BSI Standards Publication

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

National foreword

This British Standard is the UK implementation of EN 298:2022. It supersedes BS EN 298:2012, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GSE/22, Safety and control devices for gas and oil burners and gas burning appliances.

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

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Amendments/corrigenda issued since publication

Date	Text affected

EUROPEAN STANDARD **EN 298**

NORME EUROPÉENNE

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.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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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of an identical text or by endorsement, at the latest by May 2023, and conflicting national standards shall be withdrawn at the latest by November 2025.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.

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.

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[1], *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — General requirements*

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

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

EN 60947-5-1:2017[4], *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[5], *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.