

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electromechanical elementary relays –  
Part 4: General and safety requirements for reed relays**

**Relais électromécaniques élémentaires –  
Partie 4: Exigences générales et de sécurité relatives aux relais à lames souples**



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**ELECTROMECHANICAL ELEMENTARY RELAYS –****Part 4: General and safety requirements for reed relays**

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International Standard IEC 61810-4 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.

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

FDIS	Report on voting
94/482/FDIS	94/484/RVD

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

This document 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.

This document is to be read in conjunction with IEC 61810-1.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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- replaced by a revised edition, or
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## INTRODUCTION

Reed relays have been used in wide fields such as household and similar appliances, security control systems for appliances, measuring instruments, medical equipment, semiconductor and chip test equipment, information and communication equipment, power distribution facilities and transit vehicles, etc.

IEC 61810-4 provides technical deviations/additions to IEC 61810-1 in order to specify general and safety requirements for reed relays, as a result of component safety standards for relevant systems.

The reed switches are used as the switching contacts of the reed relays, all the requirements for reed contacts (reed switches) within the reed relay are read in conjunction with IEC 61243 (all parts).

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## ELECTROMECHANICAL ELEMENTARY RELAYS –

### Part 4: General and safety requirements for reed relays

#### 1 Scope

This part of IEC 61810 applies to electromechanical elementary relays with reed switches (reed contacts) incorporated into general control circuits. It defines the basic functional and safety requirements in all areas of electrical engineering or electronics in accordance with the parts of IEC 61810 series and IEC 62246 series.

This document defines technical deviations/additions to IEC 61810-1. It specifies type tests, routine tests, special tests and environmental tests to confirm the service conditions for applications.

NOTE The terms reed switch(es) and reed contact(s) are both in use for the description of the contact set in reed relays.

#### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 60068-2-17:1994, *Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing*

IEC 60077-1:2017, *Railway applications – Electric equipment for rolling stock – Part 1: General service conditions and general rules*

IEC 60077-2:2017, *Railway applications – Electric equipment for rolling stock – Part 2: Electrotechnical components – General rules*

IEC 60571:2012, *Railway applications – Electric equipment used on rolling stock*

IEC 61373:2010, *Railway applications – Rolling stock equipment – Shock and vibration tests*

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

IEC 61810-1:2015/AMD1:2019

IEC 61810-2:2017, *Electromechanical elementary relays – Part 2: Reliability*

IEC 61810-2-1:2017, *Electromechanical elementary relays – Part 2-1: Reliability – Procedure for the verification of  $B_{10}$  values*

IEC 61810-7:2006, *Electromechanical elementary relays – Part 7: Test and measurement procedures*

IEC 61810-10:2019, *Electromechanical elementary relays – Part 10: Additional functional aspects and safety requirements for high-capacity relays*