
Harmonized system of quality assessment for electronic components: Generic specification: Dry reed change-over contact units mechanically biased

Système harmonisé d'assurance de la qualité des composants électroniques
Spécification générique: Contacts de travail secs à deux directions en enceinte
scellée polarisés mécaniquement

Harmonisiertes Gütebestätigungssystem für Bauelemente der Elektronik
Fachgrundspezifikation: Trockene Reedkontakt-Einheiten mit mechanisch
vorgespanntem Wechsler

National foreword

This British Standard has been prepared under the direction of the Electronic Components Standards Committee. It is identical with CENELEC Electronic Components Committee (CECC) 18000 : 1983 'Harmonized system of quality assessment for electronic components: Generic specification: Dry reed change-over contact units mechanically biased'.

This standard, which serves both as a generic and sectional specification, gives the terminology, quality assessment procedures, test and measurement procedures, preferred values and the rules for writing detail specifications in respect of dry reed change-over contact units mechanically biased. Where the text would be identical with that applicable to dry reed make contact units, reference is made to the corresponding standard for those components, namely BS CECC 19000.

Any blank detail specification dealing with a particular sub-family of dry reed change-over contact units mechanically biased required to be used in conjunction with this standard will select those tests which are considered appropriate to the sub-family and may also give more detailed information relative to the sub-family. The test schedules and grouping of the tests to be prescribed in the blank detail specification are to be written in accordance with the requirements of clause 7 of BS CECC 19000 : 1979.

This standard is a harmonized specification within the CECC system.

Terminology and conventions. The text of the CECC specification has been approved as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is drawn especially to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

NOTE. The last sentence of the foreword of the CECC specification is inapplicable for the purposes of this British Standard.

Cross-reference. The British Standard which implements CECC 00100 is BS 9000 'General requirements for a system for electronic components of assessed quality' Part 2 : 1983 'Specification for national implementation of CECC basic rules and rules of procedure'.

International standard	Corresponding British Standard
CECC 19000 : 1978	BS CECC 19000 : 1979 Harmonized system of quality assessment for electronic components: Generic specification: Dry reed make contact units (Identical)

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

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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 accepted by all member countries without further testing.

This specification has been formally approved by the CECC, and has been prepared for those countries taking part in the System who wish to issue national harmonized specifications for DRY REED CHANGE-OVER CONTACT UNITS MECHANICALLY BIASED. It should be read in conjunction with document CECC 00 100: Basic Rules (1974).

At the date of printing of this document the member countries of the CECC are Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom. Copies of it can be obtained from the addresses shown on the inside cover.

PREFACE

This generic specification was prepared by Working Group 19 : "Reed contact devices".

This specification is based on CECC 19 000 : Dry reed make contact units and it shall be used in conjunction with it.

In accordance with the requirements of document CECC 00 100 it is based wherever possible, on the Recommendations of the International Electrotechnical Commission.

