BRITISH STANDARD

BS EN 61811-51:2002

Electromechanical all-or-nothing relays —

Part 51: Blank detail specification — Electromechanical all-or-nothing telecom relays of assessed quality — Non-standardized types and construction

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ICS 29.120.70

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee EPL/94, General purpose relays and reed contact units, which has the responsibility to:

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— present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;

— monitor related international and European developments and promulgate them in the UK.

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This British Standard, having been prepared under the direction of the Electrotechnical Sector Policy and Strategy Committee, was published under the authority of the Standards Policy and Strategy Committee on 19 September 2002

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EUROPEAN STANDARD **EN 61811-51**

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English version

Electromechanical all-or-nothing relays
Part 51: Blank detail specification - Electromechanical all-or-nothing telecom relays of assessed quality - Non-standardized types and construction
(IEC 61811-51:2002)

Relais électromécaniques de tout-ou-rien
Partie 51: Spécification particulière cadre - Relais électromécaniques de tout-ou-rien télécom soumis au régime d'assurance de la qualité - Types et construction non normalisés
(CEI 61811-51:2002)

Elektromechanische Schaltrelais
Teil 51: Vordruck für Bauartspezifikation - Elektromechanische Telekom-Relais mit bewerteter Qualität - Nicht standardisierte Bauarten und Konstruktionen
(IEC 61811-51:2002)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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Foreword

The text of document 94/145/FDIS, future edition 2 of IEC 61811-51, prepared by IEC TC 94, All-or-nothing electrical relays, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61811-51 on 2002-05-01.

This European Standard supersedes EN 116501:1992.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2003-02-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2005-05-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61811-51:2002 was approved by CENELEC as a European Standard without any modification.

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ELECTROMECHANICAL ALL-OR-NOTHING RELAYS –

Part 51: Blank detail specification – Electromechanical all-or-nothing telecom relays of assessed quality – Non-standardized types and construction

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 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 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*

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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 for the IEC Quality Assessment System for Electronic Components (IECQ) – Part 2: Documentation*

QC 001002-3:1998, *Rules of Procedure for 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*

(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.)

1.3 Front page of the detail specification

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

(1)	QC xxxxxx (2) Edition: 200X Page 1 of x
Electronic components of assessed quality in accordance with: (3) IEC 61810-7:1997 IEC 61811-50:2002	(4)
Detail specification for electromechanical all-or-nothing telecom relays of assessed quality Type: (5) Construction: (6)	
Outline drawing and wiring diagram (7) Dimensions in millimetres	Application: (8)
Coil data (9) Rated voltages: … V d.c. Rated power: … mW	
Contact data (10) Number(s) and type(s) of contacts Rated contact voltage: Rated contact current: Rated contact power:	
Component climatic category according to IEC 60068-1: (11) Temperature range – operating ambient temperature: …°C to …°C – storage temperature: …°C to …°C	
Information about manufacturers who have components qualified according to this detail specification is available in the current QC 001005.	

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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 CA 3

– Relay mass: max. … g

– Finish of the terminals: presoldering; admissible non-presoldered part, for example max. distance to the relay body, if applicable

– Insulation resistance: … MΩ min. at 500 V d.c. initial value

– Dielectric strength: see table 1

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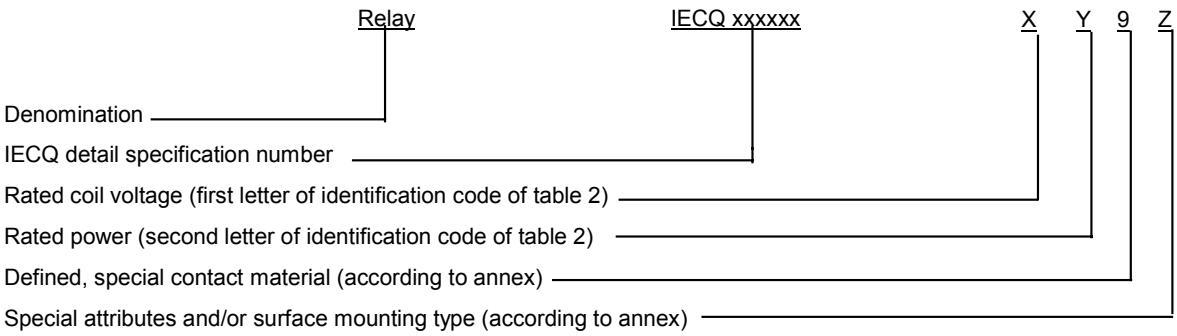
Table 1 – Dielectric test voltages

	Dielectric test V a.c. min.	**Impulse voltage test** 10/700 µs and/or 1,2/50µs V min.
Opened contact circuits		
Between separate contact circuits		
Coil to contact circuits		
All parts to case		

2.2 Construction of IECQ type designation (ordering information)



The coding of the monostable or bistable relay type shall be combined with the rated power of the coil, if applicable. The reference to the number and types of contacts shall be given on the front page of the specification.

Use code 0 as the last digit if no special attributes apply. If one of the attributes in the example for a detail specification shall not be considered, the corresponding code number or letter shall be deleted; there shall be no special marks or open space for non-applicable attributes (see also 2.5).

The manufacturer may use his own numbering system, provided that a conversion list with the IECQ type designations and the manufacturer's part numbers is given in an annex to the detail specification.

2.3 Coil data

Table 2 – Coil data

Identifi-cation code	**Rated voltage** V	**Coil resistance at (23 ± 2) °C** Ω ± 10 %	**Must operate voltage V at coil temperature of**			**Maximum coil voltage V at coil temperature of**	**Must not release voltage V at coil temperature of**	**Must release voltage V at coil temperature of**			**Rated power** mW
			°C	23 °C	°C	°C	23 °C	°C	23 °C	°C	

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