



**BSI Standards Publication**

## **High-voltage switchgear and controlgear**

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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

This Published Document is the UK implementation of CLC IEC/TR 62271-307:2019. It is identical to IEC TR 62271-307:2015. It supersedes PD IEC/TR 62271-307:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PEL/17, High voltage switchgear, controlgear and assemblies.

A list of organizations represented on this committee can be obtained on request to its secretary.

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(IEC/TR 62271-307:2015)**

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  
(IEC/TR 62271-307:2015)

Hochspannungs-Schaltgeräte und -Schaltanlagen - Teil  
307: Leitfaden für die Erweiterung des Geltungsbereichs  
von Typprüfungen von metall- und isolierstoffgekapselten  
Wechselstrom-Schaltanlagen für Bemessungsspannungen  
über 1 kV und bis einschließlich 52 kV  
(IEC/TR 62271-307:2015)

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## **European foreword**

This document (CLC IEC/TR 62271-307:2019) consists of the text of IEC/TR 62271-307:2015 prepared by SC 17C "Assemblies" of IEC/TC 17 "High-voltage switchgear and controlgear".

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The text of the International Standard IEC/TR 62271-307:2015 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60865-1	NOTE	Harmonized as EN 60865-1
IEC 60071-1:2006	NOTE	Harmonized as EN 60071-1:2006 (not modified)
IEC 60071-1:2006/A1:2010	NOTE	Harmonized as EN 60071-1:2006/A1:2010 (not modified)

## CONTENTS

FOREWORD .....	5
1 General .....	7
1.1 Scope .....	7
1.2 Normative references .....	7
2 Terms and definitions .....	7
3 Use of extension criteria .....	9
3.1 General .....	9
3.2 Parameters for extension criteria .....	10
3.3 Use of calculations .....	10
3.3.1 General .....	10
3.3.2 Temperature rise calculations .....	11
3.3.3 Electric field calculations .....	11
3.3.4 Mechanical stress calculations .....	11
3.3.5 Short-circuit current calculations .....	11
3.3.6 Internal arc pressure rise calculations .....	12
3.4 Information needed for extension of type test validity .....	12
4 Application of extension criteria .....	12
4.1 Dielectric tests .....	12
4.2 Temperature rise tests .....	13
4.3 Mechanical tests .....	15
4.4 Short-time and peak withstand current tests .....	15
4.5 Making and breaking tests .....	16
4.6 Internal arc fault tests .....	17
4.6.1 General .....	17
4.6.2 Extension criteria with respect to design .....	17
4.6.3 Extension criteria with respect to ratings and installation conditions .....	18
5 Extending the validity of type tests .....	19
5.1 General .....	19
5.2 Extension of validity of a test report to other functional units (situation a) .....	20
5.3 Validation of a family by selection of test objects (situation b) .....	21
5.3.1 General .....	21
5.3.2 Mapping of the family .....	21
5.3.3 Specification of test objects .....	22
5.4 Validation of an assembly by existing test reports (situation c) .....	22
5.5 Validation of a design modification (situation d) .....	23
Annex A (informative) Rationale for the extension criteria .....	24
A.1 General .....	24
A.2 Dielectric tests .....	24
A.2.1 General .....	24
A.2.2 Clearances (Items 1 and 2) .....	24
A.2.3 Insulating supports and material (Items 3 and 4) .....	24
A.2.4 Live parts (Items 5 and 6) .....	25
A.2.5 Open contact gap and isolating distance (Items 7 and 8) .....	25
A.2.6 Minimum functional pressure for insulation (Item 9) .....	25
A.3 Temperature rise tests .....	25
A.3.1 General .....	25

