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

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 04/25

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EN IEC 63522-48

January 2025

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English Version

**Electrical relays - Tests and measurements - Part 48: Contact
failure rate test
(IEC 63522-48:2024)**

Relais électriques - Essais et mesurages - Partie 48 : Essai
de taux de défaillance des contacts
(IEC 63522-48:2024)

Elektrische Relais - Prüfungen und Messungen - Teil 7-48:
Prüfung der Kontaktausfallrate
(IEC 63522-48:2024)

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EN IEC 63522-48:2025 (E)**European foreword**

The text of document 94/1039/FDIS, future edition 1 of IEC 63522-48, prepared by TC 94 "Electrical relays" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63522-48:2025.

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Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
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	EN 61810-1	-
IEC 61810-2	-	Electromechanical elementary relays - Part 2: Reliability	EN 61810-2	-
IEC 61810-4	-	Electromechanical elementary relays - Part 4: General and safety requirements for reed relays	EN IEC 61810-4	-
IEC 62246-1	-	Reed switches - Part 1: Generic specification	EN 62246-1	-
IEC 62246-1-1	2018	switches – Part 1-1: Generic specification - Blank detail specification	EN IEC 62246-1-1	2018
IEC 62246-4	2023	Reed switches - Part 4: Application in conjunction with magnetic actuator used for magnetic sensing devices	EN IEC 62246-4	2023
IEC 63522-0 ¹	—	Electrical relays - Tests and Measurements - Part 0: General and Guidance	EN IEC 63522-0 ²	—
IEC 63522-6 ³	-	Electrical relays - Tests and measurements - Part 6: Contact-circuit resistance (or voltage drop)	EN IEC 63522-6 ⁴	-

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

² Under preparation. Stage at the time of publication: prEN IEC 63522-0:2024.

³ Under preparation. Stage at the time of publication: IEC FDIS 63522-6:2024.

⁴ Under preparation. Stage at the time of publication: FprEN IEC 63522-6:2024.

EN IEC 63522-48:2025 (E)

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 63522-7 ⁵	-	Electrical relays - Tests and measurements - Part 7: Functional tests	EN IEC 63522-7 ⁶	-
IEC 63522-45 ⁷	—	Electrical relays - Tests and measurements - Part 45: Maximum frequency of operation	EN IEC 63522-45 ⁸	—

⁵ Under preparation. Stage at the time of publication: IEC BPUB 63522-7:2024.

⁶ Under preparation. Stage at the time of publication: FprEN IEC 63522-7:2024.

⁷ Under preparation. Stage at the time of publication: IEC FDIS 63522-45:2024.

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**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 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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TESTS AND MEASUREMENTS –****Part 48: Contact failure rate test****FOREWORD**

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IEC 63522-48 has been prepared by IEC technical committee 94: Electrical relays. It is an International Standard.

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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. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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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

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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*

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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*¹

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

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IEC 63522-7, *Electrical relays – Tests and measurements – Part 7: Functional tests*³

IEC 63522-45:–, *Electrical relays – Tests and measurements – Part 45: Maximum frequency of operation*⁴

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