



SLOVENSKI STANDARD
SIST EN 125:2022+A1:2025

01-marec-2025

Nadomešča:
SIST EN 125:2022

**Naprave za nadzor plamena pri plinskih aparatih - Termoelektrična varovala
(vključno z dopolnilom A1)**

Flame supervision devices for gas burning appliances - Thermoelectric flame supervision devices

Flammenüberwachungseinrichtungen für Gasgeräte - Thermo-elektrische Zündsicherungen

Dispositifs de surveillance de flamme pour appareils à gaz - Dispositifs thermoélectriques de surveillance de flamme

Ta slovenski standard je istoveten z: EN 125:2022+A1:2024

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ICS:

27.060.20 Plinski gorilniki Gas fuel burners

SIST EN 125:2022+A1:2025 **en,fr,de**

EUROPEAN STANDARD

EN 125:2022+A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2024

ICS 27.060.20

English Version

Flame supervision devices for gas burning appliances - Thermoelectric flame supervision devices

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gaz - Dispositifs thermoélectriques de surveillance de
flamme

Flammenüberwachungseinrichtungen für Gasgeräte -
Thermo-elektrische Zündsicherungen

This European Standard was approved by CEN on 8 August 2022 and includes Amendment 1 approved by CEN on 3 July 2024.

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European foreword

This document (EN 125:2022+A1:2024) 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of an identical text or by endorsement, at the latest by May 2025, and conflicting national standards shall be withdrawn at the latest by November 2027.

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 includes Amendment 1 approved by CEN on 3 July 2024.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This document supersedes A1 EN 125:2022.

This document differs from EN 125:2022 as follows:

a) Annex ZA has been brought in line with Mandate M/595 and the normative references are updated. A1

A1 Deleted text A1

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For relationship with EU Directive(s) / Regulation(s), see informative Annex ZA, which is an integral part of this document.

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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.

EN 13611:2019 recognizes the safety level specified by CEN/TC 58 and is regarded as a horizontal standard dealing with the safety, construction, performance and testing of controls for burners and appliances burning gaseous and/or liquid fuels.

The general requirements for controls are given in EN 13611:2019, and methods for classification and assessment for new controls and control functions are given in EN 14459:2021 (see Figure 1). EN 126:2012 (see Figure 1) specifies multifunctional controls combining two or more controls and Application Control Functions, one of which is a mechanical control function. The requirements for controls and Application Control Functions are given in the specific control standard (see Figure 1, control functions).

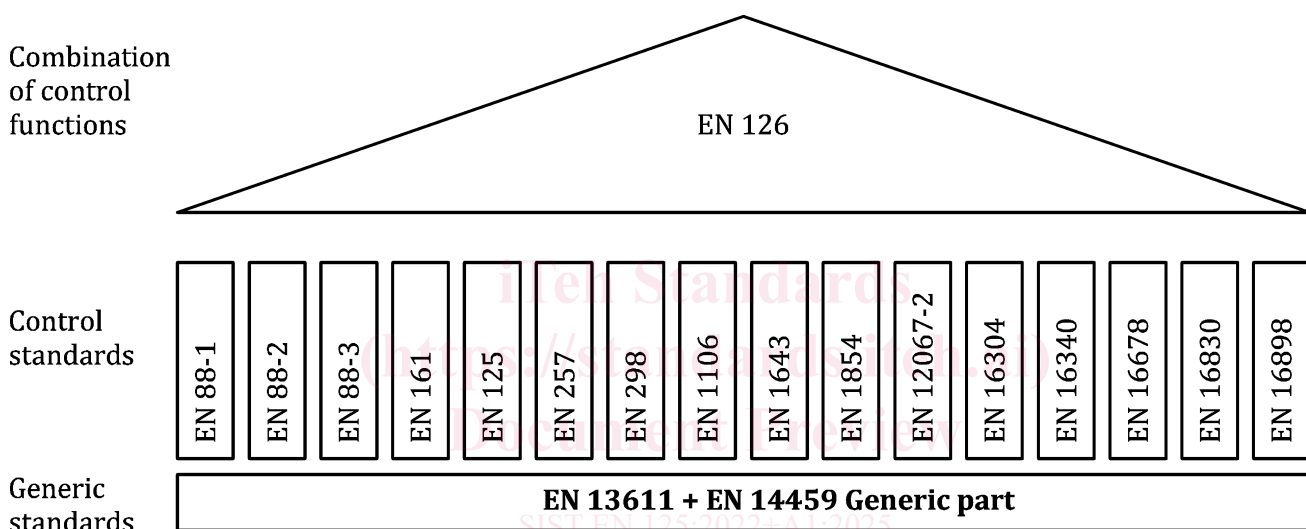


Figure 1 — Interrelation of control standards

EN 13611:2019 should be used in conjunction with the specific standard for a specific type of control (e.g. A_1 EN 88-1:2022+A1:2023 A_1 , A_1 EN 88-2:2022+A1:2024 A_1 , A_1 EN 88-3:2022+A1:2024 A_1 , A_1 EN 125:2022+A1:2024 A_1 , EN 126:2012, EN 161:2022, A_1 EN 257:2022+A1:2023 A_1 , EN 298:2022, A_1 EN 1106:2022+A1:2023 A_1 , EN 1643:2022, A_1 EN 1854:2022+A1:2023 A_1 , EN 12067-2:2022, A_1 EN 16304:2022+A1:2024 A_1 , EN 16340:2014, EN 16678:2022 and A_1 EN 16898:2022+A1:2023 A_1), or for controls for specific applications.

