

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Electrical relays – Tests and measurements –  
Part 48: Contact failure rate test**

**Relais électriques – Essais et mesurages –  
Partie 48 : Essai de taux de défaillance des contacts**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL RELAYS –  
TESTS AND MEASUREMENTS –**

**Part 48: Contact failure rate test**

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

Draft	Report on voting
94/1039/FDIS	94/1084/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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts of IEC 63522 series, published under the general title *Electrical relays – Tests and measurements*, 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](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

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# ELECTRICAL RELAYS – TESTS AND MEASUREMENTS –

## Part 48: Contact failure rate test

### 1 Scope

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

This document defines a standard test method for contact failure rate test of electromechanical elementary relays applied to low-load applications (for example, CC 0, CC 1) and failure rates and failure rate levels at low loads under specified conditions.

### 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 60605-4:2001, *Equipment reliability testing – Part 4: Statistical procedures for exponential distribution – Point estimates, confidence intervals, prediction intervals and tolerance intervals*

IEC 61810-1, *Electromechanical elementary relays – Part 1: General and safety requirements*

IEC 61810-2, *Electromechanical elementary relays – Part 2: Reliability*

IEC 61810-4, *Electromechanical elementary relays – Part 4: General and safety requirements for reed relays*

IEC 62246-1, *Reed switches – Part 1: Generic specification*

IEC 62246-1-1:2018, *Reed switches – Part 1-1: Generic specification – Blank detail specification*

IEC 62246-4:2023, *Reed switches – Part 4: Application in conjunction with magnetic actuator used for magnetic sensing devices*

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

IEC 63522-6, *Electrical relays – Tests and measurements – Part 6: Contact-circuit resistance (or voltage drop)*<sup>2</sup>

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

<sup>2</sup> Under preparation. Stage at the time of publication: IEC FDIS 63522-6:2024.