

ILNAS

Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 50600-2-1:2021

Information technology - Data centre facilities and infrastructures - Part 2-1: Building construction

Technologie de l'information -
Installation et infrastructures de centres
de traitement de données - Partie 2-1:
Construction des bâtiments

Informationstechnik - Einrichtungen und
Infrastrukturen von Rechenzentren - Teil
2-1: Gebäudekonstruktion

04/2021



National Foreword

This European Standard EN 50600-2-1:2021 was adopted as Luxembourgish Standard ILNAS-EN 50600-2-1:2021.

Every interested party, which is member of an organization based in Luxembourg, can participate for FREE in the development of Luxembourgish (ILNAS), European (CEN, CENELEC) and International (ISO, IEC) standards:

- Participate in the design of standards
- Foresee future developments
- Participate in technical committee meetings

<https://portail-qualite.public.lu/fr/normes-normalisation/participer-normalisation.html>

THIS PUBLICATION IS COPYRIGHT PROTECTED

Nothing from this publication may be reproduced or utilized in any form or by any mean - electronic, mechanical, photocopying or any other data carries without prior permission!

ILNAS-EN 50600-2-1:2021
EUROPEAN STANDARD **EN 50600-2-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2021

ICS 35.020; 35.110; 91.140.50

Supersedes EN 50600-2-1:2014 and all of its
amendments and corrigenda (if any)

English Version

Information technology - Data centre facilities and infrastructures - Part 2-1: Building construction

Technologie de l'information - Installation et infrastructures
de centres de traitement de données - Partie 2-1:
Construction des bâtiments

Informationstechnik - Einrichtungen und Infrastrukturen von
Rechenzentren - Teil 2-1: Gebäudekonstruktion

This European Standard was approved by CENELEC on 2021-03-22. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	4
Introduction	5
1 Scope	8
2 Normative references	8
3 Terms, definitions and abbreviations	9
3.1 Terms and definitions	9
3.2 Abbreviations	10
4 Conformance	10
5 Location	10
5.1 Assessment of location	10
5.2 Geographical location	11
5.3 Environmental risk analysis	11
5.4 Utility provision.....	12
6 Site configuration	13
6.1 General	13
6.2 Site selection	13
6.3 Assessment of existing premises	14
6.4 Utilities	14
7 Outside spaces	15
7.1 Access routes	15
7.2 Parking.....	15
7.3 Temporary facilities.....	15
7.4 Fuel storage facilities and infrastructure	16
7.5 Underground facilities	16
7.6 Perimeter design and Protection Class Boundaries	16
8 Building construction	19
8.1 Load-bearing structure.....	19
8.2 Building materials and finishes	19
8.3 Electromagnetic Interference.....	20
8.4 Protection Class Boundaries	20
8.5 Foundations	21
8.6 Exterior walls	22
8.7 Interior walls and barriers	22
8.8 Roofs.....	23
8.9 Water drainage	23
8.10 Floors	24
8.11 Raised access floors.....	25
8.12 Ceilings	25
8.13 Corridors and doors	26

8.14	Transportation lifts	26
9	Design of data centre spaces	26
9.1	Accommodation	26
9.2	Control room space	27
9.3	Computer room space	27
9.4	Electrical space	28
9.5	Mechanical space	28
9.6	Telecommunications space	28
9.7	Spaces for firefighting systems	28
9.8	Storage space	28
9.9	Testing and holding spaces	29
9.10	Docking bay	29
9.11	General office space	29
10	Construction of data centre spaces	29
10.1	Protection against flooding	29
10.2	Access to data centre spaces	30
10.3	Vapour density	30
11	Fire compartments and fire barriers	30
11.1	Fire compartments	30
11.2	Fire barriers	31
11.3	Protection Class boundaries	32
	Annex A (informative) Building materials	33
	Annex B (informative) Summary of data centre location requirements and recommendations of Clause 5	35
	Bibliography	38
Figures		
	Figure 1 — Schematic relationship between the EN 50600 series standards	6
	Figure 2 — Examples of free-standing barriers and minimum effective height	18
Tables		
	Table 1 — Heights and topping requirements for free-standing barriers	17
	Table 2 — Load capacity guidance for building structures	24
	Table B.1 — Summary of EN 50600-2-1:2021, Clause 5 location requirements and recommendations	35