

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Electrical relays - Tests and measurements -
Part 45: Maximum frequency of operation**

**Relais électriques - Essais et mesurages -
Partie 45: Fréquence maximale de fonctionnement**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

Electrical relays - Tests and measurements - Part 45: Maximum frequency of operation

FOREWORD

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IEC 63522-45 has been prepared by IEC technical committee 94: Electrical relays. It is an International Standard.

The text of this International Standard is based on the following documents:

Draft	Report on voting
94/1022/FDIS	94/1136/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts of IEC 63522 series, published under the general title *Electrical relays*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
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- revised.

1 Scope

This part of IEC 63522 is used for testing electromechanical elementary relays (electromechanical relays, reed relays, reed contacts, reed switches and technology combination of these) and evaluates their ability to perform under expected conditions of transportation, storage and all aspects of operational use.

This test defines a standard test method for maximum frequency of operation to ensure the mechanical, electrical durability and contact failure rate test of electromechanical elementary relays.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 63522-0:–¹, *Electrical relays – Tests and measurements – Part 0: General and guidance*

IEC 63522-8:–², *Electrical relays – Tests and measurements – Part 8: Timing*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 63522-0 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1 Terms and definitions related to conditions and operations

3.1.1

maximum frequency of operation

N_{\max}

maximum number of cycles per hour to ensure the mechanical or electrical durability by adding a pulse input of the rated voltage to the relay coil

[SOURCE: IEC 60050-444:2002, 444-02-12, modified – modification of the term and definition]

3.1.2

energizing voltage

value of the coil voltage, when applied to the coil(s) of a DUT under specified conditions, enables it to fulfil its purpose

[SOURCE: IEC 60050-444:2002, 444-03-01, modified – modification of the term energizing quantity]

¹ Under preparation. Stage at the time of publication: IEC CDV 63522-0:2024.

² Under preparation. Stage at the time of publication: IEC CDV 63522-8:2024.