

**Harmonized system of quality
assessment for electronic components**

**Blank detail
specification:
Hermetically sealed
relays —
For severe static
environmental
conditions (116205) —
For severe mobile
environmental
conditions (116206) —
For severe airborne
environmental
conditions (116207)**

The European Standard EN 116205/116206/116207:1995 has the status of a British Standard

ICS 29.120.70

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)

This British Standard, having been prepared under the direction of the Electrotechnical Sector Board, was published under the authority of the Standards Board and comes into effect on 15 April 1996

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Contents

	Page
Committees responsible	Inside front cover
National foreword	ii
Foreword	2
Text of EN 116205/116206/116207	5
List of references	Inside back cover

National foreword

This British Standard has been prepared by Technical Committee EPL/94 and is the English language version of EN 116205/116206/116207:1995 *Blank detail specification: Hermetically sealed relays — For severe static environmental conditions (116205), For severe mobile environmental conditions (116206), For severe airborne environmental conditions (116207)*, 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 have to be included as mandatory requirements in any detail specification for this type of relay.

Detail specifications have to conform to the requirements of this blank detail specification and BS CECC 00111 *Rule of procedure 11. Specifications — Part 4:1991 Regulations for CECC details 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 2:1996 Specification for the national implementation of the CECC system*.

Cross-references

Publication referred to	Corresponding British Standard
	BS EN 116000 <i>Harmonized system of quality assessment for electronic components. Generic specification: Electromechanical all-or-nothing relays</i>
EN 116000-1:1996 ^a	Part 1:1996 ^b <i>General</i>
EN 116000-3:1996 ^a	Part 3:1996 ^b <i>Test and measurement procedures</i>
EN 116200:1991	BS EN 116200:1996 ^b <i>Harmonized system of quality assessment for electronic components. Sectional specification: Electromechanical all-or-nothing relays (including relays for severe environmental conditions)</i>
CECC 00114-II: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. Generic specification: Discrete semiconductor devices</i>
CECC 00108:1994	BS CECC 00108:1996 <i>Rule of procedure 8. Attestation of conformity</i>
CECC 00802:1994 ^c	BS CECC 00802:1994 <i>Harmonized system of quality assessment for electronic components. Guidance document: CECC Standard method for the specification of surface mounting components (SMDs) of assessed quality</i>

^a The text refers to EN 116000-1:1992 which has been superseded by two documents, EN 116000-1:1996 and EN 116000-3:1996.

^b In preparation.

^c This document is wrongly referred in the text as CECC 00802-2:1994 and should be read as CECC 00802:1994.

Publication referred to	Corresponding British Standard
IEC 62:1992	BS EN 60062:1994 <i>Marking codes for resistors and capacitors</i> BS 2011 <i>Environmental testing</i>
IEC 68-1:1988	Part 1.1:1989 <i>General and guidance</i>
IEC 68-2-20:1979	Part 2.1T:1981 <i>Test T. Soldering</i> BS EN 60068 <i>Environmental testing</i>
EN 60068-2-17:1994 (IEC 68-2-17:1994)	Part 2-17:1995 <i>Tests. Test Q. Sealing</i>
EN 60068-2-47:1993 (IEC 68-2-47:1982)	Part 2-47:1993 <i>Tests. Mounting of components, equipment and other articles for dynamic tests including shock (Ea), bump, (Eb), vibration (Fc and Fd), steady-state acceleration (Ga) and guidance</i>
IEC 255-1-00:1975	BS 5992 <i>Electrical relays</i> Part 2:1980 <i>Specification for all-or-nothing electrical relays</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.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the EN title page, pages 2 to 26, an inside back cover 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.

Descriptors: Quality, electronic components, relays

English version

**Blank Details Specification: Hermetically sealed relays
For severe static environmental conditions (116205)
For severe mobile environmental conditions (116206)
For severe airborne environmental conditions (116207)**

Spécification particulière cadre: Relais
hermétiques
Pour environnement sévère sur équipement
fixe (116205)
Pour environnement sévère sur équipement
mobile (116206)
Pour environnement sévère sur équipement
aéronautique (116207)

Vordruck für Bauartspezifikation: Hermetisch
dichte Relais
Für stationäres Gerät für erschwerte
Umweltbedingungen (116205)
Für bewegliches Gerät für erschwerte
Umweltbedingungen (116206)
Für fliegendes Gerät für erschwerte
Umweltbedingungen (116207)

This European Standard was approved on 1994-10-28. CENELEC members are bound to comply with the 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 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, 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

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

Foreword

This European Standard was prepared by CLC/TC CECC/WG 16.

The text of the draft based on document CECC(Secretariat)3563 was submitted to the formal vote; together with the voting report, circulated as document CECC(Secretariat)3627, it was approved as EN 116205/116206/116207 on 1994-10-28.

This European Standard supersedes EN 116205/116206/116207:1992.

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) 1995-09-06
- latest date by which national standards conflicting with the EN have to be withdrawn (dow) 1996-09-06

This standard combines three BDSs. Unless otherwise indicated, the content of this standard is applicable to all three BDSs. However, in the test schedules contained in Table 5, a differentiation is made between test schedule 5 (EN 116205), test schedule 6 (EN 116206) and test schedule 7 (EN 116207) as indicated in the second column.

