

STN	Prúdové chrániče so vstavanou nadprúdovou ochranou pre domácnosť a na podobné použitie (RCBO). Časť 1: Všeobecné pravidlá. Zmena A1	STN EN 61009-1/A1 35 4183
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Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs). Part 1: General rules

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 05/15

STN EN 61009-1 z októbra 2013 sa bez zmeny A1 môže používať do 04. 08. 2017.

Obsahuje: EN 61009-1:2012/A1:2014, IEC 61009-1:2010/A1:2012

120755

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2015
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD

EN 61009-1:2012/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2014

ICS 29.120.50

English Version

Residual current operated circuit-breakers with integral
overcurrent protection for household and similar uses (RCBOs) -
Part 1: General rules
(IEC 61009-1:2010/A1:2012 , modified)

Interrupteurs automatiques à courant différentiel résiduel
avec dispositif de protection contre les surintensités
incorporé pour usages domestiques et analogues (DD) -
Partie 1: Règles générales
(CEI 61009-1:2010/A1:2012 , modifiée)

Fehlerstrom-/Differenzstrom-Schutzschalter mit
eingebautem Überstromschutz (RCBOs) für
Hausinstallationen und für ähnliche Anwendungen - Teil 1:
Allgemeine Anforderungen
(IEC 61009-1:2010/A1:2012 , modifiziert)

This amendment A1 modifies the European Standard EN 61009-1:2012; it was approved by CENELEC on 2014-08-04. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 61009-1:2012/A1:2014) consists of the text of IEC 61009-1:2010/A1:2012 prepared by SC 23E "Circuit-breakers and similar equipment for household use" of IEC/TC 23 "Electrical accessories", together with the common modifications prepared by CLC/TC 23E "Circuit breakers and similar devices for household and similar applications".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2015-08-04
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2017-08-04

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 61009-1:2010/A1:2012 are prefixed "Z".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

Endorsement notice

The text of the International Standard IEC 61009-1:2010/A1:2012 was approved by CENELEC as a European Standard with agreed common modifications.

Common modifications

Item	Clause	Common modifications
1.	1	<p>Replace</p> <p><i>“Delete Note 8 and replace it by the following paragraph and new Note 8”</i></p> <p>by</p> <p><i>“Replace the paragraph beginning by “For RCBOs incorporated...” by the following paragraph and add a new Note 8:”</i></p> <p>Delete “the requirements of IEC 60884-1 or” in the new paragraph.</p> <p>Add “for socket-outlets” between “national requirements” and “of the country”.</p>
2.	2	Delete the modifications to Clause 2.
3.	4.10	<p>Replace the modifications to 4.10 by</p> <p><i>“Delete the title “4.10.1 According to the fixation system” (but keep the contents of this subclause).</i></p> <p><i>Delete the subclause 4.10.2 (both title and contents).”</i></p>
4.	4.13	Delete the last dash and Note 3.
5.	Table 2	Delete <i>“In the table, replace the word “non-operating” by “non-actuating”.</i>
6.	5.3.10	<p>Add a new modification:</p> <p>“5.3.10 Standard values of rated impulse withstand voltage (U_{imp})</p> <p><i>Delete Note 2.”</i></p>
7.	6	<p>Replace</p> <p><i>“Replace the contents of item l) by the following:”</i></p> <p>by</p> <p><i>“Replace the contents of item l) in Table Z3 by the following:”</i></p>
8.	6	Delete the two paragraphs beginning by <i>“Replace the third paragraph...”</i> and finishing by <i>“...manufacturer’s catalogue.”</i>
9.	6	<p>Replace</p> <p><i>“Replace in the eleventh paragraph after Note 1, the word “circuit” by “conductor””</i></p> <p>by</p> <p><i>“Replace in the ninth paragraph of 6.Z1, the word “circuit” by “conductor””</i></p>
10.	6	<p>Replace</p> <p><i>“Add the following text at the end of Clause 6:”</i></p> <p>by</p> <p><i>“Add the following text at the end of Clause 6.Z1:”</i></p>
11.	8.1.3	Delete “before 9.7.1” in the new Note 1.
12.	8.1.3 Table 7	Delete <i>“Delete, in this table, point 5 in the first column and the existing Note 3.”</i>

