



**SLOVENSKI STANDARD**  
**oSIST prEN IEC 61095:2022**

**01-oktober-2022**

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**Elektromehanski kontaktorji za gospodinjstva in podobne namene**

Electromechanical contactors for household and similar purposes

Elektromechanische Schütze für Hausinstallationen und ähnliche Zwecke

Contacteurs électromécaniques pour usages domestiques et analogues

**Ta slovenski standard je istoveten z: prEN IEC 61095:2022**

<https://standards.iteh.ai/catalog/standards/sist/b0496a00-1ef2-48f1-bb50-cbbeccd8549f/osist-pren-iec-61095-2022>

**ICS:**

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| 29.130.20 | Nizkonapetostne stikalne in krmilne naprave | Low voltage switchgear and controlgear |
|-----------|---|--|

**oSIST prEN IEC 61095:2022**

**en**





# 121A/505/CDV

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| IEC SC 121A : LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR  |   |
| SECRETARIAT:<br>France  | SECRETARY:<br>Mr Michaël LAHEURTE   |
| OF INTEREST TO THE FOLLOWING COMMITTEES:<br>SC 23B, SC 23E, TC 34   | PROPOSED HORIZONTAL STANDARD:<br><input type="checkbox"/><br>Other TC/SCs are requested to indicate their interest, if any, in this CDV to the secretary. |
| FUNCTIONS CONCERNED:<br><input checked="" type="checkbox"/> EMC <input type="checkbox"/> ENVIRONMENT <input type="checkbox"/> QUALITY ASSURANCE <input checked="" type="checkbox"/> SAFETY  |   |
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| <p><b>Attention IEC-CENELEC parallel voting</b></p> <p>The attention of IEC National Committees, members of CENELEC, is drawn to the fact that this Committee Draft for Vote (CDV) is submitted for parallel voting.</p> <p>The CENELEC members are invited to vote through the CENELEC online voting system.</p> |   |

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TITLE:

**Electromechanical contactors for household and similar purposes**

PROPOSED STABILITY DATE: 2026

NOTE FROM TC/SC OFFICERS:

SC121A Officers support circulation of CDV for project IEC 61095 ED3.

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**INTERNATIONAL ELECTROTECHNICAL COMMISSION**

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**ELECTROMECHANICAL CONTACTORS  
FOR HOUSEHOLD AND SIMILAR PURPOSES**

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**FOREWORD**

282

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International Standard IEC 61095 has been prepared by subcommittee 121A: Low-voltage switchgear and controlgear, of IEC technical committee 121: Switchgear and controlgear in conjunction with subcommittee 23E: Circuit-breakers and similar equipment for household use, of IEC technical committee 23: Electrical accessories.

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This third edition cancels and replaces the second edition published in 2009 and constitutes a technical revision.

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

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– Addition of requirements for screwless terminals

322

– Addition of requirements for the switching of LED lamps

323

– Addition of requirements for contactors with electronically controlled electromagnet

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326

The text of this standard is based on the following documents:

| FDIS | Report on voting |
|------|------------------|
|      |                  |

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

330 This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

331 The committee has decided that the contents of this publication will remain unchanged until the  
332 maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data  
333 related to the specific publication. At this date, the publication will be

- 334 • reconfirmed;
- 335 • withdrawn;
- 336 • replaced by a revised edition, or
- 337 • amended.

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## INTRODUCTION

341 This International Standard gives requirements for contactors household and similar purposes,  
342 including contactors for distribution control in buildings.

343 Contactors for such purposes have particular requirements which include test sequences and  
344 sampling plans to facilitate testing.

345 Contactors according to this standard are limited in the range of operational currents and  
346 operational voltages to values appropriate to the applications. Such contactors are for use in  
347 circuits of limited prospective short-circuit fault current for which they need to be co-ordinated  
348 with an appropriate short-circuit protective device to provide suitable co-ordination.

349 This standard defines in a single document the specific utilization category for a described  
350 application and states the relevant requirements. As far as possible, it is in line with the  
351 requirements contained in IEC 60947-4-1 "Electromechanical contactors and motor-starters".

352 This standard also applies to contactors which are components of an appliance, unless  
353 otherwise stated in the standard covering the relevant appliance.

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# ELECTROMECHANICAL CONTACTORS FOR HOUSEHOLD AND SIMILAR PURPOSES

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## 361 1 Scope

362 This International Standard applies to electromechanical air break contactors for household and  
363 similar purposes provided with main contacts intended to be connected to circuits the rated  
364 voltage of which does not exceed 440 V AC (between phases) with rated operational currents  
365 less than or equal to 63 A for utilization category AC-7a, and 32 A for utilization categories AC-  
366 7b, AC-7c and AC-7d (expressed in rated power), and rated conditional short-circuit current  
367 less than or equal to 6 kA.

368 Specific requirements apply to contactors equipped with screwless-type terminals.

369 The contactors dealt with in this standard are not normally designed to interrupt short-circuit  
370 currents. Therefore, suitable short-circuit protection (see 9.3.4) shall form part of the  
371 installation.

372 This standard does not apply to

- 373 – contactors complying with IEC 60947-4-1;
- 374 – semiconductor contactors;
- 375 – contactors designed for special applications;
- 376 – auxiliary contacts of contactors. These are dealt with in IEC 60947-5-1.

