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**Informacijska tehnologija - Vzpostavitev podatkovnega centra in infrastruktura - 1.
del: Splošna zasnova**

Information technology - Data centre facilities and infrastructures - Part 1: General concepts

Informationstechnik - Einrichtungen und Infrastrukturen von Rechenzentren - Teil 1: Allgemeine Konzepte

Technologie de l'information - Installation et infrastructures de centres de traitement de données - Partie 1: Concepts généraux

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ICS:

35.020

Informacijska tehnika in
tehnologija na splošno

Information technology (IT) in
general

SIST EN 50600-1:2026

en

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EUROPEAN STANDARD
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**Information technology - Data centre facilities and infrastructures
- Part 1: General concepts**

Technologie de l'information - Installation et infrastructures
de centres de traitement de données - Partie 1: Concepts
généraux

Informationstechnik - Einrichtungen und Infrastrukturen von
Rechenzentren - Teil 1: Allgemeine Konzepte

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European Committee for Electrotechnical Standardization
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European foreword

This document (EN 50600-1:2026) has been prepared by CLC/TC 215 “Electrotechnical aspects of telecommunication equipment”.

The following dates are fixed.

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2027-08-31
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2029-08-31

This document supersedes EN 50600-1:2019.

EN 50600-1:2026 includes the following significant technical changes with respect to EN 50600-1:2019:

- a) the whole document has been revised technically and editorially, aligning with EN 50600-2-2 and EN 50600-2-3;
- b) resource enablement aspects included;
- c) Clause 3 updated and aligned with terms and definitions of CLC/TS 50600-4-31 and implemented throughout the document;
- d) Clause 5 updated to include e.g. resilience analysis aspects according to CLC/TS 50600-4-31 and improved terminology (“services” replaced with “functional capability”);
- e) Clause 7 revised, in particular regarding the application of the data centre maturity model of CLC/TS 50600-5-1 and 7.2.3 on multi-site data centres;
- f) Clause 8 design phases 1 to 4, 6 and 10 revised and aligned with EN 50600-2-5;
- g) Clause 9 updated and supplemented with new 9.5 on design principles for improved resilience;
- h) Annex A completely revised considering the specifications of CLC/TS 50600-4-31;
- i) Annex B contains a new Table B.2 summarizing the availability classification for telecommunications cabling.

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Introduction

The unrestricted access to internet-based information demanded by the information society has led to an exponential growth of both internet traffic and the volume of stored/retrieved data. Data centres are housing and supporting the information technology and network telecommunications equipment for data processing, data storage and data transport. They are required both by network operators (delivering those services to customer premises) and by enterprises within those customer premises.

Data centres usually need to provide modular, scalable and flexible facilities and infrastructures to easily accommodate the rapidly changing requirements of the market. In addition, energy consumption and water/resource usage of data centres has become critical both from an environmental point of view (reduction of environmental footprint) and with respect to economical considerations (cost of energy) for the data centre operator.

The implementation of data centres varies in terms of:

- a) purpose (enterprise, co-location, co-hosting or network operator facilities);
- b) security level;
- c) physical size;
- d) accommodation (mobile, temporary and permanent constructions).

The needs of data centres also vary in terms of availability of service, the provision of security and the objectives for energy efficiency. These needs and objectives influence the design of data centres in terms of building construction, power distribution, environmental control, telecommunications cabling and physical security as well as the operation of the data centre. Effective management and operational information is required to monitor achievement of the defined needs and objectives.

Recognizing the substantial resource consumption, particularly of energy, of larger data centres, it is also important to provide tools for the assessment of that consumption both in terms of overall value and of source mix and to provide Key Performance Indicators (KPIs) to evaluate trends and drive performance improvements.

