ICS 29.120.50 SLOVENSKÁ TECHNICKÁ NORMA Jún 2015

STN	**Prúdové chrániče bez vstavanej nadprúdovej ochrany pre domácnosť a na podobné použitie (RCCB). Časť 1: Všeobecné pravidlá. Zmena A1**	**STN EN 61008-1/A1** 35 4182

Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCDc). 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 61008-1 zo septembra 2013 sa bez zmeny A1 môže používať do 04. 08. 2017.

Obsahuje: EN 61008-1:2012/A1:2014, IEC 61008-1:2010/A1:2012

120753

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61008-1:2012/A1

October 2014

ICS 29.120.50

English Version

Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) - Part 1: General rules (IEC 61008-1:2010/A1:2012 , modified)

Interrupteurs automatiques à courant différentiel résiduel sans dispositif de protection contre les surintensités incorporé pour usages domestiques et analogues (ID) - Partie 1: Règles générales (CEI 61008-1:2010/A1:2012 , modifiée)

Fehlerstrom-/Differenzstrom-Schutzschalter ohne eingebauten Überstromschutz (RCCBs) für Hausinstallationen und für ähnliche Anwendungen - Teil 1: Allgemeine Anforderungen (IEC 61008-1:2010/A1:2012 , modifiziert)

This amendment A1 modifies the European Standard EN 61008-1:2012; 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.

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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 61008-1:2012/A1:2014) consists of the text of IEC 61008-1:2010/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 61008-1:2010/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 61008-1:2010/A1:2012 was approved by CENELEC as a European Standard with agreed common modifications.

Common modifications

Item	Clause	Common modifications
1.	1	**Replace** "*Delete Note 5 and replace it by the following paragraph and new Note 5*" by "*Replace the paragraph beginning by "*For RCCBs incorporated…*" by the following paragraph and add a new Note 5:*"" **Delete** "the requirements of IEC 60884-1 or" in the new paragraph. **Add** "for socket-outlets" between "national requirements" and "of the country".
2.	2	**Delete** the modifications to Clause 2.
3.	4.11	**Delete** the last dash and Note 3. **Add** after common modifications on 4.11: *"Delete subclause 4.Z1.* *Renumber subclause "*4.Z2 According to the range of ambient air temperature*" by "*4.Z1 According to the range of ambient air temperature*"."*
4.	Table 1	**Delete** the modification to Table 1.
5.	Table 3	**Delete** the modifications to Table 3.
6.	6	**Replace** *"Replace the contents of item k) by the following:"* by *"Replace the contents of item k) in Table Z3 by the following:"*
7.	6	**Replace** *"Replace in the twelfth paragraph after Note 1, the word* "circuit" *by* "conductor"" by *"Replace in the eleventh paragraph of 6.Z1, the word* "circuit" *by* "conductor"*"
8.	6	**Replace** *"Add the following text at the end of Clause 6:"* by *"Add the following text at the end of Clause 6.Z1:"*
9.	8.1.3	**Delete** "before 9.7.1" in the new Note 1.
10.	8.1.3 Table 5	**Delete** "*Delete, in this table, point 5 in the first column and the existing Note 3."*
11.	8.1.4.4	**Replace** *"In the subclause, replace the existing text by the following:"* by *"In the subclause, replace the existing text <u>before the note</u> by the following:"*

<table>
<tr><th>Item</th><th>Clause</th><th>Common modifications</th></tr>
<tr><td>12.</td><td>8.1.5.1</td><td>Replace
“Delete the second paragraph and the note in this subclause.”
by
"Insert a second paragraph:
In this standard, only terminals for copper conductors are considered."</td></tr>
<tr><td>13.</td><td>8.1.5.1</td><td>Replace
“Annex J, K or L”
by
“Annex J or K”</td></tr>
<tr><td>14.</td><td>8.1.5.2</td><td>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”</td></tr>
<tr><td>15.</td><td>8.1.5.2
Table 6</td><td>Delete “NOTE Information on AWG is given in Annex ID.”</td></tr>
<tr><td>16.</td><td>9.1.1
Table 9</td><td>After “Delete, in this table, the dashed item “– Resistance of the insulation against an impulse voltage””, add a new paragraph:
"Add, in this table, at the end of the existing list, in the second column, the following subclause corresponding to “Behaviour at low ambient air temperatures of RCCBs classified for use in the range of –25 °C to +40 °C”:
9.Z1"</td></tr>
<tr><td>17.</td><td>9.5.1</td><td>Delete “NOTE Information on AWG is given in Annex ID.”</td></tr>
<tr><td>18.</td><td>9.7.7.2</td><td>Delete twice “(or path)”</td></tr>
<tr><td>19.</td><td>9.7.7.4.1
Table 22</td><td>Delete the two following rows:
<table>
<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>
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)].</td></tr>
<tr><td>20.</td><td>9.7.7.4.3</td><td>Delete twice “(or path)”</td></tr>
</table>