Item	Clause	Common modifications
13.	8.1.5.1	Replace <i>"Delete the second paragraph and the note in this subclause."</i> by <i>"Insert a second paragraph:</i> In this standard, only terminals for copper conductors are considered."
14.	8.1.5.1	Replace "Annexes J, K or L" by "Annexes J or K"
15.	8.1.5.2	Replace "or terminals for external untreated aluminium conductors and with aluminium screw-type terminals for use with copper or with aluminium conductors according to Annex L." by "VOID"
16.	8.1.5.2 Table 8	Delete "NOTE Information on AWG is given in Annex ID."
17.	8.13	Delete the modifications to 8.13.
18.	9.1.1 Table 12	Replace "items" by "item" Delete the first dashed item "– Limiting values of the non-operating current under overcurrent conditions 9.18"
19.	9.5.1	Delete "NOTE Information on AWG is given in Annex ID."
20.	9.7.7.1 Table 18	Add the following new modification: <i>"Replace the title of Table 18 by "Void" and delete the table."</i>
21.	9.7.7.2	Delete twice "(or path)"

Item	Clause	Common modifications												
22.	9.7.7.4.1 Table 28	<p>Delete the two following rows:</p> <table border="1"> <tr> <td>Single-phase system with mid-point earthed 120/240^{a)}</td> <td>3,5</td> <td>3,5</td> <td>3,4</td> <td>3,2</td> <td>3,0</td> </tr> <tr> <td>Single phase system 120/240 240^{b)}</td> <td>6,2</td> <td>6,0</td> <td>5,8</td> <td>5,6</td> <td>5,0</td> </tr> </table> <p>Replace “Three-phase systems 230/400” by “Single-phase systems 230 or 400 Three-phase systems 400 or 230/400” Delete the two footnotes ^{a)} and ^{b)}.</p>	Single-phase system with mid-point earthed 120/240 ^{a)}	3,5	3,5	3,4	3,2	3,0	Single phase system 120/240 240 ^{b)}	6,2	6,0	5,8	5,6	5,0
Single-phase system with mid-point earthed 120/240 ^{a)}	3,5	3,5	3,4	3,2	3,0									
Single phase system 120/240 240 ^{b)}	6,2	6,0	5,8	5,6	5,0									
23.	9.7.7.4.3	Delete twice “(or path)”												
24.	9.7.7.5	In the paragraph after Note 1, replace “50/60 Hz” by “50 Hz”												
25.	9.7.7.5	Delete “(or path)” in the first dashed item.												
26.	9.7.7.5	Replace the last sentence of the paragraph after Note 4 by: “One test only is made, on one pole taken at random, with measurement of break time: the latter shall not exceed the value specified in Table 2 at $I_{\Delta n}$.”												
27.	9.7.7.5	Delete the last paragraph “This test is not applied to devices with solid neutral.”												
28.	9.9.2.2	Delete the modifications to 9.9.2.2.												
29.	9.12.2	Delete the two following dashed items: “- a single-pole RCBO with two current paths;” “- a three-pole RCBO with four current paths;”												
30.	9.12.2	Replace “The voltage sensors are connected – across the terminals of the pole for single-pole RCBOs; – across the supply terminals for multipole RCBOs.” by “The voltage sensors are connected across the supply terminals.”												
31.	9.12.9.1	Replace the modification to 9.12.9.1 by <i>“Replace at the end of paragraph after Note 1, “Figure 7 and 11” by “Figures 7 and 8”.”</i>												

Item	Clause	Common modifications
32.	9.12.11.2.1	In the second paragraph, replace “105 %” by “110 %” Add a sentence at the end of the second paragraph: “Phases which do not carry the short circuit current during this test shall be connected to the supply voltage at the line terminals.” Add a new paragraph after the second paragraph: “The measurement of the break time shall be carried out at every test and the values shall comply with the values of Table 2.”
33.	9.12.11.2.2	Add a new modification at the end of the modifications to 9.12.11.2.2: “ <i>Delete the last paragraph.</i> ”
34.	9.12.11.3	In the first paragraph, replace “ <i>ninth</i> ” by “ <i>seventh</i> ” Delete the paragraph beginning with “For three-pole...”. Delete the paragraph beginning with “For four-pole...” In the last paragraph, delete “single-pole and”.
35.	9.12.11.4	Add a new modification: “ <i>In paragraph d), replace “Figure 11” by “Figure 7”</i> ”
36.	9.12.13.1	Delete the modification to 9.12.13.1.
37.	9.12.13.2	Delete the modification to 9.12.13.2
38.	9.15	Replace “ <i>From the fifth to the ninth paragraph,</i> ” by “ <i>From the sixth to the tenth paragraph,</i> ”
39.	9.18	Delete the modification to 9.18.
40.	9.19.1	Delete the modification to 9.19.1.
41.	9.24 Table 27	Delete the modification to Table 27.
42.	9.25	Replace “ <i>Add before Figure 1 the following new subclause:</i> ” by “ <i>Add before 9.Z1, the following new subclause:</i> ”
43.	Before Figure 7	In the first line of the modification, replace “to 12” by “and 11”

