

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Electrical relays – Tests and measurements –  
Part 14: Mould growth**

**Relais électriques – Essais et mesurages –  
Partie 14: Moisissures**

IEC 63522-14:2025

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**ELECTRICAL RELAYS – TESTS AND MEASUREMENTS –****Part 14: Mould growth**

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IEC 63522-14 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
94/1059/FDIS	94/1110/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 in the 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 14: Mould growth

### 1 Scope

This part of IEC 63522 is used for testing along with the appropriate severities and conditions for measurements and tests designed to assess the ability of DUTs to perform under expected conditions of transportation, storage and all aspects of operational use.

This document defines a test for determining the extent to which electrical relays support mould growth and how any mould growth can affect the performance and other relevant properties/functions of a relay.

### 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 60068-2-10:2005, *Environmental testing – Part 2-10: Tests – Test J and guidance: Mould growth*

IEC 60068-2-10:2005/AMD1:2018

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

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

### 3 Terms and definitions

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

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

## 4 Test procedure

### 4.1 Purpose

The purpose of this test procedure is to assess the extent of mould growth on a relay, or the effect of mould growth on the function of a relay.

### 4.2 Procedure

The test shall be carried out in accordance with test J of IEC 60068-2-10 and, if not otherwise specified by the manufacturer or application standards, in accordance with test variant 1 with a test duration of 28 days (severity 1) applies.

As part of the initial measurements, all DUTs shall be tested in accordance with IEC 60068-2-10:2005, Clause 9 and with IEC 63522-7.

### 4.3 Conditions

The conditions to be specified are the following.

All details on the following items in accordance with a) to f) of IEC 60068-2-10:2005, Clause 13:

- a) test variant 1 or 2,
- b) test variant 1 duration of incubation (severity),
- c) initial electrical and mechanical measurements and functional checks (only if performance deterioration is to be determined),
- d) preconditioning by cleaning,
- e) inoculation method (if not by spraying),
- f) interruption of incubation for visual intermediate inspection.

## 5 Evaluation

### 5.1 General

Final examinations shall include the following and be in accordance with IEC 60068-2-10:2005, Clause 12:

- a) visual examination,
- b) effect of growth,
- c) extent of growth – any grade is permitted as long as the functional test mentioned in 5.1 d) in accordance with IEC 63522-7 is passed,
- d) functional test according to IEC 63522-7, and the relay parameters are in line with the product specification.



## 5.2 Test report

If this document is applied as a part of a test record of another standard, then the results shall be reported as required in the other standard.

Otherwise, it is recommended to issue a dedicated test report in accordance with this document.

The test report shall contain all the information necessary to reproduce the test. In particular, the following shall be recorded:

- description of test DUT,
- test standard, edition and test variant,
- severity for test variant 1,
- test fungi (if deviating from the test standard),
- initial, intermediate and final examinations (detailed),
- cleaning of the DUT(s) (if applied),
- method of inoculation,
- conditions of incubation (if deviating from the test standard),
- mould growth on the control strips (after 7 days incubation),
- test results (specific observations inclusive),
- test criterion (permissible grade of mould growth if prescribed),
- evaluation of the performance (based on the test criterion),
- if applicable – any other observation.

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IEC 60068-1:2013, *Environmental testing – Part 1: General and guidance*

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