BS EN 62271-105:2012



BSI Standards Publication

High-voltage switchgear and controlgear

Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV

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National foreword

This British Standard is the UK implementation of EN 62271-105:2012. It is identical to IEC 62271-105:2012. It supersedes BS EN 62271-105:2003, which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee PEL/17, Switchgear, controlgear, and HV-LV co-ordination, to Subcommittee PEL/17/1, High-voltage switchgear and controlgear.

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

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(IEC 62271-105:2012)

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Partie 105: Combinés interrupteurs-fusibles pour courant alternatif de tensions assignées supérieures à 1 kV et jusqu'à 52 kV inclus
(CEI 62271-105:2012)

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Teil 105: Wechselstrom-Lastschalter-Sicherungs-Kombinationen für Bemessungsspannungen über 1 kV bis einschließlich 52 kV
(IEC 62271-105:2012)

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European Committee for Electrotechnical Standardization
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Foreword

The text of document 17A/1013/FDIS, future edition 2 of IEC 62271-105, 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 62271-105:2012.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2013-08-01
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-11-01

This document supersedes EN 62271-105:2003.

EN 62271-105:2012 includes the following significant technical changes with respect to EN 62271-105:2003:

– implementation of figures at the place where they are cited first;

– renumbering of tables;

– addition of some of the proposals from IEC paper 17A/852/INF;

– addition of missing subclauses of EN 62271-1;

– implementation of 6.105 "Extension of validity of type tests" and consequently removing of the relevant parts in the different existing clauses;

– change of 7th paragraph of 6.101.4 as there is now a definition of NSDD given in 3.7.4 of EN 62271-1:2008. Harmonization with EN 62271-107;

– some referenced clauses in other standards like EN 60282-1 were changed and therefore changed the editions under 1.2 to the ones referred to;

– addition of a new Annex C defining tolerances.

This standard is to be read in conjunction with EN 62271-1:2008, to which it refers and which is applicable, unless otherwise specified in this standard. In order to simplify the indication of corresponding requirements, the same numbering of clauses and subclauses is used as in EN 62271-1. Amendments to these clauses and subclauses are given under the same numbering, whilst additional subclauses are numbered from 101.

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 62271-105:2012 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:

NOTE Harmonized as EN 62271-202.

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

		High-voltage fuses - Part 1: Current-limiting fuses	EN 60282-1	2009
IEC/TR 60787	2007	Application guide for the selection of high-voltage current-limiting fuse-links for transformer circuits	-	-
IEC 62271-1	2007	High-voltage switchgear and controlgear - Part 1: Common specifications	EN 62271-1	2008
IEC 62271-100	2008	High-voltage switchgear and controlgear - Part 100: Alternating current circuit-breakers	EN 62271-100	2009
IEC 62271-102 + corr. April + corr. February + corr. May	2001 2002 2005 2003	High-voltage switchgear and controlgear - Part 102: Alternating current disconnectors and earthing switches	EN 62271-102 + corr. July + corr. March	2002 2008 2005
IEC 62271-103	2011	High-voltage switchgear and controlgear - Part 103: Switches for rated voltages above 1 kV up to and including 52 kV	EN 62271-103	2011

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HIGH-VOLTAGE SWITCHGEAR AND CONTROLGEAR –

Part 105: Alternating current switch-fuse combinations for rated voltages above 1 kV up to and including 52 kV

1 General

1.1 Scope

Subclause 1.1 of IEC 62271-1:2007 is not applicable, and is replaced as follows:.

This part of IEC 62271 applies to three-pole units for public and industrial distribution systems which are functional assemblies of switches including switch-disconnectors and current-limiting fuses designed so as to be capable of

– breaking, at the rated recovery voltage, any current up to and including the rated short-circuit breaking current;
– making, at the rated voltage, circuits to which the rated short-circuit breaking current applies.

It does not apply to fuse-circuit-breakers, fuse-contactors, combinations for motor-circuits or to combinations incorporating single capacitor bank switches.

In this standard, the word “combination” is used for a combination in which the components constitute a functional assembly. Each association of a given type of switch and a given type of fuse defines one type of combination.

In practice, different types of fuses may be combined with one type of switch, which give several combinations with different characteristics, in particular concerning the rated currents. Moreover, for maintenance purposes, the user should know the types of fuses that can be combined to a given switch without impairing compliance to the standard, and the corresponding characteristics of the so-made combination.

A switch-fuse combination is then defined by its type designation and a list of selected fuses is defined by the manufacturer, the so-called “reference list of fuses”. Compliance with this standard of a given combination means that every combination using one of the selected fuses is proven to be in compliance with this standard.

The fuses are incorporated in order to extend the short-circuit breaking rating of the combination beyond that of the switch alone. They are fitted with strikers in order both to open automatically all three poles of the switch on the operation of a fuse and to achieve a correct operation at values of fault current above the minimum melting current but below the minimum breaking current of the fuses. In addition to the fuse strikers, the combination may be fitted with either an over-current release or a shunt release.

NOTE In this standard the term “fuse” is used to designate either the fuse or the fuse-link where the general meaning of the text does not result in ambiguity.

This standard applies to combinations designed with rated voltages above 1 kV up to and including 52 kV for use on three-phase alternating current systems of either 50 Hz or 60 Hz.

Fuses are covered by IEC 60282-1.

Devices that require dependent manual operation are not covered by this standard.