SLOVENSKI STANDARD
kSIST-TP FprCEN ISO/TR 52127-2:2020

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Energijske lastnosti stavb - Avtomatizacija, regulacija in upravljanje stavb - 2. del: Razlaga in utemeljitev ISO 52127-1 (ISO/PRF TR 52127-2:2020)

Energy performance of buildings - Building automation, controls and building management - Part 2: Explanation and justification of ISO 52127-1 (ISO/PRF TR 52127-2:2020)

Performance énergétique des bâtiments - Automatisation, régulation et gestion technique du bâtiment - Partie 2: Explication et justification de l'ISO 52127-1 (ISO/PRF TR 52127-2:2020)

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ICS:

35.240.67	Uporabniške rešitve IT v gradbeništvu	IT applications in building and construction industry
91.120.10	Toplotna izolacija stavb	Thermal insulation of buildings
97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use

kSIST-TP FprCEN ISO/TR 52127-2:2020 **en,fr,de**

TECHNICAL REPORT

ISO/TR 52127-2

First edition

Energy performance of buildings — Building automation, controls and building management —

Part 2: Explanation and justification of ISO 52127-1

Performance énergétique des bâtiments — Automatisation, régulation et gestion technique du bâtiment —

Partie 2: Explication et justification de l'ISO 52127-1

PROOF/ÉPREUVE

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 205, *Building environment design*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 247, *Building Automation, Controls and Building Management*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

A list of all parts in the ISO 52127 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The CENSE project, the discussions between CEN and the concerted action highlighted the high page count of the entire package due to a lot of “textbook” information. This resulted in flooding and confusing the normative text.

A huge amount of informative contents should be recorded and available for users to properly understand, apply and nationally adapt the EPB standards.

The detailed technical rules CEN/TS 16629 ask for a clear separation between normative and informative contents:

— to avoid flooding and confusing the actual normative part with informative content;

— to reduce the page count of the actual standard;

— to facilitate understanding of the package.

Therefore each EPB standard should be accompanied by an informative technical report, like this one, where all informative contents is collected.

Table 1 shows the relative position of tis standard within the EPB set of standards.

Table 1 — Position of this standard within the EPD set of standards

	Over-arching	Building (as such)	Technical Building System									
Submod-ule	**Descrip-tions**	**Descrip-tions**	**Descrip-tions**	**Heat-ing**	**Cool-ing**	**Ventila-tion**	**Humidifi-cation**	**Dehumidifi-cation**	**Domes-tic Hot waters**	**Light-ing**	**Building automa-tion and control**	**PV, wind, ..**
sub1	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M7**		**M8**	**M9**	**M10**	**M11**
1	General	General	General									
2	Common terms and defini-tions; symbols, units and subscripts	Building Energy Needs	Needs									
3	Applica-tion	(Free) Indoor Condi-tions without Systems	Maximum Load and Power									
4	Ways to Express Energy Perfor-mance	Ways to Express Energy Perfor-mance	Ways to Express Energy Perfor-mance									
5	Building Func-tions and Building Bounda-ries	Heat Transfer by Trans-mission	Emission and con-trol									
6	Building Occupan-cy and Operating Condi-tions	Heat Transfer by Infil-tration and Ven-tilation	Distribu-tion and control									

Table 1 *(continued)*

	Over-arching	Building (as such)	Technical Building System									
Submod-ule	**Descrip-tions**	**Descrip-tions**	**Descrip-tions**	**Heat-ing**	**Cool-ing**	**Ventila-tion**	**Humidifi-cation**	**Dehumidifi-cation**	**Domes-tic Hot waters**	**Light-ing**	**Building automa-tion and control**	**PV, wind, ..**
sub1	**M1**	**M2**		**M3**	**M4**	**M5**	**M6**	**M7**	**M8**	**M9**	**M10**	**M11**
7	Aggre-gation of Energy Servic-es and Energy Carriers	Internal Heat Gains	Storage and con-trol									
8	Building Partition-ing	Solar Heat Gains	Genera-tion and control									
9	Calculat-ed Energy Perfor-mance	Building Dynamics (thermal mass)	Load dispatch-ing and operating conditions									
10	Measured Energy Perfor-mance	Measured Energy Perfor-mance	Measured Energy Perfor-mance									
11	Inspection	Inspection	Inspection									
12	Ways to Express Indoor Comfort		BMS								x	
13	External Environ-ment Con-ditions											
14	Economic Calcula-tion											

Energy performance of buildings — Building automation, controls and building management —

Part 2: Explanation and justification of ISO 52127-1

1 Scope

This document contains information to support the correct understanding, use and adoption of ISO 52127-1.

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.

ISO 52127-1, *Building Management System — Module M10-12*

ISO 7345, *Thermal insulation — Physical quantities and definitions (ISO 7345:1987)*

ISO 52000-1, *Energy performance of buildings — Overarching EPB assessment — Part 1: General framework and procedures*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 7345, ISO 52000-1 and ISO 52127-1 apply.

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

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Symbols

For the purposes of this document, the symbols given in ISO 52000-1 and ISO 52127-1 apply.

5 Method description

5.1 Effect of building automation and control (BAC) and technical building management (TBM)

The key-role of building automation and control and TBM is to ensure the balance between the desired human comfort - which should be maximal, and energy used to obtain this goal - which should be minimal.

The scope of BAC and TBM covers in accordance with their role from one side all technical building systems (where the effect of the BAC is used in the calculation procedures) and from another side the global optimization of the energy performance of a building.