

BS EN 61810-3:2015



BSI Standards Publication

Electromechanical elementary relays

Part 3: Relays with forcibly guided
(mechanically linked) contacts

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National foreword

This British Standard is the UK implementation of EN 61810-3:2015. It is identical to IEC 61810-3:2015. It supersedes BS EN 50205:2002 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EPL/94, General purpose relays and reed contact units.

A list of organizations represented on this committee can be obtained on request to its secretary.

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English Version

**Electromechanical elementary relays -
Part 3: Relays with forcibly guided (mechanically linked) contacts
(IEC 61810-3:2015)**

Relais électromécaniques élémentaires -
Partie 3: Relais à contacts guidés (liés mécaniquement)
(IEC 61810-3:2015)

Elektromechanische Elementarrelais -
Teil 3: Relais mit (mechanisch) zwangsgeführten Kontakten
(IEC 61810-3:2015)

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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

Foreword

The text of document 94/378/FDIS, future edition 1 of IEC 61810-3, prepared by IEC/TC 94 "All-or-nothing electrical relays" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61810-3:2015.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2016-01-01
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2018-04-01

This document supersedes EN 50205:2002.

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Endorsement notice

The text of the International Standard IEC 61810-3:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated :

IEC 61810-2-1 NOTE Harmonized as EN 61810-2-1.

Annex ZA
(normative)**Normative references to international publications
with their corresponding European publications**

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

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60947-5-1	-	Low-voltage switchgear and controlgear - Part 5-1: Control circuit devices and switching elements - Electromechanical control circuit devices	EN 60947-5-1	-
IEC 61810-1	2015	Electromechanical elementary relays - Part 1: General and safety requirements	EN 61810-1	2015
IEC 61810-7	-	Electromechanical elementary relays - Part 7: Test and measurement procedures	EN 61810-7	-

CONTENTS

FOREWORD	3
INTRODUCTION	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Functional requirements	7
4.1 Forcibly guided (mechanically linked) operation	7
4.2 Changeover contacts	7
4.3 Mechanical endurance	8
4.4 Electrical endurance	8
4.5 Operating conditions	8
4.5.1 Ambient temperature	8
4.5.2 Energizing quantity	8
4.6 Characteristic values and marking	8
4.6.1 Characteristic values	8
4.6.2 Marking	8
5 Verification and type tests	9
5.1 Design verification	9
5.2 Type tests	9
5.3 Test procedure	10
5.3.1 Testing for failure to open	10
5.3.2 Mechanical and electrical endurance	10
Bibliography	11
Figure 1 – Symbol for a forcibly guided (mechanically linked) contact set, type A	8
Figure 2 – Symbols for use on type B relays	9

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMECHANICAL ELEMENTARY RELAYS –**Part 3: Relays with forcibly guided (mechanically linked) contacts**

FOREWORD

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International Standard IEC 61810-3 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.

The content of this standard was already published in EN 50205:2002. The revisions in this standard only involve editorial changes and update of references.

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

FDIS	Report on voting
94/378/FDIS	94/382/RVD

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 list of all parts of IEC 61810 series, published under the general title *Electromechanical elementary relays* can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.

INTRODUCTION

This Standard applies to elementary relays in which special design and constructional measures are used to ensure that make (normally-open) contacts cannot assume the same state as break (normally-closed) contacts. These relays can be used in self-monitoring control systems, e.g. safety-related control systems.

ELECTROMECHANICAL ELEMENTARY RELAYS –

Part 3: Relays with forcibly guided (mechanically linked) contacts

1 Scope

This part of IEC 61810 specifies special requirements and tests for elementary relays with forcibly guided contacts, also known as mechanically linked contacts. These special requirements apply in addition to the general requirements of IEC 61810-1.

NOTE 1 This standard does not apply to electromechanical control circuit devices as described in IEC 60947-5-1.

NOTE 2 IEC 61810-2-1 provides guidelines for the assignment of reliability values.

NOTE 3 Contacts that are not mechanically linked (forcibly guided) are not considered in this standard.

2 Normative references

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

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

IEC 61810-1:2015, *Electromechanical elementary relays – Part 1: General and safety requirements*

IEC 61810-7, *Electromechanical elementary relays – Part 7: Test and measurement procedures*

3 Terms and definitions

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

3.1

elementary relay

non-specified time all-or-nothing relay

Note 1 to entry: In this document the word “elementary” is sometimes omitted for clarity.

[SOURCE: IEC 60050-444:2002, 444-01-03, modified – modification of the definition]

3.2

failure to open

fault condition when a contact does not open when expected to do so

3.3

failure criteria

specified conditions to judge if a fault or malfunction is a failure