Contents

	Page
Foreword	2
1 Related documents	5
2 Characteristic values of the relay	5
3 Qualification approval	8
4 Quality conformance inspection	8
5 Marking and documentation	8
6 Annexes	9
7 Tests	9
8 Ordering information	9
Annex A Codes for coils, terminals, mounting variants and special attributes recommended for uniformity	26
Table 1 — Dielectric test voltages	5
Table 2 — Coil data	6
Table 3 — Data for endurance and overload tests	6
Table 4.1 — Variants of terminals and codes	7
Table 4.2 — Soldering classification	7
Table 4.3 — Resistance to soldering heat: immersion conditions	7
Table 4.4 — Mounting variants and codes	7
Table 5 — Tests for quality conformance inspection	10
Table 6 — Tests for qualification approval for EN 116205	23

(1)	CECC 16205 (206, 207)-XXX Issue: ... month, year Page 1 to ...	(2)
(3)	Electronic components of assessed quality in accordance with EN 116000-1:1992 EN 116200:1991 EN 116205, 116206 or 116207 as applicable	(4)
Detail specification for all-or-nothing relays		(5)
Type(s):		(6)
Construction:		
Outline drawing	(7)	Application: (8)
		Relays according to this standard are provided for the operation in military and/or commercial equipment and/or installations with increased mechanical and environmental requirements. The applicable load range is from low level to less than 5 Amperes.
		Test schedule: (Test schedule from sectional specification)
		The relays have a quality assessment level Y.
Dimensions in mm		
Coil data:		(9)
Contact data:		(10)
Temperature range:		(11)
Storage temperature: – 65 to + 150 °C		
Ambient temperature: – 65 to + 125 °C		
Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00200: Register of Approvals.		

Key for page 3:

The first page of the detail specification (DS) should have the layout recommended on page 3. The numbers between brackets on page 3 correspond to the following indication 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 DS is available.
- 2) The CECC symbol and the number allotted to the completed detail specification by the CECC General Secretariat.
- 3) The number and issue number of the CECC generic specification and/or sectional specification as relevant, 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 information required by the national system, together with any amendment numbers.

Identification of the relay

- 5) Type: Monostable or bistable, polarized or not, number and arrangement of contacts, low level (or not) to high level, contact current and voltage, suppression device, protection against reverse polarity, coil protection.
- 6) Construction: Sizes (for example half-size crystal can)
Terminals, mounting variants and other typical construction details.

For 5) and 6) the text to be given in the detail specification should be suitable for an entry in CECC 00200 (Register of Approvals) and CECC 00300 (Library List).

- 7) Basic outline drawing and implantation; the detailed variants for terminals and mountings shall be given in appendices, if necessary.
- 8) Application and test schedule:
The test schedules contained in these combined BDSs include all requirements for EN 116205, EN 116206 and EN 116207.
Unless otherwise indicated, the content of these combined BDSs including the test schedules is applicable to EN 116205, EN 116206 and EN 116207.
Where shown in the second column of the test schedules in Table 5, individual test schedules 5, 6 or 7 are applicable as indicated to EN 116205, EN 116206 or EN 116207 respectively.
The test schedules have levels of assessment which render the qualified components suitable for the following applications:
Test schedule 5 (EN 116205) hermetically sealed relays for severe static environmental conditions.
Test schedule 6 (EN 116206) hermetically sealed relays for severe mobile environmental conditions.
Test schedule 7 (EN 116207) hermetically sealed relays for severe airborne environmental conditions.
- 9) Available coil voltages.
- 10) Available contact arrangements and contact current and voltage.
- 11) Temperature range.

1 Related documents

CECC 00802-2:1994	Guidance Document: CECC standard method for the specification of surface mounting components (SMDs) of assessed quality
EN 116000-1:1992	Generic Specification: Electromechanical all-or-nothing relays
EN 116200:1991	Sectional Specification: Electromechanical all-or-nothing relays

(National authorized institutions should complete this section making reference to any additional documents or specifications directly referred to in their national equivalent of this document.)

2 Characteristic values of the relay

These shall be in accordance with IEC 255-1-00 as applicable.

2.1 General data

- Contact application:
- Contact arrangement:
- Mass (Weight): g max.
- Finish of the relay housing:
- Finish of the terminals:
- Insulation resistance: 10 000 M Ω min. at 500 V d.c.
- Dielectric withstand voltage: V min.
- Nominal free volume:

Table 1 — Dielectric test voltages

	at sea level V a.c. min.	at 2 kPa (26 600 m) V a.c. min.
Open contacts		
Between adjacent contacts		
Contacts to case		
Coil to contacts		
Coil to case		

2.2 Construction of designation (ordering information)

	Relay	CECC 16 205 (206, 207)	- XXX	A	B	C	1	Y
Denomination								
CECC number								
Type code (CECC registration number)								
Coil voltage (according to 2.3)								
Terminals (according to 2.5)								
Mounting (according to 2.6)								
Special attributes (according to 2.3)								
Assessment Level								

For electronic data processing the ordering data shall be written without blanks.

NOTE The reference to monostable or bistable, polarized or not polarized, number and kind of contacts and general coil additives shall be given in the title of the specification.