



NSAI
Standards

Irish Standard Recommendation
S.R. HD 60364-5-551:2010&A11:2016

Low-voltage electrical installations - Part 5-55: Selection and erection of electrical equipment - Other equipment - Clause 551: Low-voltage generating sets

S.R. HD 60364-5-551:2010&A11:2016

Incorporating amendments/corrigenda/National Annexes issued since publication:

HD 60364-5-551:2010/A11:2016

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:

HD 60364-5-551:2010

Published:

2010-02-05

This document was published under the authority of the NSAI and comes into effect on:

2018-01-16

ICS number:

NOTE: If blank see CEN/CENELEC cover page

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National Foreword

S.R. HD 60364-5-551:2010&A11:2016 is the adopted Irish version of the European Document HD 60364-5-551:2010, Low-voltage electrical installations - Part 5-55: Selection and erection of electrical equipment - Other equipment - Clause 551: Low-voltage generating sets

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

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HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 60364-5-551:2010/A11

May 2016

ICS 91.140

English Version

**Low-voltage electrical installations - Part 5-55: Selection and
erection of electrical equipment - Other equipment - Clause 551:
Low-voltage generating sets**

Installations électriques à basse tension - Partie 5-55: Choix
et mise en oeuvre des matériels électriques - Autres
matériels - Article 551: Groupes générateurs à basse
tension

Errichten von Niederspannungsanlagen - Teil 5-55:
Auswahl und Errichtung elektrischer Betriebsmittel - Andere
Betriebsmittel - Abschnitt 551:
Niederspannungsstromerzeugungseinrichtungen

This amendment A11 modifies the Harmonization Document HD 60364-5-551:2010; it was approved by CENELEC on 2016-02-29. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this amendment at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This amendment exists in three official versions (English, French, German).

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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European foreword

This document (HD 60364-5-551:2010/A11:2016) was prepared by CLC/TC 64 “Electrical installations and protection against electric shock”.

The following dates are fixed:

- latest date by which the document has to be implemented at (dop) 2017-03-01
national level by publication of an identical national
standard or by endorsement
- latest date by which the national standards conflicting with (dow) 2019-03-01
the document have to be withdrawn

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.

Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 60364-5-55:2001/A2:2008 (Clause 551) are prefixed “Z”.

HD 60364-5-551:2010/A11:2016

1 Modification to Foreword

In the last but one paragraph, replace "Annex ZA" by "Annex ZB".

2 Modification to Clause 551.2 General requirements

Add the following new subclause after 551.2.4:

551.2.Z1 Annex ZC details additional requirements

- for stand-alone generating sets not connected to the mains supply and
- for stand-alone generating sets for supplying energy in a fixed installation that is disconnected from the mains supply.

3 Modification to Annex ZA

Add the following new references:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60309-2	-	Plugs, socket-outlets and couplers for industrial purposes - Part 2: Dimensional interchangeability requirements for pin and contact-tube accessories	EN 60309-2	-
IEC 61557-8	-	Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. - Equipment for testing, measuring or monitoring of protective measures - Part 8: Insulation monitoring devices for IT systems	EN 61557-8	-

4 Modification to Annex ZB

Add the following SNC:

ZC.3.2.2.2 Germany

Instead of the requirements of the second paragraph of ZC.3.2.2.2, in Germany the standards DIN 14685-1, DIN 14685-2, DIN 14686 and DIN 14687 apply for single-phase socket-outlets for emergency cases.

5 Addition of Annex ZC

Add the following new Annex:



Corrigendum to HD 60364-5-551:2010

English version

SNC Germany

<u>Clause</u>	<u>Special national condition</u>
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551.1 Note	Delete the existing note and replace it by the following additional normative requirement: For low-voltage generating sets, which are connected to the low-voltage grid, the requirements of the distribution system operator shall be considered.
551.1 1st, 2nd and 3rd dash	The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore, the word <i>public</i> is deleted in the first, second and third dash.
551.2.1 Note	The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore, the word <i>public</i> is deleted in the note.
551.2.2 2nd sentence	The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore, the word <i>public</i> is deleted in the second sentence.
551.2.4	Clause 551.2.4 does not apply for Germany.
551.4.2 Clause and note	551.4.2 including the note is deleted, because the requirement is covered by 551.4.1 for all systems.
551.4.3.3.1 Note	The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore, the word <i>public</i> is deleted in the note.

551.4.3 *Additional requirements to 551.4.3*

In Germany the following measures are required, when protection by automatic disconnection of supply is provided by:

- a) IT system
In the IT system all exposed-conductive-parts shall be interconnected by a protective conductor. An earth resistance of $R_A \leq 100 \, \Omega$ is sufficient.
- b) Protective separation
When protective separation is applied, the following requirements shall be met: The exposed-conductive-parts of the generating set shall be connected to the unearthed equipotential bonding conductor, provided that the generating set is not protective class II equipment or set up with equivalent insulation.

If more than one current-using equipment is connected to the generating set, either item 1 or item 2 of the following requirements shall be apply:

- 1) If the insulation resistance between active parts and the unearthed equipotential bonding conductor drops below $100 \, \Omega$ per V nominal voltage, the circuits of the current-using equipment shall disconnect automatically within 1 s. Limitation of the network extension and adherence of the requirements for automatic disconnection conditions at the occurrence of two faults are not required.

