Electromechanical elementary relays –

Part 1:
General and safety requirements

Relais électromécaniques élémentaires –

Partie 1:
Exigences générales et de sécurité
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FOREWORD

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International Standard IEC 61810-1 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.


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

<table>
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<th>FDIS</th>
<th>Report on voting</th>
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<tr>
<td>94/182/FDIS</td>
<td>94/186/RVD</td>
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Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

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

A bilingual version of this document may be issued at a later date.
This new edition has been completely revised in order to
  – establish a stand-alone standard for the type testing of electromechanical elementary relays,
  – incorporate and update the requirements and tests with regard to insulation coordination as contained in former IEC 61810-5:1998,
  – improve the structure of the standard to achieve better readability,
  – update various requirements and tests.

The committee has decided that the contents of this publication will remain unchanged until 2005. At this date, the publication will be
  • reconfirmed;
  • withdrawn;
  • replaced by a revised edition, or
  • amended.

The contents of the corrigendum of October 2004 have been included in this copy.
ELECTROMECHANICAL ELEMENTARY RELAYS –

Part 1: General and safety requirements

1 Scope

This part of IEC 61810 applies to electromechanical elementary relays (non-specified time all-or-nothing relays) for incorporation. It defines the basic safety-related and functional requirements for applications in all areas of electrical engineering or electronics, such as:

- general industrial equipment,
- electrical facilities,
- electrical machines,
- electrical appliances for household and similar use,
- information technology and business equipment,
- building automation equipment,
- automation equipment,
- electrical installation equipment,
- medical equipment,
- control equipment,
- telecommunications,
- vehicles,
- transportation,
- etc.

Compliance with the requirements of this standard is verified by the type tests indicated.

In case the application of a relay determines additional requirements exceeding those specified in this standard, the relay should be assessed in line with this application in accordance with the relevant IEC standard(s) (for example IEC 60730-1, IEC 60335-1, IEC 60950-1).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60038:1983, IEC standard voltages
   Amendment 1 (1994)
   Amendment 2 (1997)

IEC 60050: International Electrotechnical Vocabulary

Amendment 2 (1987)

IEC 60085:1984, Thermal evaluation and classification of electrical insulation

IEC 60112:2003, Method for the determination of the proof and the comparative tracking indices of solid insulating materials

IEC 60364-4-44:2001, Electrical installations of buildings – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances

IEC 60417-DB:2002, Graphical symbols for use on equipment¹

IEC 60664-1:1992, Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests
Amendment 1 (2000)
Amendment 2 (2002)

Amendment 1 (1994)


IEC 60695-10-2:1995, Fire hazard testing – Part 10-2: Guidance and test methods for the minimization of the effects of abnormal heat on electrotechnical products involved in fires – Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test
Amendment 1 (2001)

IEC 60721-3-3:1994, Classification of environmental conditions – Part 3-3: Classification of groups of environmental parameters and their severities – Stationary use at weatherprotected locations
Amendment 1 (1995)
Amendment 2 (1996)

IEC 60730-1:1999, Automatic electrical controls for household and similar use – Part 1: General requirements

IEC 60947-5-1:1997, Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices
Amendment 1 (1999)
Amendment 2 (1999)


IEC 60999-1:1999, Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units – Part 1: General requirements and particular requirements for clamping units for conductors from 0,2 mm² up to 35 mm² (included)

IEC 61210:1993, Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements

¹ “DB” refers to the IEC on-line database.

IEC 61984:2001, *Connectors – Safety requirements and tests*