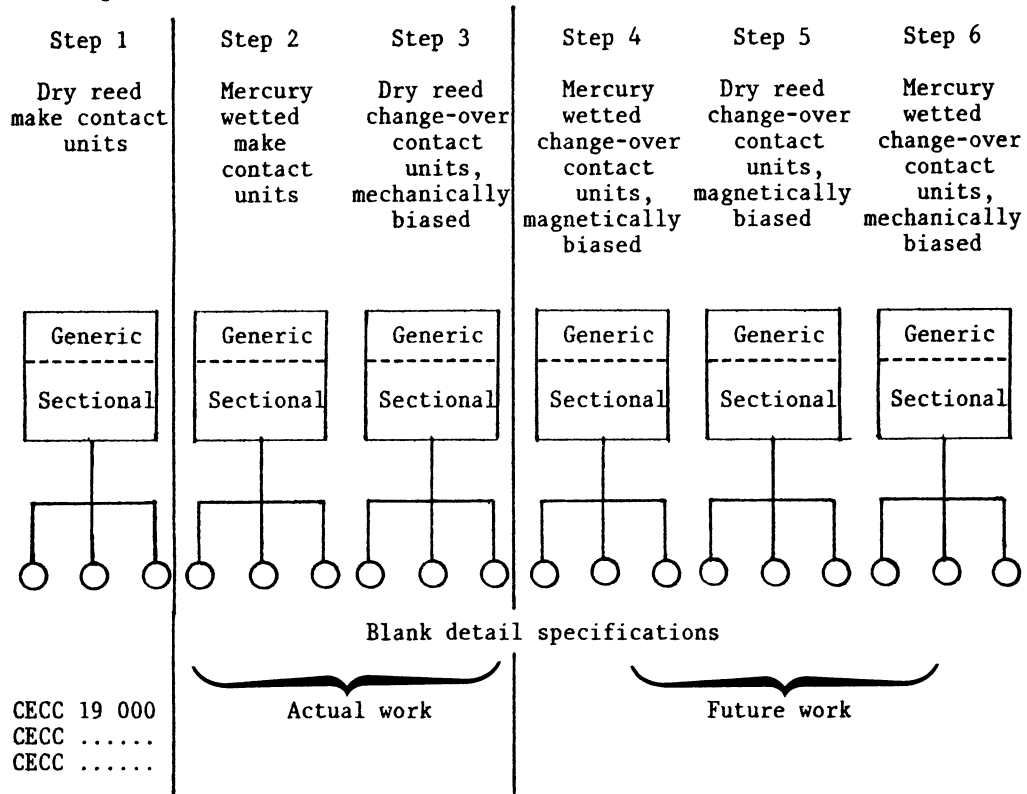
Voting

The text of this specification was circulated to the CECC for voting in the documents listed below, and was ratified by the President of the CECC for printing as a CECC Specification.

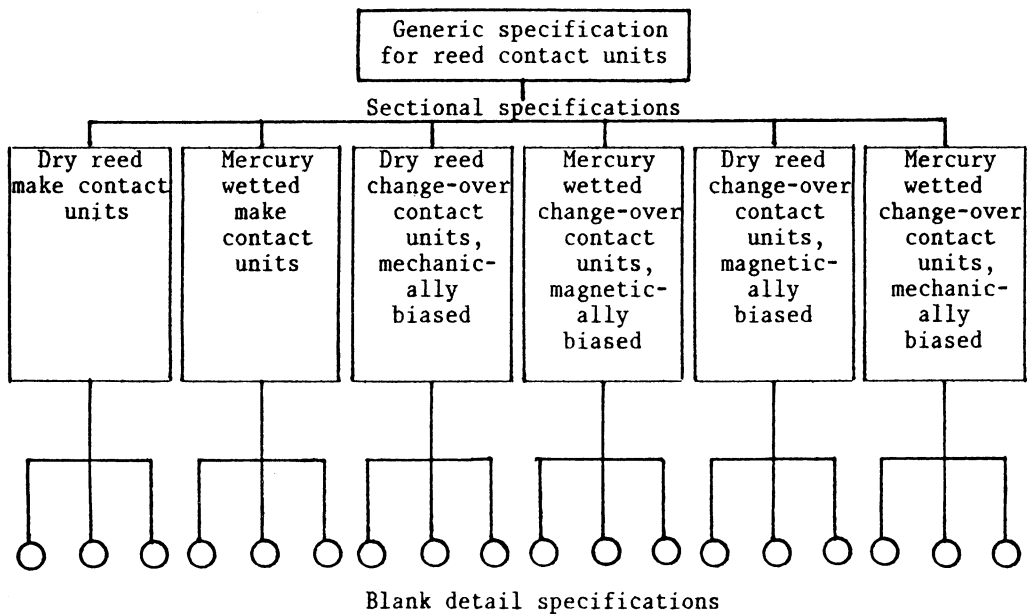
<u>Document</u>	<u>Voting Date</u>	<u>Report on the voting</u>
CECC(Secretariat)1066	September 1981	CECC(Secretariat)1174

SPECIFICATION FOR DRY REED CHANGE-OVER CONTACT UNITS, MECHANICALLY BIASED

The present scheme is as follows:



After completion of the different steps, the specifications will be reworked as follows:



SECTION 1 - SCOPE

This generic specification lists the test and measurement procedures which may be selected for use in detail specifications for dry reed change-over contact units, mechanically biased of assessed quality. It also specifies the quality assessment procedures to be followed and lays down the rules for writing the corresponding detail specifications.

