

STN	Vonkajšie elektrické vedenia so striedavým napätím nad 1 kV Časť 2-5: Národné normatívne hľadiská (NNA) pre DÁNSKO (založené na EN 50341-1: 2012)	STN EN 50341-2-5 33 3300
------------	--	--

Overhead electrical lines exceeding AC 1 kV Part 2-5: National Normative Aspects (NNA) for DENMARK (based on EN 50341-1:2012)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/17

Obsahuje: EN 50341-2-5:2017

125129

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

EN 50341-2-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2017

ICS 29.240.20

English Version

**Overhead electrical lines exceeding AC 1 kV - Part 2-5: National
Normative Aspects (NNA) for DENMARK
(based on EN 50341-1:2012)**

Lignes électriques aériennes dépassant 1 kV en courant
alternatif - Partie 2-5: Aspects normatifs nationaux
(NNA) pour le DANEMARK (basé sur l'EN 50341-1:2012)

This European Standard was approved by CENELEC on 2017-02-01.

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

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

Contents

	Page
European foreword	4
1 Scope	5
1.1 DK.1 Reliability levels	5
2 Normative references, definitions and symbols	5
2.1 DK.1 Normative references	5
2.3 DK.1 Symbols	5
3 Basis of design	6
3.2 Requirements of overhead lines	6
3.2.2 DK.1 Reliability levels	6
4 Actions on lines	6
4.1 DK.1 Introduction	6
4.3 Wind loads	6
4.3.1 DK.1 Field of application and basic wind velocity	6
Table 4.3.1/DK.1 - Reference wind speeds in Denmark	6
4.3.3 DK.1 Mean wind pressure	6
4.4 Wind forces on overhead line components	6
4.4.1 Wind forces on conductors	6
4.4.1.1 DK.1 General	6
DK.2 General	6
4.4.1.3 DK.1 Drag factor	7
4.4.3 Wind forces on lattice towers	7
4.4.3.1 DK.1 General	7
4.4.4 DK.1 Wind forces on poles	7
4.5 Ice loads	7
4.5.1 DK.1 General	7
4.5.2 DK.1 Ice forces on conductors	7
4.6 Combined wind and ice loads	7
4.6.6 Combination of wind velocity and ice loads	7
4.6.6.1 DK.1 Extreme ice load IT combined with a high probability wind velocity VIH	7
4.6.6.2 DK.1 Nominal ice load I3 combined with a low probability wind velocity VIL	7
4.7 DK.1 Temperature effects	7
4.8 Security loads	7
4.8.2 DK.1 Torsional loads	8
4.8.3 DK.1 Longitudinal loads	9
4.12 Load cases	9
4.12.1 DK.1 General	9
4.12.2 DK.1 Standard load cases	9
4.13 DK.1 Partial factors for actions	9
5 Electrical requirements	9
5.6 Load cases for calculation of clearances	9
5.6.1 DK.1 Load conditions	9
5.6.2 DK.1 Maximum conductor temperature	9
5.6.3 DK.1 Wind loads for determination of electric clearances	9
5.6.3.2 DK.1 Nominal wind loads for determination of internal and external clearances	10
5.6.4 DK.1 Ice loads for determination of electric clearances	10
5.6.5 DK.1 Combined wind and ice loads	10
5.8 DK.1 Internal clearances within the span and at the top of support	10
5.9 External clearances	10
5.9.3 DK.1 External clearances to residential and other buildings	10
5.9.4 DK.1 External clearances to crossing traffic routes	10
5.9.7 DK.1 External clearances to recreational areas (playgrounds, sports areas, etc.)	10
6 Earthing systems	11
7 Supports	11
7.1 Initial design considerations	11
7.1.1 DK.1 Introduction	11
7.2.1 DK.1 Steel materials, bolts, nuts and washers, welding consumables	11

7.2.4	DK.1 Holding-down bolts	11
7.3.6	Ultimate limit states	11
7.3.6.1	DK.1 General	11
7.4.6.1	DK.1 General	11
7.4.8	Resistance of connections	11
7.4.8.3	DK.1 General	11
7.6.4	DK.1 Ultimate limit states	11
8	Foundations	12
8.2.2	DK.1 Geotechnical design by calculation	12
8.3	DK.1 Soil investigation and geotechnical data (EN 1997-1:2004 – Section 3)	12
9	Conductors and earth-wires	12
10	Insulators	12
10.1	DK.1 Introduction	12
10.7	DK.1 Mechanical requirements	12
11	Hardware	12
12	Quality assurance, checks and taking-over	12

European foreword

- 1 The Danish National Committee (NC) is identified by the following address:

Dansk Standard
Göteborg Plads 1
DK-2150 Nordhavn
Phone no. +45 39 96 61 01
E-mail: dansk.standard@ds.dk

- 2 The Danish NC has prepared this Part 2-5 of EN 50341, listing the Danish national normative aspects, under its sole responsibility, and duly passed it through the CENELEC and CLC/TC 11 procedures.

NOTE The Danish NC also takes sole responsibility for the technically correct coordination of this EN 50341-2-5 with EN 50341-1:2012. It has performed the necessary checks in the frame of quality assurance/control. It is noted however that this quality assurance/control has been made in the framework of the general responsibility of a standards committee under the national laws/regulations.

- 3 This EN 50341-2-5 is normative in Denmark and informative for other countries.
- 4 This EN 50341-2-5 has to be read in conjunction with EN 50341-1:2012, hereinafter referred to as Part 1. All clause numbers used in this Part 2-5 correspond to those of Part 1.

Specific sub clauses, which are prefixed “DK”, are to be read as amendments to the relevant text in Part 1. Any necessary clarification regarding the application of Part 2-5 in conjunction with Part 1 shall be referred to the Danish NC who will, in cooperation with CLC/TC 11 clarify the requirements.

When no reference is made in Part 2-5 to a specific sub clause, then Part 1 applies.

- 5 In the case of “boxed values” defined in Part 1, amended values (if any) which are defined in Part 2-5 shall be taken into account in Denmark.

However any “boxed values”, whether in Part 1 or Part 2-5, shall not be amended in the direction of greater risk in a Project Specification.

- 6 The national Danish standards/regulations related to overhead electrical lines exceeding 1 kV (AC) are identified in 2.1/DK1.

NOTE All national standards referred to in this Part 2-5 will be replaced by the relevant European Standards as soon as they become available and are declared by the Danish NC to be applicable and thus reported to the secretary of CLC/TC 11.

1 Scope

(snc)

This Part 2-5 is applicable for new permanent overhead lines only and generally not for existing lines in Denmark. If some planning/design or execution work on existing lines in Denmark has to be performed, the degree of application of this Standard shall be agreed upon by the parties concerned and the authorities.

1.1 DK.1 General

(ncpt)

Installations in the planning and construction stage may be completed adopting the standard edition valid at the beginning of planning.

2 Normative references, definitions and symbols**2.1 DK.1 Normative references**

(A-dev)

Lov nr. 525 af 29/04/2015.

Lov om sikkerhed ved elektriske anlæg, elektriske installationer og elektrisk materiel
(Elsikkerhedsloven)

Act No. 525 - 29/04/2015.

Act on the Safety of Electrical Plants, Electrical Installations and Electrical Equipment (the Electrical Safety Act)

Bekendtgørelse nr. 1114 af 18/08/2016

Bekendtgørelse om sikkerhed for udførelse af elektriske anlæg

Executive Order no. 1114 - 18/08/2016

Executive Order on Safety in connection with the Construction of Electrical Plants

koniec náhľadu – text ďalej pokračuje v platenej verzii STN