Item	Clause	Common modifications
21.	9.7.7.5	In the paragraph after Note 1, **replace** “50 Hz/60 Hz” by “50 Hz”
22.	9.7.7.5	**Delete** “(or path)” in the first dashed item.
23.	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 1 at $I_{\Delta n}$.”
24.	9.7.7.5	**Delete** the last paragraph “This test is not applied to devices with solid neutral.”
25.	9.11.2.1 a)	In the first modification, **replace** “Figures 8, 9, 10, 11 and 12” by “Figures 7 and 12”
26.	9.11.2.1 a)	**Delete** the modification “*Replace, in the existing eighth paragraph of item a), the words “*The additional impedance Z_3*” by “*The additional impedance Z_1*”*”.
27.	9.11.2.1 a)	**Delete** the modification “*Replace, in the fifth paragraph after the existing Note 3, the words* “resistor R_1” *by* “resistor R_2”.
28.	9.11.2.1 e)	**Replace** *"Replace, in the second paragraph of item e), the words* “the current sensor O_1” *by* “the current sensor”." by *"Replace, in the second paragraph of item e), the words* “the current sensor I_1, I_2, I_3, I_4” *by* “the current sensor”."
29.	9.11.2.1 e)	**Delete** the modification “*Replace, in the third paragraph of item e), the word “Z_3” by “Z_1”.*”
30.	9.11.2.3	**Replace** in the last modification “*fifth paragraph*” by “*fourth paragraph*”
31.	9.14	**Replace** “*From the fifth to the ninth paragraph”* by “*From the sixth to the tenth paragraph”.*
32.	9.19.1	**Delete** the modification to 9.19.1.
33.	9.25	**Replace** *"Add before Figure 1 the following new subclause:”* by *“Add before 9.Z1 the following new subclause:“*

<table>
<tr><th>Item</th><th>Clause</th><th>Common modifications</th></tr>
<tr><td>34.</td><td>Before Figure 7</td><td>In the first line of the modification, replace
“to 12”
by
“and 12”</td></tr>
<tr><td>35.</td><td>Figure 8</td><td>Replace
“Figure 8 – Test circuit for the verification of the rated making and breaking capacity and of the coordination with a SCPD of a single-pole RCCB with two current paths (9.11)
Replace Figure 8 by the following:”
by
“Figure 8 – Void
Reintroduce Figure 8 as follows:”</td></tr>
<tr><td>36.</td><td>Figure 9</td><td>Replace
“Figure 9 – Test circuit for the verification of the rated making and breaking capacity and of the coordination with a SCPD of a two-pole RCCB, in case of a single-phase circuit (9.11)
Replace Figure 9 by the following:”
by
“Figure 9 – Void
Reintroduce Figure 9 as follows:”</td></tr>
<tr><td>37.</td><td>Annex A Table A.1</td><td>Replace the test sequence G of the new Table A.1 by
<table>
<tr><td>G_0</td><td>9.22.1</td><td>Reliability (climatic tests)</td></tr>
<tr><td>G_1</td><td>9.Z1</td><td>Verification of correct operation at low ambient air temperature of RCCBs operating at temperatures between -25 °C and + 40 °C</td></tr>
</table></td></tr>
<tr><td>38.</td><td>Annex A Table A.2</td><td>Replace
“In Table A.2, replace A by A_1.
In Table A.2, add a new row after the new A_1 containing the following:
<table>
<tr><td>A_2</td><td>3</td><td>2</td><td>3</td></tr>
</table>
”
by
“In Table A.2, replace A by the following:
<table>
<tr><td>A_1</td><td>1</td><td>1</td><td>-</td></tr>
<tr><td>A_2</td><td>3</td><td>2</td><td>3</td></tr>
</table>
and delete footnote [f]”</td></tr>
<tr><td>39.</td><td>Annex J</td><td>Replace
“Add the following new Annex J:”
by
“Replace Annex J by the following:”</td></tr>
</table>