EN 13611:2019 can also be applied, so far as reasonable, to controls not mentioned in a specific standard and to controls designed on new principles, in which case additional requirements can be necessary. EN 14459:2021 provides methods for classification and assessment of new control principles.

Primarily in industrial applications it is common practice to rate the safety of a plant based on values describing the likelihood of a dangerous failure. These values are being used to determine Safety Integrity Levels or Performance Levels when the system is being assessed in its entirety.

CEN/TC 58 standards for safety relevant controls do go beyond this approach, because for a certain life time for which the product is specified, designed and tested a dangerous failure is not allowed at all. Failure modes are described and assessed in greater detail.

Measures to prevent from dangerous situations are defined. Field experience over many decades is reflected in the CEN/TC 58 standards. Requirements of EN 13611:2019 can be considered as proven in practice.

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 designed as Annex AA, BB, CC, etc. It should be noted that these clauses, subclauses and Annexes are not indicated as an addition.

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EN 125:2022+A1:2024 (E)**1 Scope**

EN 13611:2019, Clause 1 applies with the following modification and addition:

Modification:

The 1st paragraph of EN 13611:2019, Clause 1 is replaced by:

This document specifies the safety, design, construction, and performance requirements and testing for thermoelectric flame supervision devices, energized by a thermocouple intended for use with burners and appliances burning one or more gaseous fuels, hereafter referred to as “controls”.

This document is applicable to controls with declared maximum inlet pressures up to and including 500 kPa and of nominal connection sizes up to and including DN 50.

Addition:

This document is not applicable to:

- the thermocouple;
- controls which use auxiliary energy (e.g. electrical energy supplied externally).

The 4th paragraph of EN 13611:2019, Clause 1 is removed.

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.

[A1] EN 13611:2019 **[A1]**, *Safety and control devices for burners and appliances burning gaseous and/or liquid fuels — General requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13611:2019 and the following 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 <https://www.electropedia.org/>

3.101**thermocouple**

thermoelectric flame sensing element that responds to the temperature of the supervised flame, and in which the flame effect produces an electromotive force (e.m.f.)

3.102**thermoelectric flame supervision device**

control which, in response to the e.m.f. produced by the thermocouple, maintains the gas way to the main burner or the main burner and the pilot burner open and which shuts off the gas way to the main burner at least, after extinction of the supervised flame

Note 1 to entry: For further reference, see Figure AA.1 and Figure AA.2.

3.103**ignition interlock**

part which prevents the igniter from operating as long as the main gas way is open

3.104**re-start interlock**

mechanism which prevents the re-opening of the gas way to the main burner or to the main burner and the pilot burner until the armature plate has separated from the magnetic element

Note 1 to entry: For further information, see Figure AA.1 and Figure AA.2.

3.105**sealing force**

force acting on the closure member when the closure member is in the closed position, independent of any force provided by fuel gas pressure

3.106**closed position**

position of the closure member(s) in the absence of the thermoelectric energy

4 Classification**4.1 Classes of control**

EN 13611:2019, 4.1 is replaced by the following:

Controls shall be classified A, B or C according to the number of operations as tested in 7.105.2.2.

4.2 Groups of control

Shall be according to EN 13611:2019, 4.2.

4.3 Classes of control functions

EN 13611:2019, 4.3 is not applicable.

4.4 Types of DC supplied controls

EN 13611:2019, 4.4 is not applicable.

5 Test conditions and uncertainty of measurements

Shall be according to EN 13611:2019, Clause 5.

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6 Design and construction

6.1 General

Shall be according to EN 13611:2019, 6.1 with the following modification and addition:

The 3rd paragraph of EN 13611:2019, 6.1 is not applicable.

Controls shall shut off the gas way to the burner automatically with at least the sealing force specified in 7.104 in case of failure in the thermoelectric current. Controls shall also be designed so that during ignition either the gas way to the main burner is open, if there is no pilot burner, or the gas way to the main burner is closed and that to the pilot burner is open.

6.2 Mechanical parts of the control

6.2.1 Appearance

Shall be according to EN 13611:2019, 6.2.1.

6.2.2 Holes

Shall be according to EN 13611:2019, 6.2.2.

6.2.3 Breather holes

EN 13611:2019, 6.2.3 is not applicable.

6.2.4 Screwed fastenings

Shall be according to EN 13611:2019, 6.2.4.

6.2.5 Jointing

Shall be according to EN 13611:2019, 6.2.5.

6.2.6 Moving parts

Shall be according to EN 13611:2019, 6.2.6.

6.2.7 Sealing caps

Shall be according to EN 13611:2019, 6.2.7.

6.2.8 Dismantling and reassembly

Shall be according to EN 13611:2019, 6.2.8.

6.2.9 Auxiliary canals and orifices

Shall be according to EN 13611:2019, 6.2.9.

6.2.10 Presetting device

Shall be according to EN 13611:2019, 6.2.10.

6.3 Materials

6.3.1 General material requirements

Shall be according to EN 13611:2019, 6.3.1.