

INTERNATIONAL STANDARD

IEC 61811-54

QC 160504

Second edition
2002-03

Electromechanical all-or-nothing relays –

Part 54:

**Blank detail specification –
Electromechanical all-or-nothing telecom
relays of assessed quality –
Two change-over contacts,
15 mm × 7,5 mm base**

Relais électromécaniques de tout-ou-rien –

Partie 54:

*Spécification particulière cadre –
Relais électromécaniques de tout-ou-rien télécom
soumis au régime d'assurance de la qualité –
Deux contacts à deux directions,
surface d'encombrement de 15 mm × 7,5 mm*



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CONTENTS

| | |
|---|-------|
| FOREWORD..... | 3 |
| 1 General | 5 |
| 1.1 Scope..... | 5 |
| 1.2 Normative references | 5 |
| 1.3 Front page of the detail specification..... | 7 |
| 2 Characteristic values of the relay | 8 |
| 2.1 General data..... | 8 |
| 2.2 Construction of IECQ type designation (ordering information)..... | 9 |
| 2.3 Coil data..... | 9 |
| 2.4 Contact data | 10 |
| 2.4.1 Electrical endurance and switching frequency..... | 10 |
| 2.4.2 Static contact-circuit resistance..... | 10 |
| 2.4.3 Mechanical endurance | 10 |
| 2.4.4 Timing (without suppression device)..... | 10 |
| 2.5 Mounting | 11 |
| 2.6 Environmental data..... | 11 |
| 2.7 Package of relays for automatic handling (if applicable)..... | 11 |
| 3 Qualification approval procedures | 11 |
| 4 Quality conformance inspection | 12 |
| 4.1 Formation of inspection lots..... | 12 |
| 4.2 Intervals between tests..... | 12 |
| 5 Marking and documentation | 12 |
| 5.1 Marking of the relay | 12 |
| 5.2 Marking of the package..... | 12 |
| 5.3 Documentation..... | 13 |
| 6 Annexes | 13 |
| 7 Tests | 13 |
| 7.1 Standard conditions for testing..... | 13 |
| 7.2 Mounting of test specimens during the test | 13 |
| 7.3 General conditions for testing | 13 |
| 8 Ordering information | 13 |
| 9 Relay reliability – Failure rate data (optional)..... | 13 |
| Table 1 – Dielectric test voltages | 9 |
| Table 2 – Coil data | 9 |
| Table 3 – Loads, contact-circuit resistance limits, switching cycles and frequencies for electrical endurance and overload tests..... | 10 |
| Table 4 – Quality conformance inspection | 14-28 |
| Table 5 – Qualification approval | 29-31 |
| Table 6 – Industrial qualification | 31 |

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMECHANICAL ALL-OR-NOTHING RELAYS –**Part 54: Blank detail specification –
Electromechanical all-or-nothing telecom relays of assessed quality –
Two change-over contacts, 15 mm × 7,5 mm base**

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
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International Standard IEC 61811-54 has been prepared by of IEC technical committee 94: All-or-nothing electrical relays.

This second edition of IEC 61811-54 cancels and replaces the first edition published in 1997 and constitutes a technical revision.

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

| FDIS | Report on voting |
|-------------|------------------|
| 94/148/FDIS | 94/162/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.

The QC number that appears on the front cover of this publication is the specification number in the IEC Quality Assessment System for Electronic Components (IECQ).

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

The committee has decided that the contents of this publication will remain unchanged until 2007. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

Withdrawing

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ELECTROMECHANICAL ALL-OR-NOTHING RELAYS –

Part 54: Blank detail specification – Electromechanical all-or-nothing telecom relays of assessed quality – Two change-over contacts, 15 mm × 7,5 mm base

1 General

1.1 Scope

This part of IEC 61811 is a blank detail specification applicable to electromechanical all-or-nothing telecom relays of assessed quality. Relays according to this standard are provided for operation in telecommunication applications. However, as electromechanical all-or-nothing relays, they are also suitable for particular industrial and other applications.

This standard selects from IEC 61810-7 and other sources the appropriate methods of tests 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 IEC 61811-1.

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 60068-1:1988, *Environmental testing – Part 1: General and guidance*
Amendment 1 (1992)

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

IEC 60068-2-20:1979, *Environmental testing – Part 2: Tests – Test T: Soldering*
Amendment 2 (1987)

IEC 60068-2-47:1999, *Environmental testing – Part 2-47: Test methods – Mounting of components, equipment and other articles for vibration, impact and similar dynamic tests*

IEC 60255-14:1981, *Electrical relays – Part 14: Endurance test for electrical relay contacts – Preferred values for contact loads*

IEC 60695-2-2:1991, *Fire hazard testing – Part 2: Test methods – Section 2 – Needle-flame test*

IEC 61709:1996, *Electronic components – Reliability – Reference conditions for failure rates and stress models for conversion*

IEC 61810-7:1997, *Electromechanical all-or-nothing relays – Part 7: Test and measurement procedures*

IEC 61811-1:1999, *Electromechanical non-specified time all-or-nothing relays of assessed quality – Part 1: Generic specification*

IEC 61811-50:2002, *Electromechanical all-or-nothing relays – Part 50: Sectional specification – Electromechanical all-or-nothing telecom relays of assessed quality*

QC 001002-2:1998, *Rules of Procedure of the IEC Quality Assessment System for Electronic Components (IECQ) – Part 2: Documentation*

QC 001002-3:1998, *Rules of Procedure of the IEC Quality Assessment System for Electronic Components (IECQ) – Part 3: Approval Procedures*

QC 001005:2000, *Register of Firms, Products and Services approved under the IECQ System, including ISO 9000*

