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# Fyringsautomater til brændere og brændstofapparater til gasformigt eller flydende brændstof

Automatic burner control systems for burners and appliances burning gaseous or liquid fuels



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EUROPÄISCHE NORM

November 2022

ICS 27.060.01

Supersedes EN 298:2012

English Version

## Automatic burner control systems for burners and appliances burning gaseous or liquid fuels

Systèmes automatiques de commande pour brûleurs et appareils utilisant des combustibles gazeux ou liquides

Feuerungsautomaten für Brenner und Brennstoffgeräte für gasförmige oder flüssige Brennstoffe

This European Standard was approved by CEN on 2 October 2022.

CEN 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 CEN 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 CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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## Contents

Page

<b>European foreword</b> .....	<b>5</b>
<b>Introduction</b> .....	<b>6</b>
<b>1 Scope</b> .....	<b>7</b>
<b>2 Normative references</b> .....	<b>7</b>
<b>3 Terms and definitions</b> .....	<b>8</b>
<b>4 Classification</b> .....	<b>16</b>
4.1 Classes of control .....	16
4.2 Groups of control .....	16
4.3 Classes of control functions.....	16
4.4 Types of <i>DC</i> supplied controls.....	16
<b>5 Test conditions and uncertainty of measurements</b> .....	<b>16</b>
<b>6 Design and construction</b> .....	<b>16</b>
6.1 General .....	16
6.2 Mechanical parts of the control .....	16
6.3 Materials.....	16
6.4 Gas connections.....	16
6.5 Electrical parts of the control.....	16
6.5.1 General.....	16
6.5.2 Switching elements .....	17
6.5.3 Electrical components.....	17
6.6 Protection against internal faults for the purpose of functional safety.....	18
6.6.1 Design and construction requirements.....	18
6.6.2 Class A.....	18
6.6.3 Class B .....	18
6.6.4 Class C .....	18
6.6.5 Circuit and construction evaluation.....	20
<b>7 Performance</b> .....	<b>20</b>
7.1 General .....	20
7.2 Leak-tightness .....	20
7.3 Torsion and bending.....	20
7.4 Rated flow rate.....	21
7.5 Durability .....	21
7.5.1 Elastomers in contact with gas .....	21
7.5.2 Durability of marking .....	21
7.5.3 Resistance to scratching.....	21
7.5.4 Resistance to humidity .....	21
7.5.5 Lubricants in contact with gas .....	21
7.6 Performance tests for electronic controls.....	21
7.6.1 At ambient temperature.....	21
7.6.2 At minimum temperature.....	21
7.6.3 At maximum temperature .....	21
7.7 Long-term performance for electronic controls.....	22
7.7.1 General.....	22
7.7.2 Stress test .....	22
7.7.3 Long-term performance tests .....	22
7.8 Data exchange .....	22
7.101 Functional requirements .....	23
7.101.1 General.....	23
7.101.2 Program.....	23
7.101.3 Timing and operational sequences .....	26
7.101.4 Flame detector device/HTO detector .....	28
7.101.5 Lock-out function .....	32

This is a preview of "DS/EN 298:2022". [Click here to purchase the full version from the ANSI store.](#)

	7.101.6 HTO detector.....	33
<b>8</b>	<b>Electrical requirements .....</b>	<b>33</b>
	8.1 General.....	33
	8.2 Protection by enclosure.....	33
<b>9</b>	<b>Electromagnetic compatibility (EMC) .....</b>	<b>33</b>
	9.1 Protection against environmental influences.....	33
	9.2 Supply voltage variations below 85 % of rated voltage.....	35
	9.3 Voltage dips and interruptions .....	35
	9.4 Supply frequency variations .....	35
	9.5 Surge immunity tests .....	36
	9.6 Electrical fast transient/burst.....	36
	9.7 Immunity to conducted disturbances induced by radio frequency fields.....	37
	9.8 Immunity to radiated disturbances induced by radio frequency fields.....	37
	9.9 Electrostatic discharge tests .....	37
	9.10 Power frequency magnetic field immunity tests .....	37
	9.11 Harmonics and interharmonics including mains signalling at a. c. power port, low frequency immunity tests .....	38
<b>10</b>	<b>Marking, instructions .....</b>	<b>38</b>
	10.1 Marking.....	38
	10.2 Instructions.....	38
	10.3 Warning notice.....	40
	<b>Annex A (informative) Abbreviations and symbols .....</b>	<b>41</b>
	<b>Annex B (informative) Leak-tightness tests for gas controls – volumetric method.....</b>	<b>42</b>
	<b>Annex C (informative) Leak-tightness tests for gas controls – pressure loss method .....</b>	<b>43</b>
	<b>Annex D (normative) Calculation of pressure loss into leakage rate.....</b>	<b>44</b>
	<b>Annex E (normative) Electrical/electronic component fault modes .....</b>	<b>45</b>
	<b>Annex F (normative) Additional requirements for safety accessories and pressure accessories as defined in EU Directive 2014/68/EU .....</b>	<b>47</b>
	<b>Annex G (normative) Materials for pressurized parts .....</b>	<b>48</b>
	<b>Annex H (informative) Additional materials for pressurized parts.....</b>	<b>49</b>
	<b>Annex I (normative) Requirements for controls used in DC supplied burners and appliances burning gaseous or liquid fuels.....</b>	<b>50</b>
	<b>Annex J (normative) Method for the determination of a Safety Integrity Level (SIL) .....</b>	<b>52</b>
	<b>Annex K (normative) Method for the determination of a Performance Level (PL) .....</b>	<b>53</b>
	<b>Annex L (informative) Relationship between Safety Integrity Level (SIL) and Performance Level (PL).....</b>	<b>54</b>
	<b>Annex M (normative) Reset functions .....</b>	<b>55</b>
	<b>Annex N (informative) Guidance document on Environmental Aspects.....</b>	<b>56</b>
	<b>Annex O (normative) Seals of elastomer, cork and synthetic fibre mixtures .....</b>	<b>57</b>
	<b>Annex AA (informative) Functional characteristics of automatic burner control systems, to be given by the appliance standard.....</b>	<b>58</b>
	<b>Annex BB (informative) Fault modes of flame sensors.....</b>	<b>59</b>
	<b>Annex CC (informative) Functional diagrams of automatic burner control systems for oil .....</b>	<b>61</b>
	<b>Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2009/142/EC aimed to be covered.....</b>	<b>65</b>
	<b>Annex ZB (informative) Relationship between this European Standard and the essential requirements of Regulation (EU) 2016/426 aimed to be covered .....</b>	<b>66</b>