This specification applies only to those contact units which are operated by an applied magnetic field and is not restricted to any particular type of contact load. It does not apply to dry reed change-over contact units where:

- the electrical circuit and the magnetic circuit close at different magnetization values.
- or the electrical circuit and the magnetic circuit open at different magnetization values.

It also excludes those units built with remanent magnetic material and permanent magnets.

Note : Because tests using a standard coil and standard resistive loads are the easiest to specify and define this specification is currently restricted to tests of this type.

SECTION 2 - GENERAL

2.1 Related documents

The related documents for this specification are CECC 19 000 together with the documents listed in 2.1 of that specification.

2.2 Units, symbols and terminology

The requirements of 2.2 of CECC 19 000 with the exception of 2.2.3, 2.2.16, 2.2.19, 2.2.20, 2.2.24 and 2.2.25, are relevant to the needs of this specification. The following definitions also apply :

Note: For 2.2.8, 2.2.9, 2.2.10, 2.2.11, 2.2.12, 2.2.13, 2.2.14 and 2.2.15 of CECC 19 000, figure 1 does not adequately illustrate the functional characteristics of dry reed change-over contact units, mechanically biased, and reference should therefore be made to figure 1 of this specification.

2.2.1 Contact blade (for dry reed change-over contact units)

A metal blade providing either the functions of an electric or magnetic circuit or both functions combined.

2.2.2 Make Contact (Form A contact)

A make contact of a reed contact unit is physically open when there is no applied magnetic field. This is a normally open contact.

2.2.3 Break Contact (Form B contact)

A break contact of a reed contact unit is physically closed when there is no applied magnetic field. This is a normally closed contact.

2.2.4 Change-over reed contact unit

A change-over reed contact unit contains a normally open and a normally closed contact within its envelope, one contact blade being common.

2.2.5 Change-over reed contact unit, mechanically biased

A change-over reed contact unit where the biasing, to determine the normally closed and normally open positions is achieved mechanically.

2.2.6 Change-over break-before-make reed contact unit (Form C contact)

Change-over reed contact unit, one contact circuit of which breaks before the other makes.

2.2.7 Change-over make-before-break reed contact unit (Form D contact)

Change-over reed contact unit, one contact circuit of which makes before the other breaks.

2.2.8 Change-over reed contact unit with unspecified switching sequence
(Form A + B contact)

Change-over reed contact unit where the switching sequence can be either make-before-break or break-before-make.

2.2.9 Operate position

The position where the make contact is closed and the break contact is open.

2.2.10 Release position

The position where the make contact is open and the break contact is closed.

2.2.11 Magnetic Dwell

The difference in the values of applied magnetic field when the break contact just opens and the make contact just closes.

Note : For time definitions see also Fig. 3B and 3C.

2.2.12 Transfer time

The time interval during which both contact circuits are open (not including bounce time).

2.2.13 Bridging time

The time interval during which both contact circuits are closed (not including bounce time).

2.2.14 Operate time

The time interval between the instant of application of a magnetic field to the reed contact unit and the instant the contact is in the operate position.

2.2.15 Release time

The time interval between the instant of the removal of an applied magnetic field from the reed contact unit and the instant the contact is in the release position.

2.2.16 Operate make time

The time interval between the instant of the application of a magnetic field to the reed contact unit and the instant of the first physical closing of the make contact.

2.2.17 Operate break time

The time interval between the instant of the application of a magnetic field to the reed contact unit and the instant of the first physical opening of the break contact.

