ICS 35.020, 35.110, 35.160 SLOVENSKÁ TECHNICKÁ NORMA August 2016

STN	**Informačná technika. Zariadenia a infraštruktúry výpočtových stredísk. Časť 2-5: Bezpečnostné systémy.**	**STN EN 50600-2-5** 36 7254

Information technology - Data centre facilities and infrastructures - Part 2-5: Security systems

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. 07/16

Obsahuje: EN 50600-2-5:2016

123188

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50600-2-5

March 2016

ICS 35.020; 35.110; 35.160

English Version

Information technology - Data centre facilities and infrastructures - Part 2-5: Security systems

Technologie de l'information - Installation et infrastructures de centres de traitement de données - Partie 2-5: Systèmes de sécurité

Informationstechnik - Einrichtungen und Infrastrukturen von Rechenzentren - Teil 2-5: Sicherungssysteme

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

Ref. No. EN 50600-2-5:2016 E

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European foreword

This document (EN 50600-2-5:2016) 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)	2017-01-25
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2019-01-25

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Regarding the various parts in the EN 50600 series, see the Introduction.

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 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);

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 European Standards 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 European Standard, the EN 50600 series currently comprises the following standards:

— 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*;

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

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

— FprEN 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*.

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

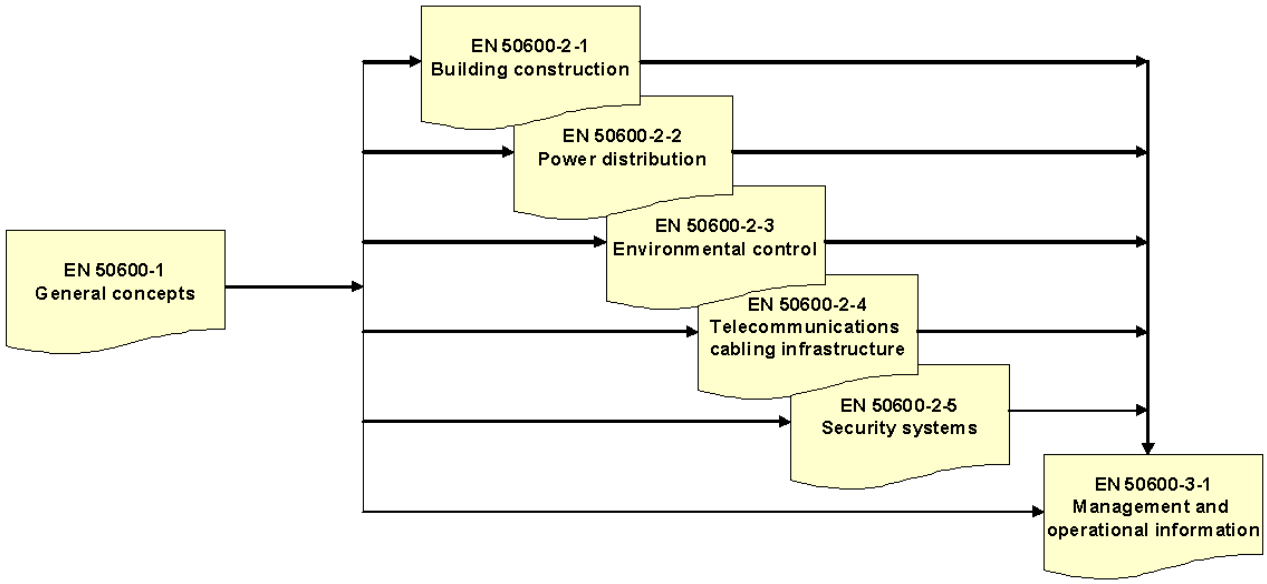

Figure 1 — Schematic relationship between the EN 50600 standards

EN 50600-2-X standards 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.

This European Standard addresses the physical security of facilities and infrastructure within data centres together with the interfaces for monitoring the performance of those facilities and infrastructures in line EN 50600-3-1 (in accordance with the requirements of EN 50600-1).

This European Standard is intended for use by and collaboration between architects, building designers and builders, system and installation designers and security managers among others.

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

1 Scope

This European Standard addresses the physical security of data centres based upon the criteria and classifications for “availability”, “security” and “energy efficiency enablement” within EN 50600-1.

This European Standard provides designations for the data centres spaces defined in EN 50600-1.

This European Standard specifies requirements and recommendations for those data centre spaces, and the systems employed within those spaces, in relation to protection against:

a) unauthorized access addressing constructional, organizational and technological solutions;

b) fire events igniting within data centres spaces;

c) other events within or outside the data centre spaces, which would affect the defined level of protection.

Safety and electromagnetic compatibility (EMC) requirements are outside the scope of this European Standard and are covered by other standards and regulations. However, information given in this European Standard may be of assistance in meeting these standards and regulations.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 3 (all parts), *Portable fire extinguishers*

EN 54 (all parts), *Fire detection and fire alarm systems*

EN 54-13, *Fire detection and fire alarm systems — Part 13: Compatibility assessment of system components*

EN 54-20:2006, *Fire detection and fire alarm systems — Part 20: Aspirating smoke detectors*

EN 1047-2, *Secure storage units — Classification and methods of test for resistance to fire — Part 2: Data rooms and data container*

EN 1366-3, *Fire resistance tests for service installations — Part 3: Penetration seals*

EN 1627:2011, *Pedestrian doorsets, windows, curtain walling, grilles and shutters — Burglar resistance — Requirements and classification*

EN 1634 (all parts), *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware*

EN 12845, *Fixed firefighting systems — Automatic sprinkler systems — Design, installation and maintenance*

EN 13565-2, *Fixed firefighting systems — Foam systems — Part 2: Design, construction and maintenance*

CEN/TS 14816, *Fixed firefighting systems — Water spray systems — Design, installation and maintenance*

CEN/TS 14972, *Fixed firefighting systems — Watermist systems — Design and installation*

prEN 16750, *Fixed firefighting systems — Oxygen reduction systems — Design, installation, planning and maintenance*

EN 50131 (all parts), *Alarm systems — Intrusion and hold-up systems*

EN 50136 (all parts), *Alarm systems — Alarm transmission systems and equipment*

EN 50518 (all parts), *Monitoring and alarm receiving centre*

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

EN 50600–2-1:2014, *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 60839-11-1, *Alarm and electronic security systems — Part 11-1: Electronic access control systems — System and components requirements (IEC 60839-11-1)*

EN 62676-1-1:2014, *Video surveillance systems for use in security applications — Part 1-1: System requirements — General (IEC 62676-1-1:2014)*