This is a preview of "DS/EN 298:2022". [Click here to purchase the full version from the ANSI store.](#)

<b>Annex ZC (informative) Relationship between this European Standard and the essential requirements of Directive 2014/68/EU aimed to be covered.....</b>	<b>67</b>
<b>Bibliography .....</b>	<b>68</b>

This is a preview of "DS/EN 298:2022". [Click here to purchase the full version from the ANSI store.](#)

## European foreword

This document ([EN 298:2022](#)) has been prepared by Technical Committee CEN/TC 58 "Safety and control devices for burners and appliances burning gaseous or liquid fuels", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by November 2025.

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 supersedes [EN 298:2012](#).

In comparison with the previous edition, the following significant changes have been incorporated in this document:

- a) alignment with [EN 13611:2019](#), as impacted by [EN 13611:2019/AC:2021](#);
- b) inclusion of [Annex J](#), [Annex K](#), [Annex L](#), [Annex M](#), [Annex N](#), [Annex O](#), [Annex ZB](#) and [Annex ZC](#);
- c) alignment with Regulation (EU) 2016/426 on appliances burning gaseous fuels (GAR) and addition of [Annex ZB](#);
- d) addition of the high-temperature operation (HTO).

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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## **Introduction**

This document is intended to be used in conjunction with [EN 13611:2019](#).

This document refers to clauses of [EN 13611:2019](#) or adapts clauses by stating “with the following modification”, “with the following addition”, “is replaced by the following” or “is not applicable” in the corresponding clause.

This document adds clauses or subclauses to the structure of [EN 13611:2019](#) which are particular to this document. Subclauses which are additional to those in [EN 13611:2019](#) are numbered starting from 101. Additional Annexes are designated as [Annex AA](#), [Annex BB](#), [Annex CC](#), etc. It should be noted that these clauses, subclauses and Annexes are not indicated as an addition.

If by reference to [EN 13611:2019](#) the term “control” is given, this term should be read as automatic burner control systems, flame detector devices or HTO detectors.

[EN 298](#) compliance for automatic burner control systems, flame detector devices or HTO detectors cannot be claimed based upon SIL classification according to the [EN 61508](#) series.

SIL classification cannot be claimed based upon compliance with this standard only. A supplementary method for SIL determination is specified in [EN 13611:2019](#), Annex J.

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# Automatic burner control systems for burners and appliances burning gaseous or liquid fuels

## 1 Scope

[EN 13611:2019](#), Clause 1 is replaced by the following:

This document specifies the safety, design, construction and performance requirements, and testing for automatic burner control systems, programming units, flame detector devices and High Temperature Operation (HTO) detectors, intended for use with gas and oil burners and gas and oil burning appliances, with or without fans and similar use.

This document is applicable to automatic burner control systems that include additional functions.

This document is not applicable to automatic burner control systems utilizing thermo-electric flame supervision devices.

NOTE Standards for burners, appliances or processes which use automatic burner control systems, programming units, flame detectors or HTO detectors can override the requirements of this document.

## 2 Normative references

Shall be according to [EN 13611:2019](#), Clause 2 with the following additions:

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.

[EN 267:2020](#), *Forced draught burners for liquid fuels*

[EN 1643:2022](#), *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — Valve proving systems for automatic shut-off valves*

[EN 13611:2019](#)<sup>1)</sup>, *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — General requirements*

[EN 60730-1:2016](#)<sup>2)</sup>, *Automatic electrical controls — Part 1: General requirements (IEC 60730-1:2013, modified)*

[EN 60730-2-5:2015](#)<sup>3)</sup>, *Automatic electrical controls — Part 2-5: Particular requirements for automatic electrical burner control systems (IEC 60730-2-5:2013)*

[EN 60947-5-1:2017](#)<sup>4)</sup>, *Low-voltage switchgear and controlgear — Part 5-1: Control circuit devices and switching elements — Electromechanical control circuit devices (IEC 60947-5-1:2016, modified)*

[EN 61810-1:2015](#)<sup>5)</sup>, *Electromechanical elementary relays — Part 1: General and safety requirements (IEC 61810-1:2015)*

[EN ISO/IEC 80079-20-1:2019](#), *Explosive atmospheres — Part 20-1: Material characteristics for gas and vapour classification — Test methods and data (ISO/IEC 80079-20-1:2017, including Cor 1:2018)*

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1) As impacted by EN 13611:2019/AC:2021.

2) As impacted by EN 60730-1:2016/A1:2019 and EN 60730-1:2016/A2:2022.

3) As impacted by EN 60730-2-5:2015/A1:2019 and EN 60730-2-5:2015/A2:2021.

4) As impacted by EN 60947-5-1:2017/AC:2020-05.

5) As impacted by EN 61810-1:2015/AC:2017-07, EN 61810-1:2015/AC:2018-04 and EN 61810-1:2015/A1:2020.