CECC 00802:1990, *Guidance document: CECC Standard Method for the Specification of Surface Mounting Components (SMDs) of Assessed Quality*

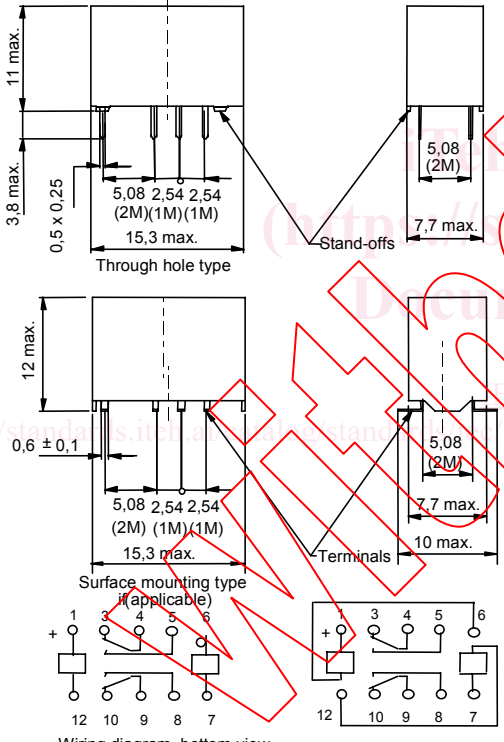
(National authorized institutions will complete this clause by making reference to any documents or specifications directly referred to in their national equivalent of this standard.)



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1.3 Front page of the detail specification

The layout of the front page of the detail specification is as follows.

| | | |
|---|---|-----|
| (1) | QC xxxxxx Edition:200X Page 1 of x | (2) |
| Electronic components of assessed quality in accordance with: IEC 61810-7:1997 IEC 61811-50:2002 | (3) | (4) |
| Detail specification for electromechanical all-or-nothing telecom relays of assessed quality, dual-in-line, with 15 mm × 7,5 mm base, two change-over contacts | | |
| Type: | two change-over contacts | (5) |
| Construction: | dual-in-line, with 15 mm × 7,5 mm base plastic sealed case, overall height through-hole type of 11 mm max. surface mounting type of 12 mm max. relay properties RT III for conventional assembling techniques of printed circuit boards using mounting holes and soldering or for surface mounting technology (if applicable) | (6) |
| Outline drawing and wiring diagram Dimensions in millimetres | (7) | (8) |
| <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">  <p>Through hole type</p> <p>Stand-offs</p> <p>Surface mounting type (if applicable)</p> <p>Terminals</p> <p>Wiring diagram, bottom view</p> <p>IEC 639/02</p> </div> <div style="width: 50%;"> <p>Application:</p> <p>Relays according to this standard are provided for the operation in telecommunication applications. However, as printed circuit board relays, they are suitable also for control or switching functions in particular industrial and other applications.</p> </div> </div> <p>NOTE Drawings are examples; the maximum outer dimensions, the wiring diagram of one coil relay, the terminal arrangement and the same orientation of all rectangular terminals are mandatory.</p> | | |
| Coil data (9) | | |
| Rated voltages: V d.c. Rated power: mW | | |
| Contact data (10) | | |
| Change-over break-before-make contacts Rated contact voltage: 110 V d.c. / 125 V a.c.* Rated contact current: 1,25 A max. Rated contact power: 30 W/50 VA* Limiting continuous current: 2 A max. * AC values mandatory only if stated in detail specification. | | |
| Component climatic category according to IEC 60068-1: 25/70/21 (11) | | |
| Temperature range – operating ambient temperature: –25 °C to 70 °C – storage temperature: –40 °C to 85 °C | | |
| Information about manufacturers who have components qualified according to this detail specification is available in the current QC 001005. | | |

Key to front page:

The numbers between brackets on the front page correspond to the following indications which should be given.

Identification of the detail specification

- (1) The name of the national standards organization under whose authority the detail specification is published and, if applicable, the organization from whom the detail specification is available.
- (2) The IECQ symbol and the number allotted to the completed detail specification by the IECQ secretariat.
- (3) The number and the year of availability of the IEC standard concerning test and measurement procedures for electromechanical all-or-nothing relays and/or sectional specification; also national reference, if different.
- (4) If different from the IECQ number, the national number of the detail specification, date of issue and any further information required by the national system, together with any amendment numbers.

Identification of the relay

- (5) Type: monostable or bistable, non-polarized or polarized, number and types of contacts.
- (6) Construction: sizes, for example dual-in-line, base and overall height, type of relay, based upon environmental protection (RT I to RT IV), mounting variants and other typical construction details.
- (7) An outline drawing with main dimensions which are of importance for interchangeability, and/or reference to the appropriate national or international document for outlines. Alternatively, this drawing may be given in an annex to the detail specification, but (7) should always contain an illustration of the general outer appearance of the component.
- (8) Typical field of applications.
- (9) Available rated coil voltages and rated power.
- (10) Available contact arrangements, defined special contact materials and contact voltage, current and power. The respective code digit for contact materials shall be listed in an annex, if applicable.
- (11) Component climatic category according to clause 8 and annex A of IEC 60068-1, and temperature range.

2 Characteristic values of the relay**2.1 General data**

- Thermal resistance: max. ... K/W
- Contact application: CA 0, CA 1, CA 2 and/or CA 3
- Relay mass: max. ... g
- Finish of the terminals: presoldering; admissible non-presoldered part: max. 1 mm to the stand-off plane, if applicable
- Insulation resistance: 1 000 M Ω min. at 500 V d.c. initial value
- Dielectric strength: see table 1

