Standard Recommendation
S.R. CLC/TS 50539-22:2010

Low-voltage surge protective devices - Surge protective devices for specific application including d.c. -- Part 22: Selection and application principles - Wind turbine applications

S.R. CLC/TS 50539-22:2010

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

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

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:	*This document is based on:* CLC/TS 50539-22:2010	*Published:* 14 May, 2010

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

14 June, 2010

ICS number:
29.120.50

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

Údarás um Chaighdeáin Náisiúnta na hÉireann

S.R. CLC/TS 50539-22:2010

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CLC/TS 50539-22

May 2010

ICS 29.120.50

English version

Low-voltage surge protective devices - Surge protective devices for specific application including d.c. - Part 22: Selection and application principles - Wind turbine applications

Parafoudres basse tension - Parafoudres pour applications spécifiques incluant le courant continu - Partie 22: Principes de choix et d'application - Parafoudres connectés aux installations éolienne

Überspannungsschutzgeräte für Niederspannung - Überspannungsschutzgeräte für besondere Anwendungen einschließlich Gleichspannung - Teil 22: Auswahl und Anwendungsgrundsätze - Überspannungsschutzgeräte für den Einsatz in Windenergieanlagen

This Technical Specification was approved by CENELEC on 2009-10-30.

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.

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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. CLC/TS 50539-22:2010 E

Foreword

This Technical Specification was prepared by the Technical Committee CENELEC TC 37A, Low voltage surge protective devices.

It was circulated for voting in accordance with the Internal Regulations, Part 2, Subclause 11.3.3.3 and was accepted as a CENELEC Technical Specification on 2009-10-30.

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

The following date was fixed:

– latest date by which the existence of the CLC/TS has to be announced at national level (doa) 2010-04-30

Contents

Figures

Tables

1 Scope

This Technical Specification applies to surge protection of wind turbine generators and wind power systems.

Normative references are made to generic standards for lightning protection, low-voltage systems and high-voltage systems for machinery and installations and electromagnetic compatibility (EMC).

This Technical Specification defines requirements for selection and installation of surge protective devices for the power circuits. Some special information about particular testing are also included since there is not a current standard for testing surge protective devices for wind turbines.

2 Normative references

Void.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
LEMP protection measures system
LPMS
complete system of protection measures for internal systems against LEMP

[EN 62305-4:2006, Definition 3.9]

3.2
lightning current
i
current flowing at the point of strike

[EN 62305-1:2006, Definition 3.9]

3.3
lightning electromagnetic impulse
LEMP
electromagnetic effects of lightning current

NOTE It includes conducted surges as well as radiated impulse electromagnetic field effects.

[EN 62305-4:2006, Definition 3.4]

3.4
lightning protection level
LPL
number related to a set of lightning current parameter values relevant to the probability that the associated maximum and minimum design values will not be exceeded in naturally occurring lightning

NOTE Lightning protection level is used to design protection measures according to the relevant set of lightning current parameters.

[EN 62305-1:2006, Definition 3.38]

3.5
lightning protection system
LPS
complete system used to reduce physical damage due to lightning flashes to a structure

NOTE It consists of both external and internal lightning protection systems.

[EN 62305-1:2006, Definition 3.40]