

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electromechanical telecom elementary relays of assessed quality –  
Part 1: Generic specification and blank detail specification**

**Relais télécom électromécaniques élémentaires soumis au régime d'assurance  
qualité –  
Partie 1: Spécification générique et spécification particulière cadre**



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**ELECTROMECHANICAL TELECOM ELEMENTARY  
RELAYS OF ASSESSED QUALITY –****Part 1: Generic specification and blank detail specification**

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International Standard IEC 61811-1 has been prepared by IEC technical committee 94: All-or-nothing electrical relays.

This second edition of IEC 61811-1 cancels and replaces

- IEC 61811-1 published in 1999,
- IEC 61811-10 published in 2002,
- IEC 61811-11 published in 2002,
- IEC 61811-50 published in 2002,
- IEC 61811-51 published in 2002,
- IEC 61811-52 published in 2002,
- IEC 61811-53 published in 2002,
- IEC 61811-54 published in 2002,

- IEC 61811-55 published in 2002,

and constitutes a technical revision. This edition includes the following significant technical changes with respect to the previous editions:

- a) to get one document for telecom relays;
- b) update all relevant references;

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

FDIS	Report on voting
94/379/FDIS	94/383/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.

A list of all parts in the IEC 61811 series, published under the general title *Electromechanical telecom elementary relays of assessed quality*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

This publication was drafted in accordance with ISO/IEC Directives, Part 2.

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- withdrawn,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.

## ELECTROMECHANICAL TELECOM ELEMENTARY RELAYS OF ASSESSED QUALITY –

### Part 1: Generic specification and blank detail specification

#### 1 Scope

This part of IEC 61811 applies to electromechanical telecom elementary relays. Relays according to this standard are provided for the operation in telecommunication applications. However, as electromechanical elementary relays, they are also suitable for particular industrial and other applications.

This standard selects from IEC 61810 series and other sources the appropriate methods of test to be used in detail specifications derived from this specification, and contains basic test schedules to be used in the preparation of such specifications in accordance with this standard.

Detailed test schedules are contained in the detail specifications.

#### 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 60062:2004, *Marking codes for resistors and capacitors*

IEC 60068-1:2013, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-17:1994, *Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing*

IEC 60068-2-20:2008, *Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads*

IEC 60068-2-58:2004, *Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)*

IEC 60410:1973, *Sampling plans and procedures for inspection by attributes*

IEC 60695-11-5:2004, *Fire hazard testing – Test flames – Needle-flame test method – Apparatus, confirmatory test arrangement and guidance*

IEC 61810 (all parts), *Electromechanical elementary relays*

IEC 61810-1:2008, *Electromechanical elementary relays – Part 1: General requirements*

IEC 61810-2:2011, *Electromechanical elementary relays – Part 2: Reliability*

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

ISO 2859 (all parts), *Sampling procedures for inspection by attributes*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61810 series, as well as the following apply.

#### 3.1 Type of relays

The most frequent types of electromechanical telecom elementary relays are defined in 3.1.1, 3.1.2, 3.1.3 and 3.1.4.

##### 3.1.1

###### **bistable relay**

electrical relay which, having responded to an energizing quantity and having changed its condition, remains in that condition after the quantity has been removed; a further appropriate energization is required to make it change its condition.

[SOURCE: IEC 60050-444:2002, 444-01-08]

##### 3.1.2

###### **monostable relay**

electrical relay which, having responded to an energizing quantity and having changed its condition, returns to its previous condition when that quantity is removed

[SOURCE: IEC 60050-444:2002, 444-01-07]

##### 3.1.3

###### **non-polarized relay**

electrical relay, the change of condition of which does not depend upon the polarity of its energizing quantity

[SOURCE: IEC 60050-444:2002, 444-01-10]

##### 3.1.4

###### **polarized relay**

###### **polarized elementary relay**

electrical relay, the change of condition of which depends upon the polarity of its d.c. energizing quantity

[SOURCE: IEC 60050-444:2002, 444-01-09; modified – In the definition, "elementary relay" has been replaced by "electrical relay".]

#### 3.2 Types of contacts

##### 3.2.1

###### **change-over break-before-make contact**

change-over contact, one contact circuit of which breaks before the other makes

[SOURCE: IEC 60050-444:2002, 444-04-21, modified – The definition has been reworded.]

##### 3.2.2

###### **change-over make-before-break contact**

change-over contact, one contact circuit of which makes before the other breaks

[SOURCE: IEC 60050-444:2002, 444-04-20, modified – The definition has been reworded.]