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Elinstallationer för lågspänning – Utförande av elinstallationer för lågspänning

*Low-voltage electrical installations –
Rules for design and erection of electrical installations*

Preface

This translation from Swedish into English of the Swedish Standard SS 436 40 00 is based on the following International Standard, issued by the International Electrotechnical Commission, IEC, and European Standard, issued by Comité Européen de Normalisation Electrotechnique, CENELEC:

the IEC 60364 series; and

the HD 384 and HD 60364 series.

In the preparation of the Swedish standard, the particular requirements in the Regulations issued by the Swedish National Electrical Safety Board (Elsäkerhetsverket) have been considered. The requirements of the International and European standards have been adapted to the Swedish Electrical Safety Practice and Swedish conditions. The Swedish standard also contains clauses which have no international correspondence.

Text in black indicates it is identical to that of the IEC, text in green indicates it is identical to that of the CENELEC and text in red indicates it is uniquely Swedish.

The previously ratified Swedish Standards SS 436 40 00, Edition 1, 2003, SS 436 40 00 T1, Edition 1, 2006, SS 436 46 61, Edition 2, 2005, SS 436 46 61 T1, Edition 1, 2006 och SS 436 47 53, Edition 1, 2004, are withdrawn and no longer valid as Swedish standard from 1 April 2010.

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PART 1 – FUNDAMENTAL PRINCIPLES, ASSESSMENT OF GENERAL CHARACTERISTICS

11 Scope

This standard gives the rules for the design, erection, and verification of electrical installations. The rules are intended to provide for the safety of persons, livestock and property against dangers and damage which may arise in the reasonable use of electrical installations and to provide for the proper functioning of those installations.

11.1

This standard applies to the design, erection and verification of electrical installations such as those of:

- a) residential premises
- b) commercial premises
- c) public premises
- d) industrial premises
- e) agricultural and horticultural premises
- f) prefabricated buildings
- g) caravans, caravan sites and similar sites
- h) construction sites, exhibitions, fairs and other installations for temporary purposes
- i) marinas
- j) external lighting and similar installations (see, however, 11.3e))
- k) medical locations (see also SS 437 10 02)
- l) mobile or transportable units
- m) photovoltaic systems
- n) low-voltage generating sets
- o) electrical installations for distribution.**

NOTE “Premises” covers the land and all facilities including buildings belonging to it.

11.2

This standard covers:

- a) circuits supplied at nominal voltages up to and including 1000 V a.c. or 1500 V d.c.
For a.c., the preferred frequencies which are taken into account in this standard are 50 Hz, 60 Hz and 400 Hz. The use of other frequencies for special purposes is not excluded.
- b) circuits, other than the internal wiring of apparatus, operating at voltages exceeding 1000 V and derived from an installation having a voltage not exceeding 1000 V a.c., for example, discharge lighting, electrostatic precipitators
- c) wiring systems and cables not specifically covered by the standards for appliances
- d) out-door electrical installations
- e) fixed wiring for information and communication technology, signalling, control and the like (excluding internal wiring of apparatus)
- f) the extension or alteration of the installation and also parts of the existing installation affected by the extension or alteration.

NOTE The rules of this standard are intended to apply to electrical installations generally but, in certain cases, they may need to be supplemented by the requirements or recommendations of other standards (for example, for installations in explosive gas atmospheres).

11.3

This standard does not apply to:

- a) electric traction equipment, including rolling stock and signaling equipment
- b) electrical equipment of motor vehicles, except those covered in Part 7
- c) electrical installations on board ships and mobile and fixed offshore platforms
- d) electrical installations in aircraft
- e) radio interference suppression equipment, except where it affects the safety of the installation
- f) electric fences
- g) external lightning protection systems for buildings (LPS).

NOTE Atmospheric phenomena are covered in this standard but only insofar as effects on the electrical installations are concerned (for example, with respect to selection of surge protective devices).

- h) certain aspects of lift installations
- i) electrical equipment of machines.

11.4

NOTE According to SS 421 01 01 which provides common rules for the design and the erection of electrical power installations in systems with nominal voltages above 1kV a.c. and nominal frequency up to and including 60 Hz, low-voltage a.c. and d.c. protection and monitoring systems should be in accordance with SS 436 40 00.

11.5

Electrical equipment is dealt with only so far as its selection and application in the installation are concerned.

This applies also to assemblies of electrical equipment complying with the relevant standards.

12 Normative references

For the application of this standard the normative references are listed in Annex A.