Item	Clause	Common modifications															
44.	Figure 8	<p>Replace</p> <p>“Figure 8 – Test circuit for the verification of the rated short-circuit capacity of a single-pole RCBO with two-current paths (9.12) <i>Replace Figure 8 by the following:</i>”</p> <p>by</p> <p>“Figure 8 – Void <i>Reintroduce Figure 8 as follows:</i>”</p>															
45.	Figure 9	<p>Replace</p> <p>“Figure 9 – Test circuit for the verification of the rated short-circuit capacity of a two-pole RCBO, in case of a single-phase circuit (9.12) <i>Replace Figure 9 by the following:</i>”</p> <p>by</p> <p>“Figure 9 – Void <i>Reintroduce Figure 9 as follows:</i>”</p>															
46.	Figures 10 to 12	<p>Replace</p> <p>“<i>Delete Figures 10, 11 and 12 and replace by “Void”.</i>”</p> <p>by</p> <p>“<i>Delete Figure 11 and replace by “Void”.</i>”</p>															
47.	Figure 22	Delete “ <i>Delete Figure 22 and replace by “Void”.</i> ”															
48.	Annex A Table A.1	<p>Replace the test sequence D₁ of the new Table A.1 by:</p> <table border="1"> <tbody> <tr> <td rowspan="4">D₁</td> <td>9.17</td> <td>Behaviour in case of failure of the line voltage</td> </tr> <tr> <td>9.19</td> <td>Behaviour in case of surge currents</td> </tr> <tr> <td>9.21</td> <td>D.C. components</td> </tr> <tr> <td>9.16</td> <td>Test device</td> </tr> </tbody> </table>	D ₁	9.17	Behaviour in case of failure of the line voltage	9.19	Behaviour in case of surge currents	9.21	D.C. components	9.16	Test device						
D ₁	9.17	Behaviour in case of failure of the line voltage															
	9.19	Behaviour in case of surge currents															
	9.21	D.C. components															
	9.16	Test device															
49.	Annex A Table A.1	<p>Replace the test sequences F₀, F₁ and G of the new Table A.1 by:</p> <table border="1"> <tbody> <tr> <td>F₀</td> <td>9.12.11.4 b) (and 9.12.12)</td> <td>Performance at service short-circuit capacity</td> </tr> <tr> <td>F₁</td> <td>9.12.11.4 c) (and 9.12.12.2)</td> <td>Performance at rated short-circuit capacity</td> </tr> <tr> <td>F₂</td> <td>9.12.11.4 d) (and 9.12.12.2)</td> <td>Performance at I_{Δm}</td> </tr> <tr> <td>G₀</td> <td>9.22.1</td> <td>Reliability (climatic tests)</td> </tr> <tr> <td>G₁</td> <td>9.Z1</td> <td>Verification of correct operation at low ambient air temperature of RCBOs operating at temperatures between -25 °C and + 40 °C</td> </tr> </tbody> </table>	F ₀	9.12.11.4 b) (and 9.12.12)	Performance at service short-circuit capacity	F ₁	9.12.11.4 c) (and 9.12.12.2)	Performance at rated short-circuit capacity	F ₂	9.12.11.4 d) (and 9.12.12.2)	Performance at I _{Δm}	G ₀	9.22.1	Reliability (climatic tests)	G ₁	9.Z1	Verification of correct operation at low ambient air temperature of RCBOs operating at temperatures between -25 °C and + 40 °C
F ₀	9.12.11.4 b) (and 9.12.12)	Performance at service short-circuit capacity															
F ₁	9.12.11.4 c) (and 9.12.12.2)	Performance at rated short-circuit capacity															
F ₂	9.12.11.4 d) (and 9.12.12.2)	Performance at I _{Δm}															
G ₀	9.22.1	Reliability (climatic tests)															
G ₁	9.Z1	Verification of correct operation at low ambient air temperature of RCBOs operating at temperatures between -25 °C and + 40 °C															

