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Electrical relays - Tests and measurements -
Part 46: Impulse voltage test

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Electrical relays - Tests and measurements - Part 46: Impulse voltage test

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IEC 63522-46 has been prepared by IEC technical committee 94: Electrical relays. It is an International Standard.

This International Standard is to be used in conjunction with IEC 63522-0:–[1].

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[1] Under preparation. Stage at the time of publication: IEC FDIS 63522-0:2026.

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

Draft	Report on voting
94/1198/FDIS	94/1218/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 - 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 in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.

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 standard test method for impulse voltage test.

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 60664-1:2020, *Insulation coordination for equipment within low-voltage supply systems - Part 1: Principles, requirements and tests*
IEC 60664-1:2020/AMD1:2025

IEC 61180:2016, *High-voltage test techniques for low-voltage equipment - Definitions, test and procedure requirements, test equipment*

IEC 63522-0:-[2], *Electrical relays - Tests and measurements - Part 0: General and guidance*

IEC 63522-4, *Electrical relays - Tests and measurements - Part 4: Dielectric strength test*

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

4 Test procedure

4.1 Purpose

The impulse voltage test evaluates that the relay insulation is capable of withstanding specified transient overvoltages.

4.2 Procedure

4.2.1 Preconditioning

If specified by the relevant product standard, a relay in the new condition shall be subjected to the preconditioning specified in the standard itself.

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[2] Under preparation. Stage at the time of publication: IEC FDIS 63522-0:2026.