Note The response time should be verified in accordance with DIN EN 61557-8 (VDE 0413-8).

- 2) The total length of the cables shall be limited, so that the product of nominal voltage in Volt and the total length in meter does not exceed 100 000 provided that also the total length of the cables does not exceed 500 m. The automatic disconnection conditions according to DIN VDE 0100-410 (VDE 0100-410), 411.6 shall be fulfilled.

551.5.2 The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore, the words "*to the public*" are deleted in the first sentence.

551.6.1
1st
sentence The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore, the words "*public*" are deleted in the first sentence.

The sentence reads now:

Precautions complying with the relevant requirements of IEC 60364-5-53 for isolation shall be taken, so that the generator cannot operate in parallel with other supply systems for the distribution of electrical energy.

551.6.2
Note 1 The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the new wording in Note 1 is:

It can be desirable in TN systems to disconnect the neutral of the installation from the neutral or PEN of the distribution system to avoid disturbances such as induced voltage surges caused by lightning.

551.7
Title The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the title is changed to:

Additional requirements for installations where the generating set may operate in parallel with other supply sources including the distribution system

551.7.2 Clause 551.7.2 does not apply to Germany.

551.7.3
1st + 2nd
sentence The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the words "*to the public*" are deleted.

551.7.3 3rd (last) sentence	In Germany, the sentence „ <i>Where synchronisation is necessary, the use of automatic synchronising systems which consider frequency, phase and voltage is to be preferred</i> “ does not apply and shall be deleted. Instead, the VDE code of practice VDE-Anwendungsregel (FNN) VDE-AR-N 4105, „Erzeugungsanlagen am Niederspannungsnetz“ shall be considered.
551.7.4 1st paragraph	<p>The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the first paragraph of 551.7.4 is as follows:</p> <p>Where a generating set is intended to run in parallel with the system of distribution of electricity, means of automatic switching shall be provided to disconnect the generating set from the distribution system in the event of loss of that supply or deviation of the voltage or frequency at the supply terminals from the values declared for normal supply.</p>
551.7.4 2nd paragraph	<p>The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the second paragraph of 551.7.4 is as follows:</p> <p>The type of protection and the sensitivity and operating times depend upon the protection of the system for distribution of electricity and the number of generating sets connected and shall be agreed by the distributor.</p>
551.7.5 1st paragraph	<p>The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the text of 551.7.5 is as follows:</p> <p>Where a generating set is intended to run in parallel with the system for distribution of electricity, means shall be provided to prevent the connection of a generating set from the distribution system in the event of loss of that supply or deviation of the voltage or frequency at the supply terminals from values declared for normal supply.</p>
551.7.6 1st sentence	<p>The requirements in Germany are not limited to the public supply system only, but include all supply systems. Therefore the 1st sentence of 551.7.6 is as follows:</p> <p>Where a generating set is intended to run in parallel with the system for distribution of electricity, means shall be provided to enable the generating set to be isolated from the distribution system.</p>
551.8	Clause 551.8 does not apply to Germany, because the requirements are covered by DIN EN 50272-2 (VDE 0510-2).

December 2010

HARMONIZATION DOCUMENT
DOCUMENT D'HARMONISATION
HARMONISIERUNGSDOKUMENT

HD 60364-5-551

February 2010

ICS 91.140

Supersedes HD 384.5.551 S1:1997

English version

**Low-voltage electrical installations -
Part 5-55: Selection and erection of electrical equipment -
Other equipment -
Clause 551: Low-voltage generating sets
(IEC 60364-5-55:2001/A2:2008 (CLAUSE 551))**

Installations électriques à basse
tension -
Partie 5-55: Choix et mise en oeuvre
des matériels électriques -
Autres matériels -
Article 551: Groupes générateurs à
basse tension
(CEI 60364-5-55:2001/A2:2008
(CLAUSE 551))

Errichten von Niederspannungsanlagen -
Teil 5-55: Auswahl und Errichtung elektrischer
Betriebsmittel -
Andere Betriebsmittel -
Abschnitt 551:
Niederspannungsstromerzeugungseinrichtungen
(IEC 60364-5-55:2001/A2:2008 (CLAUSE 551))

This Harmonization Document was approved by CENELEC on 2009-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for implementation of this Harmonization Document at national level.

Up-to-date lists and bibliographical references concerning such national implementations may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC

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

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Foreword

The text of the International Standard IEC 60364-5-55:2001/A2:2008, Clause 551, prepared by IEC TC 64, Electrical installations and protection against electric shock, was submitted to the CENELEC Unique Acceptance Procedure and was approved by CENELEC as HD 60364-5-551 on 2009-10-01.

This document supersedes HD 384.5.551 S1:1997.

In this standard, the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

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The following dates were fixed:

- latest date by which the HD has to be implemented
at national level by publication of a harmonized
national standard or by endorsement (dop) 2010-10-01
- latest date by which the national standards conflicting
with the HD have to be withdrawn (dow) 2012-10-01

For this Harmonization Document the informative Annex A of IEC 60364-5-55:2001/A2:2008 shall be disregarded and has been replaced by the normative Annex ZA, *Special national conditions*.

Annexes ZA and ZB have been added by CENELEC.

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