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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 37751.2-2019

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

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Table of Contents

Foreword

1 Scope

2 Normative references

3 Terms and definitions

3.1 Definition of the inflow of earth current from live parts

3.2 Definition of RCD incentives

3.3 Definition of RCD actions and functions

3.4 Definitions relating to incentive magnitudes and ranges

3.5 Definitions relating to arcing time

Foreword

GB/T 37751 "Residual current operated circuit breakers for household and similar purposes" is divided into the following sections.

--- Part 1. Overview of independent modules and unit modules for residual current electrical standards (GB/T 37751.1);

--- Part 2. Residual current electrical appliances (RCD) Vocabulary (GB/T 37751.2);

--- Part 3-1. Particular requirements for RCDs with non-threaded terminals to be connected to external copper conductors (GB/T 37751.31);

--- Part 3-2. Particular requirements for RCDs with flat quick-connect ends (GB/T 37751.32);

---Part 3-3. Threaded terminal blocks with external untreated aluminium conductors and aluminium threaded connection to copper or aluminium conductors

Special requirements for type terminal block RCD (GB/T 37751.33).

This part is the second part of GB/T 37751.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the translation method equivalent to IEC 62873-2:2016 "Residual Current Circuit Breakers for Household and Similar Uses Part 2"

Points. Residual Current Appliances (RCD) Vocabulary.

This section has made the following editorial changes.

--- Added Chinese Pinyin index and moved the English corresponding word index from Chapter 3 to the end of the text.

--- To facilitate understanding and distinguishing terms, for some terms, move the contents of the definition to the term.

* "3.2.6 Residual current" is modified to "3.2.6 (RCBO) residual current";

* "3.3.23 main circuit" is modified to "3.3.23 (RCD) main circuit";

* "3.3.24 control circuit" is modified to "3.3.24 (RCD) control circuit";

* "3.3.25 auxiliary circuit" is modified to "3.3.25 (RCD) auxiliary circuit";

* "3.5.1 arcing time" is changed to "3.5.1 (one pole) arcing time";

* "3.5.2 arcing time" is changed to "3.5.2 (multi-pole RCD) arcing time";

* "3.5.3 Breaking time" is changed to "3.5.3 (breaking time under overcurrent)";

* "3.5.9 I_2t characteristics" is changed to "I.2 characteristics of 3.5.9 RCD".

---Delete definition "remaining action current" "remaining non-operating current" "remaining on and off capability" "limit short-circuit current" "limit remaining

The error symbol in the "short-circuit current" and the corresponding contents in Appendix A are modified.

This part was proposed by China Electrical Equipment Industry Association.

This part is under the jurisdiction of the National Low Voltage Electrical Appliance Standardization Technical Committee (SAC/TC189).

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1 Scope

This part of GB/T 37751 defines the terms and definitions used in the RCD product standard.

2 Normative references

There are no normative references in this section.

3 Terms and definitions

The following terms and definitions apply.

Unless otherwise specified, the term "voltage" or "current" is used to mean an effective value.

Note. When the terms "RCC", "RCBO" or "RCD" are used in place of the terms "electrical appliance" or "mechanical switching appliance", the definition of IEV is also cited.

3.1 Definition of the inflow of earth current from live parts

3.1.1

Ground fault current earthfaultcurrent

Current flowing into the earth due to insulation failure.

Note. Rewrite GB/T 2900.70-2008, define 442-01-23.

3.1.2

Earth leakage current earthleakagecurrent

No insulation fault, current flowing from the live parts of the equipment into the earth.

Note. Rewrite GB/T 2900.70-2008, define 442-01-24.

3.1.3

Pulsating direct current pulsatingdirectcurrent

In each rated power frequency period, the electrical angle represents a pulsating waveform with a current value of 0 over a period of at least 180°

Current.

Note. The adjective "pulsating" is specified in GB/T 2900.92-2015, 103-06-07.

3.1.4

Current lag angle currentdelayangle

The phase represented by the electrical angle at which the start of the current conduction lags by the phase control.

Note. Rewrite GB/T 2900.70-2008, define 442-05-42.

3.1.5

Smooth DC current smoothdirectcurrent

DC current without ripples.

Note. When the coefficient of the ripple is less than 10%, it can be considered that the current has no ripple.

3.2 Definition of RCD incentives

3.2.1

Incentive amount

Applied alone or in combination with other such quantities to an RCD, it is capable of performing the electrical excitation of its function under specified conditions.

3.2.2

Incentive input quantity energizing input-quantity

The amount of excitation that causes the RCD to operate when applied under specified conditions.

Note. These conditions may include, for example, determining the excitation of the auxiliary component.

3.2.3

Residual current residual current

I_{Δ}

The vector sum (expressed as a rms value) of the instantaneous value of the current flowing through the RCD main loop.

Note. Rewrite GB/T 2900.70-2008, define 442-05-19.

3.2.4

Residual action current residual operating current

The residual current value that causes the RCD to operate under specified conditions.

[GB/T 2900.70-2008, definition 442-05-20]

3.2.5

Remaining non-operating current residual non-operating current

At this current (and below this current), the residual current value at which the RCD does not operate under specified conditions.

[GB/T 2900.70-2008, definition 442-05-21]

3.2.6

(RCBO) residual current residual current (of an RCBO)

$I_{\Delta t}$

The residual current value at the lower limit of the instantaneous overcurrent trip range.