

Förderverein für Elektrotechnische Normung (FEN) e. V.
Cenelec Electronic Components Committee

CECC



Harmonized System of Quality Assessment for
Electronic Components

DETAIL SPECIFICATION:

ELECTROMECHANICAL ALL-OR-NOTHING RELAYS

**POLARIZED MONOSTABLE
HERMETICALLY SEALED
GENERAL PURPOSE RELAYS**

1

Edition
Issue
Ausgabe

CECC 16 200-801

1990



Documents

Document Sharing Hub

Information about the System may be obtained from:



FEN e.V. Secretariat
and
CECC General Secretariat
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Telefax: Int. + 49 69 63 94 27

or from the National Authorized Institutions
of the participating countries listed
who can supply copies of:

- 1 The Internal Regulations of the FEN e.V.
- 2 CECC Specifications of the FEN and National Specifications for the System
- 3 CECC 00 200: Qualified Products List (QPL)
- 4 CECC 00 300: CECC Publications and their related national documents

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für Elektrotechnik
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Comité Electrotechnique Belge
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B-1000 Brussels

Denmark

Dansk Elektroteknisk Komite
Strandgade 36
DK-1401 Copenhagen K

Finland

Finnish Electrotechnical
Standards Association
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France

Union technique de l'Electricité
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GB-London W1A 2BS

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 detail specification should be read in conjunction with the current regulations for the CECC System.

At the date of printing of this specification, the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom, and copies of it can be obtained from the addresses shown on the blue fly sheet.

PREFACE

This CECC detail specification is based, wherever possible, on the Publications of the International Electrotechnical Commission.

The text of this detail specification was circulated to the members of CECC WG 16 and was approved for publication under the accelerated procedure for the acceptance of detail specifications in accordance with Decisions 10, 11 and 12 of the minutes of the CECC CD in document CECC(Secretariat)1838.

Document

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Approval Date

February 1990

CECC 16 200-801 Issue 1

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Detail Specification:

Electromechanical all-or-nothing relays

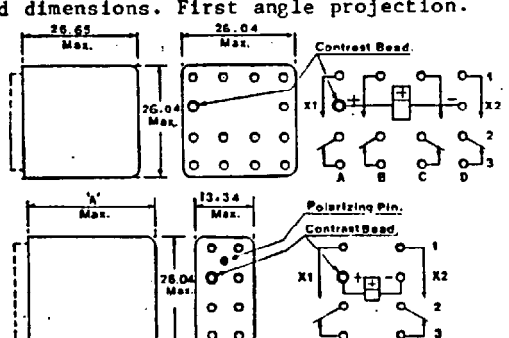
POLARIZED MONOSTABLE

HERMETICALLY SEALED

GENERAL PURPOSE RELAYS

THIS SPECIFICATION IS IN CONFORMANCE WITH THE

**PERFORMANCE LEVEL
ACCORDING TO TEST SCHEDULE 3
OF CECC 16 200 ISSUE 1**

Copies of this specification available from: CECC General Secretariat, Gartenstraße 179, D - 6000 Frankfurt or from the addresses shown on the inside cover	CECC 16 200-801 Issue 1 Page 1 of 26																																																									
ELECTRONIC COMPONENTS OF ASSESSED QUALITY. DETAIL SPECIFICATION IN ACCORDANCE WITH CECC 16 000 : 1980 and 1990 CECC 16 200 : 1990																																																										
Outline and dimensions. First angle projection.  Coil Variants 01, 02, 03, 04 and 05, 'A' = 25,65 max. Coil Variants 06 A = 28,6 max. All dimensions are in millimetres Mounting and Termination variants are shown in Annexes 1 and 2 Marking information: See clause 6.	ELECTROMECHANICAL ALL-OR NOTHING RELAYS POLARIZED MONOSTABLE HERMETICALLY SEALED GENERAL PURPOSE RELAYS HOOKED OR STRAIGHT TERMINATIONS.	CLIMATIC CATEGORY 65/125/56	Test Schedule : 3																																																							
1. COIL:																																																										
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3. Limiting conditions of use (not for inspection purposes)																																																										
Temperature Range : - 65 °C to + 125 °C Acceleration : 250 m/s ² Bump : 390 " 6 ms Vibration : 294 " 3000 Hz Shock : 1960 " 6 ms ½ sine. Dielectric strength at 23 °C : 1000 V rms coil to case 1250 V rms contacts to case Insulation resistance at ambient temperature: 100 M ohms at 500 V d.c.																																																										
Refer to Qualified Products List CECC 00 200 for details of manufacturers approved to this specification.																																																										

1 RELATED DOCUMENTS:

CECC 16 000 : 1990 Generic Specification : Electromechanical All-or-Nothing Relays
 CECC 16 200 : 1990 Sectional Specification : Electromechanical All-or-Nothing Relays
 CECC 00 200 Qualified Products List
 IEC 68 Basic environmental testing procedures
 IEC 410 Sampling Procedures and tables for Inspection by Attributes
 IEC 512-5 : 1977 Impact tests, static load tests, endurance tests and overload tests

2 CHARACTERISTIC VALUES:

2.1 Coils

TABLE 1 OPERATING CHARACTERISTICS (23 °C)

