

Electrical apparatus for the detection of combustible gases in domestic premises - Guide on the selection, installation, use and maintenance

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50244:2016 sisaldab Euroopa standardi EN 50244:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 50244:2016 consists of the English text of the European standard EN 50244:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 06.05.2016.	Date of Availability of the European standard is 06.05.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 13.320

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:

Aru 10, 10317 Tallinn, Eesti; koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Aru 10, 10317 Tallinn, Estonia; homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

**Electrical apparatus for the detection of combustible gases in
domestic premises - Guide on the selection, installation, use and
maintenance**

Appareils électriques pour la détection des gaz
combustibles dans les locaux à usage domestique - Guide
de sélection, d'installation, d'utilisation et de maintenance

Elektrische Geräte für die Detektion von brennbaren Gasen
in Wohnhäusern - Leitfaden für Auswahl, Installation,
Einsatz und Wartung

This European Standard was approved by CENELEC on 2016-03-14. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

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

Contents

	Page
European foreword.....	3
Introduction.....	4
1 Scope	5
2 Normative references.....	5
3 Terms and definitions.....	5
4 Sensing of combustible gas	6
5 Types of apparatus	7
6 Installation	8
6.1 General	8
6.2 Gas releases	8
6.2.1 General.....	8
6.2.2 Source of the gas escape	8
6.2.3 Examples of behaviour of gas releases	9
6.2.4 Positioning of the gas detector.....	10
6.3 Remote Detector Heads	12
6.4 Mains power supply	12
7 Executive functions (type A apparatus only).....	13
7.1 General	13
7.2 Shut-off valve	13
7.3 Ventilation fan	13
7.4 Main electric switch.....	13
7.5 Remote alarm	13
7.6 Additional visual alarm.....	13
7.7 Link between detector and ancillary device.....	13
7.8 Fault relays	13
8 Advice to the user	14
8.1 Manufacturer's instructions	14
8.2 Location	14
8.3 Power supply	14
8.4 Indicators	14
8.5 Alarms.....	14
8.6 Maintenance	15
8.7 Lifetimes.....	15
9 Emergency actions.....	15
Bibliography	16

European foreword

This document (EN 50244:2016) 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) 2017-03-14
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2019-03-14

This document supersedes EN 50244:2000.

EN 50244:2016 includes the following significant technical changes with respect to EN 50244:2000 (various minor changes have also been made):

- General information added to cover domestic premises, boats and caravans. This is a result of the splitting of EN 50194 into EN 50194-1 and EN 50194-2.
- In Clause 4 text has been added regarding alarm set points for apparatus complying with EN 50194-1.
- A new Clause 5 has been created to provide further information to the user concerning the differences between Type A and Type B devices.
- Former Clause 5 has been renumbered Clause 6, text has been reformulated to avoid repetition and make it easier to understand.
- New Figures 1 and 2 created, to show the typical locations of combustible gas alarms when used with Natural Gas and LPG installations.
- The text in Clause 7 “Executive Actions” has been aligned with EN 50292, where applicable, for combustible gas alarms.
- In Clause 8 “Advice to the User”, additional text has been added to highlight the differences between location of a combustible gas detector and a carbon monoxide alarm.

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

Introduction

This European Standard is intended to be a guide for people who, in the course of their professional activities, are required to install combustible gas detectors in domestic premises. It is also aimed at anyone who might supply such gas detectors to members of the public for subsequent installation by competent persons according to national regulations, so that advice may be given based on good engineering practice.

Apparatus for the detection of combustible gases are not a substitute for good gas installation practice and regular servicing of gas appliances, although they may provide an added margin of reassurance for users of gaseous fuels. Domestic combustible gas detectors with or without some form of executive function may overcome fears of fuel safety and can be particularly beneficial in certain circumstances.

1 Scope

This European Standard provides information on the selection, installation, use and maintenance of apparatus for the detection of combustible gas designed for continuous operation in a fixed installation in domestic premises as described in the EN 50194 series. This guide should be read in conjunction with any additional relevant national or local regulations.

The European Standard refers to the installation of two types of apparatus designed to operate in the event of an escape of town gas, natural gas or liquefied petroleum gas:

- Type A apparatus - to provide a visual and audible alarm and an executive action in the form of an output signal that may actuate directly or indirectly a shut-off device and/or other ancillary device;
- Type B apparatus - to provide visual and audible alarms only.

This guide is not applicable to the use of apparatus:

- for the detection of toxic gases such as carbon monoxide, see EN 50292;
- for industrial or commercial premises, see EN 60079-29-2.

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.

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

EN 50194 (all parts), *Electrical apparatus for the detection of combustible gases in domestic premises*

EN 60079-29-2, *Explosive atmospheres — Part 29-2: Gas detectors — Selection, installation, use and maintenance of detectors for flammable gases and oxygen (IEC 60079-29-2)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

lower explosive limit

LEL

volume ratio of combustible gas or vapour in air below which an explosive gas atmosphere will not be formed

3.2

upper explosive limit

UEL

volume ratio of combustible gas or vapour in air above which an explosive gas atmosphere will not be formed

3.3

continuous operation

apparatus which is continuously powered with continuous or intermittent automatic sensing