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Elektriska friledningar över 1 kV (AC) och upp till och med 45 kV (AC)

Overhead electrical lines exceeding AC 1 kV up to and including AC 45 kV

Som svensk standard gäller europastandarden EN 50423-1:2005 och den svenska normativa bilagan EN 50432-3-18 till EN50423-1:2005. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50423-1:2005 och den del av EN 50423-3 som äger tillämpning i Sverige.

Nationellt förord

Europastandarden EN 50423

består av tre delar:

- EN 50423-1, som innehåller avsnitt gemensamma för hela CENELEC
- EN 50423-2, som är en innehållsförteckning till del 3, och
- EN 50423-3, som innehåller nationella bilagor, vilka ger de fordringar som i respektive land gäller utöver eller istället för fordringarna i motsvarande avsnitt i del 1.

Denna standard innehåller den officiella engelska språkversionen av EN 50423-1 och av den svenska normativa bilagan EN 50423-3-18 och ersätter SS-EN 50423, utgåva 2, 2010.

Tidigare fastställd svensk standard SS-EN 50423, utgåva 2, 2010, gäller ej fr o m 2013-08-14.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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EUROPEAN STANDARD

EN 50423-1

NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

**Overhead electrical lines exceeding AC 1 kV
up to and including AC 45 kV
Part 1: General requirements –
Common specifications**

Lignes électriques aériennes
dépassant 1 kV AC jusqu'à 45 kV AC
Partie 1: Exigences générales –
Spécifications communes

Freileitungen über AC 1 kV
bis einschließlich AC 45 kV
Teil 1: Allgemeine Anforderungen –
Gemeinsame 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 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 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

This European Standard was prepared by the Technical Committee CENELEC TC 11, Overhead electrical lines exceeding 1 kV a.c. (1,5 kV d.c.).

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50423-1 on 2004-10-01.

This European Standard is to be read with EN 50341-1:2001.

The following dates were fixed:

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

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Introduction

This standard is based on EN 50341-1 “Overhead electrical lines exceeding AC 45 kV – Part 1: General requirements – Common Specifications”.

As an aid to the user the clause numbers of this standard refer to, amend, substitute for or add to the text of the same clause number in EN 50341-1. Consequently, contrary to usual practice, the clauses of this standard are not numbered sequentially.

In order to avoid confusion regarding references to NNAs, the NNAs of EN 50341 (ie. EN 50341-3) are referred to as “associated NNAs” to EN 50341. All other reference to NNAs in this standard refer to those included in EN 50423-3, which may be either entirely new NNAs or amended and updated NNAs of EN 50341-3.

1 Scope

This standard applies to bare and covered conductor overhead lines and overhead insulated cable systems with nominal voltage exceeding AC 1 kV up to and including AC 45 kV and with rated frequencies below 100 Hz.

In general the requirements in EN 50341-1 apply. This standard specifies additional requirements and simplifications that apply only for this voltage range.

In connection with EN 50341-1, this standard specifies the general requirements that shall be met for the design and construction of new overhead lines to ensure that the line is suitable for its purpose with regard to safety of persons, maintenance, operation and environmental considerations.

This standard does not apply to:

- overhead electric lines inside closed electrical areas as defined in HD 637 S1;
- catenary systems of electrified railways unless explicitly required by another standard.

National Normative Aspects (NNA)
for
SWEDEN

Based on EN 50423-1:2005

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Foreword

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

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- 2 The Swedish NC has prepared this Part 3-18 of EN 50423, listing the Swedish national normative aspects, under the sole responsibility, and duly passed it through the CENELEC and CLC/TC 11 procedures.

NOTE The Swedish NC also takes the sole responsibility for the technically correct co-ordination of this EN 50423-3-18 with EN 50423. 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 standard committee under the national laws/regulations.

- 3 This EN 50423-3-18 is normative in Sweden and informative in other countries.

- 4 This EN 50423-3-18 has to be read in conjunction with EN 50423-1, hereinafter referred to as Part 1. All clause numbers used in this Part 3-18 corresponds to those of Part 1. Specific subclauses, which are prefixed "SE", are to be read as amendments to the relevant text in Part 1. Any necessary clarification regarding the application of Part 3-18 in conjunction with Part 1 shall be referred to the Swedish NC who will, in co-operation with CLC/TC 11 clarify the requirements. When no reference is made in Part 3-18 to a specific subclause, then Part 1 applies.

- 5 In the case of "boxed values" defined in Part 1, amended values (if any) which are defined in Part 3-18 shall be taken into account in Sweden. However any boxed value, whether in Part 1 or Part 3-18, shall not be amended in the direction of greater risk in a Project specification.

- 6 The Swedish NC declares in accordance with subclause 3.1 of Part 1 that this Part 3-18 follows the "General Approach" 4.1), and that consequently subclause 4.2 "Empirical Approach" is not applicable for Sweden.

- 7 The symbols used in Part 3-18 and not stated in Part 1 are identified/listed in 2.2/SE.1.

- 8 The national Swedish standards/regulations related to bare and covered conductor overhead lines and overhead insulated cable systems with nominal voltage exceeding AC 1 kV up to and including AC 45 kV and with rated frequencies below 100 Hz. are identified/listed in 2.3/SE.1.

NOTE All National Standards referred to in this Part 3-18 and listed in 2.3/SE.2 will be replaced by the relevant European Standards as soon as they become available and are declared by Swedish NC to be applicable and thus reported to the secretary of CLC/TC 11.

Clause National regulation

1 **Scope**

(ncpt) **SE.1 Application to existing overhead lines**

This Part 3-18 is applicable for new overhead lines only and not for existing lines in Sweden. If some planning/design or execution work on existing lines in Sweden has to be performed, the degree of application of this Standard shall be agreed upon by the parties concerned.

(ncpt) **SE.2 Replacement**

This Part 3-18 replaces the Swedish Standards SS 436 01 01 to SS 436 01 07, SS 436 01 10, SS 436 01 11, SS 436 01 13 SS 436 01 14 and SS 421 07 10 for overhead lines with a nominal voltage exceeding AC 1 kV up to and including AC 45 kV. Consequently this Part take into account both Class A, Class B, and the reinforced lines type 1 and type 2 "Brottsäker ledning och ledning i förstärkt utförande"

(ncpt) **SE.3 Optical ground wire (OPGW) and optical phase conductor (OPCON)**

This Part 3-18 is applicable for installation of OPGW and OPCON, also known as OPPC, in overhead lines in Sweden.

(ncpt) **SE.4 All dielectric self supporting optical cable (ADSS) and optical attached cable (OPAC)**

This Part 3-18 is applicable for installation of ADSS and OPAC in overhead lines in Sweden.

NOTE The allowable electrical field for the ADSS cable should be taken into consideration when the conductor configuration is determined.