Item	Clause	Common modifications												
50.	Annex A Table A.2	<p>Replace</p> <p><i>"In Table A.2, replace A by A₁.</i></p> <p><i>In Table A.2, add a new row after the new A₁ containing the following:</i></p> <table border="1"> <tr> <td>A₂</td> <td>3</td> <td>2</td> <td>3</td> </tr> </table> <p><i>"</i></p> <p>by</p> <p><i>"In Table A.2, replace A by the following:</i></p> <table border="1"> <tr> <td>A₁</td> <td>1</td> <td>1</td> <td>-</td> </tr> <tr> <td>A₂</td> <td>3</td> <td>2</td> <td>3</td> </tr> </table> <p><i>and delete footnote ^{fn}.</i></p>	A ₂	3	2	3	A ₁	1	1	-	A ₂	3	2	3
A ₂	3	2	3											
A ₁	1	1	-											
A ₂	3	2	3											
51.	Annex A Table A.4	<p>Add a new modification:</p> <p><i>"In Table A.4, replace contents of footnote ^a by:</i></p> <p>For sequence B, only the tests of 9.8 shall be performed on 3 samples of maximum rating I_n with minimum rating I_{Δn}. For sequence E₀, only the test 9.9.2.2 shall be performed on one sample of all ratings I_n with minimum rating I_{Δn}.</p>												
52.	Annex G	<p>Replace all modifications to Annex G by</p> <p><i>"Add "G.1 General" before introduction and renumber all clauses accordingly.</i></p> <p>G.4.2.3 Marking of the assembled circuit breaker and r.c. unit (RCBO)</p> <p><i>Replace all paragraphs of G.4.2.3 by the following:</i></p> <p>Marking c) on the r.c. unit, if lower than the maximum rated voltage of the circuit-breaker with which the r.c. unit may be assembled, shall remain visible after assembly.</p> <p>The marking of the maximum rated current of the circuit-breaker with which the r.c. unit may be assembled shall not be visible after assembly.</p> <p>Marking l) of the r.c. unit, if applicable, shall always remain visible after assembly.</p> <p>G.4.3 Instructions for assembly and operation</p> <p><i>Delete the second dashed item ("method of assembly").</i></p> <p>G.5.1 General</p> <p><i>In the last sentence of G.5.1, replace "G.5.4" by "G.6.4".</i></p> <p>G.5.4 Electrical compatibility</p> <p><i>Delete the first paragraph.</i></p> <p>G.6.4 Verification of marking and constructional requirements of RCBOs</p> <p><i>In the first paragraph, replace "G.3.1, G.3.2, G.3.3, G 4.1, G.4.2, G.4.3 and G.4.4" by "G.4.1, G.4.2, G.4.3, G 5.1, G.5.2, G.5.3 and G.5.4".</i></p> <p><i>In the second paragraph, replace "G.4.1" by "G.5.1"."</i></p>												
53.	Annex J	<p>Replace</p> <p><i>"Add the following new Annexes J, K and L"</i></p> <p>by</p> <p><i>"Replace Annexes ZE and ZF by the following new Annexes J and K "</i></p>												