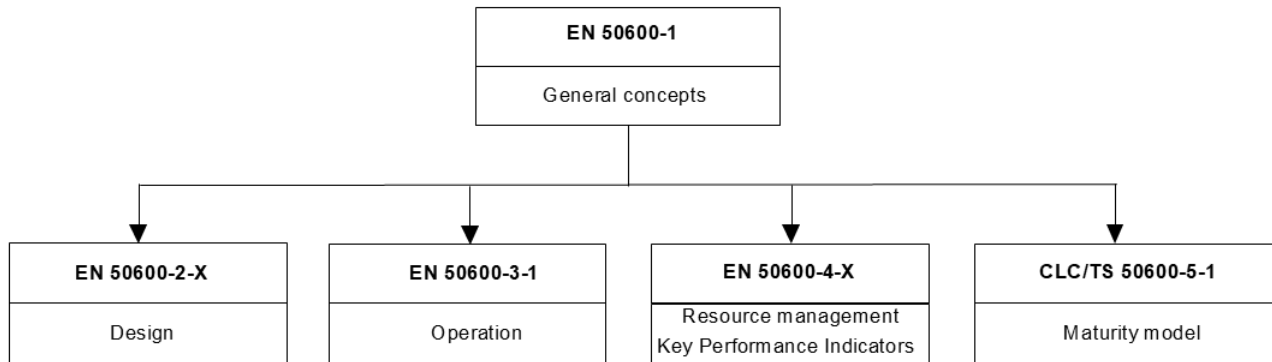
At the time of publication of this document, the EN 50600 series have been designed as a framework of standards, technical specifications and technical reports covering the design, the operation and management, the key performance indicators for energy efficient operation of the data centre as well as a maturity model for energy management and environmental sustainability.

This series of documents specifies requirements and recommendations to support the various parties involved in the design, planning, procurement, integration, installation, operation and maintenance of facilities and infrastructures within data centres. These parties include:

- 1) owners, operators, facility managers, ICT managers, project managers, main contractors;
- 2) consulting engineers, architects, building designers and builders, system and installation designers, auditors, test and commissioning agents;
- 3) facility and infrastructure integrators, suppliers of equipment;
- 4) installers, maintainers.

This document is intended for use by and collaboration between all parties involved, however, at least by consulting engineers, architects, building designers and builders, system and installation designers.

The inter-relationship of the documents within the EN 50600 series is shown in Figure 1.

EN 50600-1:2026 (E)**Figure 1 — Schematic relationship between EN 50600 series of documents**

EN 50600-1 introduces the general concepts relevant for the design and operation of data centres.

EN 50600-2-X documents define the requirements for the data centre design and specify requirements and recommendations for particular facilities and infrastructures to support the relevant classification for “availability”, “physical security” and “energy efficiency enablement” selected from EN 50600-1.

EN 50600-3-1 specifies requirements and recommendations for data centre operations, processes and management.

EN 50600-4-X documents specify requirements and recommendations for key performance indicators (KPIs) used to assess and improve the resource usage efficiency and effectiveness, respectively, and criteria of resilience of a data centre.

CLC/TS 50600-5-1 specifies the maturity model for energy management and environmental sustainability and refers amongst others to EN 50600-4-X for KPIs as appropriate.

This document, EN 50600-1, specifies general requirements for all kinds of data centres irrespective of their size and physical construction. It introduces a classification system for availability, physical security and energy efficiency enablement based on business risk/impact analysis outcome.

This series of documents does not address the selection of information technology and network telecommunications equipment, software and associated configuration issues.

1 Scope

This document:

- a) describes the general principles for data centres upon which the requirements of the EN 50600 series are based;
- b) defines the common aspects of data centres including terminology, parameters and reference models (functional elements and their accommodation) addressing both the size and complexity of their intended purpose;
- c) describes general aspects of the facilities and infrastructures required to support data centres;
- d) specifies a classification system, based upon the key criteria of “availability”, “security” and “resource and energy efficiency enablement” over the planned lifetime of the data centre, for the provision of effective facilities and infrastructure;
- e) details the issues to be addressed in a business risk and operating cost analysis enabling application of the classification of the data centre;
- f) provides reference to documentation, operation and management of data centres;
- g) introduces the concepts of Key Performance Indicators (KPIs) for resource management and resilience of data centre facilities and infrastructures;
- h) defines the use of an environmental sustainability strategy.

The following topics are outside of the scope of this series of documents:

- 1) the selection of information technology and network telecommunications equipment, software and associated configuration issues are outside the scope of this document;
- 2) quantitative analysis of overall service availability resulting from multi-site data centres;
- 3) safety and electromagnetic compatibility (EMC) requirements (covered by other standards and regulations. However, information given in this document can be of assistance in meeting these standards and regulations).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

CLC/TS 50600-5-1, *Information technology - Data centre facilities and infrastructures - Part 5-1: Maturity Model for Energy Management and Environmental Sustainability*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— IEC Electropedia: available at <https://www.electropedia.org/>