377 This standard states

- 378 1) the characteristics of contactors.
- 379 2) the conditions with which contactors shall comply with reference to:
  - 380 a) their operation and behaviour;
  - 381 b) their dielectric properties;
  - 382 c) the degrees of protection provided by their enclosures, where applicable;
  - 383 d) their construction;
  - 384 e) their electromagnetic compatibility characteristics.
- 385 3) the tests intended for confirming that these conditions have been met, and the methods to  
386 be adopted for these tests.
- 387 4) the test sequences and the number of samples.
- 388 5) the information to be given with contactors or in the manufacturer's literature.

## 389 2 Normative references

390 The following documents are referred to in the text in such a way that some or all of their content  
391 constitutes requirements of this document. For dated references, only the edition cited applies.  
392 For undated references, the latest edition of the referenced document (including any  
393 amendments) applies.

394 IEC 60028:1925, *International standard of resistance for copper*

395 IEC 60050 (all parts), *International Electrotechnical Vocabulary (IEV) Available from:*  
396 <http://www.electropedia.org/>

- 397 IEC 60068-2-78:2012, *Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady*  
398 *state*
- 399 IEC 60073:2002, *Basic and safety principles for man-machine interface, marking and*  
400 *identification – Coding principles for indicators and actuators*
- 401 IEC 60085:2007, *Electrical insulation – Thermal evaluation and designation*
- 402 IEC 60112:2020, *Method for the determination of the proof and the comparative tracking indices*  
403 *of solid insulating materials*
- 404 IEC 60216 (all parts), *Electrical insulating materials – Properties of thermal endurance*
- 405 IEC 60364-4-44:2007, *Low-voltage electrical installations – Part 4-44: Protection for safety –*  
406 *Protection against voltage disturbances and electromagnetic disturbances*  
407 *Amendment 1 (2015)*  
408 *Amendment 2 (2018)*
- 409 IEC 60417, *Graphical symbols for use on equipment (available at*  
410 *<http://www.graphicalsymbols.info/equipment>)*
- 411 IEC 60445:2021 *Basic and safety principles for man-machine interface, marking and*  
412 *identification - Identification of equipment terminals, conductor terminations and conductors*
- 413 IEC 60447:2004, *Basic and safety principles for man-machine interface, marking and*  
414 *identification – Actuating principles*
- 415 IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*  
416 *Amendment 1 (1999)*  
417 *Amendment 2 (2013)*
- 418 IEC 60664-1:2020, *Insulation coordination for equipment within low-voltage systems – Part 1:*  
419 *Principles, requirements and tests*
- 420 IEC 60669-1:2017, *Switches for household and similar fixed electrical installations – Part 1:*  
421 *General requirements*
- 422 IEC 60669-2-1:2021, *Switches for household and similar fixed electrical installations - Part 2-*  
423 *1: Particular requirements - Electronic control devices*
- 424 IEC 60695-2-10:2021, *Fire hazard testing – Part 2-10: Glowing/hot-wire based test methods –*  
425 *Glow-wire apparatus and common test procedure*
- 426 IEC 60695-2-11:2021, *Fire hazard testing – Part 2-11: Glowing/hot-wire based test methods –*  
427 *Glow-wire flammability test method for end-products*
- 428 IEC 60695-11-10:2013, *Fire hazard testing – Part 11-10: Test flames – 50 W horizontal and*  
429 *vertical flame test methods*  
430 *Amendment 1 (2003)*
- 431 IEC 60947-1:2020, *Low-voltage switchgear and controlgear – Part 1: General rules*
- 432 IEC 60947-4-1:2018, *Low-voltage switchgear and controlgear – Part 4-1: Contactors and motor-*  
433 *starters – Electromechanical contactors and motor-starters*  
434

435 IEC 60947-5-1:2016, *Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices*  
436 *and switching elements – Electromechanical control circuit devices*

437 IEC 60998-2-2:2002, *Connecting devices for low-voltage circuits for household and similar*  
438 *purposes – Part 2-2: Particular requirements for connecting devices as separate entities with*  
439 *screwless-type clamping units*

440 IEC 61140:2016, *Protection against electric shock – Common aspects for installation and*  
441 *equipment*

442 IEC 61180:2016, *High-voltage test techniques for low-voltage equipment - Definitions, test and*  
443 *procedure requirements, test equipment*

444 ISO 7000:2019, *Graphical symbols for use on equipment – Index and synopsis*

445 ISO 2039-2:1999, *Plastics – Determination of hardness – Part 2: Rockwell hardness*

446 CISPR 14-1:2020, *Electromagnetic compatibility – Requirements for household appliances,*  
447 *electric tools and similar apparatus – Part 1: Emission*

### 448 **3 Terms and definitions**

449 For the purposes of this document, the following terms and definitions apply.

450 ISO and IEC maintain terminological databases for use in standardization at the following  
451 addresses:

452 • ISO Online browsing platform: available at <http://www.iso.org/obp>

<https://standards.iteh.ai/catalog/standards/sist/b0496a00-1ef2-48f1-bb50->

453 • IEC Electropedia: available at <http://www.electropedia.org/>5-2022

#### 454 **3.1 General terms**

##### 455 **3.1.1**

##### 456 **over-current**

457 current exceeding the rated current

458 [IEV 441-11-06]

##### 459 **3.1.2**

##### 460 **short-circuit**

461 accidental or intentional conductive path between two or more conductive parts forcing the  
462 electric potential differences between these conductive parts to be equal to or close to zero

463 [IEV 151-12-04]

##### 464 **3.1.3**

##### 465 **short-circuit current**

466 over-current resulting from a short circuit due to a fault or an incorrect connection in an electric  
467 circuit

468 [IEV 441-11-07]

##### 469 **3.1.4**

##### 470 **overload**

471 operating conditions in an electrically undamaged circuit which cause an over-current