<table>
<tr><th>Item</th><th>Clause</th><th>Common modifications</th></tr>
<tr><td>40.</td><td>Annex J
J.1</td><td>In the first paragraph, replace
“with screwless terminals”
by
“with universal screwless terminals”</td></tr>
<tr><td>41.</td><td>Annex J
J.1</td><td>Replace Note 1 by
“NOTE 1 Non-universal terminals are subject to special national conditions.”</td></tr>
<tr><td>42.</td><td>Annex J
J.3.3</td><td>Delete Note 1 to entry in Definition J.3.3.</td></tr>
<tr><td>43.</td><td>Annex J
J.6</td><td>Replace
“Non-universal terminals:”
by
“Non-universal terminals (if accepted by Special National Conditions):”</td></tr>
<tr><td>44.</td><td>Annex J
J.8.2
Table J.1</td><td>Replace Table J.1 by
Table J.1 – Connectable conductors
<table>
<tr><th colspan="5">Connectable conductors and their theoretical diameter</th></tr>
<tr><th colspan="3">Rigid</th><th colspan="2">Flexible</th></tr>
<tr><th></th><th>Solid</th><th>Stranded</th><th colspan="2"></th></tr>
<tr><td>mm^2</td><td>∅ mm</td><td>∅ mm</td><td>mm^2</td><td>∅ mm</td></tr>
<tr><td>1,0</td><td>1,2</td><td>1,4</td><td>1,0</td><td>1,5</td></tr>
<tr><td>1,5</td><td>1,5</td><td>1,7</td><td>1,5</td><td>1,8</td></tr>
<tr><td>2,5</td><td>1,9</td><td>2,2</td><td>2,5</td><td>2,3</td></tr>
<tr><td>4,0</td><td>2,4</td><td>2,7</td><td>4,0</td><td>2,9</td></tr>
<tr><td colspan="5">NOTE Diameters of the largest rigid and flexible conductors are based on Table C.1 of IEC 60228:2004.</td></tr>
</table></td></tr>
<tr><td>45.</td><td>Annex J
J.10</td><td>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).</td></tr>
<tr><td>46.</td><td>Annex K
K.1</td><td>Delete Note 1.</td></tr>
<tr><td>47.</td><td>Annex K
K.1</td><td>At the end of the second paragraph, delete “(AWG equal to or greater than 12).”</td></tr>
<tr><td>48.</td><td>Annex K
K.8.2.2</td><td>Delete Note 1.</td></tr>
<tr><td>49.</td><td>Annex L</td><td>Delete Annex L.</td></tr>
</table>

<table>
<tr><th>Item</th><th>Clause</th><th>Common modifications</th></tr>
<tr><td>50.</td><td>Annex ZA</td><td>
Add the following new modifications:
"Annex ZA (normative) Normative references to international publications with their corresponding European publications
Delete the reference to IEC 60051.
Add the following new references to the existing list:
<table>
<tr><th>Publication</th><th>Year</th><th>Title</th><th>EN/HD</th><th>Year</th></tr>
<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 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>
</table>
Replace the reference to IEC 61543 by the following:
<table>
<tr><td>IEC 61543
-
+ A1 (mod)
-
+ A2
-</td><td>1995
-
2004
-
2005
-</td><td>Residual current-operated protective devices (RCDs) for household and similar use - Electromagnetic compatibility</td><td>EN 61543
+ corr. December
+ A11
+ corr. May
+ A2
+ A12</td><td>1995
1997
2003
2004
2006
2005</td></tr>
</table>
"
</td></tr>
<tr><td>51.</td><td>Annex ZXX</td><td>
Add a new modification
Annex ZXX (informative) List of clauses that require retesting
Replace the contents of Annex ZXX by:
“Based on EN 61008-1:2012, the following tests and/or requirements have been technically modified and may require retesting or inspection as applicable:
– 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
– 9.14 Test of resistance to abnormal heat and to fire”
</td></tr>
<tr><td>52.</td><td>Bibliography</td><td>
Replace
“IEC 60664-5”
by
“EN 60664-5”
Replace
“IEC 60695-2-11:2000”
by
“EN 60695-2-11:2001"
</td></tr>
</table>

IEC 61008-1

Edition 3.0 2012-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules

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

IEC 61008-1:2010/A1:2012

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Edition 3.0 2012-04

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules

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

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

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CODE PRIX XA

ICS 29.120.50

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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/740/FDIS	23E/744/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 5 and replace it by the following paragraph and new Note 5:

For RCCBs 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 5 RCCBs 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 60664-3, *Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution*

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)