2.2.18 Release make time

The time interval between the instant of the removal of an applied magnetic field from the reed contact unit, and the instant of the first physical closing of the break contact.

2.2.19 Release break time

The time interval between the instant of the removal of an applied magnetic field from the reed contact unit, and the instant of the first physical opening of the make contact.

2.2.20 Operate transfer time

The transfer time measured when the break-before-make reed contact unit moves from the released position to the operate position.

2.2.21 Release transfer time

The transfer time measured when the break-before-make reed contact unit moves from the operate position to the release position.

2.2.22 Operate bridging time

The bridging time during which the make-before-break reed contact unit moves from the release to the operate position.

2.2.23 Release bridging time

The bridging time during which the make-before-break reed contact unit moves from the operate to the release position.

2.2.24 Maximum cycling frequency

The maximum number of cycles per second, at and below which, the contact unit still meets the specifications.

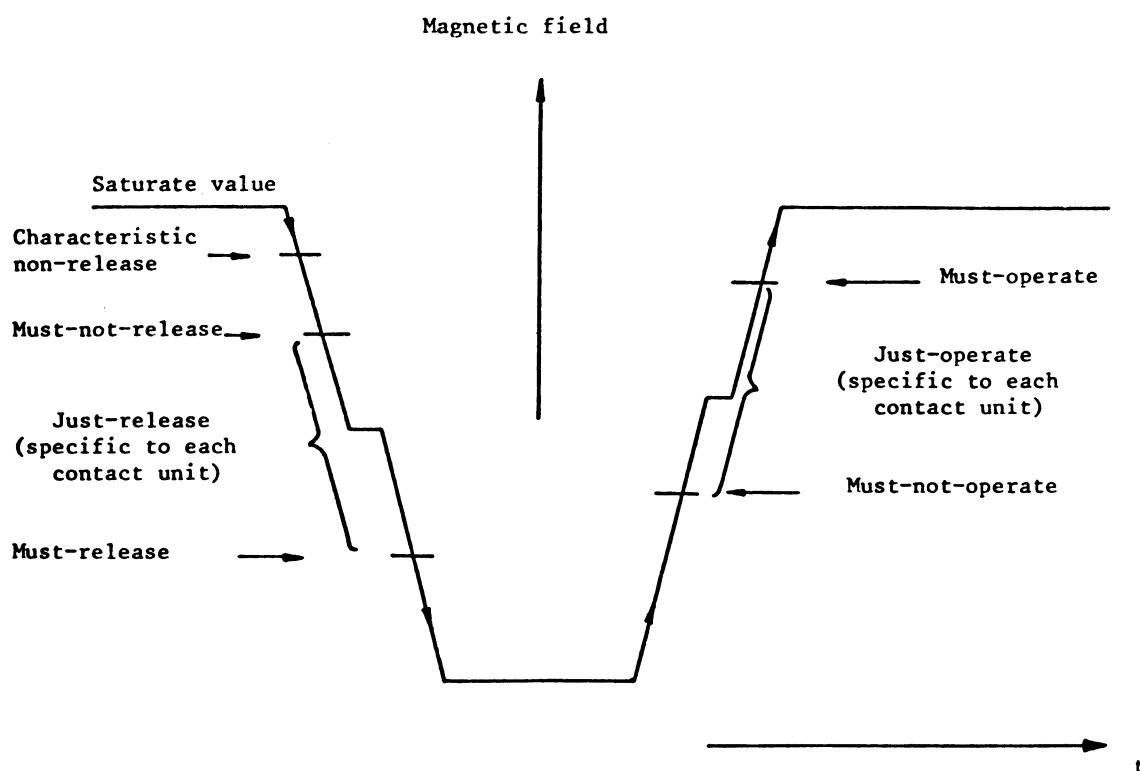


FIG. 1 FUNCTIONAL CHARACTERISTICS

2.3 Marking

As specified in 2.3 of CECC 19 000.