Item	Clause	Common modifications																																								
54.	Annex J J.1	In the first paragraph, replace “with screwless terminals” by “with universal screwless terminals”																																								
55.	Annex J J.1	Replace Note 1 by “NOTE 1 Non-universal terminals are subject to special national conditions.”																																								
56.	Annex J J.3.3	Delete Note 1 to entry in Definition J.3.3.																																								
57.	Annex J J.6	Replace “Non-universal terminals:” by “Non-universal terminals (if accepted by Special National Conditions):”																																								
58.	Annex J J.8.2 Table J.1	<p>Replace Table J.1 by</p> <p style="text-align: center;">Table J.1 – Connectable conductors</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="5" style="text-align: center;">Connectable conductors and their theoretical diameter</th> </tr> <tr> <th colspan="3" style="text-align: center;">Rigid</th> <th colspan="2" style="text-align: center;">Flexible</th> </tr> <tr> <th></th> <th style="text-align: center;">Solid</th> <th style="text-align: center;">Stranded</th> <th colspan="2"></th> </tr> <tr> <th style="text-align: center;">mm²</th> <th style="text-align: center;">∅ mm</th> <th style="text-align: center;">∅ mm</th> <th style="text-align: center;">mm²</th> <th style="text-align: center;">∅ mm</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1,0</td> <td style="text-align: center;">1,2</td> <td style="text-align: center;">1,4</td> <td style="text-align: center;">1,0</td> <td style="text-align: center;">1,5</td> </tr> <tr> <td style="text-align: center;">1,5</td> <td style="text-align: center;">1,5</td> <td style="text-align: center;">1,7</td> <td style="text-align: center;">1,5</td> <td style="text-align: center;">1,8</td> </tr> <tr> <td style="text-align: center;">2,5</td> <td style="text-align: center;">1,9</td> <td style="text-align: center;">2,2</td> <td style="text-align: center;">2,5</td> <td style="text-align: center;">2,3</td> </tr> <tr> <td style="text-align: center;">4,0</td> <td style="text-align: center;">2,4</td> <td style="text-align: center;">2,7</td> <td style="text-align: center;">4,0</td> <td style="text-align: center;">2,9</td> </tr> </tbody> </table> <p>NOTE Diameters of the largest rigid and flexible conductors are based on IEC 60228.</p>	Connectable conductors and their theoretical diameter					Rigid			Flexible			Solid	Stranded			mm ²	∅ mm	∅ mm	mm ²	∅ mm	1,0	1,2	1,4	1,0	1,5	1,5	1,5	1,7	1,5	1,8	2,5	1,9	2,2	2,5	2,3	4,0	2,4	2,7	4,0	2,9
Connectable conductors and their theoretical diameter																																										
Rigid			Flexible																																							
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mm ²	∅ mm	∅ mm	mm ²	∅ mm																																						
1,0	1,2	1,4	1,0	1,5																																						
1,5	1,5	1,7	1,5	1,8																																						
2,5	1,9	2,2	2,5	2,3																																						
4,0	2,4	2,7	4,0	2,9																																						
59.	Annex J J.10	Delete the last four references (ASTM B172-01a, ICEA S-19-81 / NEMA WC3, ICEA S-66-524 / NEMA WC7 and ICEA S-68-516 / NEMA WC8).																																								
60.	Annex K	Delete Note 1.																																								
61.	Annex K K.1	At the end of the second paragraph, delete “(AWG equal to or greater than 12)”.																																								
62.	Annex K	Delete Note 1.																																								
63.	Annex L	Delete Annex L.																																								

Item	Clause	Common modifications																																																												
64.	Annex ZA	<p>Add the following new modifications:</p> <p>"Annex ZA (normative) Normative references to international publications with their corresponding European publications</p> <p><i>Delete the reference to IEC 60051.</i></p> <p><i>Add the following new references to the existing list:</i></p> <table border="1"> <thead> <tr> <th><u>Publication</u></th> <th><u>Year</u></th> <th><u>Title</u></th> <th><u>EN/HD</u></th> <th><u>Year</u></th> </tr> </thead> <tbody> <tr> <td>IEC 60228</td> <td>2004</td> <td>Conductors of insulated cables</td> <td>EN 60228 + corr. May</td> <td>2005 2005</td> </tr> <tr> <td>IEC 60364-4-44 (mod) + corr. May</td> <td>2007 2010</td> <td>Low-voltage electrical installations Part 4-44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances</td> <td>HD 60364-4-444 + corr. July + AC:2012</td> <td>2010 2010 2012</td> </tr> <tr> <td>IEC 60664-3</td> <td>-</td> <td>Insulation coordination for equipment within low-voltage systems Part 3: Use of coating, potting or moulding for protection against pollution</td> <td>EN 60664-3</td> <td>-</td> </tr> <tr> <td>IEC 60695-2-10</td> <td>-</td> <td>Fire hazard testing Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure</td> <td>EN 60695-2-10¹⁾</td> <td>-</td> </tr> <tr> <td>IEC 60695-2-11 + corr. January</td> <td>2000 2001</td> <td>Fire hazard testing Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end- products</td> <td>EN 60695-2-11</td> <td>2001</td> </tr> </tbody> </table> <p><i>Replace the reference to IEC 61543 by the following:</i></p> <table border="1"> <tbody> <tr> <td>IEC 61543</td> <td>1995</td> <td>Residual current-operated</td> <td>EN 61543</td> <td>1995</td> </tr> <tr> <td>-</td> <td>-</td> <td>protective devices (RCDs) for</td> <td>+ corr. December</td> <td>1997</td> </tr> <tr> <td>+ A1 (mod)</td> <td>2004</td> <td>household and similar use -</td> <td>+ A11</td> <td>2003</td> </tr> <tr> <td>-</td> <td>-</td> <td>Electromagnetic compatibility</td> <td>+ corr. May</td> <td>2004</td> </tr> <tr> <td>+ A2</td> <td>2005</td> <td></td> <td>+ A2</td> <td>2006</td> </tr> <tr> <td>-</td> <td>-</td> <td></td> <td>+ A12</td> <td>2005</td> </tr> </tbody> </table> <p>"</p>	<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>	IEC 60228	2004	Conductors of insulated cables	EN 60228 + corr. May	2005 2005	IEC 60364-4-44 (mod) + corr. May	2007 2010	Low-voltage electrical installations Part 4-44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances	HD 60364-4-444 + corr. July + AC:2012	2010 2010 2012	IEC 60664-3	-	Insulation coordination for equipment within low-voltage systems Part 3: Use of coating, potting or moulding for protection against pollution	EN 60664-3	-	IEC 60695-2-10	-	Fire hazard testing Part 2-10: Glowing/hot-wire based test methods - Glow-wire apparatus and common test procedure	EN 60695-2-10 ¹⁾	-	IEC 60695-2-11 + corr. January	2000 2001	Fire hazard testing Part 2-11: Glowing/hot-wire based test methods - Glow-wire flammability test method for end- products	EN 60695-2-11	2001	IEC 61543	1995	Residual current-operated	EN 61543	1995	-	-	protective devices (RCDs) for	+ corr. December	1997	+ A1 (mod)	2004	household and similar use -	+ A11	2003	-	-	Electromagnetic compatibility	+ corr. May	2004	+ A2	2005		+ A2	2006	-	-		+ A12	2005
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65.	Annex ZD	<p>Add a new modification:</p> <p>"Annex ZD (normative) Classification of RCBOs Type B and C up to and including 63A into energy limiting classes</p> <p><i>Replace the first sentence after Table ZD.2 by:</i></p> <p>"The maximum I²t values measured during the test sequence F₀ or F₁ as applicable serve as reference values for the classification."</p>																																																												

