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# Controls for heating systems

Part 7: Accompanying TR prEN

12098-3:2015 — Modules M3-5,6,7,8

**National foreword**

This Published Document is the UK implementation of CEN/TR 12098-7:2016.

The UK participation in its preparation was entrusted to Technical Committee RHE/16, Performance requirements for control systems.

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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prEN 12098-3:2015 - Modules M3-5,6,7,8**

Begleitender TR zu EN 12098-3

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## Contents

Page

European foreword.....	3
Introduction .....	4
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions .....	7
4 Symbols and abbreviations .....	7
4.1 Symbols.....	7
4.2 Abbreviations .....	7
5 Control heating systems, general design rules.....	8
5.1 Control heating systems, main design rules, general design rules .....	8
5.2 Partitioning control heating zones in buildings .....	8
5.3 Generation, distribution, emission control .....	8
5.3.1 General.....	8
5.3.2 Generation .....	8
5.3.3 Distribution.....	8
5.3.4 Emission .....	9
6 Control heating functions and they impact.....	10
6.1 OTC - Outside Temperature Compensated control.....	10
6.2 Added functions to OTC control.....	11
6.2.1 Auto tuning heating curve parameters .....	11
6.2.2 Compensation by emitters energy demand transmission .....	11
6.2.3 Other meteorological variables and forecast .....	11
6.2.4 OSS - Optimum Start-Stop scheduling.....	11
6.2.5 OSS generation impact .....	12
6.2.6 OSS distribution impact.....	12
6.2.7 OSS emission impact .....	13
6.3 Added functions to OSS .....	13
6.3.1 Auto tuning OSS parameters .....	13
6.3.2 Summer-winter switch.....	13
7 Integrated functions in control systems and their impact.....	13
7.1 Integrated functions.....	13
7.2 Central control effect on room temperature control .....	14
7.2.1 General.....	14
7.2.2 Heating power control accuracy .....	14
7.2.3 Heating curve adaptation.....	14
7.2.4 Calculating contribution of central control to emission control.....	14
Bibliography.....	16

## European foreword

This document (CEN/TR 12098-7:2016) 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 [the present Technical Report; currently at Voting stage];
- Controls for heating systems — Part 8: Accompanying TR prEN 12098-5:2015 Modules M3-5,6,7,8 [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 position 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		M 3	M 4	M5	M6	M 7	M8	M 9	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 Energy Performance	Building Dynamics (thermal	Load dispatching									

	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		M 3	M 4	M5	M6	M 7	M8	M 9	M10	M11
		mass)	and operati ng conditio ns									
10	Measured Energy Performance	Measured Energy Performance	Measur ed Energy Perfor mance									
11	Inspection	Inspection	Inspecti on									
12	Ways to Express Indoor Comfort		BMS									
13	External Environment Conditions											
14	Economic Calculation											



## 1 Scope

This Technical Report refers to prEN 12098-3, *Controls for heating systems — Part 3: Control equipment for electrical heating systems — Modules M3-5,6,7,8*.

It contains information to support the correct understanding, use and national adaption of prEN 12098-3:2015.

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 12098-3:2015, *Controls for heating systems - Part 3: Control equipment for electrical heating systems - Modules M3-5,6,7,8*

prEN 15232-1:2015, *Energy performance of buildings - Part 1: Impact of Building Automation, Controls and Building Management - Modules M10-4,5,6,7,8,9,10*

EN 15316-2-3:2007, *Heating systems in buildings - Method for calculation of system energy requirements and system efficiencies - Part 2-3: Space heating distribution systems*

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

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, prEN 12098-3:2015 (the accompanied EPB standard) apply.

## 4 Symbols and abbreviations

### 4.1 Symbols

For the purposes of this document, the symbols given in prEN ISO 52000-1:2015 and prEN 12098-3:2015 (the accompanied EPB standard) apply.

### 4.2 Abbreviations

Abbreviation	Term
OTC	outside temperature compensated
RTC	room temperature control
FSS	fixed start-stop scheduling
OSS	optimum start –stop scheduling