



Irish Standard  
I.S. EN 50423-3:2005 (2009)

# Overhead electrical lines exceeding AC 1 kV up to and including AC 45 kV -- Part 3: Set of National Normative Aspects

## I.S. EN 50423-3:2005 (2009)

*Incorporating amendments/corrigenda issued since publication:*

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EUROPEAN STANDARD

**EN 50423-3**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2005

ICS 29.240.20

Incorporates Corrigenda April 2005 and February 2009

English version

**Overhead electrical lines exceeding  
AC 1 kV up to and including AC 45 kV  
Part 3: Set of National Normative Aspects**

Lignes électriques aériennes  
dépassant 1 kV AC jusqu'à 45 kV AC  
Partie 3: Aspects Normatifs Nationaux

Freileitungen über AC 1 kV  
bis einschließlich AC 45 kV  
Teil 3: Nationale Normative Festlegungen

This European Standard was approved by CENELEC on 2004-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard 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 Central Secretariat or to any CENELEC member.

This European Standard exists in one official version (English). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The different parts of this European Standard were prepared by the respective CENELEC National Committees in cooperation with the Technical Committee CENELEC TC 11, Overhead electrical lines exceeding 1 kV a.c. (1,5 kV d.c.).

The texts of the drafts were submitted to the Unique Acceptance Procedure and were approved by CENELEC as EN 50423-3 on 2004-10-01.

The following dates were fixed:

- |                                                                                                                                                |       |            |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------|------------|
| – latest date by which the EN has to be implemented<br>at national level by publication of an identical<br>national standard or by endorsement | (dop) | 2005-10-01 |
| – latest date by which the national standards conflicting<br>with the EN have to be withdrawn                                                  | (dow) | 2007-10-01 |

## Text of EN 50423-3

Please see the subparts specific to each National Committee.

NOTE This Part 3 of EN 50423 is published by CENELEC in English only.

The contents of the corrigenda of April 2005 and February 2009 have been included in this copy.

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**Index of National Normative Aspects**

Reference	Country		Valid version in
	Code	Name	
EN 50423-3-1	AT	Austria	EN 50423-3:2005 modified by Corr. February 2009
EN 50423-3-2	BE	Belgium	EN 50423-3:2005
EN 50423-3-3	CH	Switzerland	EN 50423-3:2005
EN 50423-3-4	DE	Germany	EN 50423-3:2005
EN 50423-3-5	DK	Denmark	EN 50423-3:2005
EN 50423-3-6	ES	Spain	EN 50423-3:2005
EN 50423-3-7	FI	Finland	Replaced by Corr. February 2009
EN 50423-3-8	FR	France	EN 50423-3:2005
EN 50423-3-9	GB	Great Britain and Northern Ireland	EN 50423-3:2005 modified by Corr. April 2005
EN 50423-3-10	GR	Greece	EN 50423-3:2005
EN 50423-3-11	IE	Ireland	EN 50423-3:2005
EN 50423-3-12	IS	Iceland	EN 50423-3:2005
EN 50423-3-13	IT	Italy	EN 50423-3:2005
--	LU	Luxembourg	No NNA
EN 50423-3-15	NL	Netherlands	EN 50423-3:2005
EN 50423-3-16	NO	Norway	Replaced by Corr. February 2009
EN 50423-3-17	PT	Portugal	EN 50423-3:2005
EN 50423-3-18	SE	Sweden	Replaced by Corr. February 2009

Reference	Country		Valid version in
	Code	Name	
EN 50423-3-19	CZ	Czech Republic	EN 50423-3:2005
EN 50423-3-20	EE	Estonia	Added by Corr. February 2009
--EN 50423-2-21	SI	Slovenia	Added by Corr. February 2009
--	PL	Poland	No NNA
--	MT	Malta	No NNA
--	HU	Hungary	No NNA
--	SK	Slovakia	No NNA
--	LT	Lithuania	No NNA

# **National Normative Aspects (NNA) for IRELAND**

based on EN 50423-1:2005

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## Foreword

- 1 The Irish National Committee(NC) is identified by the following address:  
Electrotechnical Council of Ireland,  
Ballymun road,  
Dublin 9,  
Ireland.  
Tel. +353-1-8376773  
Fax. +353-1-8073838
- 2 The Irish NC has prepared this Part 3-11 of EN 50423, listing the Irish National Normative Aspects (NNA), under its sole responsibility, and duly passed it through the CENELEC and CLC/TC 11 procedures.
- 3 This EN 50423-3-11 is normative for Ireland and informative for other countries.
- 4 The Irish National Committee has prepared this Part 3-11 of EN 50423 with clause numbers corresponding to those of EN 50423-1. Clauses 1 to 9 in the text are to be read as amendments to the relevant text in Part 1. Any necessary clarification regarding this Part 3-11 shall be referred to the Irish NC who will in co-operation with CLC/TC 11 clarify the requirements.

Clause   National regulation**1**      **Scope**

Requirements may be specified in the project specification.

This Part 3-11 applies to complete new lines only . Existing lines and their extension, modification or refurbishment are not covered, and existing designs may be applied. Notes 1 and 2 of EN 50341-1:2001 apply.

**2**      **Definitions, list of symbols and references**

Requirements may be specified in the project specification. Otherwise as EN 50341-1.

**3**      **Basis of design**

Requirements may be specified in the project specification. An empirical approach will generally be used.

**4**      **Actions on lines**

Voltage	10 kV&20 kV	10 kV&20 kV	38 kV	38 kV	38 kV	Note
Line rating	$\leq 50 \text{ mm}^2$	$> 50 \text{ mm}^2$	Normal	Strengthened normal	High security	1
Load						
Wind (mph)	102	100	-	100	112	2
Radial ice (cm)	-	0,95	2,5	2,5	5,0	
Wind on iced conductor (mph)	-	50	36	36	50	3
Additional load (N/m)	4.4 to 5.3 (Note 4)	-	-	-	-	4
<p>NOTE 1 38 kV strength standards applications:  Normal: Open fields and near unoccupied buildings  Strengthened normal: Close to isolated dwellings  High security: Built up areas, over industrial estates. Not normally over private dwellings. Other defined situations.</p> <p>NOTE 2 Wind pressure <math>= 0,015(\text{wind speed in mph})^2 \text{ (kg/m}^2\text{)} = 0,147(\text{wind speed in mph})^2 \text{ (N/m}^2\text{)}</math></p> <p>NOTE 3 Wind 44 mph on iced conductors of <math>300 \text{ mm}^2</math>.</p> <p>NOTE 4 Additional load <math>= 180 (\text{dia. conductor-mm})^{0,5} \text{ (gram/m)} = 1,77 (\text{dia. conductor-mm})^{0,5} \text{ (N/m)}</math></p>						

Requirements may be specified in the project specification

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