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English Version

**Information technology - Data centre facilities and infrastructures
- Part 99-3: Guidance to the application of EN 50600 series**

Technologies de l'information - Installations et
infrastructures des centres de traitement de données -
Partie 99-3: Recommandations relatives à l'application de la
série EN 50600

Informationstechnik - Einrichtungen und Infrastrukturen von
Rechenzentren - Teil 99-3: Anleitung zur Anwendung der
Normenreihe EN 50600

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European foreword

This document (CLC/TR 50600-99-3:2018) has been prepared by CLC/TC 215 “*Electrotechnical aspects of telecommunication equipment*”.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

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Regarding the structure of the EN 50600 series, see the Introduction.

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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 need to provide modular, scalable and flexible facilities and infrastructures to easily accommodate the rapidly changing requirements of the market. In addition, energy consumption of data centres has become critical both from an environmental point of view (reduction of carbon footprint) and with respect to economic 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 and physical security. Effective management and operational information is required to monitor achievement of the defined needs and objectives.

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, facility managers, ICT managers, project managers, main contractors;
- 2) architects, consultants, building designers and builders, system and installation designers;
- 3) facility and infrastructure integrators, suppliers of equipment;
- 4) installers, maintainers.

At the time of publication of this Technical Report, EN 50600 series will comprise the following standards and documents:

EN 50600-1, *Information technology — Data centre facilities and infrastructures — Part 1: General concepts*;

EN 50600-2-1, *Information technology — Data centre facilities and infrastructures — Part 2-1: Building construction*;

EN 50600-2-2, *Information technology — Data centre facilities and infrastructures — Part 2-2: Power distribution*;

EN 50600-2-3, *Information technology — Data centre facilities and infrastructures — Part 2-3: Environmental control*;

EN 50600-2-4, *Information technology — Data centre facilities and infrastructures — Part 2-4: Telecommunications cabling infrastructure*;

EN 50600-2-5, *Information technology — Data centre facilities and infrastructures — Part 2-5: Security systems*;

EN 50600-3-1, *Information technology — Data centre facilities and infrastructures — Part 3-1: Management and operational information*.

EN 50600-4-1, *Information technology — Data centre facilities and infrastructures — Part 4-1: Overview of and general requirements for key performance indicators*

EN 50600-4-2, *Information technology — Data centre facilities and infrastructures — Part 4-2: Power Usage Effectiveness*

EN 50600-4-3, *Information technology — Data centre facilities and infrastructures — Part 4-3: Renewable Energy Factor*

CLC/TR 50600-99-1, *Information technology — Data centre facilities and infrastructures — Part 99-1: Recommended practices for energy management*

CLC/TR 50600-99-2, *Information technology — Data centre facilities and infrastructures — Part 99-2: Recommended practices for environmental sustainability*

CLC/TR 50600-99-3, *Information technology — Data centre facilities and infrastructures — Part 99-3: Guidance to the application of EN 50600 series*

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

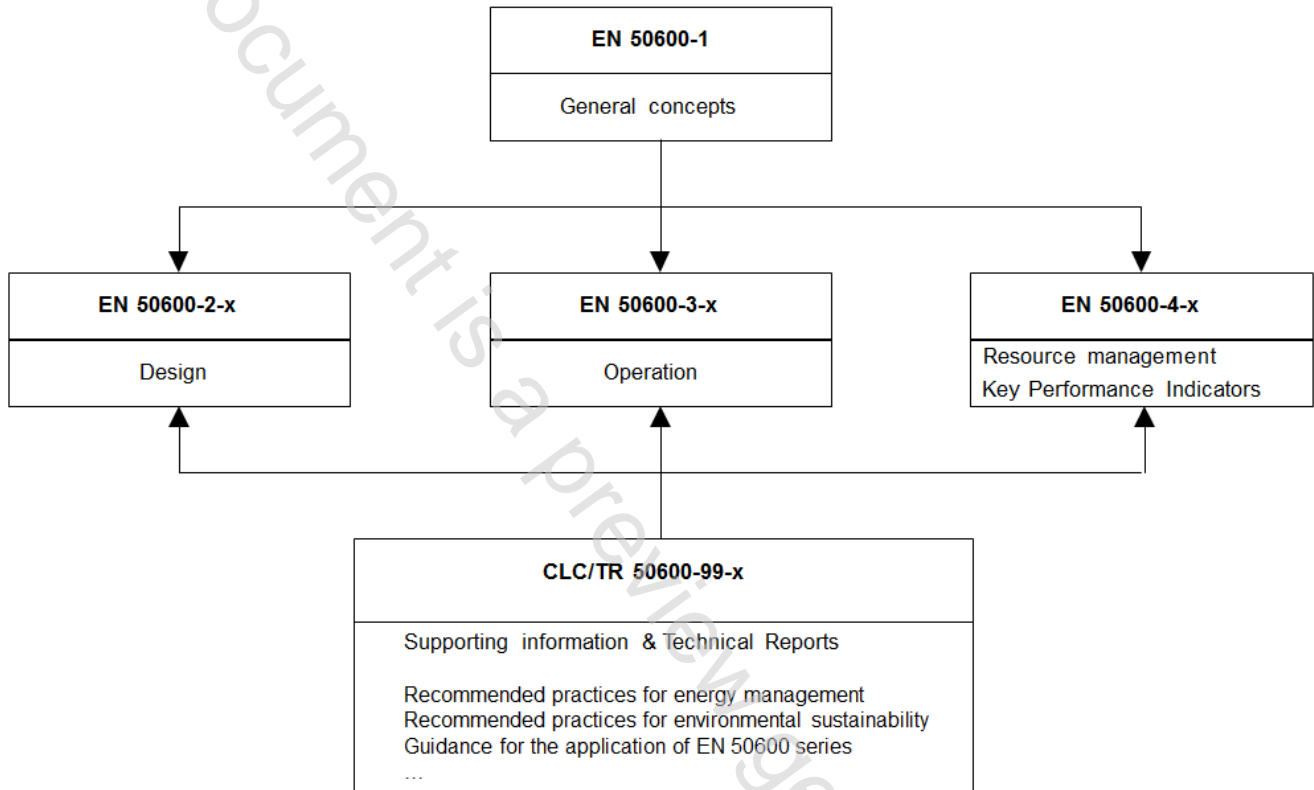


Figure 1 — Schematic relationship between the EN 50600 series of documents

EN 50600-2-X documents 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-X documents specify 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, of a data centre.

This Technical Report provides readers with an introduction into the EN 50600 series and the interdependencies between the various standards in order to ease the correct application by all parties concerned.

1 Scope

This document offers users additional information on the background of the requirements and recommendations in the EN 50600 series. In addition it constitutes a guideline for the correct application and interpretation of these standards.

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.

EN 50600 (all parts), *Information technology - Data centres facilities and infrastructures*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the terms and definitions of series EN 50600 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1.1

black building test

test to check resilience measures for availability of energy supply and distribution by switching off the main supplies

3.1.2

distribution element

technical system to distribute air or cooling fluid within the environmental control system

3.2 Abbreviations

For the purposes of this document, the abbreviations of EN 50600 series and the following apply.

CHP	combined heat and power
EMC	electromagnetic compatibility
MP	measurement point
N/A	not applicable

4 Principles

4.1 General

The EN 50600 series addresses the following aspects of data centre design and operation:

- a) construction;
- b) availability;
- c) physical security;