

Harmonized system of quality assessment for electronic components — Blank detail specification — Electromechanical all-or-nothing heavy load relays of assessed quality (hermetically sealed, 5A to 25A)

The European Standard EN 116303:1993 has the status of a
British Standard

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee EPL/94, General purpose relays and reed contact units, upon which the following bodies were represented.

- FEI (Federation of the Electronics Industry)
- Ministry of Defence
- National Supervising Inspectorate — BSI PC

Amendments issued since publication

Amd. No.	Date	Comments

Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
Foreword	2
Text of EN 116303	5

National foreword

This British Standard has been prepared by Technical Committee EPL/94 and is the English language version of EN 116303:1993 *Blank detail specification: Electromechanical all-or-nothing heavy load relays of assessed quality (hermetically sealed, 5A to 25A)*, published by the Electronic Components Committee (CECC) of the European Committee for Electrotechnical Standardization (CENELEC).

This standard lists the ratings, characteristics and inspection requirements which shall be included as mandatory requirements in any detail specification for this type of relay.

Detail specifications shall conform to the requirements of this blank detail specification and to BS CECC 00111 *Rule of Procedure 11. Specifications — Part 4:1991 Regulations for CECC detail specifications*.

The British Standard which implements the CECC Rules of Procedure is BS 9000 *General requirements for a system for electronic components of assessed quality — Part 2:1991 Specification for the national implementation of the CECC system*.

Cross-references

International Standard	Corresponding British Standard
CECC 00114-2:1994	BS CECC 00114 <i>Rule of procedure 14 Quality assessment procedures</i> Part 2:1995 <i>Qualification approval of electronic components</i>
CECC 50000:1986	BS CECC 50000:1987 <i>Harmonized system of quality assessment for electronic components</i> <i>Generic specification: Discrete semiconductor devices</i>
EN 116300:1993	BS EN 116300:1994 <i>Harmonized system of quality assessment for electronic components.</i> <i>Sectional specification: Electromechanical all-or-nothing heavy load relays of assessed quality (rated from 5A and above)</i> BS 2011 <i>Environmental testing</i>
IEC 68-2-14:1984	Part 2.1N:1985 <i>Test N. Change of temperature</i>
IEC 68-2-2:1979	Part 2.1T:1981 <i>Test T. Soldering</i>
IEC 68-2-21:1983	Part 2.1U:1984 <i>Test U. Robustness of terminations and integral mounting devices</i>
IEC 68-2-43:1976	Part 2.1Kd:1977 <i>Test Kd. Hydrogen sulphide test for contacts and connections</i>
IEC 68-2-47:1982	BS EN 60068-2-47:1993 <i>Environmental testing. Tests</i> <i>Mounting of components, equipment and other articles for dynamic tests including shock (Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ga) and guidance</i>

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the EN title page, pages 2 to 28 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

UDC

Descriptors: Quality, electronic components, relays

English version

**Blank detail specification:
Electromechanical all-or-nothing
heavy load relays of assessed quality
(hermetically sealed, 5 A to 25 A)**

Spécification particulière cadre:
Relais électromécaniques de tout-ou-rien
soumis au régime d'assurance de la qualité,
haute limite de charge
(hermétique, 5 A à 25 A)

Vordruck für Bauartspezifikation:
Gütebestätigte elektromechanische
Schaltrelais von hoher Belastbarkeit
(hermetisch dicht, 5 A bis 25 A)

This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 10 August 1992. CENELEC members are bound to comply with CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the General Secretariat of the CECC 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 CECC General Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and United Kingdom. The membership of the CECC is identical, with the exception of the national electrotechnical committees of Greece, Iceland and Luxembourg.

CECC

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

Central Secretariat: rue de Stassart 35, B-1050 Brussels

Foreword

The CENELEC Electronic Components Committee (CECC) is composed of those member countries of the European Committee for Electrotechnical Standardization (CENELEC) who wish to take part in a harmonized System for electronic components of assessed quality.

The object of the System is to facilitate international trade by the harmonization of the specifications and quality assessment procedures for electronic components, and by the grant of an internationally recognized Mark, or Certificate, of Conformity. The components produced under the System are thereby acceptable in all member countries without further testing.

This specification was prepared by CECC WG 16 “Relays”.

The text of the draft based on document CECC (Secretariat)2827 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3144, it was approved by CECC as EN 116303 on 10 August 1992.

