



SLOVENSKI STANDARD

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Generic Specification: Electromechanical all-or-nothing relays - Part 2: Generic data and methods of test for time delay relays

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Fachgrundspezifikation: Elektromechanische Schaltrelais -- Teil 2: Fachgrundspezifische Angaben und Prüfverfahren für Zeitrelais

Spécification générique: Relais électromécaniques de tout-ou-rien -- Partie 2: Caractéristiques générales et méthodes d'essai pour relais temporisés

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**EUROPEAN STANDARD
NORME EUROPÉENNE
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EN 116 000 - 2

November 1992

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Generic Specification:

Electromechanical all-or-nothing relays.

Part II: Generic data and methods of test for time delay relays

**Spécification Générique:
Relais électromécaniques de tout-ou-rien.
Partie II: Caractéristiques générales et méthodes d'essai pour relays temporisés**

**Fachgrundspezifikation:
Elektromechanische Schaltrelais.
Teil II: Fachgrundspezifische Angaben und Prüfverfahren für Zeitrelais**

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This European Standard was approved by the CENELEC Electronic Components Committee (CECC) on 14 October 1991. 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

CENELEC Electronic Components Committee

Comité des Composants Electroniques du CENELEC

CENELEC Komitee für Bauelemente der Elektronik

General Secretariat: Gartenstr. 179, D- 6000 Frankfurt/Main 70

PREFACE

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 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 **ELECTROMECHANICAL ALL-OR-NOTHING RELAYS**. It should be read in conjunction with the current regulations for the CECC System.

Copies of it can be obtained from the addresses shown on the blue fly sheet.

FOREWORD

This specification was prepared by CECC WG 16 "Relays".

It is based, wherever possible, on the Publications of the International Electrotechnical Commission (IEC).

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The CECC voting procedure for the conversion of publication CECC 16 000 Part II Issue 1 : 1986 to EN has resulted in a positive vote.

The voting report [document CECC(Secretariat)2879/09.91] has been submitted for formal approval and has been accepted. The reference document was approved by CECC as EN 116 000 - 2 : 1992 on 14 October 1991.

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The following dates were fixed:

- | | | |
|---|-------|------------|
| - latest date of announcement of the EN at national level | (doa) | 1992-12-08 |
| - latest date of publication of an identical national standard | (dop) | 1993-06-08 |
| - latest date of declaration of national standards obsolescence | | 1993-06-08 |
| - latest date of withdrawal of conflicting national standards | (dow) | 2002-12-08 |

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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
GENERIC DATA AND METHODS OF TEST FOR TIME DELAY RELAYS.

It 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. Copies of it can be obtained from the addresses shown on the blue fly sheet.

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PREFACE

This Part II of CECC 16 000 (Generic Specification, Electromechanical all-or-nothing relays) was prepared by CECC Working Group 16: 'Relays'.
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It is based, wherever possible, on the Publications of the International Electrotechnical Commission.

The text of this Part II was circulated to the CECC for voting in the document 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)1586	March 1985	CECC(Secretariat)1727

This Part II for practical and organizational reasons is published under its own cover but should be read in close conjunction with Part I.

The numbering of clauses is not completely in line with CECC 00 400. However, to avoid unnecessary editorial work taking considerable time this has been left unchanged.

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P A R T IIGENERIC DATA AND METHODS OF TEST FOR TIME DELAY RELAYS
=====1. Scope

This Part II lists the additional test and measurement procedures which, together with those given in Part I may be selected by specification writers, in conjunction with the relevant sectional and blank detail specifications, to prepare detail specifications for time delay relays of assessed quality. This Part II also gives the relevant terminology.

The time delay relays (TDR s) covered by this Part II can have either electromechanical or solid state outputs, and their time characteristics may be achieved by electronic (solid state), thermal or mechanical means, or may be inherent in the relay construction.

Relays having the following types of time characteristic are covered:

- a) Delay on operate
- b) Delay on release
- c) Interval
- d) Repeat cycle

2. Terms and definitions

Where applicable the terms and definitions of Part I apply.

The definitions of Release condition and Operate condition remain valid for TDR s under the assumption that the relay is energized or not energized for a time sufficient to complete its designated function in its output circuit.

Note: The basic types, functions, conditions and time parameters of TDR s are explained in drawings 1 to 9.

The following definitions also apply:

2.1 Time delay relay (TDR)

An all-or-nothing relay of which the characterising performance is an intended time function.

Note: This term is not identical to the term "Specified-time relay", as the latter may or may not perform an intended time function. As a consequence, some other terms related to TDR s have to be different from those for specified-time (and, even more so, for non-specified-time) relays.

2.2 Delay on operate TDR

A TDR with intentionally prolonged operate time.

2.3 Delay on release TDR

A TDR with intentionally prolonged release time.

2.4 Interval TDR

A TDR which remains in operate condition during a pre-determined time interval.

2.5 Repeat cycle TDR

A TDR which continually changes over at predetermined time intervals.

2.6 Cumulative TDR

A TDR which summates periods of application or removal of the input energizing voltage until it changes over.

2.7 Maintained TDR

A TDR which does not reset in the event of the auxiliary energizing voltage being removed before it changes over.

2.8 Preset TDR

A TDR with fixed timing and without the possibility of adjustment

Note: In this specification, such TDR s are referred to as TDR with no scale.

2.9 Energizing voltage

A voltage which alone or in combination with other voltages enables the TDR to operate.

2.10 Input energizing voltage

An energizing voltage to which the TDR is designed to respond by its designated function.

2.11 Auxiliary energizing voltage

An energizing voltage other than the input energizing voltage.

2.12 Interval time

For an interval TDR, the time interval during which the relay remains in operate condition.

For a repeat cycle TDR, the time interval during which the relay remains in operate condition (on-time) or during which it remains in release condition (off-time).

2.13 Recovery time

The time needed by a TDR to recover from an operate condition so that the following operating time is within specified limits.

2.14 Absolute error

The algebraic difference between the actual value of a time parameter and its setting value.

2.15 Relative error

The ratio of the absolute error to the setting value.

2.16 Conventional error

The ratio of the absolute error to a specified conventional value.

Note: For TDR s the specified conventional value is the maximum value of the setting range.

2.17 Influencing quantity (factor)

Any quantity or factor likely to modify any of the time parameters of a TDR.

2.18 Variation

The difference between the values of a time parameter when one or more influencing quantities or factors successively assume specified values within their rated ranges. It may be expressed as an absolute value, as a relative or as a conventional variation.

2.19 Limit of error

The maximum value of error assigned by the manufacturer to the time parameter of a TDR. It shall be expressed as a percentage relative or conventional error.