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BSI Standards Publication

# Controls for heating systems

## Part 8: Accompanying TR prEN 12098-5:2015 — Modules M3-5,6,7,8

bsi.

**National foreword**

This Published Document is the UK implementation of CEN/TR 12098-8:2016.

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A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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# Controls for heating systems - Part 8: Accompanying TR prEN 12098-5:2015 - Modules M3-5,6,7,8

Begleitender TR zu EN 12098-5

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## European foreword

This document (CEN/TR 12098-8:2016) has been prepared by Technical Committee CEN/TC 247 “Building Automation, Controls and Building Management”, the secretariat of which is held by SNV.

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

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document is currently divided into the following parts:

— Controls for heating systems — Part 1: Control equipment for hot water heating systems;

— Controls for heating systems — Part 3: Control equipment for electrical heating systems;

— Controls for heating systems — Part 5: Start-stop schedulers for heating systems;

— Controls for heating systems — Part 6: Accompanying TR prEN 12098-1:2015 Modules M3-5,6,7,8 [Technical Report; currently at Voting stage];

— Controls for heating systems — Part 7: Accompanying TR prEN 12098-3:2015 Modules M3-5,6,7,8 [Technical Report; currently at Voting stage];

— Controls for heating systems — Part 8: Accompanying TR prEN 12098-5:2015 Modules M3-5,6,7,8 [the present Technical Report; currently at Voting stage].

# Introduction

The CENSE project, the discussion 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 shall indeed 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 shall be accompanied by an informative technical report, like this one, where all informative content is collected.

Table 1 shows the relative position of this TR within the EPB set of standards.

**Table 1 — Relative positon of this TR within the EN EPB package of standards**

| | Over-arching | Building (as such) | Technical Building System | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Submodule** | **Descriptions** | **Descriptions** | **Descriptions** | **Heating** | **Cooling** | **Ventilation** | **Humidification** | **Dehumidification** | **Domestic Hot waters** | **Lighting** | **Building automation and control** | **PV, wind, ..** |
| **sub 1** | **M1** | **M2** | | **M3** | **M4** | **M5** | **M6** | **M7** | **M8** | **M9** | **M10** | **M11** |
| **1** | General | General | General | | | | | | | | | |
| **2** | Common terms and definitions; symbols, units and subscripts | Building Energy Needs | Needs | | | | | | | | | |
| **3** | Application | (Free) Indoor Conditions without Systems | Maximum Load and Power | | | | | | | | | |
| **4** | Ways to Express Energy Performance | Ways to Express Energy Performance | Ways to Express Energy Performance | | | | | | | | | |
| **5** | Building Functions and Building Boundaries | Heat Transfer by Transmission | Emission and control | x | | | | | | | | |
| **6** | Building Occupancy and Operating Conditions | Heat Transfer by Infiltration and Ventilation | Distribution and control | x | | | | | | | | |
| **7** | Aggregation of Energy Services and Energy Carriers | Internal Heat Gains | Storage and control | x | | | | | | | | |
| **8** | Building Partitioning | Solar Heat Gains | Generation and control | x | | | | | | | | |
| **9** | Calculated | Building | Load | | | | | | | | | |

| | **Over-arching** | **Building (as such)** | **Technical Building System** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Submodule** | **Descriptions** | **Descriptions** | **Descriptions** | **Heating** | **Cooling** | **Ventilation** | **Humidification** | **Dehumidification** | **Domestic Hot waters** | **Lighting** | **Building automation and control** | **PV, wind, ..** |
| **sub 1** | **M1** | **M2** | | **M3** | **M4** | **M5** | **M6** | **M7** | **M8** | **M9** | **M10** | **M11** |
| | Energy Performance | Dynamics (thermal mass) | dispatching and operating conditions | | | | | | | | | |
| **10** | Measured Energy Performance | Measured Energy Performance | Measured Energy Performance | | | | | | | | | |
| **11** | Inspection | Inspection | Inspection | | | | | | | | | |
| **12** | Ways to Express Indoor Comfort | | BMS | | | | | | | | | |
| **13** | External Environment Conditions | | | | | | | | | | | |
| **14** | Economic Calculation | | | | | | | | | | | |

# 1 Scope

This Technical Report refers to prEN 12098-5:2015, *Controls for heating systems — Part 5: Start-stop schedulers for heating systems — Modules M3-5,6,7,8*.

It contains information to support the correct understanding, use and national adaption of prEN 12098-5:2015.

This Technical Report does not contain any normative provision.

# 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.

prEN 12098-1:2015, *Controls for heating systems — Part 1: Control equipment for hot water heating systems — Modules M3-5,6,7,8*

prEN 12098-5:2015, *Controls for heating systems — Part 5: Start-stop schedulers for heating systems — Modules M3-5,6,7,8*

EN 15316–2-3, *Heating systems in buildings - Method for calculation of system energy requirements and system efficiencies - Part 2-3: Space heating distribution systems*

prEN 15500-1:2015, *Control for heating, ventilating and air-conditioning applications — Part 1: Electronic individual zone control equipment — Modules M3-5,M4-5,M5-5*

prEN ISO 52000-1:2015, *Energy performance of buildings — Overarching EPB assessment — Part 1: General framework and procedures*

EN ISO 7345:1995, *Thermal insulation - Physical quantities and definitions (ISO 7345:1987)*

# 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 7345:1995, prEN ISO 52000-1:2015 and prEN 12098-5:2015 (the accompanied EPB standard) apply.

# 4 Symbols and abbreviations

## 4.1 Symbols

For the purposes of this European Standard, the symbols given in prEN ISO 52000-1:2015 and prEN 12098-5:2015 (the accompanied EPB standard)apply.

## 4.2 Abbreviations

| Abbreviation | Term |
|---|---|
| FSS | fixed start-stop scheduling |