

**High-voltage switchgear and controlgear -- Part 4:
Handling procedures for sulphur hexafluoride (SF₆) and
its mixtures**

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62271-4:2013 sisaldab Euroopa standardi EN 62271-4:2013 inglisekeelset teksti.	This Estonian standard EVS-EN 62271-4:2013 consists of the English text of the European standard EN 62271-4:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
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English version

**High-voltage switchgear and controlgear -
Part 4: Handling procedures for sulphur hexafluoride (SF₆)
and its mixtures
(IEC 62271-4:2013)**

Appareillage à haute tension -
Partie 4: Utilisation et manipulation de
l'hexafluorure de soufre (SF₆) et des
mélanges contenant du SF₆
(CEI 62271-4:2013)

Hochspannungs-Schaltgeräte und -
Schaltanlagen -
Teil 4: Handhabungsmethoden im
Umgang mit Schwefelhexafluorid (SF₆)
und seinen Mischgasen
(IEC 62271-4:2013)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 17A/1044/FDIS, future edition 1 of IEC 62271-4, prepared by SC 17A "High-voltage switchgear and controlgear" of IEC/TC 17 "Switchgear and controlgear" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62271-4:2013.

The following dates are fixed:

- latest date by which the document has to be (dop) 2014-06-30
implemented at national level by
publication of an identical national
standard or by endorsement
- latest date by which the national (dow) 2016-09-30
standards conflicting with the
document have to be withdrawn

This document supersedes CLC/TR 62271-303:2009.

EN 62271-4:2013 includes the following significant technical changes with respect to CLC/TR 62271-303:2009:

- a) the description of the potential effects on health of SF₆ by-products (former Annex D of CLC/TR 62271-303:2009) has been replaced by the calculation methods for evaluating of the potential effects on health of SF₆ by-products (see Annex H);
- b) information about cryogenic reclaim of SF₆ have been added (see Annex I);
- c) handling procedures for the most popular SF₆ mixtures have been added (see Annex J).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 62271-4:2013 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 62271-203:2011	NOTE	Harmonized as EN 62271-203:2012 (not modified).
ISO 14040:2006	NOTE	Harmonized as EN ISO 14040:2006 (not modified).

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-441	-	International Electrotechnical Vocabulary (IEV) - Chapter 441: Switchgear, controlgear and fuses	-	-
IEC 60050-601	-	International Electrotechnical Vocabulary (IEV) - Chapter 601: Generation, transmission and distribution of electricity - General	-	-
IEC 60376	-	Specification of technical grade sulfur hexafluoride (SF ₆) for use in electrical equipment	EN 60376	-
IEC 60480	-	Guidelines for the checking and treatment of sulphur hexafluoride (SF ₆) taken from electrical equipment and specification for its re-use	EN 60480	-
IEC 62271-1	-	High-voltage switchgear and controlgear - Part 1: Common specifications	EN 62271-1	-
-	-	Transportable gas cylinders - Gas cylinder identification (excluding LPG) - Part 3: Colour coding	EN 1089-3	-

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INTRODUCTION

As agreed with TC 10, annexes A, E, F, G, H and I will be removed from this document as soon as the revised editions of IEC 60376 and IEC 60480 have been published.

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 4: Handling procedures for sulphur hexafluoride (SF₆) and its mixtures

1 General

1.1 Scope

This part of IEC 62271 applies to the procedures for handling of SF₆ during installation, commissioning, normal and abnormal operations, disposal at the end-of-life of high-voltage switchgear and controlgear.

These procedures are regarded as minimum requirements to ensure the safety of personnel working with SF₆ (see Annex B) and to minimize the SF₆ emission to the environment.

This standard generally applies also to gas mixtures containing SF₆. The particularities for their handling are covered in Annex J.

NOTE 1 Throughout this standard, use of the term High-Voltage (refer to IEC 60050-601:1985, 601-01-27) means a rated voltage above 1 000 V. However the term Medium Voltage (refer to IEC 60050-601: 1985, 601-01-28) is commonly used for distribution systems with voltages above 1 kV and generally applied up to and including 52 kV.

NOTE 2 Throughout this standard, the term “electric power equipment” stands for “high-voltage and medium-voltage switchgear and controlgear”.

NOTE 3 Throughout this standard, the term “pressure” stands for “absolute pressure”.

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, *International Electrotechnical Vocabulary – Chapter 441: Switchgear, controlgear and fuses*

IEC 60050-601, *International Electrotechnical Vocabulary – Chapter 601: Generation, transmission and distribution of electricity – General*

IEC 60376, *Specification of technical grade sulphur hexafluoride (SF₆) for use in electrical equipment*

IEC 60480, *Guidelines for the checking and treatment of sulphur hexafluoride (SF₆) taken from electrical equipment and specifications for its re-use*

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

EN 1089-3, *Transportable gas cylinders. Gas cylinder identification (excluding LPG). Colour coding*