¹⁾ EN 60695-2-10 is superseded by EN 60695-2-10:2013, which is based on IEC 60695-2-10:2013.

Item	Clause	Common modifications
66.	Annex ZXX	<p>Add a new modification:</p> <p>"Annex ZXX (informative) List of clauses that require retesting</p> <p><i>Replace the contents of Annex ZXX by</i></p> <p>"Based on EN 61009-1:2012, the following tests and/or requirements have been technically modified and may require retesting or inspection as applicable:</p> <ul style="list-style-type: none"> – 9.5 Test of reliability of screw-type terminals for external copper conductors – 9.7.7.5 Verification of the behaviour of components bridging the basic insulation – 9.15 Test of resistance to abnormal heat and to fire" "
67.	Bibliography	<p>Delete "IEC 60228".</p> <p>Replace</p> <p>"IEC 60664-5"</p> <p>by</p> <p>"EN 60664-5".</p> <p>Delete "IEC 60695-2-11:2000".</p>



INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

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

**Interrupteurs automatiques à courant différentiel résiduel avec dispositif de
protection contre les surintensités incorporé pour usages domestiques et
analogues (DD) –
Partie 1: Règles générales**



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FOREWORD

This amendment 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 amendment is based on the following documents:

FDIS	Report on voting
23E/741/FDIS	23E/745/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC web site 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.

1 Scope

Delete Note 8 and replace it by the following paragraph and new Note 8:

For RCBOs incorporated in, or intended only for association with socket-outlets, the requirements of this standard may be used, as far as applicable, in conjunction with the requirements of IEC 60884-1 or the national requirements of the country where the product is placed on the market.

NOTE 8 Residual current-operated protective devices (RCDs) incorporated in, or intended only for association with socket-outlets, can either meet IEC 62640 or this standard.

2 Normative references

Delete the reference to IEC 60051.

Add to the existing list, the following new references:

IEC 60228:2004, *Conductors of insulated cables*

IEC 60364-4-44:2007, *Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances*

IEC 60664-3, *Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or moulding for protection against pollution*

IEC 60695-2-10, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods – Glow-wire apparatus and common test procedure*

IEC 60695-2-11:2000, *Fire hazard testing – Part 2-11: Glowing /hot-wire based test methods – Glow-wire flammability test method for end-products*

Replace the reference to IEC 61543:1995 by the following new reference:

IEC 61543:1995, *Residual current -operated protective devices (RCDs) for household and similar use – Electromagnetic compatibility*
Amendment 1:2004
Amendment 2:2005

koniec náhľadu – text ďalej pokračuje v platenej verzii STN