A.3.2	Centre distance between phase conductors (Item 1).....	26
A.3.3	Phase to earth distance (Item 2).....	26
A.3.4	Enclosure and compartment volume (Item 3) .....	26
A.3.5	Insulating gas (Item 4) .....	27
A.3.6	Conductors (Items 5 and 6) .....	27
A.3.7	Conductor joints and connections (Items 7, 8 and 9).....	27
A.3.8	Ventilation area of partitions and enclosure (Item 10) .....	27
A.3.9	Power dissipation of components (Item 11).....	28
A.3.10	Insulating barriers (Item 12).....	28
A.3.11	Insulating coating of conductors and enclosures (Item 13 and 14) .....	28
A.3.12	Insulating material in contact with conductors (Item 15).....	29
A.4	Mechanical tests .....	29
A.4.1	General .....	29
A.4.2	Shutter systems (Item 1).....	29
A.4.3	Contacts of removable parts (Item 2) .....	30
A.4.4	Interlocking systems (Items 3 and 4).....	30
A.5	Short-time and peak withstand current tests.....	30
A.5.1	General .....	30
A.5.2	Centre distance between phase conductors (Item 1).....	31
A.5.3	Conductors (Items 2, 5 and 6).....	31
A.5.4	Insulating conductor supports (Items 3 and 4).....	31
A.5.5	Insulating material in contact with conductors (Item 7).....	32
A.5.6	Enclosure, partitions or bushings (Item 8).....	32
A.5.7	Contacts of removable part (Item 9).....	32
A.6	Making and breaking tests .....	32
A.6.1	General .....	32
A.6.2	Clearance between phases and to earth (Items 1 and 2).....	33
A.6.3	Enclosure and compartment volume (Item 3) .....	33
A.6.4	Insulating gas (Item 4) .....	33
A.6.5	Conductors (Items 5 and 6) .....	33
A.6.6	Insulating supports (Items 7, 8 and 9).....	33
A.7	Internal arc fault tests .....	34
A.7.1	General .....	34
A.7.2	Clearance between phases and to earth (Items 1 and 2).....	34
A.7.3	Compartment volume (Item 3).....	34
A.7.4	Pressure of insulating gas (Item 4) .....	35
A.7.5	Material in the region of arc initiation (Items 5, 6, 7 and 8).....	35
A.7.6	Pressure relief opening devices (Items 9, 10 and 11).....	35
A.7.7	Enclosure and compartments (Items 12, 13, 14 and 15).....	36
A.8	Rationale for extension criteria with respect to arc fault ratings and installation conditions .....	36
A.8.1	General .....	36
A.8.2	Rated arc fault current and duration (items 1 and 2) .....	36
A.8.3	Rated voltage (item 3) .....	36
A.8.4	Rated frequency (item 4) .....	37
A.8.5	Arrangement of assembly (items 5, 6 and 7).....	37
A.8.6	Indoor or outdoor installation (item 8) .....	37
A.8.7	Type of accessibility (item 9) .....	37
A.8.8	Accessible sides (item 10).....	37

Annex B (informative) Examples for the extension of validity of type tests.....	38
B.1 General.....	38
B.2 Design modification of a cable terminal in air insulated switchgear (AIS).....	38
B.3 Design modification of an AIS bus riser functional unit by adding current transformers .....	39
B.4 Design modification of a key-lock in the door of a functional unit of AIS .....	41
B.5 Extension of a ring-main unit (GIS) to functional units with larger width.....	41
B.6 Extension of a family of gas insulated switchgear (GIS) by a functional unit.....	43
Bibliography.....	46
 Figure 1 – Extension of validity of one test report; situation a) .....	20
Figure 2 – Validation of a family by selection of appropriate test objects; situation b).....	21
Figure 3 – Validation of actual assembly with existing test reports; situation c) .....	23
Figure B.1 – Cable terminals in the connection compartment of air insulated switchgear.....	38
Figure B.2 – Addition of block-type current transformers into the bus riser functional unit of air insulated switchgear.....	40
Figure B.3 – Special type of key-lock as replacement for a standard key-lock in the door of air insulated switchgear .....	41
Figure B.4 – Front view and top cross sectional view of a combination of functional units making up a ring-main unit .....	42
Figure B.5 – Cross-section of two different functional units of GIS .....	44
 Table 1 – Examples of design parameters.....	10
Table 2 – Extension criteria for dielectric withstand performance .....	13
Table 3 – Extension criteria for temperature rise performance .....	14
Table 4 – Extension criteria for mechanical performance .....	15
Table 5 – Extension criteria for short-time and peak withstand current performance .....	16
Table 6 – Extension criteria for making and breaking capacity .....	17
Table 7 – Extension criteria for internal arc fault withstand performance .....	18
Table 8 – Extension criteria for internal arc fault classification with respect to installation conditions .....	19
Table B.1 – Affirmation of extension criteria with respect to dielectric withstand performance of a functional unit.....	39
Table B.2 – Affirmation of extension criteria with respect to short-time current withstand performance of a functional unit .....	40
Table B.3 – Affirmation of extension criteria with respect to temperature rise performance of a ring-main-unit .....	43
Table B.4 – Affirmation of extension criteria with respect to internal arc classification of a GIS circuit-breaker compartment.....	44

## 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.