



BSI Standards Publication

## High-voltage switchgear and controlgear

Part 307: Guidance for the extension of validity of type tests of AC metal and solid-insulation enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV

### **National foreword**

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# TECHNICAL REPORT

# RAPPORT TECHNIQUE



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**High-voltage switchgear and controlgear –  
Part 307: Guidance for the extension of validity of type tests of AC metal and  
solid-insulation enclosed switchgear and controlgear for rated voltages above  
1 kV and up to and including 52 kV**

**Appareillage à haute tension –  
Partie 307: Lignes directrices pour l'extension de validité des essais de type  
d'appareillages en courant alternatif sous enveloppe métallique et d'isolation  
solide pour tensions assignées supérieures à 1 kV et jusqu'à 52 kV inclus**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

**Part 307: Guidance for the extension of validity of type tests of  
AC metal and solid-insulation enclosed switchgear and controlgear  
for rated voltages above 1 kV and up to and including 52 kV**

## FOREWORD

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IEC TR 62271-307, which is a technical report, has been prepared by subcommittee 17C: Assemblies, of IEC technical committee 17: High-voltage switchgear and controlgear.

This Technical Report is to be read in conjunction with IEC 62271-200 published in 2011 and IEC 62271-201 published in 2014.

The text of this Technical Report is based on the following documents:

|               |                  |
|---------------|------------------|
| Enquiry draft | Report on voting |
| 17C/625/DTR   | 17C/632/RVC      |

Full information on the voting for the approval of this Technical Report can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 62271 series, published under the general title *High-voltage switchgear and controlgear*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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## HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

### Part 307: Guidance for the extension of validity of type tests of AC metal and solid-insulation enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV

## 1 General

### 1.1 Scope

This Part of IEC 62271, which is a Technical Report, refers to prefabricated metal-enclosed and solid-insulation enclosed (both hereinafter called enclosed) switchgear and controlgear assemblies for alternating current of rated voltages above 1 kV and up to and including 52 kV as specified in IEC 62271-200 and IEC 62271-201, and to other equipment included in the same enclosure with any possible mutual influence.

This Technical Report may be used for the extension of the validity of type tests performed on one test object with a defined set of ratings to another switchgear assembly of the same family with a different set of ratings or different arrangements of components. It supports the selection of representative test objects composed of functional units of a family of switchgear and controlgear aimed at the optimization of type tests in order to perform a consistent conformity assessment.

This Technical Report utilises a combination of sound technical and physical principles, manufacturer and user experience and calculations to establish guidance for the extension of validity of type tests, covering various design and rating aspects.

### 1.2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050-441:1984, *International Electrotechnical Vocabulary. Switchgear, controlgear and fuses*

IEC 60050-441:1984/AMD1:2000

IEC 62271-1:2007, *High-voltage switchgear and controlgear – Part 1: Common specifications*

IEC 62271-1:2007/AMD1:2011

IEC 62271-200:2011, *High-voltage switchgear and controlgear – Part 200: AC metal-enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV*

IEC 62271-201:2014, *High-voltage switchgear and controlgear – Part 201: AC solid-insulation enclosed switchgear and controlgear for rated voltages above 1 kV and up to and including 52 kV*

## 2 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-441, IEC 62271-1, IEC 62271-200, IEC 62271-201, as well as the following apply.

NOTE Some standard terms and definitions are recalled here for ease of reference.