

© Copyright SEK Svensk Elstandard. Reproduction in any form without permission is prohibited.

Elektriska apparater för detektering av kolmonoxid i hemmiljö, husvagnar och båtar – Vägledning vid val, installation, användning och underhåll

*Electrical apparatus for the detection of carbon monoxide in domestic premises, caravans and boats –
Guide on the selection, installation, use and maintenance*

Som svensk standard gäller europastandarden EN 50292:2023. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50292:2023.

Nationellt förord

Tidigare fastställd svensk standard SS-EN 50292, utg 2:2016 med eventuella tillägg, ändringar och rättelser gäller ej fr o m 2026-03-20.

ICS 13.320.00

Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

English Version

**Electrical apparatus for the detection of carbon monoxide in
domestic premises, caravans and boats - Guide on the selection,
installation, use and maintenance**

Matériels électriques pour la détection de monoxyde de carbone dans les locaux à usage domestique, caravanes et bateaux - Guide de sélection, d'installation, d'utilisation et de maintenance

Elektrische Geräte für die Detektion von Kohlenmonoxid in Wohnhäusern, Caravans und Booten - Leitfaden für Auswahl, Installation, Benutzung und Instandhaltung

This European Standard was approved by CENELEC on 2023-03-20. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	6
4 Sources of carbon monoxide	8
4.1 General information.....	8
4.2 Normal exposure levels	9
4.3 Burning of carbonaceous materials for heating and cooking	9
4.3.1 General.....	9
4.3.2 Space and water heating.....	9
4.3.3 Cooking.....	9
4.4 Uncontrolled burning	9
4.5 Tobacco smoking	10
4.6 Fuel burning appliances	10
4.7 Migration of CO	10
5 Installation	10
5.1 General.....	10
5.2 Planning and configuration	10
5.2.1 General.....	10
5.2.2 Configuration and installation.....	10
5.2.3 Siting	11
5.3 Types of apparatus.....	13
5.4 Special Needs and Risk Groups	14
6 Examples of executive actions (valid only for Type A apparatus)	14
6.1 General.....	14
6.2 Shut-off valve	14
6.3 Ventilation system	14
6.4 Mains electrical switch.....	15
6.5 Remote alarm	15
6.6 Additional signalling devices	15
6.7 Link between apparatus and ancillary device	15
7 Advice to the installer	15
7.1 Use of alarm	15
7.2 Manufacturer's instructions	15
7.3 Location	15
7.4 Power supply	16
7.5 Indicators.....	16
7.6 Nuisance alarms	16
7.7 Maintenance	16
7.8 Lifetimes	17
8 Emergency actions.....	17
Annex A (informative) Health effects.....	18
Annex B (informative) Philosophy of setting alarm levels	21
Annex C (informative) Emergency actions	23
Bibliography	25

European foreword

This document (EN 50292:2023) has been prepared by CLC/TC 216, "Gas detectors".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2024-03-20
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-03-20

This document supersedes EN 50292:2013 and all of its amendments and corrigenda (if any).

EN 50292:2023 includes the following significant technical changes with respect to EN 50292:2013 (various minor changes have also been made):

- Document title revised to include applications that are similar to domestic premises;
- Section titles have been revised to be clearer;
- Normative references have been extended to include smoke and CO alarm standards;
- Clause 3, Definitions have been extended and revised, e.g. to bring in line with other standards;
- Clause 4, sources of carbon monoxide have been revised to include wood pellets, and ethanol;
- 4.3.1, included reference to Inversion weather conditions;
- 4.3.3, revised title and text to improve clarity;
- 4.5, include reference to other smoke emitting sources such as Shisha venues;
- 4.6, Revised;
- 4.7, Revised with reference to CO diffusion;
- 5.2, Title revised;
- 5.2.1, Title revised;
- 5.2.2, Title revised;
- 5.2.2, Content revised for easier reading and improved clarity;
- 5.2.2.1, revised to improve clarity and refence to other standards included;
- 5.2.2.2, New section covering wood pellets, wood chips and biomass briquettes added;
- 5.2.2.3, renumbered and revised Caravans and recreational craft;
- 5.2.3, title revised for improved clarity;
- 5.2.3.1, Revised throughout;

- 5.2.3.2, Title revised, Text revised for improved clarity;
- 5.2.3.3, Title revised, Text revised for improved clarity;
- 5.2.3.4, Title revised, Text revised for improved clarity;
- 5.2.3.5, Revised with additional information on siting in caravans and recreational craft;
- 5.3, Revised to include reference to other standards;
- 5.4, New section referencing Special needs and Risk Groups;
- Clause 6, Title revised;
- 6.1, text revised to include references to other sections in this document;
- 6.3, Title revised and updated text in relation to ventilation systems;
- 6.4, Added examples on hazards;
- 6.5, Revised section;
- 6.6, title and text revised to reference to the principle of two senses for additional signalling;
- Clause 7, Title revised;
- 7.1, revised for improved clarity;
- 7.2, revised for improved clarity;
- 7.5, revised for improved clarity;
- 7.6, Revised title and updated text on nuisance alarms;
- 7.7, Complete revision of maintenance and lifetimes sections;
- Clause 8, Emergency actions moved to Annex C.

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

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

Introduction

This document is intended to be a guide for people who, in the course of their professional activities, are required to install apparatus for the detection of carbon monoxide (CO) in domestic premises and rooms with similar purposes. It is also aimed at anyone who might supply such detectors to members of the public for subsequent installation according to national regulations, so that advice may be given based on good engineering practice.

Apparatus for the detection of carbon monoxide are not a substitute for good installation and regular servicing of fuel burning appliances or regular cleaning of chimneys, although they may provide an added margin of reassurance for users. Domestic carbon monoxide detectors with or without some form of executive function may overcome fears of fuel safety and may be particularly beneficial in certain circumstances.

It is necessary to understand that carbon monoxide toxicity may have different consequences according to the physical condition of the individual. Thus, a carbon monoxide detector designed according to the EN 50291 series may not fully safeguard individuals with specific medical conditions.

Carbon monoxide detectors are not intended to be used as an alternative to smoke alarms.

1 Scope

This document serves as a guide on the selection, installation, use and maintenance of apparatus for the detection of carbon monoxide, intended for continuous operation in a fixed installation in domestic premises, caravans and boats. This guide is intended to cover any type of domestic or residential accommodation, including leisure accommodation vehicles such as touring and static caravans, and motor homes; and recreational craft such as canal barges. Some static caravans are used as permanent dwellings; in such cases EN 50291-1 is appropriate. For all other types of caravan, EN 50291-2 is appropriate. This guide is read in conjunction with EN 50291-1 and EN 50291-2 together with any additional relevant national or local regulations.

This document refers to the installation of two types of apparatus:

- a) Type A apparatus, to provide a visual and audible alarm and an executive action in the form of an output signal that can be used to actuate directly or indirectly a ventilation or other ancillary device;
- b) Type B apparatus, to provide a visual and audible alarm only.

This document excludes apparatus for the detection of combustible gases (see EN 50244) and for industrial installations or commercial premises.

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.

EN 1775, *Gas supply - Gas pipework for buildings - Maximum operating pressure less than or equal to 5 bar - Functional recommendations*

EN 50291-1:2018, *Gas detectors - Electrical apparatus for the detection of carbon monoxide in domestic premises - Part 1: Test methods and performance requirements*