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INTERNATIONAL STANDARD

**Electrical relays - Tests and measurements -
Part 41: Tests and measurement procedures - Insulation coordination**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Electrical relays - Tests and measurements -
Part 41: Tests and measurement procedures - Insulation coordination**

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IEC 63522-41 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
94/1181/FDIS	94/1199/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 61810 series, published under the general title *Electrical relays - Tests and measurements*, can be found on the IEC website.

This International Standard is to be used in conjunction with IEC 63522-0.

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- withdrawn, or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 provides guidelines for the insulation coordination of electromechanical elementary, solid state, time, forcibility guided and reed relays as well reed contacts and hybrid switching solutions. This document can also be used for similar devices when specified in a detail specification.

Either the test, measurement of creepages, clearances, solid insulation and insulation systems or combinations or all of them are carried out in conjunction with other parts of the IEC 63522 series.

The basis of the insulation coordination is given in the IEC 60664 series.

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 60060-1:2025, *High-voltage test techniques - Part 1: General terminology and test requirements*

IEC 60079-15:2017, *Explosive atmospheres - Part 15: Equipment protection by type of protection "n"*

IEC 60270, *High-voltage test techniques - Charge-based measurement of partial discharges*

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

IEC 60664-3:2016, *Insulation coordination for equipment within low-voltage systems - Part 3: Use of coating, potting or moulding for protection against pollution*

IEC 60664-5:2007, *Insulation coordination for equipment within low-voltage systems - Part 5: Comprehensive method for determining clearances and creepage distances equal to or less than 2 mm¹*

IEC TS 62993:2017, *Guidance for determination of clearances, creepage distances and requirements for solid insulation for equipment with a rated voltage above 1 000 V AC and 1 500 V DC, and up to 2 000 V AC and 3 000 V DC*

IEC 63522-0, *Electrical relays - Tests and measurements - Part 0: General and guidance²*

IEC 63522-4:2025, *Electrical relays - Tests and measurements - Part 4: Dielectric strength test*

¹ This publication was withdrawn.

² Under preparation. Stage at the time of publication: IEC CDV 63522-0:2025.

Bibliography

IEC 60038, *IEC standard voltages*

IEC 60050-195:2021, *International Electrotechnical Vocabulary (IEV) - Part 195: Earthing and protection against electric shock*

IEC 60050-212:2010, *International Electrotechnical Vocabulary (IEV) - Part 212: Electrical insulating solids, liquids and gases*

IEC 60664-4, *Insulation coordination for equipment within low-voltage systems - Part 4: Consideration of high-frequency voltage stress*

IEC 60730-1:2022, *Automatic electrical controls - Part 1: General requirements*

IEC 63522 (all parts), *Electrical relays - Tests and measurements*

IEC 63522-10, *Electrical relays - Tests and measurements - Part 10: Heating*

IEC 63522-43, *Electrical relays - Tests and measurements - Part 43: Proof tracking index (PTI)*