The following dates were fixed:

- latest date of announcement of the EN at national level (doa) 1993-05-01
- latest date of publication of an identical national standard (dop) 1993-11-01
- latest date of declaration of national standards obsolescence 1993-11-01
- latest date of withdrawal of conflicting national standards (dow) 2003-05-01

Contents

	Page
Foreword	2
1 Related documents	5
2 Characteristic values of the relay	5
3 Qualification approval procedures	8
4 Quality conformance inspection	8
5 Marking, package and documentation	8
6 Annexes	9
7 Tests	9
8 Ordering information	10
Annex A Mounting variants, their dimensions and corresponding code	26
Annex B Termination variants, their dimensions and corresponding code	27
Annex C Wiring diagrams	28
Table 1 — Dielectric test voltages	5
Table 2 — Coil data	6
Table 3 — Nominal load life and switching frequency	6
Table 3.1 — Intermediate load, load distribution	7
Table 4 — Time current characteristic	7
Table 5 — Terminations	7
Table 5.1 — Environmental stresses	8
Table 6 — Lot-by-lot and periodic tests	10
Table 7 — Tests for qualification approval	23

(1)	CECC 16303-xxx Issue: Pages 1 to 25	(2)
Electronic components of assessed quality in accordance with EN 116000-1:1992 (CECC 16000/I Issue 2) and EN 116300:1993		(4)
Detail specification for electromechanical all-or-nothing heavy load relays Type:		(5)
Construction:		(6)
	Hermetically sealed (RT V) Application category of contacts: CA 4 (5 A to 25 A)	
(7)	Application Relays according to this standard are capable of the following loads: (see section 2.4). The relays are circuit breaker compatible. The relays may be delivered with or without screening (assessment level Y or E).	(8)
Coil data:		(9)
Contact data:		(10)
Operate ambient temperature range: – ... to + ... °C Storage temperature range: – ... to + ... °C Climatic category:		
	$T_B/T_A/21$	
Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00200.		

Key for page 3:

The first page of the DS should have the layout recommended on page 3. The numbers between brackets on page 3 correspond to the following indications which should be given:

Identification of the detail specification

- (1) The name of the National Standardisation Organisation under whose authority the detail specification is published and, if applicable, the organisation from whom the detail specification is available.
- (2) The CECC-symbol and the number allotted to the completed detail specification by the CECC General Secretariat.
- (3) The number and year of availability of the EN generic specification and/or sectional specification, also national reference, if different.
- (4) If different from the CECC number, the national number of the detail specification, date of issue and any further informations required by the national system, together with any amendment numbers.

Identification of the relay

- (5) Type: sizes (e.g. half cubic inch), number and types of contacts, max. contact current.
- (6) Construction: e.g. hermetically sealed, type of termination, type of mounting, type of sealing, coil data, coil protection, life, other typical data.
- (7) Basic outline drawing and wiring diagram; the detailed variants for terminals and mounting shall be given in annexes, if necessary.
- (8) Application of the relay:
 - Stated application, mechanical, electrical and environmental conditions;
 - Assessment level with or without screening.
- (9) Available nominal coil voltages and, if applicable, nominal power.
- (10) Contact arrangement, contact current and voltage.
- (11) Temperature range and climatic category.

1 Related documents

CECC 00114/II (1991)	<i>Quality Assessment Procedures; Part II: Qualification Approval of Electronic Components</i>
EN 116000-1:1992 (CECC 16000/I 2nd Issue 1990)	<i>Generic specification: Electromechanical all-or-nothing relays; Part 1: General</i>
EN 116300:1993	<i>Sectional specification: Electromechanical all-or-nothing heavy load relays of assessed quality</i>
IEC 68-2-20 (1987)	<i>Basic Environmental Testing Procedures; Part 2: Tests; Test T: Soldering</i>
IEC 68-2-21 (1985)	<i>Basic Environmental Testing Procedures; Part 2: Tests; Test U: Robustness of terminations and integral mounting devices</i>
IEC 68-2-47 (1982)	<i>Basic Environmental Testing Procedures; Part 2: Tests; Mounting of components equipment and other articles for dynamic tests including shock (Ea), bump (Eb), vibration (Fc and Fd) and steady-state acceleration (Ga) and guidance.</i>

(Any other documents referred to in the DS shall be listed.)

2 Characteristic values of the relay

2.1 General data

- Contact load: (current, voltage and frequency)
- Category of contacts: according to EN 116000-1:1992 (CECC 16000/I, 1990), section 3.8
- Mass (Weight): max. ... g
- Finish of the relay housing:
- Finish of the terminals:
- Insulation resistance: min. 100 M Ohm at 500 V d.c.
- Voltage proof: according to Table 1

Table 1 — Dielectric test voltages

	Dielectric test voltages r.m.s. at 50 to 60 Hz	
	at sea level	at 2 kPa (25 000 m height)
Between open contacts		
Between adjacent contacts		
Contact to case		
Coil to contacts		
Coil to case		