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Standards

Irish Standard Recommendation
S.R. CLC/TS 50549-1:2015

Requirements for generating plants to be connected in parallel with distribution networks - Part 1: Connection to a LV distribution network above 16 A

S.R. CLC/TS 50549-1:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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English Version

**Requirements for generating plants to be connected in parallel
with distribution networks - Part 1: Connection to a LV
distribution network above 16 A**

Prescriptions relatives au raccordement de générateurs de
plus de 16A par phase - Partie 1: Connexion au réseau de
distribution BT

Anforderungen für den Anschluss von
Stromerzeugungsanlagen über 16 A je Phase - Teil 1:
Anschluss an das Mittelspannungsverteilungsnetz

This Technical Specification was approved by CENELEC on 2014-09-15.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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European Committee for Electrotechnical Standardization
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Europäisches Komitee für Elektrotechnische Normung

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

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Foreword

This document (CLC/TS 50549-1:2015) has been prepared by CLC/TC 8X "System aspects of electrical energy supply".

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.

This Technical Specification relates to both future European Network Codes and current technical market needs. Its purpose is to give detailed description of functions to be implemented in products.

This Technical Specification is also intended to serve as a technical reference for the definition of national requirements where European Network Codes requirements allow flexible implementation. The stated requirements are solely technical requirements; economic issues regarding, e.g. the bearing of cost are not in the scope of this document.

CLC/TC 8X plans future standardization work in order to ensure the compatibility of this Technical Specification with the evolution of the legal framework.

1 Scope

The purpose of this Technical Specification is to provide technical guidance on the requirements for generating plants which can be operated in parallel with a distribution network.

For practical reasons, this Technical Specification refers to the distribution system operator in case settings have to be defined and/or provided, even when these settings are to be defined and/or provided by another actor according to national and European legal framework.

NOTE 1 This includes European network codes and their national implementation, as well as further national regulations.

NOTE 2 Further national requirements especially for the connection to the distribution network and the operation of the generating plant can apply.

The requirements of this Technical Specification apply to all generating plants, electrical machinery and electronic equipment, irrespective of the kind of primary energy source and irrespective of the presence of loads in the producer's network that meet all of the following conditions:

- converting any primary energy source into AC electricity;
- connected to a LV distribution network and rated at more than 16 A per phase;
- intended to operate in parallel with this distribution network under normal network operating conditions.

NOTE 3 Generating plants rated up to and including 16 A per phase are covered by EN 50438.

NOTE 4 Generating plants connected to a MV distribution network fall into the scope of CLC/TS 50549-2.

Unless stated differently by the DSO generating plants connected to a medium voltage distribution network with a maximum apparent power up to 100 kVA can comply with this Technical Specification as alternative to the requirements of CLC/TS 50549-2. A different threshold may be defined by the DSO.

This Technical Specification defines connection requirements.

This Technical Specification recognizes the existence of National Standards, Network Codes, and specific technical requirements of the DSOs. These should be complied with.

Excluded from the scope are:

- the selection and evaluation of the point of connection;
- power system impact assessment;
- connection assessment;
- island operation of generating plants, both intentional and unintentional, where no part of the distribution network is involved;
- active front ends of drives feeding energy back into the distribution network for short duration;
- requirements for the safety of personnel as they are already adequately covered by existing European Standards.

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.

EN 60255-127, *Measuring relays and protection equipment — Part 127: Functional requirements for over/under voltage protection (IEC 60255-127)*

EN 61000-4-30, *Electromagnetic compatibility (EMC) — Part 4-30: Testing and measurement techniques — Power quality measurement methods (IEC 61000-4-30)*

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