RATED VOLTAGE	MUST RELEASE VALUE	MUST OPERATE VALUE	MUST NOT RELEASE VALUE
6 V d.c.	0,3 V d.c.	3 V d.c.	1 V d.c.
12 V d.c.	0,7 V d.c.	6 V d.c.	2 V d.c.
28 V d.c.	1,4 V d.c.	14 V d.c.	5 V d.c.
48 V d.c.	2,5 V d.c.	24 V d.c.	8 V d.c.
110 V d.c.	6,5 V d.c.	55 V d.c.	18 V d.c.
115 V a.c./400 Hz	6,5 V a.c./400 Hz	75 V a.c./400 Hz	25 V a.c./400 Hz

Additional Information (not for inspection purposes):

RATED VOLTAGE	MUST RELEASE VALUE	MUST NOT RELEASE VALUE	MUST OPERATE VALUE +125 °C
	-65 °C	+125 °C	
6 V d.c.	0,2 V d.c.	2 V d.c.	3,9 V d.c.
12 V d.c.	0,5 V d.c.	4 V d.c.	7,7 V d.c.
28 V d.c.	1,5 V d.c.	7 V d.c.	18 V d.c.
48 V d.c.	2,0 V d.c.	14 V d.c.	31 V d.c.
110 V d.c.	5,0 V d.c.	30 V d.c.	70 V d.c.
115 V a.c./400 Hz	5,0 V a.c./400 Hz	30 V a.c./400 Hz	95 V a.c./400 Hz

2.2 Contacts

TABLE 2 RATED CONTACT LOAD (Case earthed)

TYPE OF LOAD	28 V d.c.		115 V a.c. 400 Hz	
	LIFE OPERATING CYCLES $\times 10^3$	LOAD AMP	LIFE OPERATING CYCLES $\times 10^3$	LOAD AMP
Resistive	100	10	100	10
Inductive	10	8	20	8
Motor	100	4	100	4
Lamp	100	2		

TABLE 3 CONTACT TIMES

NUMBER OF POLES	OPERATE TIME ms max.	RELEASE TIME ms max.		BOUNCE TIME ms max.
		d.c. coils	a.c. coils	
2	10	10	50	1,5
4	15	15	50	1,5

Contact circuit resistance 15 m Ω (initial)
17,5 m Ω (During and after rated life)

2.3 Electrical Values

Insulation resistance 100 M Ω at 500 V d.c.
Dielectric strength 1000 V rms coil to case
1250 V rms contacts to case

2.4 Mass

2 pole : 42 g max.d.c. coil
46 g max.a.c. coil
4 pole : 78 g max,a.c. and d.c. coils

3 FORMATION OF INSPECTION LOTS:

Inspection Lots shall be formed in accordance with 3.5 of CECC 16 200.

4 QUALIFICATION APPROVAL:

For Qualification Approval see Table 5

5 QUALITY CONFORMANCE INSPECTION:

For Quality Conformance Inspection see Table 4

With the exception of Sub-Group A1, where a sub-group contains more than one test, the order of tests is mandatory.

Specimens subjected to destructive tests (D) shall not be released for delivery.

6 MARKING OF RELAYS AND PACKAGE:

Relays and their package supplied in accordance with this detail specification shall be marked as follows:

6.1 Relay

- trade mark or manufacturer's name
- relay type and variants code (see 6.3)
- coded date of manufacture, year / week, in accordance with IEC 62
- (any further necessary marking)

6.2 Package

- detail specification reference
- trade mark or manufacturer's name
- relay type code
- manufacturer batch identification code
- (any further necessary marking)

6.3 Code Number

The relay code number shall consist of the specification number and digits in the order as follows:

- | | |
|------------------------------------|---------------|
| Two digits for coil variant | (see page 1) |
| Two digits for mounting variant | (see Annex 1) |
| Two digits for termination variant | (see Annex 2) |

7 ORDERING INFORMATION:

Orders for components qualified to this specification shall include the following information:

- 1) Quantity
- 2) CECC number, code number, (see 6.3) and issue number of this specification.

8 INSPECTION REQUIREMENTS:

8.1 Standard conditions for testing applicable to all tests unless otherwise specified

8.1.1 Atmospheric conditions as 5.5.1 of CECC 16 000.

8.1.2 Properties of supply and connections as 5.5.2 to 5.5.4 of CECC 16 000.

8.1.3 Where mounting is required for a particular test, the relay shall be mounted by fixing arrangements provided on the relay housing.

8.1.4 Clause numbers of tests and performance requirements refer to CECC 16 000.

The ILs and AQLs given in table 4 are selected from IEC 410.

In this table

p	=	periodicity (in months)
n	=	sample size
c	=	acceptance criterion (permitted number of defectives)
D	=	destructive
ND	=	non-destructive
IL	=	inspection level
AQL	=	acceptable quality level

8.1.5 Contact loading for bump, shock, vibration and acceleration tests shall not exceed 12 V open circuit voltage and 10 mA closed circuit current. A voltage change in excess of 10 % of the open circuit voltage observed across the relay contacts shall be regarded as a discontinuity.

Where the coil is required to be energized, the rated coil voltage as specified in Table 1 shall be used unless otherwise stated.