

TECHNICAL SPECIFICATION

**Instructions for simulation-based insulation coordination and modelling of
electrical networks**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

Instructions for simulation-based insulation coordination and modelling of electrical networks

FOREWORD

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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

- reconfirmed,
- withdrawn, or
- revised.

1 Scope

This technical specification gives guidance on conducting insulation co-ordination studies which propose internationally recognized recommendations:

- for the computational modelling of electrical systems, and
- for the implementation of deterministic and probabilistic methods adapted to the use of numerical programmes.

Its object is to give information in terms of methods, modelling and examples that support the application of the approaches presented in IEC 60071-2:2023, and for the selection of insulation levels of equipment or installations, as defined in IEC 60071-1:2019.

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 60071-1:2019, *Insulation co-ordination - Part 1: Definitions, principles and rules*

IEC 60071-2:2023, *Insulation co-ordination - Part 2: Application guidelines*

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IEC 60099-4:2014, *Surge arresters - Part 4: Metal-oxide surge arresters without gaps for a.c. systems*

IEC 62271-100:2021, *High-voltage switchgear and controlgear - Part 100: Alternating-current circuit-breakers*

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