author

Standards New Zealand, Standards Australia

## Information type

New Zealand Standard

## Format

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## Description

This Standard proposes essential safety and associated requirements for residual current operated circuit-breakers for household and similar uses, not incorporating overcurrent protection, for rated voltages not exceeding 440 V a.c. and rated currents not exceeding 125 A. Annex ZZ lists variations for Australian and New Zealand conditions.

This Standard is a modified adoption of IEC 61008-1:2002.

## Scope

This International Standard applies to residual current operated circuit-breakers functionally independent of, or functionally dependent on, line voltage, for household and similar uses, not incorporating overcurrent protection (hereafter referred to as RCCBs), for rated voltages not exceeding 440 V a.c. and rated currents not exceeding 125 A, intended principally for protection against shock-hazard.

These devices are intended to protect persons against indirect contact, the exposed conductive parts of the installation being connected to an appropriate earth electrode. They may be used to provide protection against fire hazards due to a persistent earth fault current, without the operation of the overcurrent protective device.

RCCBs having a rated residual operating current not exceeding 30 mA are also used as a means for additional protection in care of failure of the protective means against electric shock.

This standard applies to devices performing simultaneously the functions of detection of the residual current, of comparison of the value of this current with the residual operating value and of opening of the protected circuit when the residual current exceeds this value.

Special precautions (e.g. lightning arresters) may be necessary when excessive overvoltages are likely to occur on the supply side (for example in the case of supply through overhead lines ) (see IEC 60364-4-443).

RCCBs of the general type are resistant to unwanted tripping including the case where surge voltages (as a result of switching transients or induced by lightning) cause loading currents in the installation without occurrence of flashover.

RCCBs of the S type are considered to be sufficient proof against unwanted tripping even if the surge voltage causes a flashover and a follow-on current occurs.

Particular requirements are necessary for;

- - Residual current operated circuit-breakers with integral overcurrent protection (see IEC 61009);
- - RCCBs incorporated in or intended only for association with plugs and socket-outlets or with appliance couples for household or similar general purposes.

The requirements of this standard apply for normal environmental conditions (see 7.1). Additional requirements may be necessary for RCCBs used in locations having severe environmental conditions.

RCCBs including batteries are not covered by this standard.

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