
**Zahteve za vzporedno vezavo generatorskih postrojev z razdelilnim omrežjem - 1.
del: Vezava z nizkonapetostnim razdelilnim omrežjem - Generatorski postroji do
vključno tipa B - Dopolnilo A1**

Requirements for generating plants to be connected in parallel with distribution networks
- Part 1: Connection to a LV distribution network - Generating plants up to and including
Type B

Anforderungen für zum Parallelbetrieb mit einem Verteilnetz vorgesehene
Erzeugungsanlagen - Teil 1: Anschluss an das Niederspannungsverteilstromnetz -
Erzeugungsanlagen bis einschließlich Typ B

Exigences relatives aux centrales électriques destinées à être raccordées en parallèle à
des réseaux de distribution - Partie 1: Raccordement à un réseau de distribution BT -
Centrales électriques jusqu'au Type B inclus

<https://standards.iteh.ai/catalog/standards/sist/d7b8a015-1622-4696-a026-e0ae0e4ab13c/sist-en-50549-1-2019-a1-2023>

Ta slovenski standard je istoveten z: EN 50549-1:2019/A1:2023

ICS:

29.160.20	Generatorji	Generators
29.240.01	Omrežja za prenos in distribucijo električne energije na splošno	Power transmission and distribution networks in general

SIST EN 50549-1:2019/A1:2023 en

EUROPEAN STANDARD

EN 50549-1:2019/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2023

ICS 29.160.20

English Version

Requirements for generating plants to be connected in parallel
with distribution networks - Part 1: Connection to a LV
distribution network - Generating plants up to and including
Type B

Exigences relatives aux centrales électriques destinées à
être raccordées en parallèle à des réseaux de distribution -
Partie 1: Raccordement à un réseau de distribution BT -
Centrales électriques jusqu'au Type B inclus

Anforderungen für zum Parallelbetrieb mit einem Verteilnetz
vorgesehene Erzeugungsanlagen - Teil 1: Anschluss an
das Niederspannungsverteilstromnetz - Erzeugungsanlagen bis
einschließlich Typ B

This amendment A1 modifies the European Standard EN 50549-1:2019; it was approved by CENELEC on 2023-09-21. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards 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). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

<https://standards.iteh.ai/catalog/standards/sist/d7b8a015-1622-4696-a026-e0ae0e4ab13c/sist-en-50549-1-2019-a1-2023>



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword.....	3
1 Modification to Introduction	4
2 Modification to Clause 2, “Normative references”	4
3 Modification to Clause 3, “Terms and definitions”	4
4 Modification to Clause 4, “Requirements on generating plants”	6
5 Modification to Annex C, “Parameter Table”	10
6 Modification to Annex D, “List of national requirements applicable for generating plants”	11
7 Modification to Annex F, “Examples of protection strategies”	11

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[SIST EN 50549-1:2019/A1:2023](https://standards.iteh.ai/catalog/standards/sist/d7b8a015-1622-4696-a026-e0ae0e4ab13c/sist-en-50549-1-2019-a1-2023)

<https://standards.iteh.ai/catalog/standards/sist/d7b8a015-1622-4696-a026-e0ae0e4ab13c/sist-en-50549-1-2019-a1-2023>

European foreword

This document EN 50549-1:2019/A1:2023 has been prepared by TC 8X “System aspects of electrical energy supply”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2024-09-21
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-09-21

This document amends EN 50549-1:2019.

This amendment includes the following significant technical changes:

- Introduction of a phase jump immunity requirement.
- Harmonizing the ROCOF immunity requirement for synchronous and non-synchronous generating technology.
- Modifying FRT for type A from recommendation to requirement.
- Providing additional detail for EESS in case of overfrequency.

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

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

[SIST EN 50549-1:2019/A1:2023](https://standards.iteh.ai/catalog/standards/sist/d7b8a015-1622-4696-a026-e0ae0e4ab13c/sist-en-50549-1-2019-a1-2023)

<https://standards.iteh.ai/catalog/standards/sist/d7b8a015-1622-4696-a026-e0ae0e4ab13c/sist-en-50549-1-2019-a1-2023>

EN 50549-1:2019/A1:2023 (E)**1 Modification to Introduction**

Replace item 8. with the following:

“8. Implementation of UVRT and LFSM-U to avoid legal conflict with RfG

Under Voltage Ride Through (UVRT) requirements are defined in RfG for modules type B, type C and type D. There is no mentioning of this topic for type A modules.

Nevertheless, UVRT is seen as an important requirement in some member states even for small generation modules like type A.

NOTE At the time of writing, UVRT requirements for type A modules have been implemented in the following countries: Austria, Czech Republic, Germany, Portugal (for PGM of 15 kW and higher), Switzerland.

From a legal point of view there are two contradicting opinions on whether it is allowed or forbidden to require UVRT for type A modules.

- Opinion 1: It can be required because the topic is not dealt with for type A modules.
- Option 2: It cannot be required because the topic UVRT is dealt within the RfG. Not mentioning UVRT for type A in RfG therefore means that it cannot be required for type A modules.

TC8X WG03 adopts the view of ACER as expressed in “ACER Monitoring of the Implementation of the Grid Connection Network Codes” 11 November 2021 Item 3.3.4 #D where it states the German UVRT requirement for Type A as compliant with NC RfG.

This same explanation can be applied to the requirements regarding Limited Frequency Sensitive Mode - Underfrequency (LFSM-U). In RfG, this LFSM-U is solely defined for type C and type D modules. In EN 50549, LFSM-U is defined as a recommendation (should) for generating modules of type A and type B. The sole exception is electrical energy storage systems having a requirement (shall). These systems are currently not within the scope of the RfG.”

2 Modification to Clause 2, “Normative references”

Add the following reference:

EN 50549-10, *Requirements for generating plants to be connected in parallel with distribution networks - Part 10: Tests for conformity assessment of generating units*

Delete the reference EN 60255-127.

3 Modification to Clause 3, “Terms and definitions”

Add the following note to entry to 3.2.10:

“

Note 3 to entry: Electric vehicle charging stations intended to feed power back to the grid are considered an EESS while a vehicle is connected.”

Add the following note to entry to 3.2.11:

“

Note 2 to entry: Electric vehicle charging stations intended to feed power back to the grid are considered an EES while a vehicle is connected.”

Add the following term entries:

“